Transformational and Destructive Instructor-Leadership and their Association with Student Engagement, Burnout, and Achievement in Higher Education

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Abstract

Instructor-leadership is defined as a process whereby instructors exert intentional influence over students to guide, structure, and facilitate activities and relationships. This dissertation focuses on instructor-leadership specifically in the context of higher education module/classroom interactions. In this context, research focused on the dominant theory of transformational leadership. This dissertation seeks to offer a balanced perspective on instructor-leadership by examining both transformational and destructive leadership. In so doing, this dissertation takes the first step towards unpicking leadership behaviours in a module by developing context-sensitive measures of both transformational and destructive instructor-leadership. These measures were specifically adapted to the unique situation of instructors in higher education institutions.

For the transformational instructor-leadership measure, an education-based secondary dataset of over 2,700 students across the UK was used. The findings indicated three potential quasi-transformational instructor-leadership dimensions. In an additional independent study, these three dimensions showed weak incremental validity, and failed to tap into charisma. Therefore, this educationally-developed measure was used to enhance the context-sensitivity of an already established organizational behaviour measure of transformational leadership. This enhanced measure captured four dimensions of transformational instructor-leadership including idealized influence, consideration, intellectual stimulation, and direction and congruence. Direction and congruence substituted for inspirational motivation or vision in the higher education module context. In the final study, the items derived from the secondary dataset were reworded to reflect personal transformational instructor-leadership, and there was good support for the combined measure's factor structure as well as its validity.

For the destructive instructor-leadership measure, 13 in-depth semi-structured student interviews were conducted in order to determine how students' perceive destructive leadership in the unique higher education module context. The results of a thematic analysis indicated that destructive instructor-leadership may be conceptualized as consisting of three dimensions, including callous communication, chaotic carelessness, and irresponsibility. The final quantitative study partially confirmed these three dimensions showing that chaotic carelessness slightly overlaps with callous communication and irresponsibility, and another dimension labelled victimization also emerged from the data.

Using both of the context-sensitive leadership measures, the final study examined student engagement and burnout as mechanisms that mediated the relationship between (a) transformational instructor-leadership and student achievement, and (b) destructive instructor-leadership and student achievement. The results partially supported the hypothesized relationships. Theoretical and practical implications, along with limitations and suggestions for future research, were discussed.

Keywords: Leadership; instructor-leadership; transformational leadership; destructive leadership; engagement; burnout; achievement; higher education.

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Abbreviations

AVE	Average variance extracted
BC	Bias-corrected
BEH	Behavioural engagement
C	Communality
CC	Callous communication
CFA	Confirmatory factor analysis
Co	Consideration
COG	Cognitive engagement
COR	Conservation of resources
CWB	Counterproductive work behaviour
CYN	Cynicism
DAe	Deep approach to learning in module
DAl	Deep approach to learning orientation
DIL	Destructive instructor-leadership
DWLS	Diagonally weighted least squares
DC	Direction and congruence
EM	Expectation maximization
EMO	Emotional engagement
EFA	Exploratory factor analysis
ESRC	Economic and Social Research Council
ETL	Enhancing Teaching-Learning Environments in Undergraduate Course Units
ETLQ	The Experiences of Teaching and Learning Questionnaire
EXH	Exhaustion
HEI	Higher education institution
IE	Interest and enjoyment
IR	Item reliabilities
IRR	Irresponsibility
INEF	Inefficacy
IS	Intellectual stimulation
LSQ	Learning and Studying Questionnaire
MCAR	Missing completely at random
MBI	Maslach Burnout Inventory
MLQ	Multifactor Leadership Questionnaire
MLQ-SS	Multifactor Leadership Questionnaire - Student Survey
OCB	Organizational citizenship behaviour
PCA	Principal component analysis
P-QTILQ	Potential Quasi-Transformational Instructor-Leadership Questionnaire
QTILQ	Quasi-Transformational Instructor-Leadership Questionnaire

RG	Rafferty and Griffin's questionnaire
RQ	Research question
SA	Student achievement
SCS	Student collegial support
TIL	Transformational instructor-leadership
TFL	Transformational leadership
UWES	Utrecht Work Engagement Scale
VIC	Victimization

Chapter 1: Overview

"When students experience success, so does the institution" (Low, 2000, p. 15)

1.1 Introduction

In an interview, Robert E. Quinn describes his observations of teaching at a higher education institution (HEI). An excerpt from this interview read as follows:

> "I taught on a university campus where the main building was constructed with long rows of classrooms and each one had a big window. As I walked along I could look in on each class … As I passed the classes, I would ask myself what was happening in each one. I never had to look at what the teacher was doing. All I had to do was look at the body language of the students … In the majority of the classes, the students were draped over their desks, only half awake" (Anding, 2005, p. 488).

Such potentially burnt out students may be detrimental to a HEI's service and its survivability given the growing competitiveness in the market for students.

The competition between HEIs for students means that the students are more like 'customers' of the institutions' service (Babbar, 1995; Guttenplan, 2014). This stance stresses the importance of high quality service in order to attract students. Historically, "service quality and higher education seemed about as compatible as oil and water" (Canic & McCarthy, 2000, p. 1). However, in recent times, students are becoming more savvy and selective in their choice of a HEI (Canic & McCarthy, 2000). This change, accompanied by changing socio-economic conditions such as globalization, withdrawal of state-funding for education, and emphasis on graduation rates, means that HEIs have to transition towards a service quality mentality in order

to attract students. If students become dissatisfied, enrolment figures can fall and this in turn can negatively influence funding and job security (Canic & McCarthy, 2000).

What can be done to improve student service at HEIs? Past research highlights the important role of instructors in this regard. I define instructor in this dissertation as a higher education teacher, regardless of position[1]. Students consider instructors' teaching ability, quality, and approachability to be the most important aspects of a university's service surpassing the importance of other aspects of service such as layout and décor of facilities, availability of parking, textbook value and availability, and more (J. Douglas, Douglas, & Barnes, 2006). In other words, one of the most fundamental factors affecting students' satisfaction is the instructor and the learning environment that instructors create for students.

A HEI's learning environment is characterized chiefly by the manner in which modules are delivered. When modules are expertly designed and implemented, both student satisfaction and achievement are likely to increase. Conversely, student satisfaction and achievement are likely to falter when modules are not devised properly. Gold et al. (2009) highlight components of unsuccessful modules, including ineffective student involvement, inadequate individual assistance, treatment of students as if they were the same, and little to no interaction in the classroom. The potentially detrimental effects of such disengaging teaching methods have spurred research on good teaching practices.

The majority of research on improving instructors' teaching ability and quality in higher education has been conducted in disciplines such as education, communication, and psychology. In this dissertation, I propose that the leadership literature can offer an alternative conceptual

[1] In the US and Canada, the term 'instructor' is often used to refer to a university teacher whose ranking is below an assistant professor ("instructor," n.d.). In this dissertation, instructor refers to *all* university teachers, with no reference to rank or position.

lens for investigating teaching quality. Deming (2000) shares the same view, stating that "improvement of education, and the management of education, require application of the same principles that must be used for the improvement of any process, manufacturing, or service. Innovation and improvement of education will require leaders" (p. 6). An examination of teaching quality with a leadership lens offers the possibility that leader behaviours can provide a framework for training instructors to improve their teaching.

According to Yukl (2009), *leadership* "involves a process whereby intentional influence is exerted by one person over other people to guide, structure, and facilitate activities and relationships in a group or organization" (p.3). Management research typically focuses on leadership in the corporate or military context. However, leadership can also exist in less formal groups, e.g., housewives who are active in their community, leaders of social movements, and students (Bass, 1997). Similarly, instructors can be leaders in the less formal classroom setting because they guide student activities and facilitate relationships amongst groups of students in their classes (Treslan, 2006a).

Definitions of leadership often state that leaders influence followers towards a goal (Yukl, 2009). Instructors may set specific module goals or objectives regarding improvements in students' subject knowledge, critical thinking skills, and interpersonal skills. Arguably, some of these goals may not always be collective goals as is typically associated with leadership theory. However, a shared goal with regards to learning or academic achievement is likely to exist (Peters, 2014). That is, students may strive for good grades for the prestige that is associated with good grades, career reasons, increased satisfaction, and so on. At the same time, instructors may also be concerned with good grades because this visible indicator of class performance is often a gauge for teaching effectiveness and quality, thus affecting promotional prospects.

In this chapter, I first describe the similarities and differences between the HEI module and corporate context with respect to the boundaries of leadership in each context (Section 1.1.1). Second, I briefly introduce some of the main concepts that are investigated in this dissertation including instructor-leadership, transformational leadership, and destructive leadership (Section 1.1.2). Third, I explain the rationale for this dissertation by highlighting why it is important to study both transformational and destructive instructor-leadership, and here I briefly introduce the concepts of student engagement, burnout, and achievement (Section 1.2). Fourth, I describe the implications of this dissertation including both theoretical and practical contributions (Section 1.3). Fifth, I explain the purpose of this dissertation, and develop two research questions that guide my research (Section 1.4). Sixth, I briefly explain my philosophical position throughout the research process (Section 1.5). Finally, I outline the structure of the dissertation (Section 1.6).

1.1.1 The HEI module as a quasi-corporation. Some argue that the HEI module/classroom can be regarded as a quasi-corporation (Pounder, 2008; Weaver & Qi, 2005). That is, the HEI module, "like any other workplace, is a social [corporation] where power is asserted, tasks are assigned and negotiated, and work is accomplished through the interplay of formal and informal social structures" (Weaver & Qi, 2005, p. 579). In this 'small social quasi-corporation', the teacher or professor typically is the leader and students are the followers (Pounder, 2008; Weaver & Qi, 2005). Like corporate settings, the instructor-leader to student-follower relationship features forms of *communication, coordination, and control* of activities (Kuchinke, 1999). In the HEI module context, an instructor leads by communicating what is to be learned; coordinates learning activities such as assigned readings, lectures, and tutorials; and exercises control by evaluating students' performance during the module, e.g., administering

midterm exam or coursework, and then taking corrective actions based on any deviations from expected performance, e.g., spending more time to teach a troublesome topic. From a broader perspective, Harrison (2011), in reference to work done by House and Podsakoff (1994), compares the similarities between the HEI module and corporate contexts by explaining that "instructors influence students, shape their future development, focus their attention on specific tasks, and induct them into the field or profession in a manner similar to the way [corporate] leaders influence, initiate, focus attention, set direction, and coordinate activities toward a goal" (p. 95).

Furthermore, like corporate leaders, the relationship between instructor and students is characterized by power differentials. Power refers to "the capacity of one party (the agent) to influence another party (the target)" (Yukl, 2009, p. 146). This definition highlights the existence of a *dependency* relationship (Robbins & Judge, 2009). The greater the target's dependence on the agent, the more power the agent has in the relationship. Because of an instructor's position, level of autonomy, and resources that they command, all of French and Raven's power bases can be observed in this position (Raven, 2008). Specifically, instructors possess both formal and personal power.

Formal (or position) power comprises of legitimate, reward, and coercive power (Johns & Saks, 2007; Yukl, 2009). Legitimate power "stems from the target's accepting the right of the agent to require the changed behaviour, and the target's obligation to comply" (Raven, 2008, p. 2). An instructor's formal position is characterized by legitimate power, and this form of power is supported by reward and coercive power (Johns & Saks, 2007). Reward power "stems from the ability of the agent to offer a positive incentive, if the target complies" (Raven, 2008, p. 2). An instructor may use reward power to exert influence through praise and flattery or through

more tangible means such as award of extra credit. Conversely, with coercive power, "the agent brings about change by threatening the target with negative, undesirable consequences … if the target does not comply" (Raven, 2008, p. 2). An instructor may use coercive power via punishment and threats in order to gain students' compliance towards a goal of good grades.

Personal power comprises of referent and expert power (Johns & Saks, 2007). Referent power "stems from the target identifying with the agent, or seeing the agent as a model that the target would want to emulate" (Raven, 2008, p. 3), e.g., instructor may possess referent power if they act friendly and polite towards students in directing them towards a class goal. A student may observe classmates' admiration for the instructor-leader's friendliness and decide to emulate that leader to receive such admiration. Expert power "results from the target's faith that the agent has some superior insight or knowledge about what behaviour is best under the circumstances" (Raven, 2008, p. 3), e.g., instructors who publish regularly and are internationally renowned for their research may have more expert power than an unpublished instructor.

Instructors may use any combination of formal and personal power to achieve their goals, e.g., instructors may initiate a relationship with students using tactics such as flattery, friendliness, and praise (reward and referent power tactics) in order to charm their student-followers. Using another example, an instructor who has tenure (legitimate power) and is internationally recognized for his or her research (expert power), may have the capacity to use tactics such as ordering or threatening students (coercive power tactics) with little to no repercussions. Therefore, instructors have access to a wide arsenal of influence tactics that can be used to influence students in both constructive as well as destructive ways.

Even though the HEI module setting is similar to the corporate setting, both settings are not identical. Leadership in the quasi-corporate classroom or module context is distinct to leadership in an actual corporation in three main ways. *First*, the degree of distance in supervisor-employee relationships varies in the corporate context, depending on the organization or profession (Antonakis & Atwater, 2002). However, in the HEI module context, the relationship between instructor and student is likely to be distant in most HEIs because of the trend towards large class sizes, and differences in both knowledge level and ascribed status between instructors and students. This distant relationship may have implications for how certain leadership behaviours translate to the HEI module context. Specifically, leader behaviours that are dependent on a close relationship may not be applicable to this module context.

Second, the instructor-student relationship is distinct to the supervisor-employee relationship because of the emergence of student consumerism. Student consumerism means that "because students are paying for their education, they deserve to be treated as customers in every sense of the word" (Cain, Romanelli, & Smith, 2012, p. 1). According to this view, education becomes a commodity in which instructors provide a service to their students. Therefore, students are not only followers in the instructor-student relationship, but also external customers. This unique perspective means that accountability and entitlement are likely to operate differently in the HEI module and corporate contexts. For instance, in the corporate context, employees are typically accountable to their supervisor, whereas in the HEI module context, students are primarily accountable to themselves. Therefore, students may respond differently to their instructors' direction than employees do to their supervisor. Also, in the corporate context, employees may feel entitled to receive fair pay for their efforts, whereas in the HEI module context, students may feel entitled to receive high quality teaching for their tuition payments.

Hence, students may expect their instructors to be high quality leaders in the classroom. These expectations may diminish the impact of high quality leader behaviours in the module context in comparison to the corporate context.

Third, the instructor-student relationship is short-lived unlike the typical supervisor-employee relationship. Even temporary corporate groups are different to temporary HEI module groups because the former is typically comprised of individuals with diverse skills working on a common task. The temporary nature of HEI module groups is likely to have implications for how leadership behaviours translate from the corporate context to the education module context. Specifically, leader behaviours that necessitate a long-term relationship are not likely to be applicable to the HEI module context. Taken together, the prevailing distant relationship, follower as customer perspective, and temporary group nature all indicate that instructor-student relationships in the HEI module context is different to the typical supervisor-employee relationship in corporate settings.

In summary, the HEI module/classroom is sometimes referred to as a quasi-corporation with instructor as leader and students as followers. While the module and corporate settings share many similarities, there are also key differences between the contexts. These differences may mean that corporate-developed conceptualizations and operationalizations of leadership may not translate fully to the module context (this is explained in more detail in the next chapter). Nevertheless, the similarities between both module and corporate settings suggest that instructors may indeed use leadership behaviours in classroom interactions, one-on-one meetings, mentoring relationships, supervisory relationships, and so on. In this dissertation, I focus only on undergraduate students, and instructors primarily interact with undergraduate-level students through classroom contact. That is, undergraduate students are taught the majority of

module content in the classroom itself. For this reason, this research focuses foremost on instructors' influence in the classroom but also includes other undergraduate module-related interactions such as exam feedback or office meetings. The influence of instructors in these module interactions has often been referred to as instructor-leadership (Dawson, Messe, & Phillips, 1972).

1.1.2 Instructor-leadership. In this dissertation, I use the term *instructor-leadership*. In order to define instructor-leadership, I adapted Yukl's definition of leadership to the education context (Yukl, 2009). Accordingly, I define instructor-leadership in this dissertation *as a process whereby instructors exert intentional influence over students to guide, structure, and facilitate activities and relationships*. In this dissertation, I focus on instructors' influence over undergraduate students in the HEI module context. The application of leadership theories to instructor-student relationships in modules/classrooms is a developing concept that was explored primarily by organizational behaviour (e.g., Baba & Ace, 1989; Dawson et al., 1972; Harvey, Royal, & Stout, 2003; Ojode, Walumbwa, & Kuchinke, 1999; Pounder, 2008; Walumbwa, Wu, & Ojode, 2004) and educational researchers (e.g., Bolkan & Goodboy, 2009; Gill et al., 2010). Most studies of instructor-leadership in the HEI module context (hereafter simply referred to as instructor-leadership) examine the usefulness of transformational leadership for higher education teaching practice. A *transformational* leader is defined as one who "articulates a realistic vision of the future that can be shared, stimulates subordinates intellectually, and pays attention to the differences among the subordinates" (Yammarino & Bass, 1988, p. 2). Adapting this definition to the module context, I define a transformational instructor-leader as *one who guides students towards a module's learning objectives, stimulates students intellectually, and pays attention to the differences between students*.

The foundations of transformational leadership theory were developed by Bass (1985, 1990), who describes a transformational leader in terms of four dimensions. First, charisma usually describes behaviours that are unconventional, innovative, self-sacrificial, inspirational, and dynamic (Yukl, 2009). Second, inspirational motivation entails communicating an appealing vision, providing challenging standards, talking with enthusiasm and optimism, and using symbols to focus followers' efforts (Bass, 1990; Yukl, 2009). Third, individualized consideration involves treating followers as unique individuals, giving specialized attention to followers' needs, lending support, and providing encouragement (Bass, 1990; Yukl, 2009). Finally, intellectual stimulation describes leaders who challenge followers' ways of thinking and help them to analyze various solutions and strategies in order to tackle problems (Bass, 1990; Yukl, 2009).

In comparison to research on transformational instructor-leadership, few studies examine the notion of *destructive* leadership in higher education instructor-student relationships (Goodyear, Crego, & Johnston, 1992; Hobman, Restubog, Bordia, & Tang, 2009). Destructive leadership is defined "as volitional behavior by a leader that can harm or intends to harm a leader's organization and/or followers" (Krasikova, Green, & LeBreton, 2013, p. 1310). Adapting this definition to the module context, I define destructive instructor-leadership as *volitional behaviour by an instructor that can harm or intends to harm students*. Destructive leaders (a) engage in behaviours that can encourage followers towards goals that conflict with the organization's interest and/or (b) employ a leadership style that is characterized by harmful methods (Krasikova et al., 2013). To be classified as destructive leader behaviour the leader's actions must also be sustained over a period of time (Schyns & Schilling, 2013). Destructive leadership is typically rare (Hubert & van Veldhoven, 2001), but the HEI module context

features characteristics that are conducive to the sustained usage of destructive leader behaviours, e.g., power differences, temporary time pressures, protection by tenure, etc. Moreover, harmful teaching behaviours are largely unnoticed by educational organizations (Kearney, Plax, Hays, & Ivey, 1991). Therefore, it is important to investigate destructive instructor-leader behaviours, along with the consequences of these behaviours for students.

1.2 Rationale

Transformational and destructive leadership theories are worth examining with respect to instructor-student relationships in HEI module interactions. An instructor who applies *transformational leadership* theory to guide students in a module is expected to display enthusiasm and inspire students towards achieving high standards. Such an instructor may use idealized influence to build students' trust. A relationship characterized by trust can encourage students to identify with the instructor, internalize the instructor's values, and accept the objectives set by instructors. Transformational instructor-leaders may also use intellectual stimulation by creating developmental assignments and encouraging students to think 'outside the box'. Such strategies can inspire students to achieve high standards. Finally, transformational instructor-leaders may use individualized consideration to deliver personalized learning. Therefore, these instructor-leaders may create 'successful' modules, and their actions appear to be in direct contrast to the elements of unsuccessful modules described by Gold et al. (2009) (see Section 1.1).

Evidence from a growing body of research support the notion that transformational leaders can be effective in the HEI module context (e.g., Baba & Ace, 1989; Bolkan & Goodboy, 2009; Dawson et al., 1972; Gill et al., 2010; J. Harrison, 2011; Harvey et al., 2003; Ojode et al., 1999; Pounder, 2008; Walumbwa, Wu, et al., 2004). These studies found that transformational

instructor-leadership is positively associated with student outcomes such as effort, satisfaction, learning, and involvement. However, these findings should be viewed with caution primarily because of the studies' use of context-insensitive measures (i.e., measures developed for organizational behaviour research). Specifically, transformational instructor-leadership studies, leadership was operationalized entirely with measures based on corporate supervisor-employee relationships. As explained above, the classroom/module context is similar, but not identical to the corporate context. Therefore, the use of purely corporate-oriented measures to measure instructor-leadership is likely to be limited with respect to the unique relationship between instructors and students. Therefore, in this dissertation, I propose a more context-sensitive approach to measuring transformational instructor-leadership. This approach combines (a) module-relevant behaviours from a corporate-oriented measure with (b) leadership behaviours from students' survey feedback on an instructor's actions in a module.

Unlike transformational leadership, *destructive leadership* has yet to be conceptualized in the HEI module context. It is important to study destructive leadership in the educational context to determine whether these instructor-leaders cause harm to their students in the same way that corporate destructive leaders do to their employees. In the HEI module context, destructive instructor-leader behaviours may make students feel alienated and helpless, which can result in students detaching themselves from the subject and instructor (Ashforth, 1989, 1994). Destructive instructor leader behaviours may also increase students' stress because students are likely to perceive unfairness in the outcomes or processes in the HEI module context (Horan, Chory, & Goodboy, 2010) (these arguments are explained in detail in Chapter 3). The resulting detachment and distress can then lead to suicide, alcoholism, and depression. (Levey, 2001; Mackenzie et al., 2011). These consequences have wider economic costs because they impede

the development of the future workforce. Graduates entering the corporate environment may do so with underdeveloped skills and undesirable attitudes. There is a dearth of empirical evidence for these social costs in the educational domain, but research from the corporate domain shows that destructive leadership is associated with numerous social costs, e.g., lower job satisfaction, commitment, and well-being, and higher stress, etc. (Schyns & Schilling, 2013).

In addition to the potential social costs, destructive instructor-leadership can also be financially costly. For instance, in the corporate domain, destructive leadership has been estimated to cost US corporations approximately US$23.8 billion per annum (Tepper, Duffy, Henle, & Lambert, 2006). HEIs may also incur monetary costs if their teaching staff is comprised of destructive instructor-leaders because potential student-customers may avoid enrolling in programmes with such instructors. In recent times, students are especially likely to be informed and cautious when opting to enroll at a HEI because of readily accessible online reviews of instructors and increasing tuition fees respectively (Guttenplan, 2014).

Even though there is no research directly referencing destructive instructor-leadership, the educational literature suggests that some HEI instructors use teaching behaviours akin to destructive instructor-leadership. Two concepts that provide some insight into harmful teaching in HEIs is that of teacher misbehaviour and disconfirmation. First, teacher misbehaviour is behaviour that disrupts student learning (Kearney et al., 1991). One dimension of teacher misbehaviour called ‘offensiveness’ describes teachers verbally abusing students (Banfield, Richmond, & McCroskey, 2006). Second, teacher disconfirmation is defined as “the process by which teachers communicate to students that they are not endorsed, recognized or acknowledged as valuable, significant individuals” (Ellis, 2000, p. 266). Some examples of disconfirming behaviours include rudeness, embarrassing and belittling, unwillingness to listen, arrogance and

use of intimidation, communicating that he/she did not have enough time, and showing favouritism. Both offensive misbehaviour and disconfirmation appear to share the same conceptual space as destructive leadership, thus indicating that destructive leadership can exist in higher education modules.

The existence of destructive instructor-leader behaviours in a HEI module is not surprising because higher education instructor-student relationships are characterized by large and sustainable power differentials. Such power differentials can create a 'dependency' relationship in which students are dependent on instructors for information, grades, etc. In this dependency relationship, instructors may have access to all of the power bases; therefore, they can use harmful influence tactics to accomplish their goals. Both (a) offensive misbehaviour and disconfirmation and (b) the large power differentials between instructors and students, suggest that destructive leadership theory can be relevant to instructor-student relationships.

Hence, in this dissertation, I seek to determine whether the organizational behaviour conceptualization of destructive leadership is applicable to the HEI module context. The organizational behaviour concept of destructive leadership is *partially* represented in the educational literature via offensive misbehaviour and disconfirmation (i.e., harmful teaching style). Extending these educational concepts, my aim is to determine whether instructors not only use a harmful leadership style, but also lead followers towards goals that are contradictory to the organization's interests, and use volitional and sustained behaviours.

In developing the concept of destructive instructor-leadership, I also investigate its *dimensionality*. A multidimensional conceptualization of destructive leadership seems plausible because of the two manifestations proposed by Krasikova et al. (2013). Specifically, some

destructive leader behaviours may be more closely tied to behaviours that entail the influence of followers towards goals that conflict with those of the organization, whereas other behaviours may be more closely tied to the use of harmful methods in leading followers. To investigate the dimensionality of destructive leadership in the unique HEI module context, I first considered using the most popular measure of destructive leadership, i.e., Tepper's Abusive Supervision Scale (2000). However, there were two challenges in using Tepper's measure by itself. First, Tepper's measure ignores the first manifestation of destructive leadership that was proposed by Krasikova et al. (2013), i.e., leading followers towards goals that conflict with the organization's interests. Second, Tepper's measure may not fit perfectly for the HEI module context because of the uniqueness of this context (as briefly explained earlier, and also explained in more detail later on). For these reasons, I enhance Tepper's measure via the development of additional measurement items based on interview data from students.

For both transformational and destructive instructor-leadership, I examine the extent to which each leadership theory is related to outcomes novel to instructor-leadership research, i.e., student engagement and burnout. For the HEI module context, I define student *engagement* as a positive and highly activated state of involvement that is comprised of emotional, behavioural, and cognitive dimensions. It is important to study the relationship between instructor-leader behaviour and student engagement because students who are immersed in a subject are likely perform at a high level. This, in turn, may improve graduation rates and possibly the future success of graduates. In the HEI module context, I define student *burnout* as the exhaustion of students' capacity to maintain an intense involvement. In some countries, burnout is regarded as such a serious issue that it is considered a medical diagnosis that can be treated by physicians (Schaufeli, Leiter, & Maslach, 2009). Students who are burnt out may attempt to detach

themselves from the source of burnout (Halbesleben & Bowler, 2007), and this in turn may adversely affect students' academic performance as well as a HEI's graduation rates. Therefore, examining instructor-leadership in relation to student burnout may help to better understand why students may become burnt out, and what sort of leadership interventions may combat burnout. Following these arguments, I go on to study the relationship between instructor-leadership and student achievement – an outcome that is rarely examined in instructor-leadership research. Student *achievement* refers to the successful accomplishment of a school-related task through the application of effort and skill. In the HEI module context, I examine achievement regarding academic performance. Mirroring organizational behaviour research, I take the next logical step in transformational instructor-leadership research by examining student engagement and burnout as mechanisms in the relationship between both transformational and destructive instructor-leadership and students' academic achievement. Students' academic achievement is important because it is inextricably tied to graduation rates.

Overall, this dissertation is cross-disciplinary research that focuses on the application of transformational and destructive leadership, engagement and burnout, and performance to the HEI module context. For the leadership theories and engagement and burnout, I take established frameworks from applied psychology in corporate settings, and use these frameworks as a starting point to build frameworks in the education domain. Therefore, I examine the extent to which theories proposed in corporate settings can fit to the HEI module context. For this reason, I later (a) highlight how the uniqueness of the HEI module context can impact upon the application of both leadership theories in this context and (b) explain how the engagement and burnout frameworks from applied psychology can be used to clarify the meaning of student engagement and burnout in HEI module settings. After developing the concepts of

transformational and destructive instructor-leadership, student engagement and burnout, and student achievement, I then propose a conceptual framework for the relationships between these concepts.

1.3 Implications of the Research

1.3.1 Main theoretical contributions. In this dissertation, my main contributions are a balanced view of leadership, context-sensitive measures of transformational and destructive instructor-leadership, the dimensionality of transformational and destructive instructor-leadership, and student engagement and burnout as mechanisms.

1. A balanced view of leadership. I contribute to organizational behaviour research by simultaneously examining both transformational and destructive leadership in relation to follower outcomes. In so doing, I also contribute to the instructor-leadership body of research, which has yet to simultaneously examine both constructive and destructive teaching. The extant research in both organizational behaviour and education focus primarily on the constructive side of leadership and teaching respectively. In this dissertation, I highlight the darker side of leadership, which is important because destructive leadership comprises of behaviours that go beyond the simple absence of constructive or effective leadership behaviours (Einarsen, Aasland, & Skogstad, 2007). Therefore, simultaneously comparing both transformational and destructive leadership provides "a more accurate view of leadership", and thus contributes to a broader understanding of leadership effectiveness (Einarsen et al., 2007, p. 208). Moreover, directly comparing both forms of leadership helps to test the "bad is stronger than good" notion proposed by Baumeister et al. (2001). Specifically, Baumeister et al. (2001) propose that bad events (like destructive leadership) should be more strongly related to follower outcomes than good events (like transformational leadership), because "it is evolutionary adaptive for bad to be stronger than

good" (p. 325). Baumeister et al. (2001) explain that organisms that are being better attuned to bad events have an increased chance of surviving threats, and thus an improved chance of passing along genes. Empirically, the evidence for this notion is mixed because constructive leadership seems to share stronger relationships than destructive leadership for various outcomes (see meta-analysis by Schyns & Schilling, 2013). Still, it is important to note that not all outcomes of destructive leadership have been studies in the constructive leadership domain (Schyns & Schilling, 2013). Furthermore, there is a gap in research that compares transformational and destructive leadership in relation to negative outcomes such as burnout.

2. Context-sensitive conceptualizations and operationalizations of transformational and destructive instructor-leadership. Context can be defined as "situational opportunities and constraints that affect the occurrence and meaning of organizational behaviour as well as functional relationships between variables" (Johns, 2006, p. 386). Both organizational behaviour (Johns, 2006) and instructor-leadership researchers often underappreciate the importance of context. One reason context is important is that it is likely one of the major causes of between-study variation in findings (Johns, 2006). Therefore, the nuances of the HEI module must be considered when adapting organizational behaviour leadership theories to the unique module context. Another reason context is important is that applying a model to a new setting, and showing why aspects of the theory does not work in the new conditions has theoretical merit (Whetten, 1989). In light of this, I later explain why transformational leadership can be applied to the educational context in limited ways. In so doing, my investigation helps to advance transformational leadership theory by showing how the theory works under different conditions, and I also suggest improvements to the measure for these unique conditions. Finally, context is important because it "helps us to better convey the applications of our research" (Johns, 2006, p.

389). Specifically, consumers of research are concerned about context, and thus recognizing the context allows for more authentic communications with these consumers (Johns, 2006). Therefore, for both transformational and destructive leadership theories, I highlight how the HEI module context impacts the translation of these leadership theories from the organizational behaviour domain to the educational domain.

Transformational instructor-leadership. In my research, I develop an enhanced context-sensitive measure of transformational instructor-leadership. In organizational behaviour research, the importance of context with respect to the study of transformational leadership is often marginalized, with some researchers suggesting a universal conceptualization (Bass, 1997). However, leadership and context are inherently related (Bryman & Stephens, 1996). For this reason, I am critical towards the application of the organizational behaviour conceptualization and operationalization of transformational leadership to the unique HEI module context. In this module context, I challenge the approach of relying purely on organizational behaviour measures of transformational leadership.

The HEI module context contains unique features that can invalidate the applicability of certain transformational leadership dimensions. As such, I propose that transformational instructor-leadership can be measured using (a) module-relevant behaviours from an existing and established organizational behaviour measure in combination with (b) an educational measure that captures constructive module-related interactions between instructor and student. The first approach of using an established organizational behaviour measure of transformational leadership ensures that measurement is in line with theory. However, as is explained later on, the unique module context can limit the full-scale importing of an organizational behaviour measure to the unique HEI module context. To address this limitation, the second approach of using an

educational measure can be used to enhance the context sensitivity of the first approach. For this educational approach, I use secondary data to build a theoretical framework of transformational leadership in educational settings. While the use of secondary data is far from ideal, I am *not* using this data to build a definite theoretical model of instructor-leadership; rather I am using the data as a starting point to broaden our understanding of instructor-leadership. I thus take a first step in bridging the gap in our understanding of transformational leadership in module interactions. To achieve this, my strategy is to use (a) the large body of work done on transformational leadership in corporate settings and (b) the large, readily available, and good quality secondary data that is available in educational research, to start to unpick leadership processes in educational settings, instead of starting from a blank canvas.

Destructive instructor-leadership. My research offers a context-sensitive conceptualization of destructive leadership for the HEI module context, i.e., destructive instructor-leadership. I use the definitions of destructive leadership proposed by Krasikova et al. (2013) and Schyns and Schilling (2013) in order to clarify the characteristics and boundaries of destructive instructor-leadership. I also use qualitative research to conceptualize destructive instructor-leadership because such research is useful for illuminating context effects, i.e., minimizes the risk of omitting destructive leadership behaviours that are relevant to the HEI module context (Johns, 2006). Subsequently, I use the conceptualization of destructive instructor-leadership to take a first step towards developing a context-sensitive measure of this concept. To develop this measure, I augment (a) the behaviours from an existing and established organizational behaviour measure of destructive leadership with (b) behaviours derived from students' perceptions of destructive instructor-leadership. As explained before, the second

approach of using students' perceptions in the HEI module context enhances the context sensitivity of the organizational behaviour measure.

3. The dimensionality of transformational and destructive instructor-leadership. My research adds to organizational behaviour research by improving our understanding of the dimensionality of both transformational and destructive leadership in a unique context.

Transformational leadership. Organizational behaviour researchers are divided on their stance regarding the dimensionality of transformational leadership. On the one hand, most researchers typically use the 'additive' model for which the dimensions of transformational leadership are combined to represent a single transformational leadership construct (e.g., Bass, Jung, Avolio, & Berson, 2003; Carless, 1998). On the other hand, Van Knippenberg and Sitkin (2013) argue that the use of a single construct of transformational leadership may be statistically sound, but there is no theoretical basis for combining the four dimensions into one – they each describe distinct behaviours. I examine both stances in this dissertation, and explain why the empirically supported stance is a sensible approach.

Destructive leadership. Organizational behaviour research on destructive leadership is still in its infancy. Accordingly, few researchers have focused on the dimensionality of this concept. Conceptualizations of destructive leadership allude to the possibility of a multi-dimensional concept (see Krasikova et al., 2013). Specifically, destructive leaders may (a) lead followers towards goals that are contradictory to an organization's interests and (b) use harmful methods in influencing followers (see Krasikova et al., 2013). Given these two manifestations of destructive leadership, it is likely that certain destructive leader behaviours may cluster more closely to one of the two manifestations. To determine the dimensionality of destructive

instructor-leadership, I examine the applicability of the organizational behaviour concept of destructive leadership in the HEI module context. In so doing, I use inductive techniques to arrive at a potential dimensionality, and then test this dimensionality using survey research. Finally, I examine the relationship between each destructive instructor-leadership dimension and key student outcomes.

4. Student engagement and burnout as mechanisms. I extend instructor-leadership studies by investigating student engagement and student burnout as mechanisms in the relationship between instructor-leadership and student achievement. Generally, both transformational instructor-leadership and destructive leadership research focus primarily on direct associations between leadership and outcomes, without investigating the mechanisms underlying these associations. In this dissertation, I examine mechanisms underlying the relationship between transformational instructor-leadership and student achievement. I therefore build theory in this area by (a) identifying 'what' mechanisms should logically be considered, i.e., student engagement and burnout; (b) showing 'how' these mechanisms are related to transformational and destructive instructor-leadership and student achievement; (c) explaining 'why' student engagement and burnout are plausible mechanisms in the relationship between transformational and destructive instructor-leadership and student achievement; and (d) stressing the limits of the context (Whetten, 1989). According to Whetten (1989), addressing the 'why' question is particularly important because it is "the theoretical glue that welds the model together" (p. 41). Therefore, I explain in detail the underlying reasons and logic for student engagement and burnout as mechanisms. Overall, by studying two mechanisms that are novel to instructor-leadership research, I contribute a moderate level of theory building because I

supplement existing theory (Colquitt & Zapata-Phelan, 2007). In addition, studying these mechanisms helps to shift the theorizing in instructor-leadership literature towards maturity.

1.3.2 Other implications. There are also implications for the fractionated literature on transformational instructor-leadership, student engagement and burnout conceptuality, and student engagement and burnout conceptual distinction debate.

1. Meta-analytic review of transformational instructor-leadership. Researchers demonstrate that transformational leadership can be applied to higher education teaching, i.e., transformational instructor-leadership. However, such research is fractionated across diverse fields. Fractionated research is a problem because research remains fragmented across different subject areas, with researchers often unaware of advancements being made in fields outside of their discipline. To address this issue, I conduct a meta-analytic review of transformational instructor-leadership in relation to student outcomes. This meta-analysis draws from varied disciplines in contributing the first integrative review of transformational instructor-leadership. The meta-analytic review contributes to transformational instructor-leadership research because the review helps to (a) gain an overview of the current state of evidence in this domain, (b) quantify the relationship between transformational instructor-leadership and student outcomes, and (c) uncover problematic areas in this research area, most of which I set out to improve in the dissertation.

2. Student engagement and burnout conceptuality. I extend existing conceptual studies of student engagement and burnout by offering clear definitions and conceptualizations of both student engagement and burnout in the HEI module context. Despite the popularity of student engagement and, by association, student burnout, the educational literature is unclear about the

meaning of these terms. In the educational literature, student engagement and burnout are often subsumed under a broad 'student engagement' umbrella that is theoretically messy because it (a) overlaps with other constructs, (b) substitutes for existing constructs, and (c) incorporates constructs from other literatures in a general manner (Fredricks, Blumenfeld, & Paris, 2004). Evidently, student engagement "suffers from being everything to everybody" (Fredricks et al., 2004, p. 84). To improve the conceptualizations of student engagement and burnout, I draw upon organizational behaviour theory on work engagement and burnout because the conceptual boundaries of 'engagement' and 'burnout' in this literature are notably more well-defined than in educational research. I then use measures that are aligned with the proposed conceptualizations in order to operationalize student engagement and burnout.

3. Engagement and burnout conceptual distinction debate. My research adds to the debate in organizational behaviour concerning the distinctiveness of engagement and burnout. Maslach et al. (2001) suggest that engagement and burnout are opposite poles on the same continuum. However, Schaufeli et al. (2002) refute this assertion, stating that engagement and burnout are standalone concepts with distinct underlying dimensions. In this dissertation, I adopt the latter stance, and explain why engagement and burnout should be regarded as distinct concepts. The main issue with this stance is that the most commonly used measure of engagement does not appear to tap into engagement as a standalone concept (Cole, Walter, Bedeian, & O'Boyle, 2012). To address this misalignment between theory and measurement, I follow the recommendations of Cole et al. (2012), and thus measure engagement as originally conceptualized by Kahn (1990). With this measure, I then go on to empirically investigate the proposed conceptual distinction between student engagement and burnout.

1.3.3 Practical contributions. In addition to the theoretical contributions, my research provides practical contributions centered on improving leadership in the HEI module context, i.e., teaching quality. Teaching quality has been in the spotlight for two major reasons. First, HEIs are faced with an increasingly competitive market for students, and students regard teaching as highly important for their satisfaction (J. Douglas et al., 2006). Second, HEIs are facing increased pressures to improve their graduation rates (Liljenquist, 2014) and instructors may be expected to improve graduation rates via their influence on student engagement (Price & Tovar, 2014). Therefore, HEIs can build a competitive advantage and improve their graduation rates via their instructors' teaching quality. A high quality teaching staff can be built via training and development programmes and psychometric assessments.

1. Instructor training and development. Calls were made for improvements in teaching in the US (Silva, Gimbert, & Nolan, 2000), UK (David et al., ca. 2009), and in some developing countries such as Trinidad and Tobago (George, 2002). To address these calls, the findings of my research can be used to develop a training and development programme aimed at improving teaching behaviours in HEI module interactions.

2. Selection of instructors. Instructors are hired based primarily on their credentials regarding teaching and/or research. In addition to these credentials, psychometric assessments can be used for identifying transformational and/or destructive instructor-leaders. Therefore, the findings from this dissertation can be used to further develop psychometric assessments.

Overall, I offer practical contributions for HEIs with respect to (1) the development of instructor training programmes and (2) the selection of instructors. These contributions will be covered in more detail in the final chapter.

1.4 Purpose of the Research and Research Questions

The purpose of this research is to examine the association between both transformational and destructive instructor-leadership and student engagement, burnout, and achievement. The first aim is to clarify the meaning of instructor-leadership, student engagement, student burnout, and student achievement. The second aim is to understand how both transformational and destructive leadership can be applicable to the HEI module context. The final aim is to determine the association of both transformational and destructive instructor-leadership on student engagement, burnout, and achievement. These aims are reflected as two research questions that are as follows:

1) How can (a) *transformational* and (b) *destructive* instructor-leadership be conceptualized and operationalized?
2) What are the relationships between (a) *transformational* and *destructive* instructor-leadership and (b) student engagement, *burnout*, and *achievement*?

1.5 Philosophical Position

To address the research questions, I used methods that coincided with my philosophical position. In this section, I provide a brief overview of my philosophical position by describing both my ontological and epistemological position.

1.5.1 Ontological position. Ontology concerned "beliefs about what there is to know about the world" (Ritchie & Lewis, 2003, p. 11). I adopt the ontological position of idealism. That is, I maintain that reality is determined through the human mind and socially constructed meanings (Ritchie & Lewis, 2003).

1.5.2 Epistemological position. To address the research questions, I adopt a pragmatic approach in the research process because I use both quantitative and qualitative methods with the belief that they are both "complementary strategies appropriate to different types of research questions" (Ritchie & Lewis, 2003, p. 15). The methods that I use are primarily characterized by a positivist stance in that social phenomena are studied using models, hypothesis testing, causal explanations, and statistical generalizations (as in the natural sciences). However, I also adhere to interpretivist points of view because I acknowledge that it is impossible to conduct objective research; to some extent, findings are influenced by my perspectives. I place special emphasis on reflexivity by remaining aware of my position as a researcher and how bias may infiltrate my interpretations. Throughout the research, I constantly reflected on sources of bias as well as the implications of my own background both as a higher education instructor and student.

Quantifying social phenomena while accepting interpretivist perspectives poses some difficulty because "mixing methods across paradigms may lead to a lack of analytical clarity". (Ritchie & Lewis, 2003, p. 17). This lack of clarity comes from the varying assumptions underlying data collection. Nonetheless, Ritchie and Lewis (2003) state that "purism about the epistemological origins of a particular approach may undermine our ability to choose and implement the most appropriate research design for answering the research questions posed" (p. 17). Hence, I avoid adopting a pure epistemological stance in addressing the research questions in this dissertation. Instead, I acquire knowledge inductively by looking for patterns based on observations of instructor behaviours. I also use deductive reasoning in the development of hypotheses and subsequent frameworks to test relationships between variables. In each study, I explain the reason why a particular method is chosen.

1.6 Structure of the Dissertation

The dissertation structure is shown in Table 1. For the narrative literature reviews, I refer to both organizational behaviour and educational research to (a) provide an overview of instructor-leadership and leadership theories (Chapter 2), and (b) clarify the meaning of engagement and burnout, including their theoretical relationships to leadership and performance (Chapter 3). Based on these literature reviews, I conduct four studies. For the *first* study, I take initial steps towards developing a context-sensitive measure of transformational instructor-leadership via a secondary dataset (Chapter 4). For the *second* study, I make minor changes to the item wordings of the newly developed measure from Study 1 in order to better tap into leader behaviour. In this study, I first validate the measure using a new sample, and then use this measure to supplement an organizational behaviour measure (Chapter 5). For the *third* study, I conceptualize destructive instructor-leadership and, based on this conceptualization, I propose survey items to begin building a context-sensitive measure of this concept (Chapter 6). For the *fourth* study, I (a) further change the item wordings of the final measure developed in Study 2 to fully reflect personal transformational leadership, and then validate this measure; (b) take initial steps towards developing a context-sensitive measure of destructive instructor-leadership; (c) empirically examine the distinctiveness between student engagement and burnout, including the relationships between the dimensions underlying these concepts; and (d) empirically examine the relationships between both transformational and destructive instructor-leadership and student engagement, burnout, and achievement (Chapter 7). Finally, in Chapter 8, I summarize the dissertation by describing the theoretical contributions, limitations and suggestions for future research, and practical implications (Chapter 8).

Table 1

Structure of Dissertation

Dissertation Section	RQ no.	Chapter no.	Title	Study no.	Method
Overview	-	1	Overview	-	
Narrative literature reviews	1	2	Instructor-leadership and leadership theories	-	
	2	3	Engagement and burnout as mechanisms in the relationship between leadership and performance	-	
Empirical research	1a	4	Teasing out potential transformational instructor-leadership dimensions from an educational measure of instructor behaviours	1	Quantitative
	1a	5	Validation of the transformational instructor-leadership dimensions from an educational measure and the enhancement of the context-sensitivity of an organizational behaviour measure	2	Quantitative
	1b	6	Conceptualizing destructive instructor-leadership	3	Qualitative
	1a, 1b 2	7	The association between transformational and destructive instructor-leadership, student engagement and burnout, and student achievement	4	Quantitative
Conclusion	-	8	Conclusion	-	

Note. RQ no. = research question number.

Chapter 2: Instructor-Leadership and Leadership Theories

In this narrative literature review, I explore instructor-leadership and its relationship to leadership theories. I open with an overview of instructor-leadership (Section 2.1). In so doing, I describe the historical background of instructor-leadership including its evolution across four waves of research (Section 2.1.1). The first three waves focus primarily on the relationship between an instructor and other staff members (e.g. Dean and his/her staff), thus fitting in precisely with an organizational behaviour concept of leadership. However, the fourth wave is slightly different because the focus shifts from relationships between instructor-staff to relationships between instructor-*students* in the HEI classroom/module context. Given that I focus on the fourth wave of instructor-leadership in my dissertation, this poses a question of whether the organizational behaviour constructs of leadership apply to the module context. The HEI module context is a unique context for leadership research. Therefore, I highlight the distinct features of a higher education module, and later explain how these features impact upon leadership (Section 2.1.2). In the HEI module context, I describe the relationships between instructor-leadership and four types of leadership theories, including behavioural (Section 2.2), transactional (Section 2.3), transformational (Section 2.4), and destructive (Section 2.5). For both transformational and destructive leadership theories, I examine the applicability of these theories of leadership between the corporate and the HEI module context. For transformational leadership in the module context, I also meta-analyze existing studies. At the end of the chapter, I present a brief summary (Section 2.6).

2.1 Overview of Instructor-Leadership

2.1.1 Historical background. Leadership research began around the 1930s. There are hundreds of definitions of leadership that have been advanced over time. As such, it may seem

futile to define this concept because it has become somewhat capricious. Venturing a precise definition of leadership runs the risk of omitting some meaning associated with the concept. Still, the most central theme of leadership is that of 'influence'. Yukl (2009) examined numerous leadership definitions in the literature and explained that leadership is a process of intentional influence over others to direct them towards a goal. Leadership researchers have examined this influence process in various contexts, e.g., corporations, military, politics, education, etc. In the education context, researchers have examined a concept referred to as *instructor-leadership*.

Instructor-leadership (sometimes referred to as teacher-leadership) is rooted in educational reform initiatives in the 1980s (York-Barr & Duke, 2004). Over the past three decades, instructor-leadership has received increasing attention in higher education research. Childs-Bowen, Moller, and Scrivner (2000) define instructor-leaders as instructors who "function in professional learning communities to affect student learning; contribute to school improvement; inspire excellence in practice; and empower stakeholders to participate in educational improvement" (p. 28). This definition captures the various conceptual forms of instructor-leadership that have been put forward by researchers over the years.

Varying definitions of instructor-leadership exist, and these can be tied to the evolution of the concept across four waves (Silva et al., 2000). In the first wave, instructors are regarded as leaders when they occupy *formal roles* such as department head, dean, professor, course/programme coordinator, etc. The emphasis on formal leadership in the first wave has been increasingly de-emphasized in the second and third waves. The second wave regards instructors as leaders when they possess *instructional expertise*, e.g., instructors as staff developers and mentors. In this second wave, instructors formal roles are not the focus, but instructors still had some level of control via curriculum development and instructional design

(Pounder, 2006). The third wave describes instructors as *creators of a collaborative school culture* that promotes continuous learning. This third wave diverges significantly from formal roles, and advocates instructors as leaders in the process of executing tasks and fulfilling their duties (Pounder, 2006).

The third wave of instructor-leadership is considered to be the current line of thinking. Some specifics of this third wave include exemplary classroom instruction and pedagogical practice (Harris & Muijs, 2003; Sherrill, 1999), mentoring and coaching of colleagues (Berry & Ginsburg, 1990; Harris & Muijs, 2003; Sherrill, 1999), decision making at the school-level (Berry & Ginsburg, 1990), modelers of learning and teaching (Darling-Hammond & McLaughlin, 1995; Harris & Muijs, 2003), and involvement in professional development (Berry & Ginsburg, 1990; Harris & Muijs, 2003). These characteristics of the third wave suggest that an instructor-leader is someone who guides and structures administrative and educational tasks and, in so doing, intentionally influences institutional processes and student achievement (Witziers, Bosker, & Krüger, 2003). Based on this definition, instructors' actions may include their teaching quality in the classroom. In the third wave of research, exemplary teaching quality is regarded as positively influencing colleagues practice; colleagues are regarded as an instructor-leader's followers.

Based on the third wave of instructor-leadership, it is logical to extend such leadership to HEI module interactions. In this view, students are regarded as followers to instructors. Early definitions of instructor-leadership do not explicitly state that students are followers. However, these definitions allude to the notion that instructors' behaviours can impact student outcomes. As described by Leithwood and Duke (1999), instructor-leadership "typically focuses on the behaviors of teachers as they engage in activities *directly* affecting the growth of students" (p.

261, emphasis added). These behaviours may entail the effective use of pedagogical techniques to influence student-related outcomes. Building on this pedagogical aspect of the third wave, Pounder (2006) assert that a fourth wave of instructor-leadership should showcase instructors using leadership approaches in their classroom interactions with students.

The fourth wave of instructor-leadership extracts a component of the third wave and changes the perspective from an instructor's colleagues as followers to students as followers. In higher education modules, instructors influence students primarily in classroom interactions (sometimes referred to as 'classroom leadership'), but may also influence students in other module-related interactions, e.g., office meetings, informal discussions after class, etc. In this dissertation, I focus solely on the leadership dynamics in the undergraduate module context (which likely comprises primarily of classroom interactions). In Chapter 1, I adopted Yukl's definition of leadership to the HEI module context, and thus defined instructor-leadership as *a process whereby instructors exert intentional influence over students to guide, structure, and facilitate activities and relationships*.

2.1.2 Uniqueness of the HEI module context. The leader-follower dynamics in HEI module interactions are characterized by similar leadership dynamics to that of the supervisor-employee in that both feature forms of communication, control, motivation, direction, and power differentials. However, the instructor-student relationship in module interactions feature unique characteristics that distinguish this relationship from that of the typical supervisor-employee. In addition, the leader-follower dynamics in module/classroom interactions are different to that in other instructor-student relationships, e.g., supervision of theses or mentoring relationships (explained in more detail later on). The unique features of the leader-follower dynamics in the

HEI module context is that of distance or nonimmediacy, followers as ‘customers’, and a temporary group dynamics.

Distance/nonimmediacy. Leadership dynamics depend upon how ‘close’ or ‘distant’ a leader and follower are from each other (Antonakis & Atwater, 2002). Education and communication researchers refer to closeness between an instructor and student in a HEI module as ‘immediacy’. Immediacy is defined as “verbal and nonverbal communication expressed by teachers that reduces both physical and psychological distance between teachers and students” (Neuliep, 1997, p. 431). In addition to physical and psychological or social distance, organizational behaviour researchers add that distance includes a third factor called perceived interaction frequency (Antonakis & Atwater, 2002). In the corporate context, physical, psychological/social, and interaction frequency distance between leader and follower can vary considerably depending on the organization and professional context (Antonakis & Atwater, 2002). However, in the HEI module context, these three distance factors between instructor-leader and student-follower may be similar across HEIs.

Physical distance refers to the location of the leader in relation to followers. In the HEI module context, instructors may be located either physically close or distant to students. Instructors who are physically close to students may walk around the classroom, use appropriate touch, call students by name, gesture during class, etc. (Neuliep, 1997). Conversely, a physically distant instructor may lecture behind a podium without soliciting feedback from students. The extent to which an instructor is physically close or distant to students is likely to depend on class size.

Towards the end of the twentieth century, class sizes have increased considerably because of increasing access to higher education around the world (Allais, 2014; Hornsby &

Osman, 2014). This phenomenon is often referred to as 'massification' in higher education. With such rapid increases in student enrolment, and the resulting increases in student to staff ratios, it is not uncommon to see first year undergraduate classes with over six hundred students (Allais, 2014). In such large classes, instructors may be limited by the extent to which they can be physically close to students, e.g., difficulties in recalling names in large classes or the need to stand on a platform or stage to ensure visibility in large classes. There is evidence which suggests that larger classes are more distant than smaller ones (e.g., Kendall & Schussler, 2012).

Social or psychological distance is defined as "perceived differences in status, rank, authority, social standing, and power" (Antonakis & Atwater, 2002, p. 682). In the instructor-student relationship, students are likely to respect instructors because of the instructors' experience, knowledge, and/or confidence in the subject (Kendall & Schussler, 2012). Differences in knowledge level between instructor and student are likely to exist, particularly at the undergraduate level. These knowledge differences may limit interactions between instructors and students, and thus contribute to social distance in the relationship (Kendall & Schussler, 2012). Additionally, limited interactions means that students are not likely to become personally acquainted with instructors, thus further increasing social distance (Antonakis & Atwater, 2002).

Perceived frequency of interaction refers to "the perceived degree to which leaders interact with their followers" (Antonakis & Atwater, 2002, p. 686). With the massification in higher education, increasing student to staff ratios may limit the frequency of interactions instructors can have with students in the HEI module context. Student to staff ratios in a module is akin to a supervisor's span of control in an organization. Span of control refers to the number of subordinates for which a supervisor is responsible. As a leader's span of control increases, the frequency of interactions with their followers may decrease (Antonakis & Atwater, 2002).

Antonakis and Atwater (2002) explain that "when leaders supervise a greater number of followers … it theoretically becomes increasingly difficult for the leader to spend more time with his/her followers". Hence, the logistics of large-group teaching limits the extent to which instructors can spend time with their students, e.g., spending time to provide feedback and guidance. With infrequent interactions, the instructor would be perceived as being distant.

The coexistence of physical distance, social or psychological distance, and frequency of interactions determine overall distance in leader-follower relations. Based on these three factors, Antonakis and Atwater (2002) propose eight typologies of which two are likely to be relevant to higher education teaching. *First*, 'manor house leadership' entails low physical distance, high social distance, and low frequency of interactions (Antonakis & Atwater, 2002). Similar to CEOs or top-level managers, manor house instructor-leaders do not, and cannot, share intimate relationships with their student-followers even though these instructor-leaders may be perceived as physically close (Antonakis & Atwater, 2002). *Second*, 'distal leadership' entails high physical distance, high social distance, and low frequency of interactions (Antonakis & Atwater, 2002). Distal instructor-leaders remain distant with followers and contact is infrequent (e.g., once or twice a week) and staged (e.g., rehearsed lectures) (Antonakis & Atwater, 2002). Both typologies are reflective of an overall distant relationship between instructor and student in HEI module interactions.

Followers as 'customers'. As mentioned in chapter one, HEIs are facing changing socioeconomic conditions which have led to their shift towards a service quality mentality in order to attract students. A primary component of delivering high quality service to students is university teaching (J. Douglas et al., 2006). The teaching quality provided by instructors is viewed as a service being offered to students. From this perspective, students are regarded as

'customers' of the university and its employed instructors (Babbar, 1995; Guttenplan, 2014). At the same time, students can also be regarded as followers of instructor-leaders in the module context.

The view that an instructor-leader's students are simultaneously customers and followers is unique in leadership research. Typically, leadership researchers examine the relationship between a supervisor/manager and an employee. From this corporate perspective, (1) the employee (follower) 'serves' the supervisor (leader), (2) employees receive payment for their efforts/service, and (3) employee evaluations of supervision quality are infrequently utilized (Bernardin, 1986). Contrastingly, in the HEI module context, (1) the instructor (leader) 'serves' the student-customers (followers) vis-à-vis teaching, (2) students pay for the instructor's efforts/service, i.e., teaching, and (3) students' commonly evaluate the teaching quality for each module, with these evaluations being the primary determinant of instructors' teaching quality.

The unique customer perspective in instructor-student relationships has implications for accountability and entitlement. With respect to *accountability* in the corporate context, employees are accountable to their supervisor because employees' performance impacts on the department or division's success. In comparison, in the HEI module context, students are primarily accountable to themselves because students' performance directly affects their own success. With regards to *entitlement* in the corporate context, employees may feel that they deserve to receive fair remuneration for their efforts (refer to equity and expectancy theories in organizational behaviour research). However, in the module context, students may feel that they deserve to receive value for their tuition payments. Perceived value refers to "the consumer's overall assessment of the utility of a product [or service] based on perceptions of what is received and what is given" (Zeithaml, 1988, p. 14). In the higher education context, students

may believe that they are entitled to receive high quality teaching in return for giving tuition payments (for further reading on academic entitlement and student consumerism see Delucchi & Korgen, 2002; Singleton-Jackson, Jackson, & Reinhardt, 2010). Overall, in the HEI module context, leader-follower dynamics with respect to accountability and entitlement are fundamentally different to that in the corporate context because of the unique 'follower as customer' perspective in HEIs.

Temporary group dynamics. Much of leadership research has focused on the relationship between supervisor and employee in permanent work groups, with few exceptions (e.g., Lamude, Scudder, & Simmons, 2000). Permanent groups are formed for an indefinite time period to achieve an ongoing objective (Barker, 1992). In these groups, individuals are usually more tolerant of each other and more committed to the group than in temporary groups because of the 'permanent' duration of the group (Barker, 1992). In comparison to permanent groups, temporary groups feature leader-follower dynamics that are different to those in permanent groups.

Temporary groups are created to accomplish a time-limited task, e.g., task forces or ad hoc groups (Barker, 1992). In these groups, individuals with diverse skills are usually brought together to accomplish a task. HEI module groups, comprising of instructor and students, are similar to temporary groups because the former is designed to achieve set learning goals over a limited time-period. However, HEI module groups are different to temporary corporate groups because students are neither interdependent nor working towards completing a common task. Still, the similarities between HEI module groups and temporary corporate groups, highlight some common elements unique to leadership research. In temporary groups, individuals may behave differently and expect different things than in permanent groups. Barker (1992) explains

that individuals in temporary groups may take more risks and be more vocal in order to meet set deadlines, e.g., students may 'cram' a few days before an exam or speak out against other group members in attempting to complete a group project. In addition, group members' psychological investment in a temporary group is likely to be less than in permanent groups because temporary group members are acutely aware of the group's pending termination (Barker, 1992).

In all, the HEI module context features characteristics which are unique to leadership research. I outlined these unique features with respect to distance, the 'customer' mentality, and temporary groups. These three attributes of the module context has implications for leadership theories when examined in this context. In the upcoming sections, I elaborate on each of the leadership theories that has been investigated in module context. In so doing, I also highlight how the uniqueness of the module context can impact upon the applicability of transformational and destructive leadership in this context.

2.1.3 Timeline of instructor leadership studies. The fourth wave of instructor-leadership is not completely new, but rather a re-emerging concept. Baba and Ace (1989) indicate that the origin of instructor-leadership was proposed by Greenfield and Andrews in 1961. Dawson (1970) later published a book on instructor-leadership and student performance. However, instructor-leadership only began to garner attention around the 1980s. Around this time, the focus of instructor-leadership was on instructors in formal roles as emphasized in the first wave of instructor-leadership research. The fourth wave of research, i.e., instructors as leaders in HEI module interactions, began to gain momentum at the beginning of the twenty-first century.

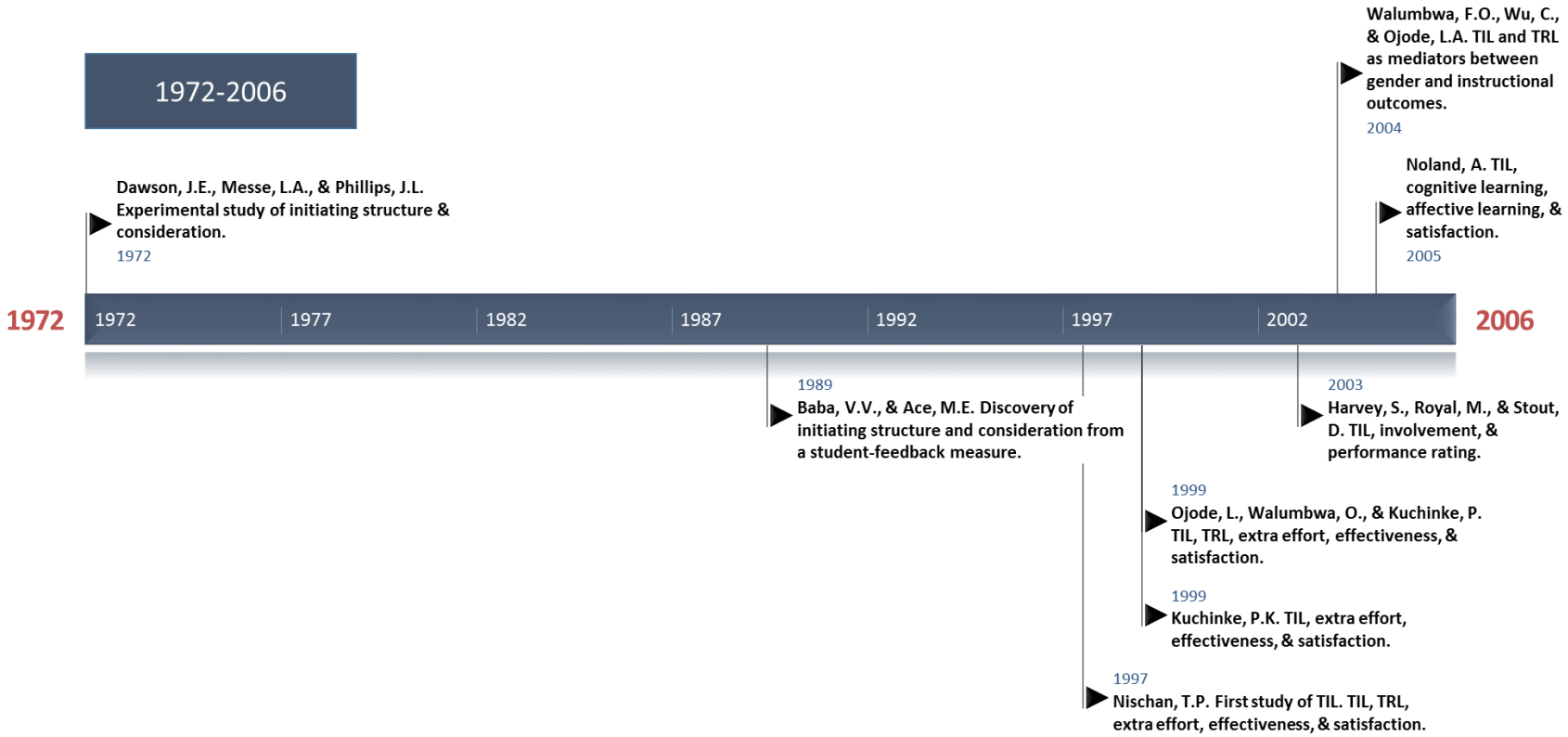

Figure 1. Timeline of empirical studies of behavioural, transactional, and transformational instructor-leadership in the higher education module context (1972 to 2006). Publication date is used where available, otherwise the first day of the year is used. TRL = transactional instructor-leadership, TIL = transformational instructor-leadership.

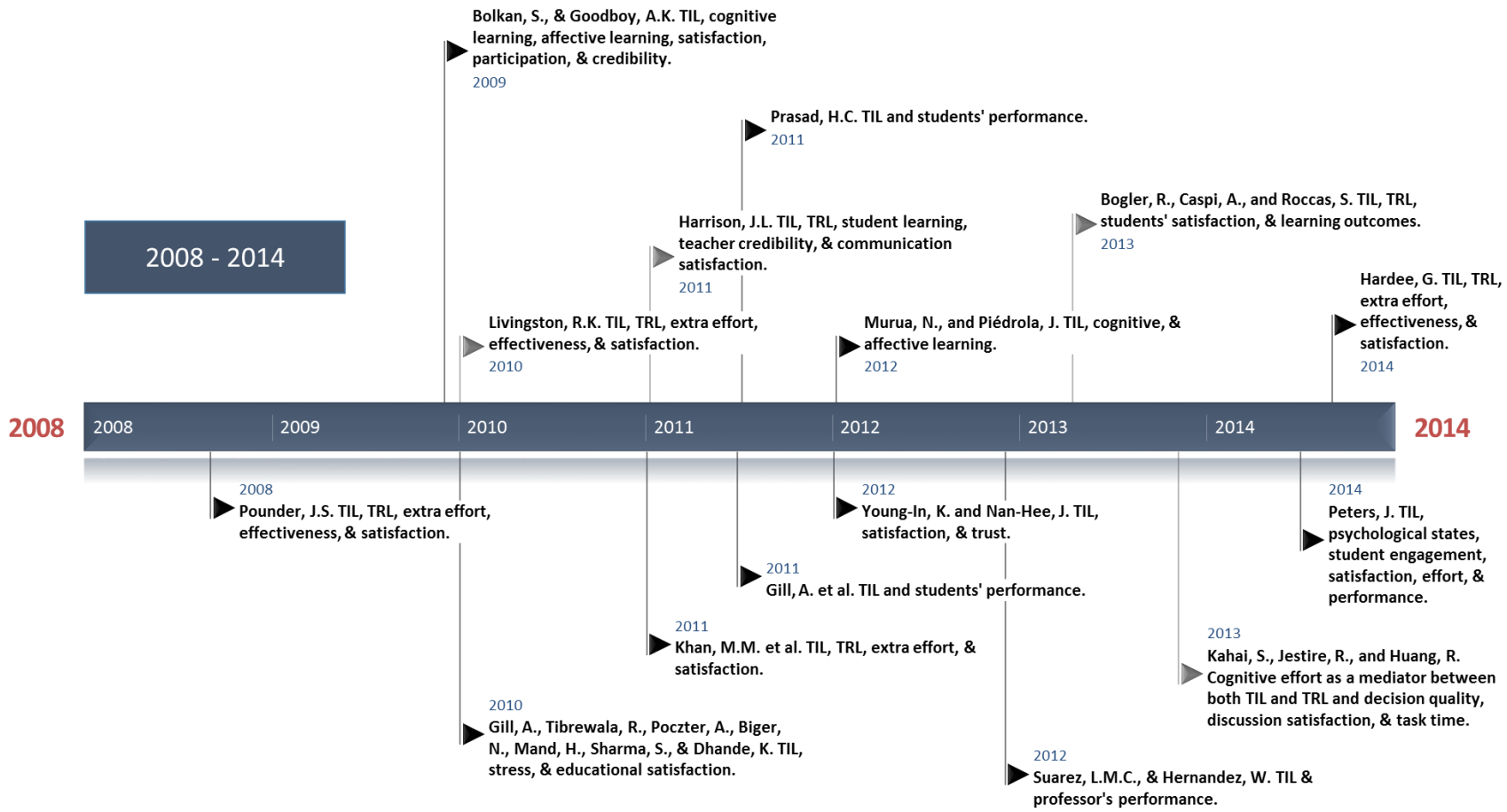

Figure 2. Timeline of empirical studies of transactional and transformational instructor-leadership in the higher education module context (2008 to 2014). Publication date is used where available, otherwise the first day of the year is used. Grey arrows/pointers indicate studies of transformational instructor-leadership in online modules. TRL = transactional instructor-leadership, TIL = transformational instructor-leadership.

The conceptualization of instructor-leadership in this fourth wave of instructor-leadership is consistent with my earlier definition of instructor-leadership, i.e., instructors as leaders in the HEI module context. In this dissertation, I focus solely on instructors as leaders in the HEI module context. In this context, I present a timeline of all studies to date in Figures 1 and 2. The timeline shows that instructor-leadership research has transitioned from behavioural leadership to transactional and transformational leadership. There are also few studies that examine concepts potentially related to destructive instructor-leadership in higher education, but none of these studies explicitly reference leadership theory, and are thus not included in the timelines. In the next four sections, I examine behavioural, transactional, transformational, and destructive leadership theories, referencing both organizational behaviour and educational approaches to leadership. For the educational approaches to transformational and destructive leadership, I highlight how the uniqueness of the HEI module context impacts upon the application of the respective leadership theory.

2.2 Behavioural Leadership

2.2.1 Organizational behaviour approach. Behavioural theories of leadership investigate leaders' actions. These theories originated from research conducted by Ohio State University and Michigan State University (see Judge, Piccolo, & Ilies, 2004). Studies from both institutions categorize leader behaviour as being either *task driven* (i.e., initiating structure and production oriented respectively) or *relationship-oriented* (i.e., consideration and employee oriented respectively). These two types of leader behaviours are also represented on a managerial grid (Blake & Mouton, 1994).

Unfortunately, initiating structure and consideration have fallen out of favour with researchers, even though a meta-analysis supports the validity of these concepts (see Judge et al.,

2004). The meta-analysis findings indicate that both consideration and initiating structure are moderately related to leadership outcomes such as follower job satisfaction, follower satisfaction with leader, leader job performance, group-organization performance, and leader effectiveness (Judge et al., 2004). Given the validity of behavioural theories of leadership, it is surprising that only a few researchers examined its usefulness in the HEI module context.

2.2.2 Educational approach. In the earliest conception of instructor-leadership, few researchers provide support for the use of *initiating structure* and *consideration* in a HEI module. In an experimental study, Dawson et al. (1972) found that classes generally perform better when instructors use high consideration in comparison to low consideration. In their study, the low consideration/high initiating structure group perceived instructor behaviour as undesirable as indicated by students' overtly hostile reactions towards the instructor. Dawson et al. (1972) suggest that the relatively weaker relationships for initiating structure may be because these behaviours cannot be fully represented in a HEI module setting. Nonetheless, their research provides a solid foundation for linking behavioural leadership theories to teaching. Even though the authors claim that initiating structure may not be fully represented in the HEI module, this limitation may have been due to the adaptation of supervisory behaviours to the classroom; items from the Supervisory Behavior Questionnaire are adjusted and some are omitted. In a later study, Baba and Ace (1989) took a more context-sensitive approach by measuring behavioural instructor-leadership as perceived by students.

Baba and Ace (1989) analyzed connections between a school-specific measure that is designed to evaluate instructors' module performance. The use of a school-specific measure, as opposed to an organizational behaviour-developed measure of leadership, is intuitive for establishing connections between instructor behaviour and leadership. The school-specific

measure used by Baba and Ace (1989) captures the naturally occurring perceptions and socially constructed meanings that students developed in the module itself. Baba and Ace (1989) used factor analysis and discovered that two of four factors are indicative of consideration and initiating structure[2].

Both Dawson et al. (1972) and Baba and Ace (1989) provided the foundation for instructor-leadership research. Following these studies, leadership researchers later turned their attention to transformational instructor-leadership and, by inclusion, transactional instructor-leadership.

2.3 Transactional Leadership

2.3.1 Organizational behaviour approach. *Transactional* leadership is an exchange process between leader and follower that is characterized by transactions (Judge & Piccolo, 2004). Three key dimensions of transactional leadership theories are contingent reward, management by exception, and laissez-faire (Bass, 1990). *Contingent reward* occurs when a leader exchanges rewards for followers' achievement of a specific goal, e.g., high effort, good performance, etc. (Bass, 1990). *Management by exception* describes the extent to which leaders take corrective action towards followers' goal accomplishment (Bass, 1990). Management by exception can be executed by taking corrective action either (1) *after* a deviation from goals has occurred (passive) or (2) *before* a deviation from the goal has occurred (active) (Bass, 1990; Judge & Piccolo, 2004). *Laissez-faire* refers to a relinquishment of responsibility or a lack of leadership (Bass, 1990; Judge & Piccolo, 2004).

[2] The other two factors represented students' concerns regarding their effort and evaluation.

Contingent reward, management by exception, and laissez-faire are often considered routine and unremarkable. The findings of a meta-analysis by Judge and Piccolo (2004) partially support this notion. The authors found that passive and non-leadership, i.e., management by exception (passive) and laissez-faire, are negatively related to follower criteria. Specifically, management by exception (passive) is negatively related to follower motivation and leader effectiveness. Laissez-faire is negatively related to follower satisfaction with leader, leader job performance, and leader effectiveness.

The findings of Judge and Piccolo's meta-analysis also support the view that transactional leadership can be effective (Judge & Piccolo, 2004). Both management by exception (active) and contingent reward are positively related to follower satisfaction with leader, follower motivation, leader job performance, and leader effectiveness. In summary, the passive and non-leadership dimensions are ineffective whereas the active and contingent reward dimensions are effective. Evidence from the educational approach to transactional leadership also supports this conclusion.

2.3.2 Educational approach. In instructor-student HEI module interactions, transactional leadership means that instructors and students are in a relationship that is characterized by 'transactions' in which instructor-leaders clarify the paths for students to obtain rewards (Bass, 1997), e.g., an instructor may reward students' valuable class contributions with praise or punish students' poor exam performance with bad grades. The findings from the educational approach to transactional leadership support the findings from the organizational behaviour literature. *Management by exception (active)* and *contingent reward* are both positively associated with student satisfaction, extra effort, and perceived instructor effectiveness (Pounder, 2008; Walumbwa, Wu, et al., 2004). On the other hand, *management by exception*

(passive) and *laissez-faire* leadership styles are negatively related to students' extra effort, satisfaction, and perceptions of instructor effectiveness (Pounder, 2008; Walumbwa, Wu, et al., 2004).

Of all the dimensions of transactional leadership, contingent reward is the most strongly related to desirable outcomes. Some researchers questioned whether the contingent reward dimension of transactional leadership is truly distinct from transformational leadership (Judge & Piccolo, 2004; Pounder, 2008; Sarros & Santora, 2001; Yukl, 1999). For instance, in Judge and Piccolo's meta-analysis, contingent reward correlates highly with transformational leadership and is as effective as transformational leadership if performance is measured objectively. Therefore, contingent reward appears to "'[straddle] the transformational-transactional leadership continuum" (Pounder, 2008, p. 126).

2.4 Transformational Leadership

2.4.1 Organizational behaviour approach. Transformational leadership has become quite a dominant force in leadership research over the past 15-20 years (Judge & Piccolo, 2004). The reason for this upsurge in transformational leadership research may be due to the romance of leadership (see Meindl, Ehrlich, & Dukerich, 1985). The romance of leadership "denotes a strong belief – a faith – in the importance of leadership factors to the functioning and dysfunctioning of organized systems" (Meindl & Ehrlich, 1987, p. 92). Studies show a small to medium positive relationship between romance of leadership and transformational leadership (see a meta-analysis by Schyns, Felfe, & Blank, 2007). Therefore, the romance of leadership may explain why transformational leadership has been the center of attention in leadership research.

Transformational leadership is often referred to as a ‘new paradigm’ theory or ‘the new leadership’ approach (Bryman, 1992). The concept of transformational leadership was first introduced by Burns (1978). In the literature, the term transformational is often used interchangeably with some of its dimensions, such as charismatic, visionary, or value-based (N. Anderson, Ones, Sinangil, & Viswesvaran, 2001). Transformational leadership was defined earlier as one who “articulates a realistic vision of the future that can be shared, stimulates subordinates intellectually, and pays attention to the differences among the subordinates” (Yammarino & Bass, 1988, p. 2). Even though Yammarino and Bass (1988) refer to the leader’s targets as ‘subordinates’, Bass (1997) later recognizes that transformational leadership can occur in less formal non-corporate settings, e.g., housewives active in their community or students in work groups. A transformational leader is typically characterized in terms of four dimensions, including charisma, inspirational motivation, individualized consideration, and intellectual stimulation (Bass, 1990).

Perhaps the most prominent dimension of transformational leadership, as evidenced by its synonymy with transformational, is *charisma* (also referred to as idealized influence). Charisma stems from the Greek word meaning ‘gifted’ or ‘favoured’ (Johns & Saks, 2007). Weber (1947) described a charismatic leader as one who “is endowed with exceptional qualities” (p. 249). Charismatic qualities of a leader is determined by a function of traits, behaviours, and facilitating conditions (Johns & Saks, 2007; Yukl, 2009). Charismatic *traits* can be grouped into physical characteristics (e.g., Bryman, 1992; Willner, 1984) psychological characteristics (e.g., Turner, 1993); and ability characteristics (e.g., N. Anderson et al., 2001). Charismatic *behaviours* are usually described as being unconventional, innovative, self-sacrificial, inspirational, and dynamic (Yukl, 2009). Finally, the importance of charismatic behaviours and traits can be

affected by the *context*. Specifically, charisma usually works best in crisis situations (Yukl, 2009).

Even though charisma is often described in highly favourable terms, it is also linked to destructive behaviours. House and Howell (1992) distinguish between socialized charismatic leadership and personalized charismatic leadership. Socialized charisma is regarded as the positive side of charisma (as explained in transformational leadership theory). Personalized charisma is regarded as a sinister side of charisma that is associated with narcissism, authoritarianism, and exploitation of followers for the satisfaction of the leader's self-interest. Therefore, personalized charisma is associated with a dark side to leadership (which is explored later on). Unless otherwise stated, charisma is used interchangeably with socialized charisma in this dissertation.

A second dimension of transformational leadership, which is similar to charisma, is *inspirational motivation*. Inspirational motivation is the articulation of appealing visions through the use of optimism, enthusiasm, setting of high expectations, and use of symbols to focus efforts (Bass, 1990, 1997). Inspirational motivation has been associated with behaviours that fascinate and entice followers to the leader's vision.

A third dimension of transformational leadership is *individualized consideration*. Individualized consideration is the treatment of followers as unique individuals, giving specialized attention to their needs and lending support when necessary so that they can realize their full potential (Bass, 1990, 1997). Individualized consideration entails relationship building as well as some form of coaching or mentoring that utilizes feedback (N. Anderson et al., 2001; Bass, 1990, 1997). These behaviours are similar to consideration as identified in the Ohio State

studies. For instance, Rafferty and Griffin (2006) explain that consideration can be divided into supportive and developmental activities. Supportive activities entail the leader's use of empathetic behaviours, and developmental activities involve the leader's concern for followers' personal and career development. These leader behaviours are very similar to the mentoring and coaching facets of individualized consideration. However, Bass and Avolio (1992) argue that individualized consideration focuses more on individualization and follower development than consideration. Although the similarities between the two concepts are unmistakable, individualized consideration appears to emphasize more one-to-one interactions.

The final dimension of transformational leadership is *intellectual stimulation*. Intellectual stimulation is the arousal of followers' "awareness of problems" and "thoughts and imagination" (N. Anderson et al., 2001, p. 177). Intellectually stimulating behaviours challenge and help followers to conceptualize, comprehend, and analyze problems, issues, and strategies (N. Anderson et al., 2001; Johns & Saks, 2007). Thus, these leaders promote "intelligence, rationality, and careful problem solving" (Bass, 1990, p. 22).

Charisma, inspirational motivation, individualized consideration, and intellectual stimulation are typically combined to represent transformational leadership. Meta-analyses confirm the effectiveness of transformational leadership in predicting leader effectiveness, individual and group performance, follower job satisfaction, satisfaction with leader, and follower motivation (Derue, Nahrgang, Wellman, & Humphrey, 2011; Judge & Piccolo, 2004; G. Wang, Oh, Courtright, & Colbert, 2011). As a result, it is of no surprise that there is an emerging body of research examining transformational leadership in instructor-student relationships.

2.4.2 Educational approach. Transformational leadership is a widely researched framework that has been shown to have predictive value, with research evidence that are replicated across various settings and cultures. One setting in which transformational leadership may also be of value is that of higher education modules. Like their corporate counterparts, transformational leaders in higher education modules, "must … be able to mobilize resources, mould their students, motivate them, and instil in them the commitment to a worthy cause" (Babbar, 1995, p. 37). Communication and educational researchers offer concepts that can be linked to the four dimensions of transformational instructor-leadership (see Table 2). For communication research, Bolkan and Goodboy (2011) conducted a content analysis in which students described their perceptions of behaviours that are indicative of transformational leadership. Students described behaviours for charisma, intellectual stimulation, and individualized consideration (these behaviours are listed in the column labelled 'Communication research' in Table 2). Educational research suggest potential links to transformational leadership through concepts such as teacher clarity (Hativa, 1998), rapport, and intellectual excitement (Lowman, 1995). Also, educational research on students' expectations of teaching as well as their evaluation of teaching quality highlight other teaching behaviours that may be linked to transformational leadership (these behaviours are listed in the column labelled 'Educational research' in Table 2) (Apodaca & Grad, 2005; Nussbaum, 1992; Sander, Stevenson, King, & Coates, 2000).

Meta-analytic review of transformational instructor-leadership. In addition to communication and educational research, some researchers directly examine the use of transformational leadership theory to higher education teaching, i.e., transformational instructor-leadership. However, such research is fractionated across diverse fields. To address this issue, I

Table 2

Potential Links between Transformational Leadership Dimensions, Communication Research, and Educational Research

Transformational leadership dimension	Communication research	Educational research
Charisma/idealized influence	Teacher confirmation Verbal and non-verbal immediacy Humour Caring Availability Content relevance Attitude homophily Equality Self-disclosure	High energy and dramatic tension Appears to love presenting Pacing of lecture Ability to modulate the voice Interpersonal skills Verbal and nonverbal behaviour (e.g., movement, gestures, eye contact) Clarity Use of narrative and anecdotal examples Enthusiasm Immediacy Humour
Inspirational motivation	N/A	Clear and challenging goals Stimulating
Individualized consideration	Teacher availability Individualized feedback Verbal immediacy Personalized content Conveying interest Special considerations Student history Encouraging participation	Rapport Interpersonal skills and approachability Feedback/evaluation
Intellectual stimulation	Teaching style Challenging students Independent thought Classroom participation Humour Content relevance	Intellectual excitement Content well-organized Stresses relationships between concepts and applications to new situations Use of conceptual examples Arrangement for classroom interaction

conducted a meta-analytic review of transformational instructor-leadership, and analyzed research in which such leadership has been empirically associated with student outcomes (see Appendix A). In comparison to individual studies, a meta-analysis provides more precise estimates of the effect sizes for the association between transformational instructor-leadership

and student outcomes including its generalizability. Here, I briefly describe the methods and findings from the review, and explain the methodological issues in more detail.

Methods. For the meta-analysis, I included only quantitative studies in order to examine empirical relationships. I searched for higher education studies that explicitly examined transformational leadership theory in relation to the outcomes hypothesized in Appendix A, i.e., students' motivation, perceived instructor credibility, satisfaction with leader, affective learning, cognitive learning, and academic performance (see Table A1 for keywords and search engines). Based on the electronic search results, I conducted both a backward and forward search for additional articles. In so doing, I collaborated with authors to either source full-text copies or clarify findings in some of the studies. Of the 40 retrieved studies, 22 met the criteria for the meta-analysis (see 'Inclusion criteria' in Appendix A). For the analysis, the Hunter-Schmidt approach was adopted, and thus correlations were corrected for attenuation due to measurement error (Hunter & Schmidt, 2004).

Findings. The findings indicated that transformational instructor-leadership was positively associated with students' motivation ($\hat{\bar{\rho}}$ = .47), perceived instructor credibility ($\hat{\bar{\rho}}$ = .72), satisfaction with leader ($\hat{\bar{\rho}}$ = .62), affective learning ($\hat{\bar{\rho}}$ = .73), and cognitive learning ($\hat{\bar{\rho}}$ = .52) (see Table 3). For these five outcomes, the mean correlations were distinguishable from zero, in that the 90% confidence intervals did not include zero. Additionally, the 80% credibility intervals excluded zero indicating that more than 90% of the individual correlations were greater than zero. In comparison to the other outcomes, transformational instructor-leadership had a relatively weaker, yet still positive relationship with students' academic performance ($\hat{\bar{\rho}}$ = .19). Also, the 90% confidence intervals did not include zero. However, the 80% credibility intervals

Table 3

Relationships of Transformational Instructor-Leadership with Students' Outcomes

					80% CV_{ρ}		90% $CI_{\hat{\bar{\rho}}}$		
Criterion	k	N	$\bar{r}$	$\hat{\bar{\rho}}$	Lower	Upper	Lower	Upper	Q
Motivation	17	2676	0.40	0.47	0.05	0.89	0.34	0.60	1263.69
Perceived instructor credibility	15	1889	0.62	0.72	0.50	0.95	0.65	0.80	798.79
Satisfaction with leader	20	3362	0.53	0.62	0.33	0.90	0.53	0.70	4948.77
Academic performance	7	1493	0.16	0.19	-0.08	0.46	0.05	0.33	85.62
Affective learning	4	665	0.68	0.73	0.63	0.83	0.66	0.80	20.28
Cognitive learning	4	665	0.47	0.52	0.38	0.66	0.42	0.62	19.52

Note. k = number of independent samples/correlations; N = combined sample size; $\bar{r}$ = sample-size weighted mean uncorrected correlation; $\hat{\bar{\rho}}$ = estimated corrected mean correlation or true-score correlation for unreliability in both the predictor and the criterion; CV = credibility interval; CI = confidence interval.

included zero, indicating that more than 10% of the correlations included in the analysis were negative.

The relatively weak relationship between transformational instructor-leadership and students' academic performance was surprising given that transformational leaders should inspire followers to achieve high levels of performance. Still, the relatively weaker strength of this relationship does corroborate with those reported by previous transformational leadership meta-analyses (see Judge & Piccolo, 2004; G. Wang et al., 2011). Perhaps transformational instructor-leadership may be a more distal antecedent in the causal chain for students' academic performance in comparison to antecedents such as motivation and learning. Very few studies examine the mechanisms in the relationship between transformational instructor-leadership and students' performance. I elaborate on this shortcoming below in my discussion of the conceptual implications arising from the meta-analysis.

Conceptual implications. There are some conceptual concerns with respect to the studies included in the meta-analysis. These conceptual issues include context sensitivity, lack of investigation of mechanisms, and dimensionality

Uniqueness of the HEI module context. The transformational instructor-leadership studies measure transformational leadership primarily with the MLQ. As explained earlier, the MLQ was developed to measure leadership in a supervisor-employee relationship. Therefore, the use of this corporate oriented measure can be problematic because the nature of instructor-student relationships is different to that of the typical supervisor-employee relationship. In the instructor-student relationship, transformational leadership is likely to function differently to the

typical supervisor-employee relationship because of the uniqueness of the HEI module context with respect to distance, followers as customers, and temporary/short-term group length.

Antonakis and Atwater (2002) explain that transformational leadership behavioural dimensions are sometimes based on the assumption of a lack of *distance*. For instance, charisma as an observable behaviour implies closeness between leaders and followers (Antonakis & Atwater, 2002). Similarly, 'individualized' consideration involves personalized attention, which infers a high degree of intimacy and closeness (Antonakis & Atwater, 2002; Popper, 2013). As explained earlier, instructor-leaders are more likely to use manor house or distal leadership with respect to distance, and thus the assumption of closeness is not a realistic assumption in higher education modules. Instead, transformational leadership may be applicable to the higher education context in limited ways. For instance, student-followers may be more prone to instructors' impression management techniques because the students lack information about their distant instructor-leader (Antonakis & Atwater, 2002). Consequently, attributed charisma is likely to be more applicable than charismatic behaviours (Antonakis & Atwater, 2002). In addition, instead of individualized consideration, instructors may be constrained to using more distant and general consideration akin to that described in behavioural theories of leadership, e.g., making helpful comments on papers/exams, showing concern for students' progress, being generally helpful in class by responding to questions and allowing students to express their viewpoints, etc. (Baba & Ace, 1989).

The view that students are simultaneously followers and *'customers'* of the instructor-leader has implications for entitlement that can mitigate the effects of transformational instructor-leader behaviours. From the customer perspective, students may come to expect high quality teaching delivered via transformational leader behaviours in a HEI module. Students may

expect their instructors to be charismatic, intellectually stimulating, and supportive because the instructors are being paid to do so. As explained by Gill et al. (2010), when students expect their instructors to use transformational leadership in teaching, these expectations may diminish the impact of transformational leadership behaviours because these leader behaviours are not seen as extraordinary.

The *temporary* nature of HEI module groups has implications for vision – a core element of transformational leadership. Rafferty and Griffin (2004) define vision as "[t]he expression of an idealized picture of the future based around organizational values" (p. 332). Rafferty and Griffin infer that this future is usually in the medium to long-term, i.e., their measure includes an item which refers to five years (Rafferty & Griffin, 2004). In the long-term, it is important for transformational leaders to repeatedly articulate the vision or ideology of their unit or organization in order to 'rally the troops'. In other words, over time, followers may need to be reminded of the overall purpose of their group in order to rekindle their motivation. However, in the short-term, like the typical higher education module, articulation of a vision is of less importance and perhaps irrelevant. Instructor-leaders do not need to frequently express a picture of the future for students, because a module is usually completed in a few months to a year. Instead of emphasizing a vision, instructor-leaders may need to focus more on short-term goals or objectives (Treslan, 2006b). In contrast to a vision, which describes a transcendent ideal that can never be fully achieved in practice, an objective is specific and achievable (S. Kirkpatrick & Locke, 1996). Higher education modules are usually designed to achieve (1) general objectives, which usually state what students should understand at the end of a module and (2) specific learning goals for each session or module. Transformational instructor-leaders may need to focus

more on directing students towards accomplishing these short-term learning objectives and less on articulation of a 'vision'.

Overall, the uniqueness of the HEI module context has important implications for the use of transformational leadership. Transformational leadership is applicable to the module context, but in limited ways. Studies that rely on the wholesale adoption of organizational behaviour developed frameworks to measure transformational instructor-leadership, without any recognition of the unusual features of instructor-student relations in the module context, need to be viewed with caution. In other words, it is not possible to directly apply transformational leadership theory to educational settings because of salient contextual differences between corporate and educational settings. But, it is possible to use transformational leadership and what we know about it as a starting point for building our understanding of module leadership in higher education. Therefore, there is a need for research that focuses on refining and perhaps developing a more context-sensitive measure of transformational instructor-leadership. For instance, Bolkan and Goodboy (2011) have taken initial steps towards developing an entirely new measure based on students' perceptions of transformational teaching. Further research needs to build upon this type of work in developing and validating a context-sensitive measure of transformational instructor-leadership.

Lack of investigation of mechanisms**.** All but one of the included studies examine the direct relationship between transformational instructor-leadership and outcomes. The one exception is Kahai et al. (2013), and they show that some outcomes, e.g., motivation, can be a precursor to other outcomes such as students' performance. Therefore, in order to understand how transformational instructor-leadership influences outcomes that are further in the causal chain, future research should examine the mechanisms through which instructor-leadership

behaviours influence these outcomes. As explained in Chapter 1, theory building requires an understanding of mechanisms because they help to address the query of 'why', e.g., why is transformational instructor-leadership related to student achievement (Colquitt & Zapata-Phelan, 2007; Sutton & Staw, 1995). As explained by Sutton and Staw (1995), strong theory provides "convincing and logically interconnected arguments" for the "underlying processes so as to understand the systematic reasons for a particular occurrence or nonoccurrence" (p. 378). Although there are a variety of mechanisms that can be investigated, one promising framework is that of student engagement.

To date, only one study examined the relationship between transformational instructor-leadership and student engagement. Drawing from organizational behaviour research, Peters (2014) explains that engagement is a highly activated and positive state for which both students and employees can be emotionally, behaviourally, and cognitively invested. Specifically, Peters (2014) proposes that students can immerse themselves in their work (e.g., during class, homework, and studying) in the same way that employees immerse themselves in their work (the parallels between employee engagement and student engagement is explained in more detail in the next chapter). In her study, Peters (2014) adapts Rich, Lepine, and Crawford's (2010) corporate measure of engagement in order to investigate psychological states as mechanisms in the relationship between transformational instructor-leadership and student engagement. The author's findings showed that transformational instructor-leadership is positively related to student engagement. However, engagement itself is likely to be a mechanism in the relationship between transformational instructor-leadership and more distal outcomes such as students' performance. Engagement as a mechanism is discussed in more detail in the next chapter.

Dimensionality**.** Across the transformational instructor-leadership studies, there is some inconsistency regarding the dimensionality of transformational instructor-leadership. Most of the studies combine the leadership dimensions into a single construct because these studies subscribe to the additive model for which the dimensions are interrelated. In spite of the high correlations between the dimensions, Harvey et al. (2003) assert that each dimension should be analyzed separately. Their findings indicate that (a) charisma plays a larger role in affecting students' perceptions of instructor effectiveness than other dimensions; (b) individualized consideration is more important in soliciting student involvement than other dimensions; and (c) intellectual stimulation is moderately associated with both perceived effectiveness and student involvement. These findings suggest that a single construct of transformational instructor-leadership may be masking the association between each dimension and specific outcomes.

Methodological implications. In addition to the conceptual concerns, there are also methodological shortcomings for the studies in the meta-analysis. While there have been considerable methodological improvements in recent studies, many of the studies are characterized by issues regarding common method variance, control variables, and causal conclusions.

Common method variance. In many of the included studies, common method variance (CMV) is a potential source of measurement error. CMV is defined as "variance … attributable to the measurement method rather than to the constructs the measures represent" (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p. 879). CMV is a potential problem because most of the data is collected using a single measure that is distributed at one point in time. CMV can adversely affect reliability and convergent validity of the scales (Podsakoff, MacKenzie, &

Podsakoff, 2012). In addition, CMV may also bias estimates regarding predictors of criterion variables (Podsakoff et al., 2012).

Although the effects of common method bias are not usually strong enough to invalidate research findings, it can be a cause for concern (Doty & Glick, 1998). Consequently, future research may wish to adopt techniques that are used in a few of the included studies in order to reduce common method bias. For instance, Walumbwa et al. (2004) and Harrison (2011) attempt to minimize the potential effects of common method bias by using mean-centered variables and controlling for social desirability respectively. Other studies collect data from different sources, e.g., measuring participation using posts in an online module (e.g., Bogler, Caspi, & Roccas, 2013) or academic performance using grades (e.g., Bogler et al., 2013; J. Harrison, 2011; Peters, 2014). A final approach may be to employ a marker variable technique (see Williams, Hartman, & Cavazotte, 2010). All of these approaches can minimize measurement error, and therefore improve confidence in the resulting estimates.

Control variables. In most of the studies, the influence of extraneous factors that can affect student outcomes are not included. For instance, findings in educational research showed that there is a strong association between students self-concepts and learning outcomes in a HEI module (e.g., Heikkilä & Lonka, 2006). As such, controlling for student factors can illuminate whether transformational instructor-leaders can influence student outcomes over and above students own influence.

Causal conclusions. Although most of the studies show associations between transformational instructor-leadership and student outcomes, causal relationships between transformational instructor-leadership and student outcomes cannot be deduced. Most of the

studies rely primarily on survey techniques at a single point in time and predominantly use statistical tests such as correlation and multiple regression. As a result, one cannot draw any causal conclusions – the evidence can indicate an inverse relationship, i.e., student outcomes influence transformational instructor-leadership (see Skinner & Belmont, 1993 for such reciprocal effects found in grades 3 to 5 classrooms).

Two of the included studies used experimental designs, and thus provide some evidence of causal direction (see Kahai et al., 2013; Peters, 2014). Building on these studies, future research may wish to adopt randomized controlled trials – the gold standard for evaluating the outcomes of an intervention. While the other methodological issues are addressed in this dissertation, I do not address causality. For this reason, I provide recommendations for conducting randomized controlled trials at the end of the dissertation. This type of research design minimizes the effects of confounding variables, greatly minimizes selection and common method bias, and provides better evidence of causality.

Summary. Transformational instructor-leadership is a relatively new concept that is receiving increasing attention in recent times. Studies have applied Bass' (1985) transformational leadership theory to the unusual HEI module context. These studies establish a promising foundation for transformational instructor-leadership. However, many of the studies are limited by (a) conceptual issues regarding uniqueness of the module context; lack of investigation of mechanisms; and dimensionality, and (b) methodological issues with respect to common method variance; control variables; and causal conclusions. These issues can adversely affect the quality of the body of research on transformational instructor-leadership, and thus need to be addressed in future research. In this dissertation, I address all of these conceptual and methodological issues, with the exception of causality.

So far, with the exception of management by exception (passive) and laissez-faire, I review leadership as a constructive force. Yet, in Yukl's definition, the leadership influence process is not inherently constructive. Interestingly, transformational leadership references a 'darker side' to leadership, i.e., personalized charisma and pseudo transformational leaders (Bass & Steidlmeier, 1999; House & Howell, 1992). The dark side of leadership is represented by the theory of destructive leadership.

2.5 Destructive Leadership

2.5.1 Organizational behaviour approach. Research has focused heavily on the positive side of leadership. However, researchers acknowledge that leadership can sometimes be destructive (Schyns & Hansbrough, 2010). Destructive leadership has adopted a variety of labels in the organizational behaviour literature, including abusive supervision (Tepper, 2000), petty tyranny (Ashforth, 1994), tyrannical leadership (Johan Hauge, Skogstad, & Einarsen, 2007), unsupportive managerial behaviours (Rooney & Gottlieb, 2007), despotic leadership (De Hoogh & Hartog, 2008), and toxic leadership (Lipman-Blumen, 2004). Krasikova et al. (2013) review these various forms of destructive leadership to arrive at a conceptualization that clarifies the characteristics and boundaries of destructive leadership. They define destructive leadership as "volitional behavior by a leader that can harm or intends to harm a leader's organization and/or followers by (a) encouraging followers to pursue goals that contravene the legitimate interests of the organization and/or (b) employing a leadership style that involves the use of harmful methods of influence with followers, regardless of justifications for such behaviour" (Krasikova et al., 2013, p. 1310). This definition highlights three key distinctions between destructive leadership and ineffective leadership or management.

First, harmful behaviours can only be classified as destructive leadership if they are used in the *process of leading* followers towards some goal. Hence, deviant work actions that are not used in the process of leading, e.g., counterproductive work behaviour, are not regarded as destructive leadership. Similarly, a laissez-faire leadership style does not involve leading, and thus represents the absence of leadership rather than destructive leadership.

Second, the definition refers to *two manifestations* of destructive leadership. The first manifestation describes a leader who influences followers towards a goal that is contradictory to the organization's interests. For instance, if an organization aims for high quality products through a number of quality control processes, a leader who persuades employees to forgo some of the testing procedures to increase the speed of production, encourages the pursuit of a destructive goal. The second manifestation refers to leaders who use harmful behaviours in the process of leading employees towards a goal. Using the same example, a leader who uses abusive behaviours towards followers to ensure that each product passes all quality control tests, is using a destructive leadership style. Schyns and Schilling (2013) add that such behaviours are only harmful if they are perceived by followers as being hostile or obstructive. Although both manifestations are independent, they can be employed simultaneously by the same leader.

Finally, destructive leadership is defined as *volitional*. With reference to the two manifestations stated above, this means that the leader chooses to follow the destructive goal, employ the destructive leadership style, or both. Krasikova et al. (2013) explain that a leader may intend to harm, but they are not necessarily consciously aware that the chosen goal or actions are harmful. Rather, they may develop unconscious rationalizations to trick themselves into believing that such destructive leadership is necessary in order to protect their ego (James & LeBreton, 2010). Krasikova et al. (2013) assert that volition is key to distinguishing between

destructive leadership and ineffective leadership. Destructive leadership describes the use of intentional leadership actions that are harmful whereas ineffective leadership refers to the unintentional absence of leadership due to a leader's inaptitude and/or low motivation to lead (Krasikova et al., 2013).

Furthermore, the leader's volitional behaviours can only be considered destructive leadership if they are *sustained* over a period of time (Schyns & Schilling, 2013). In other words, as opposed to a single destructive incident, the behaviour must be repeated in order to classify it as destructive leadership. As stated by Schyns and Schilling (2013) "a boss who has a bad day and takes it out on his or her followers should not be considered as a destructive leader" (p. 141).

Destructive leadership is associated with many harmful outcomes. A meta-analysis by Schyns and Schilling (2013) showed that destructive leadership is negatively related to followers' attitudes towards the leader, job satisfaction, job-related attitudes, justice, commitment, positive self-evaluation, and well-being. In addition, such leadership is positively associated with undesirable consequences such as follower resistance, turnover intention, counterproductive work behaviour, negative affectivity, and stress (Schyns & Schilling, 2013). Researchers examine the outcomes of destructive leadership primarily in the corporate context. However, destructive leadership can also exist in instructor-student relationships.

2.5.2 Educational approach. There is a dearth of research on destructive instructor-leadership. Some researchers examine instructors' abuse in the supervision of students' theses or projects (e.g., Goodyear et al., 1992; Hobman et al., 2009). The findings in these studies indicated that abusive supervision led to anxiety and lower psychological well-being (Hobman et al., 2009). However, caution must be advised when relating these findings to the HEI module

context because the supervision of students' theses lacks the distance featured in classroom teaching.

Thesis or project supervision usually involves the interaction between an instructor and either a small group of students or a single student. Therefore, in contrast to classroom teaching, the instructor student relationship is (1) physically close, e.g., instructor is more likely to call the student by name or ask for student feedback; (2) socially or psychologically close because of reduced status barriers and/or smaller differences in knowledge at the postgraduate level; and (3) characterized by more frequent personal interactions in providing feedback and guidance, e.g., personal emails, meetings, etc. These differences in distance between contexts may affect how destructive leadership operates in the HEI module context versus the supervision context. For instance, in a large classroom, a destructive instructor-leader may be covert in their use of destructive leader behaviours because they are exposed to a large audience. In contrast, a one-on-one supervisory relationship is more conducive to an instructor's use of directly harmful behaviours. However, in these closer supervisory relationships, instructors are less likely to be perceived by students as being destructive because of the closeness of the relationship. Thweatt and McCroskey (1996) found that students evaluated their close instructors who engaged in misbehaviours more positively than their distant instructors who did not engage in misbehaviours. In their study, students perceived distance as misbehaviour. Therefore, the distant classroom instructor-leader is more likely to be perceived as being destructive than the close thesis supervisor. In this dissertation, I focus solely on the distant undergraduate module/classroom context with respect to instructor-student relationships.

Conceptual similarities in the education literature. In the education literature, there are two concepts that are worth mentioning with regards to destructive leadership in the HEI module

context – teacher misbehaviours and disconfirmation. Teacher *misbehaviours* are defined as those teacher behaviours that disrupt student learning (Kearney et al., 1991). Instructor misbehaviour is typically conceptualized as three dimensions including offensive, indolent, and incompetent (Kearney et al., 1991). *Offensiveness* refers to teachers verbally abusing students (Banfield et al., 2006). *Indolence* is akin to the 'absent-minded' professor who is forgetful (Banfield et al., 2006). *Incompetence* means that teachers lack basic teaching skills (Banfield et al., 2006). Indolence and incompetence are regarded as ineffective leadership, and thus cannot be regarded as destructive leader behaviour (Krasikova et al., 2013). However, offensive behaviour seems to share the same conceptual space as harmful behaviour as proposed in destructive leadership theory. Similar to the offensive behaviour dimension, a concept called disconfirmation also seems to describe destructive leader behaviours in the HEI module context.

Teacher *disconfirmation* is defined as "the process by which teachers communicate to students that they are not endorsed, recognized or acknowledged as valuable, significant individuals" (Ellis, 2000, p. 266). Hence, disconfirmation represents one manifestation of destructive leadership – the use of harmful methods in the process of leading students towards a goal. These harmful methods are inclusive of disconfirmation behaviours such as rudeness; embarrassing and belittling; unwillingness to listen; arrogance and use of intimidation; communicating that he/she does not have enough time; and showing favouritism (the similarities between disconfirmation as reported by Ellis (2000) and destructive leadership are shown in Table 4). The other manifestation of destructive leadership – a leader who influences followers towards a goal that is contradictory to the organization's interest – is not apparent in the teacher disconfirmation concept. Therefore, Krasikova et al.'s (2013) definition of destructive leadership in organizational behaviour research adopts a broader perspective than disconfirmation.

Table 4

The Association Between Disconfirmation Behaviours and Destructive Leadership Concepts

Disconfirmation behaviours in educational research	Equivalent destructive leadership concepts and/or constructs in organizational behaviour research
Rudeness; embarrassing and belittling students; putting down students in class	• All explicitly represented in Tepper's Abusive Supervision Scale. (Tepper, 2000) and the construct of petty tyranny (Ashforth, 1997). • Well-documented in the workplace bullying literature (e.g., Johan Hauge et al., 2007). • Described as the undermining classification of unsupportive managerial behaviours (Rooney & Gottlieb, 2007).
Unwillingness to listen to students who disagree	• Reflected in Tepper's Abusive Supervision Scale, e.g.,"[t]ells me my thoughts or feelings are stupid" (Tepper, 2000, p. 189). • Clearly represented in the construct of petty tyranny as part of a forcing style of conflict resolution, i.e., "forces acceptance of his or her point of view"(Ashforth, 1997, p. 127). • Lipman-Blumen (2004) also describes unwillingness to listen as a toxic behaviour in which leaders stifle constructive criticism, "teaching supporters … to comply with, rather than to question, the leader's judgment and actions" (p. 20).
Arrogance and use of intimidation	• Explicitly mentioned as a quality and a destructive behaviour of a toxic leader respectively (Lipman-Blumen, 2004). • Both behaviours are also reflected in the self-aggrandizement component of petty tyranny (Ashforth, 1997).
The teacher communicating that he/she does not have time to meet with students	• May represent a lack of interest in the follower and this has been reflected as part of the apathy class of unsupportive managerial behaviours (Rooney & Gottlieb, 2007). A leader who intentionally communicates their disregard for followers, may be seen as using a destructive style. • A lack of consideration, i.e., unapproachable or unfriendly, can be considered part of the construct of petty tyranny (Ashforth, 1997).
Showing favouritism to a select group of students	• Does not seem to be explicitly mentioned in the destructive leadership literature. • The closest resemblance may be bullying because, by definition, bullying involves social exclusion of someone (Johan Hauge et al., 2007).

In Ellis' (2000) study, she develops a measure of teacher confirmation. Teacher confirmation means that instructors communicate to students that they are valuable and significant (Ellis, 2000). Unexpectedly, a factor measuring disconfirmation emerged from her data. This disconfirmation factor was problematic in developing her confirmation measure, and subsequently Ellis did not study the outcomes of disconfirmation. Nonetheless, Ellis'

disconfirmation factor empirically supports the notion that instructors can use destructive leadership in the HEI module context.

The uniqueness of the HEI module context. The unique situation of a HEI module, features two characteristics that are conducive to the emergence of destructive leadership. First, as explained earlier, instructors are likely to be *distant* in instructor-student interactions in the module. While distance is likely to have implications for the way in which transformational leadership works in the module, distance itself can also be perceived as being instructor misbehaviour (Thweatt & McCroskey, 1996). Thweatt and McCroskey (1996) explain that "nonimmediacy (or distance) acts as a[n] [instructor] misbehavior, even though students do not necessarily recognize it as a[n] [instructor] misbehavior at a conscious level" (p. 202). Their findings show that distance overpowers the influence of good instructor behaviours, and can be perceived by students as misbehaviour. Even though misbehaviour is not entirely reflective of destructive leader behaviours, the association between distance and instructor misbehaviour offers some insight into how distance may be perceived by students in the module context.

Second, the *temporary* nature of HEI module groups can encourage instructors' use of destructive leader behaviour. The temporary short-term lifespan of module groups means that there is little time for instructors to develop students' confidence in the module. In addition to time pressures, student-followers can also unintentionally block the instructor-leader's goal of promoting learning and achievement, e.g., students' immaturity or incompetence (Krasikova et al., 2013). In these situations, instructor-leaders may become frustrated that achievement of their goals is being thwarted, and turn towards using destructive leader behaviours to try to accomplish their goals (Krasikova et al., 2013).

Distance or nonimmediacy can be perceived as destructive leader behaviour, and temporary group pressures can lead to the emergence of destructive instructor-leader behaviour. The third unique characteristic of HEI modules, i.e., followers as *customers*, can potentially magnify the effects of destructive leader behaviours in this context. Students may believe that they are paying for a service, and subsequently expect that they receive value for their money. If they are faced with a destructive instructor-leader for a module, they may perceive this as poor customer service. Students may then seek to remedy the situation, e.g., complaints or resistance, only to realize that they may have little power to change anything (power differences and implications are discussed in the next chapter). Moreover, in the HEI module context, students may have more of a personal investment in their performance than followers in the corporate context because of the potential impact of academic performance on a student's career and life. Therefore, students may perceive destructive leader behaviour as especially harmful because such behaviour may adversely affect student achievement of their personal career goals.

Summary. The educational approach to destructive leadership is in its infancy. Even though the offensive dimension of instructor misbehaviours overlaps with destructive leadership behaviours, the overall misbehaviour concept is mostly characterized by ineffective leadership. In comparison, teacher disconfirmation is conceptually similar to one manifestation of destructive instructor-leadership, i.e., use of harmful methods in HEI module interactions. The uniqueness of the HEI module context has important implications for destructive leadership. First, students may perceive their instructors as destructive instructor-leaders because of the distance in the module context. Second, instructors are also likely to use destructive leader behaviours because of the short-term pressures in temporary groups. Finally, the unique follower-customer perspective can potentially worsen the effects of destructive leadership in the

module context. Taken together, these arguments offer compelling reasons for studying destructive leadership in module interactions.

2.6 Summary of Instructor-Leadership

In this chapter, I clarified the concept of instructor-leadership, and explained its relationship to four leadership theories, including behavioural, transactional, transformational, and destructive. For each leadership theory I described both organizational behaviour and educational approaches. Each leadership theory is developed in organizational behaviour research, and is thus rooted in supervisor-employee relationships. The educational approach demonstrates that each type of leadership theory derived from organizational behaviour research can be applicable to instructor-student relationships in the HEI module context. However, the uniqueness of the instructor-student relationship in the HEI module context must be taken into consideration when adapting these organizational behaviour leadership theories to the module context. In the next chapter, I use this same theme of contrasting both organizational behaviour and educational approaches in order to examine two potentially key mechanisms through which transformational and destructive instructor-leaders influence student achievement – engagement and burnout.

Chapter 3: Engagement and Burnout as Mechanisms in the Relationship between Leadership and Performance

In this chapter, I explain why engagement and burnout are likely to be key mechanisms through which transformational and destructive instructor-leaders influence student achievement. I begin the chapter with a definition and explanation of engagement and burnout (Section 3.1). Then, as shown in Figure 3, I describe the relationships between (a) transformational leadership and both engagement and burnout (Section 3.2); (b) destructive leadership and both engagement and burnout (Section 3.3); (c) both engagement and burnout and performance (Section 3.4); and (d) transformational and destructive leadership, engagement and burnout, and performance (Section 3.5). Based on the arguments presented in these sections, I create a conceptual framework for the relationships between instructor-leadership, student engagement and burnout, and student achievement (Section 3.6). At the end of the chapter, I revisit my research questions, and explain which studies address these questions (Section 3.7).

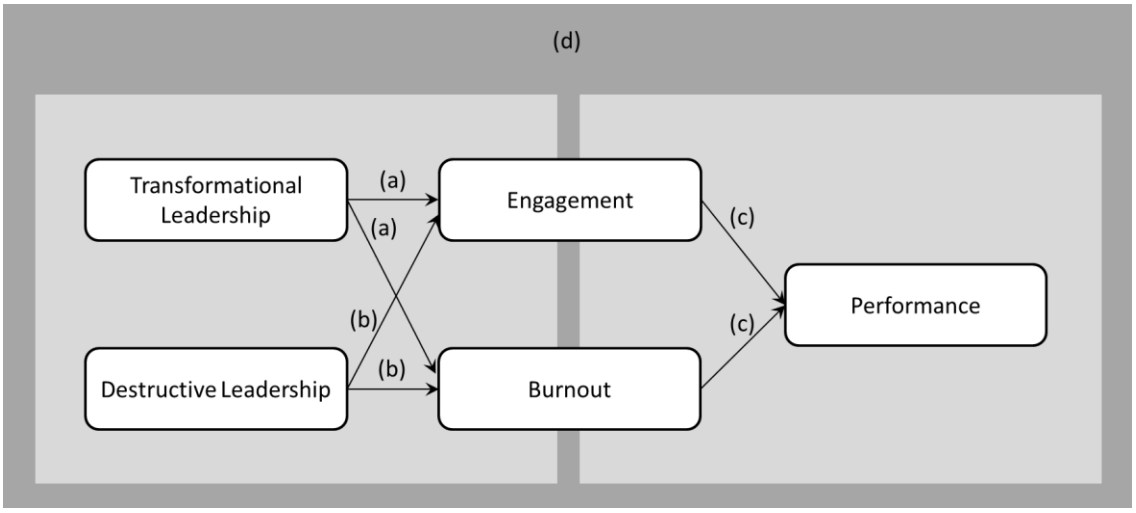

Figure 3. Engagement and burnout as mechanisms in the relationship between leadership and performance.

3.1 Engagement and Burnout

3.1.1 Organizational behaviour approach: Work engagement and burnout. There is a wealth of research on both work engagement and job burnout (also referred to as disengagement). Burnout research emerged in the 1970s whereas engagement research started in 1990, gaining momentum in the early 2000s. While there is still some debate on the concept of engagement, the concept of burnout is well-established. Burnout refers to "the exhaustion of employees' capacity to maintain an intense involvement that has a meaningful impact at work" (Schaufeli, Leiter, et al., 2009, p. 205). Burnt-out individuals uncouple themselves from their work role by suppressing energies (Kahn, 1990). Hence, burnout is often characterized by a lack of connection, passivity, and absence. Historically, burnout was thought to exist primarily in 'people-work' professions, i.e., those who spent considerable time interacting with people, e.g., nurses, teachers, physicians, etc. (Maslach & Jackson, 1981; Schaufeli, Leiter, et al., 2009). However, researchers and practitioners later recognized that burnout can also exist in other professions that may not necessarily involve considerable human interaction, e.g., managers or blue-collar workers (Schaufeli, Leiter, et al., 2009).

Maslach and Jackson (1981) describe burnout as comprising of exhaustion, cynicism, and inefficacy. *Emotional exhaustion* means that an individual's emotional resources are used up and they become worn out (Cole et al., 2012; Maslach & Jackson, 1981). *Cynicism* or depersonalization means that the individual becomes dehumanized or distant in their interactions with others (Cole et al., 2012; Maslach & Jackson, 1981). *Inefficacy* or personal accomplishment means that an individual develops feelings of incompetence and failure (Cole et al., 2012). Maslach, Schaufeli, and Leiter (2001) propose that these three dimensions result from an erosion

of engagement. That is, "…energy turns into exhaustion, involvement turns into cynicism, and efficacy turns into ineffectiveness" (Maslach et al., 2001, p. 416).

In Maslach et al.'s view, burnout is the antithesis of engagement; engagement is characterized by energy, involvement, and efficacy (Maslach et al., 2001). Therefore, engagement and burnout are described as opposite poles with the positive pole being engagement and the negative pole being burnout (Schaufeli, Leiter, et al., 2009). Maslach et al. (2001) further distinguish the difference between burnout and work engagement according to levels of activation. In this conceptualization, "burnout is characterized by low levels of activation … whereas engagement is characterized by high levels of activation" (Maslach et al., 2001, p. 417).

Schaufeli et al. (2002) adopt a different stance to Maslach et al.'s 'opposite poles' notion. While Schaufeli et al. (2002) agree that work engagement is the positive antipode of burnout, they reject the notion that engagement and burnout are opposite ends of the same continuum. Instead, Schaufeli et al. (2002) propose that engagement is a standalone concept. Schaufeli et al.'s (2002) argument is sensible because even though engagement and burnout are characterized by high and low activation respectively, this does not necessarily mean that they are opposite ends of the same continuum. Specifically, there are other high and low activation states that are not regarded as engagement or burnout, and are not opposite ends of the same continuum. For instance, a highly activated state such as being tense or anxious is not the opposite of a low activated state such as boredom.

In further support of Schaufeli et al.'s (2002) view, someone who is *not* engaged is not necessarily burnt out, and someone who is *not* burnt out is not necessarily engaged. There are other levels of activation an individual can experience. For instance, an individual who is not

engaged or not burnout out, may simply be moderately activated, e.g., content, pleased, bored, display positive conduct, adherence to rules, complete tasks with minimal effort. Schaufeli et al. (2002) elaborate on this point by highlighting shortcomings of the Maslach Burnout Inventory (MBI) – the gold standard measure of burnout – as a measure of engagement (Schaufeli & Bakker, 2004). For instance, an MBI item which reads, "Feeling emotionally drained from one's work 'once a week'" does *not* mean that the individual is not engaged for the other days of the week (Schaufeli & Bakker, 2004, p. 294). Using the same example from the MBI, if an individual is not emotionally drained from work, this does not mean that they are engaged. Schaufeli and Bakker (2004) assert that instead of being "perfectly complementary and mutually exclusive states, burnout and engagement are independent states that—because of their antithetical nature—are supposed to be negatively related" (p. 294). Empirically, some studies also support the distinction between engagement and burnout by showing different correlates for job burnout and work engagement (see Hakanen, Schaufeli, & Kirsi, 2008; Schaufeli, Bakker, & Van Rhenen, 2009).

Schaufeli et al. (2002) propose that engagement should be defined and measured as a distinct concept. In their view, engagement is a persistent cognitive-affective state comprising of vigor, dedication, and absorption. *Vigor* refers to a high level of energy and mental resilience in application of work efforts (Schaufeli, Salanova, et al., 2002). *Dedication* refers to a strong level of involvement in one's work, and is usually characterized by significance, enthusiasm, inspiration, and pride (Schaufeli, Salanova, et al., 2002). *Absorption* refers to a deep level of concentration and focus on one's work to the extent that the individual becomes unaware of time passing by, and find it difficult to detach themselves from the work (Schaufeli, Salanova, et al., 2002). Absorption is similar to the concept of flow – "the state in which people are so involved

in an activity that nothing else seems to matter" (Csikszentmihalyi, 1991, p. 4). However, absorption refers to a lasting state of focus whereas flow is a more complex concept that describes short-term experiences (Schaufeli & Bakker, 2004). Vigor, dedication, and absorption are measured by the Utrecht Work Engagement Scale (UWES). To date, the UWES remains the most popular measure of the standalone concept of engagement.

Even though Schaufeli and colleagues along with other engagement researchers argue that engagement is a standalone concept, Cole et al. (2012) explain that two of the three dimensions for both engagement and burnout are bipolar opposites. That is, vigor and dedication are direct opposites to exhaustion and cynicism respectively (see Cole et al., 2012 for a comparison of the items for burnout and engagement dimensions). In a meta-analysis, the findings by Cole et al. (2012) support their suspicions regarding the distinctiveness of the content dimensions underlying engagement and burnout. Specifically, the authors found that (1) the dimensions for engagement and burnout are highly correlated, (2) the dimensions for engagement and burnout show a similar pattern of association with correlates, and (3) the effect sizes for the dimensions of engagement are markedly reduced when controlling for burnout. Overall, these findings suggest a misalignment between the theory and measurement of engagement. Theoretically, engagement is regarded as independent of burnout, but engagement, as measured by the UWES, overlaps considerably with burnout, as measured by the MBI.

To address this misalignment, Cole et al. (2012) suggest that it is important to advance engagement research via theoretical clarity. The authors point to Kahn's definition of work engagement, which may offer insight into the distinguishing features of engagement in comparison to burnout. Kahn (1990) defines work engagement as "the harnessing of organization members' selves to their work roles" (p. 694). Engaged employees simultaneously

employ and express their "'preferred self' in task behaviors that promote connections to work and to others, personal presence, and active, full role performances" (Kahn, 1990, p. 700). By employing and expressing one's preferred self, this produces behaviours that invigorates the relation of self to work role. This connection between engagement and work role performance is not something explicitly considered by burnout (Cole et al., 2012).

Kahn (1990) conceptualizes engagement as comprising of emotional, behavioural, and cognitive energy in work role performance. Following this proposition, in a comprehensive review of work engagement, Shuck and Wollard (2010) assert that Kahn's three dimensions of emotion, behaviour, and cognition offer clarity for moving engagement research forward. The immediate difference to Schaufeli and colleagues' conceptualization is that instead of being just a cognitive-affective state, engagement also manifests itself behaviourally. Furthermore, building on ideas developed by Saks (2006) and Macey and Schneider (2008), Shuck and Wollard (2010) suggest that the three dimensions can indicate how different types of engagement interact with each other. For instance, behavioural engagement is likely to be preceded by cognitive and emotional engagement; and cognitive engagement may occur on a 'silent' level, thus acting as a catalyst for emotional and behavioural engagement (Shuck & Wollard, 2010).

Some researchers have begun to adopt measures of engagement which tap into emotion, behaviour, and cognition (e.g., May, Gilson, & Harter, 2004; Rich et al., 2010). These three dimensions of engagement may also share the same conceptual space as other concepts from organizational behaviour research, e.g., satisfaction, involvement, commitment, organizational citizenship behaviour (OCB), proactivity, and initiative (Macey & Schneider, 2008). The similarities between these latter concepts and engagement depend upon the extent to which the organizational behaviour concepts are characterized by positive and high levels of activation. In

Macey and Schneider's review of diverse literatures on work engagement, they offer propositions regarding numerous organizational behaviour concepts and the criteria for these concepts being regarded as facets of emotional, behavioural, and cognitive engagement (Macey & Schneider, 2008).

Emotional engagement. Shuck and Wollard (2010) broadly define emotional engagement as "the feelings and beliefs held by those who are engaged" (p. 105). Macey and Schneider (2008) emphasize that feelings and beliefs must connote passion in order to be regarded as engagement. In this view, Larsen and Diener's conceptualization of positive affect as "activated pleasant affect", comprised of both activation and pleasantness, can be regarded as engagement (Larsen & Diener, 1992, p. 31). Markers of positive affect such as enthusiastic, inspired, proud, determined, strong, and active, (Watson, Clark, & Tellegen, 1988) all connote high levels of activation, and are thus reflective of engagement (Macey & Schneider, 2008).

Schaufeli, Salanova, González-Romá, and Bakker (2002) also refer to high activation in their emotional descriptions of vigor, dedication, and absorption. For each factor, some energetic emotional item is included, e.g., "At my work, I feel bursting with energy" (vigor), "I am enthusiastic about my job" (dedication), and "I feel happy when I am working intensely" (absorption) (Schaufeli, Salanova, et al., 2002, p. 88). For Schaufeli and colleagues' three-factor model, emotional engagement forms part of each of the three constructs. Alternatively, emotional engagement can also be represented as a distinct construct in line with Kahn's original conceptualization of engagement (see May et al., 2004; Rich et al., 2010).

Often, emotional engagement is tied to job satisfaction (see Harter, Schmidt, & Hayes, 2002). However, the two concepts differ because "engagement connotes activation, whereas

satisfaction connotes satiation" (Macey & Schneider, 2008, p. 8). When satisfaction measures satiation, it does not share the same conceptual space as engagement. But, facets of satisfaction that assess feelings of energy, enthusiasm, and other positive affective states can be regarded as emotional engagement (Macey & Schneider, 2008), e.g., interest or excitement (Rich et al., 2010).

Behavioural engagement. Behavioural engagement (sometimes referred to as physical engagement) is commonly conceptualized as extra effort or discretionary effort (e.g., Towers-Perrin, 2003). Macey and Schneider (2008) assert that extra effort represents a limited view of engagement because (1) 'extra' indicates a point of reference which is never really defined in the literature and (2) extra effort implies doing more of the same; however, behaviourally engaged employees can also work smarter, e.g., being more creative in their work role and/or better allocation of time and energy (S. P. Brown & Leigh, 1996). Given the limited scope of extra effort, Macey and Schneider (2008) conceptualize behavioural engagement as "innovative behaviors, demonstrations of initiative, proactively seeking opportunities to contribute, and going beyond what is, within specific frames of reference, typically expected or required" (Macey & Schneider, 2008, p. 15). Using this conceptualization, Macey and Schneider (2008) explain that behavioural engagement can include facets such as organizational citizenship behaviour, role expansion, proactive behaviour, and personal initiative.

Cognitive engagement. Cognitive engagement is best represented by Schaufeli and colleagues' concept of absorption (Schaufeli, Salanova, et al., 2002). Absorption refers to a deep trance-like focus on one's work (Babcock-Roberson & Strickland, 2010; Schaufeli, Salanova, et al., 2002). As mentioned earlier, Schaufeli, Salanova, et al. (2002) include an emotional element in their conceptualization of absorption, i.e., happiness. To keep more in line with Kahn's

conceptual boundaries between cognition and emotion, May et al. (2004) removed this emotional aspect from absorption in their measurement of cognitive engagement. Building on the concept of absorption, Shuck and Wollard (2010) state that cognitive engagement can also include employees' intellectual commitment as well as their thoughts and understanding of their job, company, and culture.

In summary, researchers are beginning to refocus on the original conceptualization of engagement as proposed by Kahn (1990). In this conceptualization, work engagement comprises of three dimensions, including emotion, behaviour and cognition. In recent conceptual studies, these three dimensions are emphasized as a means for clarifying the conceptual boundaries of engagement. Similarly, recent studies conducted by educational researchers have also emphasized the three dimensions of emotion, behaviour, and cognition for conceptualizing student engagement.

3.1.2 Educational approach: Student engagement and burnout. In the educational literature, the term engagement is used to refer to student engagement. In Trowler and Trowler's review of student engagement they explain that student engagement can be divided into three types (Trowler & Trowler, 2010). First, student engagement in *individual student learning* refers to students being engaged for the purpose of improving their learning outcomes. The second type of student engagement comprises of structure and process, and refers to *students' involvement in governance and leadership*. The final type of engagement describes student engagement with respect to identity, and includes the extent to which benefits varied for different students. Trowler and Trowler (2010) assert that the value of student engagement in individual student learning (henceforth referred to as student engagement) is no longer questioned. This type of

engagement is the focus of my dissertation because, of the three, it is the most relevant to the HEI module context.

In education research, various authors have acknowledged that there is considerable ambiguity with respect to the definition and scope of student engagement (Fredricks et al., 2004; Kahu, 2013). For instance, student engagement has often been defined according to its measurement by popular student engagement surveys such as the National Survey of Student Engagement (NSSE) (e.g., Kezar & Kinzie, 2006). The NSSE describes four engagement themes including academic challenge, learning with peers, experiences with faculty, and campus environment ("From benchmarks to engagement indicators and high-impact practices," 2015). These four themes are measured by a very broad range of questions describing students own actions (all four themes), perceptions of coursework (academic challenge), perceptions of instructors' actions (experiences with faculty), and perceptions of the institutional environment (campus environment) (see Table 5 for sample questions) ("From benchmarks to engagement indicators and high-impact practices," 2015). As shown in Table 5, the NSSE appears to be useful for measuring students' overall experiences at a HEI. However, the approach of using these wide-ranging scope of items to conceptualize student engagement is counterintuitive to the theoretical development of student engagement because (1) operational definitions follow conceptualizations in scientific research and not the other way around, and (2) student engagement becomes an all-encompassing construct riddled with ambiguity and fuzziness. Moreover, there are also validity issues with the NSSE (Pike, 2006; Porter, 2010).

Perhaps the most alarming issue regarding the conceptuality of student engagement, is that numerous researchers have simply failed to explicitly define engagement (see a review by Jimerson, Campos, & Greif, 2003). As pointed out by Blumer (1940), "concepts that are vague

Table 5

National Survey of Student Engagement (NSSE) Indicators and Items

Concept	Sample indicators
Academic challenge	During your school year, how often have you reviewed your notes after class? During the current school year, how often have you evaluated what others have concluded from numerical information?
Learning with peers	During the current school year, how often have you had discussions with … people with religious beliefs other than your own? During the school year, how often have you asked another student to help you understand course material?
Experiences with faculty	During the current school year, to what extent have your instructors … used examples or illustrations to explain difficult points? During the current school year, how often have you talked about your career plans with a faculty member?
Campus environment	Indicate the quality of your interactions with (a) academic advisors, (b) student services staff, (c) other administrative staff and offices, etc. How much does your institution emphasize … attending campus activities and events?

and unclear are an immediate obstacle to effective scientific research and to the attainment of rigorous knowledge" (p. 707). For student engagement, researchers have yet to identify what it is and what it is not. With no conceptual boundaries, measurement of 'student engagement' tends to vary widely between studies, thus furthering the gap between theory and empirical observation. This gap is problematic because it does not allow for rigorous deduction as well as concept testing and revision (Blumer, 1940).

In light of the ambiguity surrounding student engagement, Kahu (2013) and Fredricks et al. (2004) offer suggestions for moving the education field forward towards a clear and unified conceptualization of engagement. Kahu (2013) suggests that a combination of the psychological and socio-cultural perspectives offers the best representation of student engagement. The *psychological* perspective recognizes that engagement is "an individual psychological state with

three dimensions … of affect, cognition, and behaviour" (Kahu, 2013, p. 764). Student engagement research typically focuses on facets of one or two of these dimensions (Fredricks et al., 2004). Fredricks et al. (2004) support the psychological perspective stating that scholars need to fuse the three dimensions of engagement together to provide a richer conceptualization in which these three dimensions are dynamically interrelated. The major drawback to this psychological perspective is that it ignores the role of the situation. This shortcoming is addressed by the socio-cultural perspective.

The *socio-cultural* perspective examines how student engagement may be affected by wider economic issues, newer technologies, and changing societal values. Here, the emphasis shifts from the individual to the structures in which they are embedded. In other words, the situation in which students are engaged can affect the three dimensions of psychological engagement, i.e., emotion, behaviour, and cognition. The socio-cultural perspective indicates that engagement is influenced by wider contextual factors, but these factors are beyond the scope of this dissertation.

In addition to psychological and socio-cultural perspectives, two other perspectives of student engagement include the behavioural and holistic perspectives. These perspectives define engagement as a process to improve student achievement rather than an element in that process. As such, both perspectives tend to convolute the three dimensions of emotional, behavioural, and cognitive engagement (Kahu, 2013).

Even though both Kahu (2013) and Fredricks et al. (2004) propose recommendations for improving the conceptualization of engagement, no definition of the concept is offered in either of their reviews. Based on their reviews and an examination of student engagement research,

student engagement can be regarded as students' involvement in the academic aspects of their studies. This broad definition highlights the expansive nature of the concept in student engagement research. In this conceptualization, engagement refers to *any* academic-oriented outcome associated with emotion, behaviour, and cognition. In addition, student engagement and burnout are often regarded as opposite poles on the same continuum. In this view, burnout is simply a lack of emotional (e.g., decline in interest), behavioural (e.g., lack of participation), and cognitive (e.g., lack of attention) engagement (Fredricks et al., 2004). Overall, student engagement and burnout "[suffer] from being everything to everybody" (Fredricks et al., 2004, p. 84). As such, there is a "need for clarity about what is and is not included in engagement and for an assessment of the 'value added' by studying engagement" (Fredricks et al., 2004, p. 84).

To move the education field forward, an examination of what constitutes student engagement and burnout is necessary. Dictionary definitions of burnout describe the concept similarly to that proposed in organizational behaviour literature, i.e., detaching or withdrawing oneself from an activity ("Disengagement," 2014a, "Disengagement," 2014b). Here, it is clear that burnout is characterized by low activation. However, for student engagement, dictionaries offer little meaningful information, often defining engagement as the act of being engaged; with engaged taken to mean behavioural involvement in an activity ("Engagement," 2014a, "Engagement," 2014b). A better approach to conceptualizing student engagement may be to adopt the characteristics of engagement from organizational behaviour research. In the organizational behaviour field, the concept of engagement has matured more than in the education field by focusing on what it means to be 'engaged' (see Section 3.1.1). Borrowing from organizational behaviour, the scope of student engagement can be narrowed so that engagement is characterized by a highly activated and positive state.

The idea that student engagement can be characterized by activation is not completely new. Nystrand and Gamoran (1991) distinguish between procedural and substantive student engagement. *Procedural* engagement is characterized by normal or 'undistinguished' activity. Here, students 'go through the motions' in order to develop competence in academic activities (Nystrand & Gamoran, 1991). In contrast, *substantive* engagement transcends procedural engagement; it is characterized by meaningful and highly energetic activity (Nystrand & Gamoran, 1991). In Nystrand and Gamoran's study, there is a clear similarity between substantive student engagement and the concept of work engagement from organizational behaviour research. Furthermore, organizational behaviour measures such as the UWES, which taps into positive and highly activated activity, and the MBI, which taps into negative and low activation, are also infrequently used to measure student engagement and burnout respectively (Schaufeli, Martínez, Pinto, Salanova, & Bakker, 2002; Schaufeli, Salanova, et al., 2002)

Both (1) Nystrand and Gamoran's concept of substantive student engagement and (2) Schaufeli and colleagues' empirical studies using adapted versions of organizational behaviour measures for student engagement, emphasize a highly activated and positive state for engagement and low activated and negative state for burnout. Following our earlier discussion of engagement and burnout (see Section 3.1), the concept of student burnout may be regarded as independent to engagement. I define student burnout as *the exhaustion of students' capacity to maintain an intense involvement*. In this dissertation, I examine student burnout in the HEI module context, and thus burnout can be characterized by (a) exhaustion or fatigue with regards to study or module demands; (b) cynicism or indifference towards study or module work; and (c) feelings of incompetence with respect to studying or a module (Schaufeli, Martínez, et al., 2002). I define student engagement as *highly activated and positive emotional, behavioural, and*

cognitive involvement. Again, in this dissertation, I examine student engagement in relation to the HEI module context, and thus the activated and positive emotions, behaviours, and cognitions are described in this context. For each of the three dimensions of student engagement, the following subsections describe the state of engagement in education research followed by my suggestions for narrowing the scope of each dimension to focus on activation.

Emotional engagement. In the educational literature, emotional engagement has been defined as "students' affective reactions in the classroom" (Fredricks et al., 2004, p. 63). Early research on students' emotions examined stress (Alzahem, van der Molen, Alaujan, Schmidt, & Zamakhshary, 2011), satisfaction (Allen, Bourhis, Burrell, & Mabry, 2002), and affective learning (D'Mello, 2013). There has also been an emergence of research on specific student emotions in HEI module settings (Pekrun, Elliot, & Maier, 2009; Stephanou, Kariotoglou, & Dinas, 2011). A central tenet of research on emotions is the subdivision of emotions into positive and negative dimensions. Some *positive* emotions students experience include interest, enjoyment, happiness, hope, and pride. Some *negative* emotions include boredom, sadness, frustration, anger, and anxiety (Goetz, Zirngibl, Reinhard Pekrun, & Hall, 2003; Pekrun et al., 2009).

There are two major differences between the organizational behaviour and education conceptualizations of emotional engagement. The first difference is that the educational approach to emotional engagement regards *all* emotion-related student outcomes as engagement whereas organizational behaviour research concentrates on *activated* feelings and emotions. Based on my proposed definition of student engagement, only activated emotional reactions should be considered engagement. To identify activated emotional reactions, Warr (2007) provides a framework based on numerous empirical studies of activated feelings. In this framework, highly

activated or aroused feelings include alert, excited, energetic, enthusiastic, cheerful, and elated. Warr (2007) also identifies highly activated feelings that are characterized by displeasure. This leads to the second difference between the education and organizational behaviour literatures.

The second difference is that the educational approach to emotional engagement regards both *positive and negative* feelings and emotions as engagement (Fredricks et al., 2004), whereas the organizational behaviour approach focuses solely on *pleasantness or positive emotions*. Following the organizational behaviour approach, the educational approach to emotional engagement can be redefined to focus only on feelings and emotions that are characterized by both activation and pleasure. In the organizational behaviour approach, feelings and emotions that are characterized by activation and *displeasure* do not share the same conceptual space as emotional engagement, e.g., alarmed, afraid, tense, anxious, and uneasy (Warr, 2007). Adopting the organizational behaviour approach for student engagement offers greater clarity while still remaining consistent with the 'positive' state that is often implied in the diverse understandings of student engagement (Trowler & Trowler, 2010).

Behavioural engagement. Behavioural engagement is usually defined in terms of specific facets. In educational research, Fredricks et al. (2004) categorized these facets into three classifications. These classifications include (1) *positive conduct and adherence to rules*, e.g., attendance; (2) *participation in learning activities*, e.g., asking questions, completing tasks, assisting colleagues; and (3) *involvement in extracurricular activities*, e.g., sports, clubs, and societies.

Of the three classifications, only the first two are relevant to the HEI module context. Participation in learning activities is reflective of a positive and activated state, and thus indicates

engagement. However, positive conduct and adherence to rules implies compliance rather than an activated state in which the student is doing something 'extra' or smarter. As suggested by organizational behaviour researchers, the 'extra' component has value in defining behavioural engagement when a specific frame of reference is provided (Macey & Schneider, 2008). Like organizational behaviour researchers, educational researchers need to specify a frame of reference in defining and measuring extra effort. Furthermore, for positive conduct and adherence to rules, educational researchers sometimes regard the absence of disengaged behaviour as engagement, e.g., non-absenteeism (Fredricks et al., 2004; Jimerson et al., 2003). Based on my conceptualization of student engagement, this approach does not measure activated behaviours. Instead, non-absenteeism may be regarded as unexceptional or cursory involvement in a module/class. Some positive and activated behaviours may include students' asking stimulating questions, making contributions in class, doing additional readings, helping other students, etc. These positive and activated behaviours should be characterized by intensity, energy, and full effort (Rich et al., 2010).

Cognitive engagement. In educational research, cognitive engagement is defined as "a student's psychological investment in and effort directed towards learning, understanding, or mastering the knowledge skills or crafts" (Newmann, 1992, p. 12). Cognitive engagement typically comprises of the concept of students' self-regulation (Fredricks et al., 2004) including a deep involvement in their learning or studying (Kahu, 2013). Self-regulation can be defined as the "use of learning principles to regulate one's own behaviour" (Johns & Saks, 2007, p. 60). Students who engage in self-regulated learning use specific learning principles in a process or cycle.

For educational research, Zimmerman (2002) proposes a model of self-regulated learning – a model that captures most of the models of self-regulation proposed by various researchers. The author proposes three phases of self-regulated learning. The first phase of *forethought* includes setting goals and strategically planning ways to achieve them. This phase is characterized by motivational beliefs such as self-efficacy and intrinsic value. The second phase of *performance* involves students' strategic actions towards the goal. Performance includes students' use of cognitive strategies such as attention and imagery, as well as self-control strategies such as self-instruction, self-recording, and self-experimentation. The final phase of *self-reflection* involves the critical evaluation of outcomes and use of self-judgment (Cassidy, 2011). The three phases provide a framework for analyzing the process of self-regulated learning. In addition to Zimmerman's model, Boekaerts (1999) developed another well-known and complementary model of self-regulation.

Boekaerts' three layer conceptual model of self-regulated learning offers a unique perspective to self-regulation (Boekaerts, 1999). The innermost layer describes students' choice of *cognitive learning strategy*. Learning strategies are categorized by Marton and Saljo (1997) as either a deep or surface approach to learning. Students who use a deep approach, try to genuinely understand the underlying meaning of the content through the use of active problem solving and deep thinking skills (Heikkilä & Lonka, 2006). Conversely, the surface approach involves rote learning for the purpose of memorization, recall, and other routine processing activities (Ferla, Valcke, & Schuyten, 2009; Heikkilä & Lonka, 2006). In addition to deep and surface approaches to learning, researchers also examine learning strategies such as note taking (Peper & Mayer, 1978, 1986) and time management (Torenbeek, Jansen, & Suhre, 2012). The choice of learning strategy may be regarded as part of Zimmerman's forethought phase, but certain concepts such

as time management can be relevant to all of Zimmerman's phases. The second layer of Boekaerts' model describes the use of *metacognitive knowledge and skills for direct learning*. Like Zimmerman's self-reflection phase, this second layer is described from a regulatory standpoint. The third layer involves the *individual's regulation of themselves*. This layer appears to be similar to Zimmerman's forethought phase. Overall, Zimmerman's model provides a framework for the process of self-regulation and Boekaerts' model offers a three-layered conceptual framework of self-regulation.

Students' self-regulation is largely determined by their orientation. That is, their self-regulation is primarily predetermined by their dispositions and choice of strategy (Lizzio, Wilson, & Simons, 2002). However, students' self-regulation can also be affected by situational factors such as curriculum strategies and instructor-factors, including their modeling, teaching, and creation of an enabling environment (Cassidy, 2011). Therefore, even though students use internal feedback as a means to measure progress, they also rely on external feedback from instructors and peers (Nicol & Macfarlane-Dick, 2006).

Self-regulation is characterized by learning activities that vary in intensity of activation. For instance, setting goals and strategically planning ways to achieve them, self-instruction, self-recording, self-experimentation, and deep approach to learning are all characterized by high activation. Moreover, some of these activated self-regulation sub-concepts or learning activities are likely to share the same conceptual space with absorption, i.e., students become absorbed in their learning and develop a trance-like focus in class or in their studies. Therefore, these positive and activated self-regulation sub-concepts are likely to be indicative of engagement. On the other hand, other self-regulation sub-concepts such as surface approaches to learning, note-taking, and

time management are all characterized by low to moderate levels of activation. Hence, these learning activities may be regarded as ‘going through the motions’ rather than engagement.

In summary, the psychological approach offers a framework comprising of emotional, behavioural, and cognitive engagement. Even though this framework offers some clarity on the multidimensional nature of student engagement, it does not specify the meaning of engagement or its conceptual boundaries. To address this issue, I use the organizational behaviour strand of research on work engagement to give prominence to the notion of positive activation. Positive activation is key for distinguishing between what engagement is and what engagement is not. With a clear conceptuality of student engagement, including its dimensions, it becomes easier to ascertain the unique differences in antecedents and consequences of engagement (Kahu, 2013).

3.1.3 Summary of organizational behaviour and educational approaches.

Historically**,** both organizational behaviour and educational approaches to engagement and burnout (or disengagement) lacked clarification and consistency across studies. This lack of consistency made it difficult to compare results between studies. To overcome this problem, both organizational behaviour and educational researchers are beginning to offer clearer conceptualizations of (1) work engagement and burnout (e.g., Macey & Schneider, 2008; Shuck & Wollard, 2010) and (2) student engagement and burnout (e.g., Fredricks et al., 2004; Kahu, 2013) than existing conceptualizations in the respective literatures. The organizational behaviour approach to engagement is entering a more mature phase than the educational approach in that the conceptual boundaries of engagement and burnout are more well-established. Organizational behaviour scholars identify what engagement and burnout is, and what engagement and burnout is not. Such clarity is useful for refining the conceptualization of student engagement.

In this dissertation, student engagement is specified as being characterized by positive and high activation; this conceptualization of engagement is identical to that in the organizational behaviour literature. This view needs to be adopted by the education literature in order to disentangle student engagement from meaning everything related to emotion, behaviour, and cognition. My conceptualization clarifies the meaning of student engagement, removing the ambiguity often accompanying the concept. In addition to engagement, the organizational behaviour literature recognizes the related concept of burnout (or disengagement) (Kahn, 1990). Burnout can be characterized by negative and low activation (Kahn, 1990; Maslach et al., 2001), e.g., disconnected from others, hiding thoughts and feelings, unvigilant, etc. Extant education research needs to acknowledge that burnout, as comprised of exhaustion, cynicism, and efficacy, may not necessarily be the opposite of engagement; instead, it may be an independent concept.

Overall, I use the recommendations from organizational behaviour to propose a clearer conceptualization of student engagement and burnout than that which is offered in educational research. In the next two sections, I examine engagement and burnout in relation to transformational and destructive leadership for both the organizational behaviour and educational approaches to leadership.

3.2 Transformational Leadership, Engagement, and Burnout

In this section, I explain why and how transformational leadership is related to follower engagement and burnout using the conceptualizations of engagement and burnout from the previous section. I first explain the organizational behaviour approach, i.e., transformational leadership in relation to work engagement and burnout, and then explain the educational approach, i.e., transformational instructor-leadership in relation to student engagement and student burnout.

3.2.1 Organizational behaviour approach.

Transformational leadership and work engagement. Transformational leadership should be related to work engagement for various reasons. Vincent-Höper, Muser, and Janneck (2012) explain that transformational leaders can increase work engagement by helping their employees to realize their potential, thus satisfying higher order needs. Kopperud, Martisen, and Humborstad (2014) add that transformational leaders can also influence work engagement through the process of mood contagion. These leaders express positive emotions that can spread to their employees. Employees may then become more emotionally engaged in their interactions with coworkers and customers (Bono, Foldes, Vinson, & Muros, 2007). Finally, Kopperud et al. (2014) explain that the challenge provided by transformational leaders can promote work engagement when that challenge is perceived as positive. Perhaps these types of challenges stimulate or activate employees in their work role.

Empirical studies support the relationship between transformational leadership and work engagement. In some of these studies, transformational leadership is directly and positively related to work engagement (e.g., Hoon Song, Kolb, Hee Lee, & Kyoung Kim, 2012; Kopperud et al., 2014; Vincent-Hoper et al., 2012). In other studies, transformational leadership weaves its way through specific mechanisms to influence work engagement. For instance, transformational leadership influences engagement via optimism (Tims, Bakker, & Xanthopoulou, 2011) and needs satisfaction (Kovjanic, Schuh, & Jonas, 2013). All of these studies provide support for a positive relationship between transformational leadership and work engagement.

Transformational leadership and job burnout. There are conflicting arguments regarding the association between transformational leadership and job burnout. On one hand,

some researchers argue that transformational leaders reduce burnout. For instance, Twigg (2011) empirically confirms his argument that transformational leaders support their subordinates, and such perceived organizational support can, in turn, reduce burnout. Reinforcing this argument, Gill, Flaschner, and Shachar (2006) explained and empirically supported the notion that transformational leaders encourage open communication which reduces job stress, and reduced job stress is associated with reduced burnout. Some other researchers also provide empirical support for a negative association between transformational leadership and burnout (e.g., Corrigan, Diwan, Campion, & Rashid, 2002; Hetland, Sandal, & Johnsen, 2007).

On the other hand, some researchers argue that transformational leadership behaviours can increase burnout. For instance, transformational leaders may encourage followers to invest a high degree of emotional involvement (R. Harrison, 1987) or physical involvement in terms of longer working hours or excessive work energies (Seltzer, Numerof, & Bass, 1989), both of which can lead to prolonged stress, eventually resulting in followers experiencing burnout. Additionally, the transformational leader behaviour of intellectual stimulation, encourages followers to tackle issues and problems in new ways. As a result, followers may take more risks and face greater uncertainty and ambiguity, potentially resulting in stress and burnout (Seltzer et al., 1989). Empirically, the best evidence to support these arguments shows that one component of intellectual stimulation, i.e., backing up opinions with reason, is positively associated with burnout (Seltzer et al., 1989). However, Seltzer and colleagues' findings show that intellectual stimulation, as well as the overall construct of transformational leadership, reduces burnout. Overall, there is no evidence to fully support the notion that transformational leadership can increase burnout.

Finally, in certain professions, transformational leadership behaviours may not have any effect on burnout. For instance, in the nursing profession, Stordeur, D'hoore, and Vandenberghe (2001) explain that the transformational leader behaviour of intellectual stimulation is unlikely to be positively associated with burnout for nurses because these workers actively seek intellectual challenges and development opportunities to increase recognition of their profession. Alternatively, in the causal chain for nurses' burnout, transformational leadership may be a more distal antecedent in comparison to proximal antecedents such as job control, physical demands, social stressors, social support, or team cohesiveness (Stordeur et al., 2001). Subsequently, Stordeur et al. (2001) found no relationship between transformational leadership and burnout for nurses. Similarly, in the teaching profession, principals' leadership styles are unlikely to affect teachers' burnout because teachers are accustomed to dealing with a variety of communication styles, and the principal becomes just another party with whom the teacher interacts (Mazur & Lynch, 1989). In their study, Mazur and Lynch (1989) found no relationship between principals' leadership styles and teachers' burnout.

To summarize, in organizational behaviour research, while there is a general agreement that transformational leaders increase followers' work engagement, there is no consensus regarding the relationship between transformational leadership and followers' burnout. Transformational leadership is expected to increase followers' work engagement via (1) helping followers to realize their full potential, (2) emotional contagion, and (3) challenges that are perceived as positive. In contrast, most of the limited evidence on the relationship between transformational leadership and burnout support the proposition that transformational leaders reduce followers' burnout via increased support and/or reduced stress. However, the extent to

which transformational leaders reduce followers' burnout may depend upon the context being examined.

3.2.2 Educational approach.

Transformational instructor-leadership and student engagement. Transformational instructor-leaders should influence student engagement for the same three reasons mentioned in the organizational behaviour literature. First, these instructor-leaders offer support and encouragement that can help students to realize their potential. Second, these instructor-leaders are attractive, emotionally arousing, animating, and enlivening, and thus can spread positive emotions to students via emotional contagion. Third, these leaders use stimulating behaviours that can challenge students in a positive manner.

There is some empirical support for the relationship between transformational instructor-leadership and student engagement. In one study, Peters (2014) found a highly significant and moderately strong relationship between transformational instructor-leadership and student engagement. As far as I know, this is the only study that examines the relationship between transformational instructor-leadership and the full concept of student engagement as proposed in this dissertation (i.e., emotional, behavioural, and cognitive engagement were combined into a single second-order construct). However, other studies also examine the relationship between transformational instructor-leadership and specific facets of the individual dimensions of student engagement. For *behavioural* engagement, studies found a positive relationship between transformational instructor-leadership and facets of behavioural engagement, e.g., extra effort (Harvey et al., 2003; Ojode et al., 1999; Pounder, 2008; Walumbwa, Wu, et al., 2004) and participation (Bolkan & Goodboy, 2009; Harvey et al., 2003). However, like the organizational

behaviour literature, these studies did not provide a frame of reference for 'extra' effort or participation. For *cognitive* engagement, two studies showed that transformational instructor-leadership is positively related to students' retention and synthesis of module material, i.e., cognitive learning (see Bolkan & Goodboy, 2009; J. Harrison, 2011). For these two studies, the instrument used to measure cognitive learning appear to tap into activation, e.g., explaining the module content to other students, thinking about the module outside of class, and comparing what is learned in class to other things that the student learned.

Unlike behavioural and cognitive engagement, there is no research that specifically examines the relationship between transformational instructor-leadership and students' *emotional* engagement. One study examined the relationship between transformational instructor-leadership and student motivation to module, and measured the latter concept using a measure which tapped into activated and pleasurable feelings such as interest and excitement (Bolkan & Goodboy, 2009). However, two issues with the measure renders it useless for measuring engagement. First, the measure is bipolar, thus tapping into displeasure as well, e.g., uninterested and bored. Second, the measure includes an item that can be indicative of behaviour, i.e., involved/uninvolved. Other studies examined the relationship between transformational instructor-leadership and students' satisfaction, but these studies operationalize satisfaction as satiation instead of high activation (e.g., Gill et al., 2010; Ojode et al., 1999; Pounder, 2008; Walumbwa, Wu, et al., 2004).

Transformational instructor-leadership and student burnout. While the relationship between transformational instructor-leadership and student burnout has yet to be examined, such leaders are likely to reduce student burnout for a HEI module. Similar to the organizational context, Gill et al. (2010) empirically support the argument that transformational instructor-

leaders foster open communication between themselves and students, thus reducing stress. It is well-established in organizational behaviour literature that workplace stress is a major precursor to burnout (see meta-analysis by R. T. Lee & Ashforth, 1996). A positive relationship between stress and burnout occurs because individuals may begin to feel that they do not have enough resources to dedicate towards stressors, thus withdrawing their personal energies from the work role (R. T. Lee & Ashforth, 1996). Reinforcing the proposition that transformational instructor-leaders reduce student burnout for a module, Ahmed, Qazi, and Jabeen (2012) explain and empirically support the notion that transformational instructor-leaders use behaviours that build students' confidence, thus increasing their self-efficacy. In light of this, perhaps transformational instructor-leaders also reduce students' inefficacy – one of the three dimensions of burnout.

To summarize, transformational instructor-leaders are expected to increase student engagement for the same three reasons stated in the organizational behaviour literature, i.e., harnessing students' full potential, emotional contagion, and challenges. The findings from the educational approach to transformational leadership support the relationship between transformational instructor-leadership and student engagement, with studies showing positive associations between transformational instructor-leadership and facets relating to both behavioural and cognitive engagement. From this body of research, only one study examined all three dimensions of student engagement simultaneously. In addition to engagement, there is no research which explicitly examines the relationship between transformational instructor-leadership and student burnout. These leaders should reduce student burnout because they encourage open communication and build students' self-confidence. Overall, transformational instructor-leaders should promote engagement and reduce burnout, and thus the following is expected:

Hypothesis 1: There is a positive relationship between transformational instructor-leadership and student engagement.

Hypothesis 2: There is a negative relationship between transformational instructor-leadership and student burnout.

Note that in Chapters 4 and 5, I discuss the dimensionality issues, and propose more specific hypotheses when examining the individual dimensions of leadership. While transformational instructor-leadership behaviours are expected to have a desirable impact on student engagement and burnout, not all instructor-leadership behaviours are likely to have the same effect. There are some instructor-leadership behaviours that may reduce student engagement and increase student burnout.

3.3 Destructive Leadership, Engagement, and Burnout

In this section, I explain why and how destructive leadership is related to follower engagement and burnout using the conceptualizations of engagement and burnout from the Section 3.1. I first explain the organizational behaviour approach, i.e., destructive leadership in relation to work engagement and burnout, and then explain the educational approach, i.e., destructive instructor-leadership in relation to student engagement and student burnout.

3.3.1 Organizational behaviour approach.

Destructive leadership and work engagement. Both destructive leadership and work engagement literatures make reference to social exchange theory (Aryee, Chen, Sun, & Debrah, 2007; Burris, Detert, & Chiaburu, 2008; Saks, 2006). Social exchange theory posits that two parties are in a relationship characterized by reciprocal interdependence (Cropanzano & Mitchell, 2005). Reciprocal interdependence suggests “contingent interpersonal transactions” in

that the actions of one party influences the behaviour of the other, e.g., if one party provides a benefit to the other, then the latter party should respond in kind (Cropanzano & Mitchell, 2005, p. 876). Following this theory, if employees are faced with a leader who mistreats them by using harmful behaviours, e.g., the leader is rude or tells employees that their thoughts and feelings are stupid (Tepper, 2000), employees are unlikely to respond to such behaviours by investing their personal energies into the work role (Burris et al., 2008). Instead, employees are more likely to suppress their personal energies as a way to repay or 'get even' with the destructive leader without risking punishment. Therefore, destructive leaders are likely to reduce followers' engagement in their work role (Burris et al., 2008).

There is limited evidence regarding the relationship between destructive leadership and work engagement. The concept of work engagement has yet to be explicitly examined in relation to destructive leadership. Regardless, Macey and Schneider (2008) explain that certain destructive leadership outcomes such as commitment and job satisfaction (Schyns & Schilling, 2013) can be indicative of engagement. They explain that commitment is part of engagement "when it is conceptualized as positive attachment to the larger organizational entity". Following this proposition, some researchers found a negative association between destructive leadership and organizational commitment (Ashforth, 1997; Hollander & Offermann, 1990; Tepper, 2000).

Macey and Schneider (2008) also explain that satisfaction must connote energy and enthusiasm in order to represent engagement. In the destructive leadership literature, some researchers measure satisfaction using items which tap into satiation as opposed to activation, e.g., "All in all, I am satisfied with my job" (Duffy, Ganster, Shaw, Johnson, & Pagon, 2006, p. 109; Fox & Stallworth, 2010, p. 935; Tepper, 2000, p. 183). In these studies, satisfaction cannot be considered engagement. However, in other studies, satisfaction is measured by items which

tap into energy and enthusiasm, e.g., "I feel energized by the work I do" (M. C. Bligh, Kohles, Pearce, Justin, & Stovall, 2007, p. 542), "Most days I am enthusiastic about my work", and "I feel real enjoyment in my work" (Breaux, Perrewé, Hall, Frink, & Hochwarter, 2008, p. 115). In these studies, satisfaction is indicative of engagement, and is negatively associated with destructive leadership. In addition to reducing work engagement, destructive leaders may also increase employees' burnout.

Destructive leadership and job burnout. Destructive leaders may increase employees' burnout because destructive leader behaviours can promote low quality social exchanges between leader and followers which result in prolonged dissatisfaction and exhaustion, eventually leading to detachment (Wayne, Shore, & Liden, 1997). Detachment may take the form of distancing oneself from the destructive leader in order to regain emotional control (Burris et al., 2008). Physically distancing oneself from the destructive leader by immediately leaving the organization is likely to be difficult given that most labour markets are not perfectly mobile (Burris et al., 2008). Instead, employees may detach themselves emotionally by becoming depersonalized in their interactions (Burris et al., 2008). Burris et al. (2008) empirically supports this view showing a positive relationship between abusive supervision and detachment.

Destructive leaders are also likely to increase employees' burnout because they can create excessive stress for employees; a key precursor to burnout (R. T. Lee & Ashforth, 1996). Destructive leader behaviours can increase stress by (1) creating role conflicts (Krasikova et al., 2013) and (2) influencing justice perceptions (Tepper, 2000). These leaders can create *role conflicts* by leading followers towards goals that contradict with the organization's interests (Krasikova et al., 2013). Destructive leaders may also influence *perceived injustice* among

followers, which can lead to anger, a desire for restitution, and low self-esteem, all of which can lead to psychological distress (Tepper, 2000). Followers may perceive injustice with respect to outcome allocation (distributive justice), the procedures used to determine outcome allocation (procedural justice), and interpersonal treatment (interactional justice) (Tepper, 2000). Following this perceived injustice argument, Hershcovis and Barling (2010) found that supervisor aggression is positively associated with employees' emotional exhaustion. Similarly, Gant et al. (1993) also found a positive association between undermining by supervisors and employees' emotional exhaustion and cynicism/depersonalization.

In addition to exhaustion and cynicism/depersonalization, Bligh et al. (2007) suggest that distress experienced by followers can also negatively affect followers' confidence and belief in themselves to perform in their work role, thus promoting follower inefficacy. Destructive leader behaviours may also create follower inefficacy via evaluative feedback provided by the leader (Duffy, Ganster, & Pagon, 2002). Destructive leaders are likely to provide evaluative feedback in a negative, rejecting, or devaluing manner, which can erode followers' self-confidence and beliefs in their abilities (Duffy et al., 2002, p. 335). Empirical research supports this notion showing an association between social evaluation and efficacy (e.g., Sanna, 1992).

Overall, destructive leader behaviours are likely to reduce engagement and increase burnout. The process through which these leaders influence employees' engagement and burnout is explained by social exchange theory. Moreover, destructive leaders are likely to increase employees' burnout because these leaders create a dysfunctional environment characterized by role conflicts, perceived injustice, and devaluing feedback. The limited empirical evidence in the organizational behaviour literature supports these views.

3.3.2 Educational approach.

Destructive instructor-leadership and student engagement. While social exchange theory infers that employees may reduce their engagement to 'get even' with a destructive leader, students are unlikely to act in the same way. Students may not purposely withhold effort to repay a destructive instructor-leader because they may be acutely aware of the importance of their efforts for their own academic performance. Instead of willingly reducing their engagement, students are more likely to experience powerlessness in a three-stage process of psychological adjustment (Ashforth, 1989).

In the first stage, students may 'react' by asserting their hegemony to reduce frustration with the destructive instructor-leader, e.g., complain, argue, act angry, etc. (Ashforth, 1989). However, students are unlikely to react in these ways if they perceive that the likelihood of their reactions being successful is low. Ashforth (1989) explains that when followers perceive high legitimacy of supervision, they are more likely to believe that their reactions will be unsuccessful. In the instructor-student relationship, instructors are likely to be perceived as possessing high legitimacy and power. That is, instructors have the capacity to influence students as indicated by students' dependence on instructors for grades, information, feedback, etc.

The second stage is referred to as 'helplessness' (Ashforth, 1989). Helplessness is defined as "the state that occurs when an individual perceives that a given outcome is independent of his or her behavior" (Ashforth, 1989, p. 208). In this stage, students may perceive that outcomes received in class is independent of their reactions. In other words, if students decide to 'react', as stated in the first stage, they may subsequently discover that their reactions against the instructor are futile. Students' reactions against an instructor are unlikely to lead to serious repercussions

for the instructor especially if an instructor is well-established in his or her field, e.g., well-published, internationally recognized, a recipient of major grants/awards, a member of editorial boards of prestigious journals, and/or contributes significantly to policy and practice.

The third stage is called 'alienation' (Ashforth, 1989). After students learn that their reactions are futile, they begin to accept what the status quo offers. Ashforth (1989) defines alienation as "a cognitive sense of separation of the individual from work and the workplace" (p. 208). In other words, a state of helplessness can erode students' psychological attachment to the module, resulting in a lack of initiative, disinterest, a lack of involvement, and resignation (Ashforth, 1989, 1994). Therefore, destructive instructor-leadership behaviours are likely to be associated with reduced student engagement via this three-stage process of psychological adjustment.

Researchers have yet to empirically examine the relationship between destructive instructor-leadership and student engagement. While Hobman et al. (2009) investigated potential student engagement related outcomes such as satisfaction and well-being, the authors examined these outcomes in relation to the supervision of a thesis and not classroom interactions – the latter is the focus of this dissertation. Furthermore, in Hobman and colleagues' study, thesis project satisfaction is measured by satiation rather than activation, and well-being is measured by all positive emotions rather than those focusing on high activation (Hobman et al., 2009).

Destructive instructor-leadership and student burnout. While destructive instructor-leadership is likely to reduce student engagement, such leadership may also increase student burnout. Following my discussion about powerlessness, helplessness can also lead to burnout. Haney, Banks, and Zimbardo (1973) show that, in a simulated prison environment, prison

guards' use of persistent harassment and aggressive behaviour result in prisoners becoming passive and depressed. Clarke (1985) also supports this view explaining that destructive leader behaviour can result in followers psychologically withdrawing in that they cease to care and become passive. Destructive instructor-leaders can be likened to the prison guards in Haney and colleagues' study in that both prison guards and instructors possess the majority of power in the leader-follower relationship, and thus follower resistance is likely to be futile. Moreover, it may not be practical for some students to transfer out of the module to avoid the source of burnout, i.e., the module may be a prerequisite for another module in the next semester or the instructor may be the sole or primary facilitator for that module. Therefore, in addition to reduced engagement, it is likely that students can become 'imprisoned' in the module and experience "the pathological prisoner syndrome", i.e., become passive and psychologically withdrawn (Haney et al., 1973).

Like the organizational behaviour literature, destructive instructor-leaders are also likely to increase student burnout by increasing students' stress. These leaders may increase students' stress via the same processes explained earlier, i.e., role conflict and perceived justice. First, students may experience role conflict if the instructor leads them towards goals that conflict with the organization's interests. For instance, a HEI's goal may be to develop students' independent thinking and analytical skills, but a destructive instructor-leader may strongly enforce their own viewpoints instead of objectively teaching all views on a particular topic. In such a case, students may feel as though the demands being made of them in the module by their instructor, i.e., to focus on one point of view, are incongruent with the demands being made by their institution, i.e., be an independent thinker and analyze all viewpoints. Therefore, students may experience role conflict.

Destructive instructor-leaders may also create perceptions of injustice in the HEI module/classroom context. The term 'classroom justice' refers to "perceptions of the fairness of the outcomes or processes that take place in the instructional context" (Chory, Horan, Carton, & Houser, 2014, p. 3). Students, who are enrolled in a destructive instructor-leader's module, may perceive injustice with respect to (1) distributive justice, e.g., the grade received or opportunities to improve grades, (2) procedural justice, e.g., the processes used to determine the grade, make-up/late policies, scheduling/workload, information for exams, class procedures, etc., and (3) interactional justice vis-à-vis the interpersonal treatment received, e.g., insensitivity, prejudice, unfair accusations, etc. (Horan et al., 2010). The excessive stress from role conflicts and perceived injustice can then lead to students becoming emotionally exhausted and cynical.

Destructive instructor-leader behaviours are likely to also lead to follower inefficacy via evaluative feedback provided in a module. In the HEI module context, an instructor's evaluative feedback is often the main form of feedback that students receive in order to gauge their progress in the module. Therefore, students' efficacy beliefs are likely to be largely influenced by the instructor's opinion of them (Duffy et al., 2002). Like their corporate counterparts, destructive instructor-leaders are likely to provide negative and devaluing feedback. Such feedback may be communicated (1) verbally, e.g., tone of voice in response to a question/answer in class, and/or (2) nonverbally, e.g., evaluative comments accompanying an assignment or facial expression in response to a student's question in class. Given that students are highly dependent on instructors for evaluative feedback, negative and devaluing feedback are likely to erode students' self-confidence and beliefs in their abilities to perform in the module.

In summary, the three-stage process of psychological adjustment suggests that students may not necessarily react to a destructive instructor-leader by using overt or covert hostility in

order to assert their dominance. This is so because, in the HEI module context, instructor-leaders are likely to have high perceived legitimacy and power which can render students' hostile reactions ineffective. As such, students may experience helplessness which can both reduce engagement and increase burnout. In addition, destructive instructor-leaders are likely to (1) excessively increase students' stress via role conflicts and justice perceptions, and (2) provide devaluing feedback, both of which are likely to lead to burnout. Based on these arguments, the following is proposed:

Hypothesis 3: There is a negative relationship between destructive instructor-leadership and student engagement.

Hypothesis 4: There is a positive relationship between destructive instructor-leadership and student burnout.

Engagement and burnout are worth examining because both are expected to influence performance.

3.4 Engagement, Burnout, and Performance

3.4.1 Organizational behaviour approach: Employee performance. Employee's individual-level performance is generally considered to be the degree to which they successfully accomplish a work-related task. In the organizational behaviour literature, employee performance is often divided into *in-role* and *extra-role* performance. In-role performance refers to the degree to which the formal requirements of the job are successfully accomplished, e.g., customer service requirements, quantity and quality of tasks. Extra-role performance refers to the degree to which voluntary non-formal job tasks are accomplished, e.g., providing assistance to a colleague.

Work engagement and employee performance. Work engagement may influence employee performance because highly engaged employees should effectively invest their emotional, behavioural, and cognitive resources in the task (Halbesleben & Wheeler, 2008, p. 245). For instance, Bakker and Bal (2010) explain that cognitively engaged employees can fully concentrate on performing the task whereas employees who have low cognitive engagement can become easily distracted and thus not perform optimally. This sort of resource allocation is a critical determinant of employee performance (Beal, Weiss, Barros, & MacDermid, 2005). Studies support this theoretical argument showing that work engagement is related to employee's in-role and extra-role performance (e.g., Bakker & Bal, 2010; Halbesleben & Wheeler, 2008; Kovjanic et al., 2013; Medlin & Jr, 2009; Rich et al., 2010; Salanova, Agut, & Peiró, 2005; Salanova, Lorente, Chambel, & Martínez, 2011; Xanthopoulou, Baker, Heuven, Demerouti, & Schaufeli, 2008). Following the notion that employees allocate their resources to the work role, burnout is also likely to influence employee performance.

Job burnout and employee performance. The conservation of resources (COR) model may explain why job burnout is likely to reduce employee performance (Hobfoll, 1989). The premise of the COR model is that "people strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources" (Hobfoll, 1989, p. 516). Hobfoll (1989) explains that resources can include the energies of an individual. Building on this notion, Halbesleben and Bowler (2007) state that emotional exhaustion represents the loss of valued energies. COR then predicts that emotionally exhausted or burnt out employees will become protective of their remaining resources, and carefully choose how to invest these remaining energies or resources. They may choose to invest these resources in areas that foster future support rather than in their work role (Halbesleben & Bowler, 2007). Moreover,

to conserve remaining resources, employees may try to distance themselves from the work role because it is the source of emotional exhaustion (Halbesleben & Bowler, 2007). Distancing oneself from the work role is likely to be a precursor to reduced work efforts and performance (Halbesleben & Bowler, 2007).

Empirical findings for this relationship between burnout and performance is inconsistent. Some studies support the conservation of resources view, showing an inverse association between burnout and job performance (e.g., Twigg, 2011; Wright & Bonett, 1997; Wright & Cropanzano, 1998). Yet, other studies found low shared variance between burnout and performance (e.g., Bakker, Demerouti, & Verbeke, 2004; Schaufeli & Enzmann, 1998). These inconsistent findings may be due to differences in measurement, with some studies using objective indicators of performance and others using self-reported performance (Schaufeli, Martínez, et al., 2002). Another reason for inconsistent results may be because researchers often fail to distinguish between in-role and extra-role performance (Bakker et al., 2004). According to Bakker et al. (2004), each of the sources (i.e., objective vs. self-report) and types (i.e., in-role vs. extra-role) of performance may have their own unique antecedents (Bakker et al., 2004).

Overall, the notion that employees possess and utilize resources, helps to understand how both engagement and burnout are related to employees' performance. Employees may choose to either invest or protect their resources, and the resulting decision is likely to either increase or reduce employees' performance respectively. In the HEI module context, the idea of resource allocation may also explain why student engagement and burnout affect their achievement.

3.4.2 Educational approach: Student achievement. There is an extensive body of research on the relationship between student engagement and student achievement (sometimes

referred to as students' success, performance, and outcomes) (see a review by Trowler & Trowler, 2010). However, research regarding student achievement is lacking a unified direction. This is partially due to the controversy and ambiguity surrounding the definition of achievement. Based on Trowler and Trowler's review, I broadly define student achievement as the degree to which students accomplish an academic-related task or goal.

As with any ambiguous concept, there is some uncertainty with respect to the content domains of student achievement. I classify the common indicators of student achievement into *tangible* and *intangible* indicators. Tangible indicators of student achievement include credits, grades, marks, etc. These tangible indicators of student achievement are commonly used by HEIs to rank students by subject knowledge (Wilbrink, 1997). On the other hand, intangible indicators of student achievement such as interpersonal skills or innovation are often neglected as part of HEI evaluation (Dean, 1998, p. 3). This may be because intangible indicators of achievement are difficult to measure or perhaps such achievement may only be realized in the long run. For instance, students' development of interpersonal skills may take place after they have been exposed to many HEI modules, instructors, students, etc. Hence, it may be difficult to pinpoint intangible gains from a single HEI module. For these reasons, my dissertation focuses on tangible achievement. Research has shown that tangible student achievement (herein after referred to simply as student achievement) is related to numerous student-related factors, including personality (Poropat, 2009), attendance (Plant, Ericsson, Hill, & Asberg, 2005), cognitive ability (Jensen, 1973), and domain knowledge (Horn, Bruning, Schraw, Curry, & Katkanant, 1993). In addition to these factors, the concepts of student engagement and burnout that are proposed in this dissertation should also be related to student achievement.

Student engagement and student achievement. Student engagement is expected to influence student achievement because highly engaged students should effectively invest their emotional, behavioural, and cognitive resources in the module. In other words, it is plausible to expect that engaged students "who are energetic and immersed in their studies are successful as well" (Schaufeli, Martínez, et al., 2002, p. 466). While Rich et al. (2010) examine the three dimensions of engagement in relation to performance in the organizational behaviour literature, no such study was conducted in educational research (Fredricks et al., 2004). Instead, educational researchers primarily examined the relationship between one or two of the three dimensions of engagement and student achievement (Fredricks et al., 2004).

For students' *emotional* engagement, few researchers examined the relationship between activated and pleasant positive emotions and student achievement. Some of these activated and pleasant positive emotions include enjoyment, pride, and hope. *Enjoyment* is regarded as a highly activated and optimum psychological experience (Kimiecik & Harris, 1996; Pekrun, Goetz, Titz, & Perry, 2002). In a sample of university and school students, enjoyment is the most reported positive emotion followed by pride (Pekrun et al., 2002). Macey and Schneider (2008) explain that *pride* in one's work is characterized by pleasure and activation, and thus should be regarded as engagement. In addition to enjoyment and pride, *hope* is described as an emotion characterized by passion (Bruininks & Malle, 2005), and thus may also indicative of engagement. These highly activated and pleasurable emotions are likely to positively influence students' cognitive resources that can be dedicated towards task completion (Pekrun et al., 2009). Empirical findings mostly support this argument, showing positive associations between enjoyment, pride, and hope and student achievement (Pekrun et al., 2002). However, Pekrun et al. (2009) found that, of these three activated emotions, enjoyment is not a significant predictor

of student achievement. Pekrun et al. (2009) explain that perhaps, for some students, enjoyment may lead to increased efforts that facilitate improved performance, whereas, for other students, enjoyment may indicate that 'all is well' and no extra effort or preparation is needed.

For students' *behavioural* engagement, researchers examined the impact of participation on student achievement. When participation is operationalized by quality contributions in class this can be indicative of engagement. Reinsch and Wambsganss (1994) found that when students are awarded points for quality class contributions, this leads to improvements in exam scores. The authors explain that the reinforcement of quality contributions influences exam scores because reinforcement encourages students to prepare more thoroughly for class. In addition to quality contributions, participation is commonly measured by attendance, and is positively related to student achievement (Plant et al., 2005; Torenbeek, Jansen, & Hofman, 2010; Torenbeek et al., 2012). However, unlike the highly activated nature of quality contributions, attendance is characterized by low activation, and thus is not indicative of engagement.

With regards to *cognitive* engagement, higher education learning requires students to be involved in their own learning. At the higher education level, students are generally given more freedom than at prior levels of education. External parties, e.g., instructors, parents, family, etc., are less likely to be involved in monitoring students' progress. For this reason, students' self-regulatory practices and approaches to learning become increasingly important for student success. Studies show that students' self-regulation inclusive of their approaches to learning are associated with academic achievement (e.g., Heikkilä & Lonka, 2006).

Student burnout and student achievement. My earlier discussion of the COR model may also explain why student burnout in a HEI module is likely to reduce their performance in said

module. As students become burnt out, they are likely to be selective in spending their remaining resources or energies (Hobfoll, 1989). To protect their remaining energies, students may distance themselves from the source of burnout (Halbesleben & Bowler, 2007), e.g., the module and/or the instructor. In addition, according to the COR model, because loss of resources is stressful, students may seek to employ their remaining resources towards coping strategies in order to offset the losses incurred by burnout (Hobfoll, 1989), e.g., compensating by regaining efficacy in a related module or activity. Taken together, distancing and attempts to offset losses are likely to reduce student achievement for a module.

Like the organizational behaviour literature, empirical findings for the relationship between student burnout and achievement are inconsistent. Some studies found a weak negative association between student burnout and achievement (e.g., McCarthy, Pretty, & Catano, 1990; Nowack & Hanson, 1983). Conversely, Balogun, Hoeberlein-Miller, Schneider, and Katz (1996) found no association between student burnout and achievement. Finally, Garden (1991) found a negative association between student burnout and perceived performance, but no association between student burnout and actual performance. Schaufeli et al. (2002) suggest that perhaps the inconsistent findings are a result of inadequate operationalizations of student burnout in the education literature. Also, in some of these studies (e.g., Balogun et al., 1996; McCarthy et al., 1990), students' general burnout is examined in relation to overall grade point average (GPA). It is reasonable to assume that a student may experience burnout in specific HEI modules, but remain engaged in others, thus reporting some overall burnout but still performing well in the modules in which they are engaged.

3.4.3 Summary of organizational behaviour and educational approaches.

Performance is specified as employee performance in the organizational behaviour literature, and

student achievement in the educational literature. In each approach, a distinction between two types of performance is made. The organizational behaviour literature clearly distinguishes between in-role and extra-role performance whereas educational research suggests a distinction between tangible and intangible student achievement. For both organizational behaviour and educational strands of research, it is expected that employees'/students' investment of emotional, behavioural, and cognitive energies in their work/study roles should influence their performance. This view is supported in both literatures, i.e., researchers consistently report positive associations between engagement and performance. Still, in the educational literature the three dimensions of engagement have yet to be examined simultaneously in relation to student achievement.

For burnout and performance, the COR model suggests that employees/students may (1) distance themselves from sources of burnout and/or (2) try to offset losses by directing their remaining resources towards coping strategies. Consequently, burnout is likely to lead to lower performance in one's work/study role. In both organizational behaviour and educational literatures, the findings between burnout and performance are inconsistent, and these inconsistencies are likely due to measurement issues as opposed to conceptual considerations. Therefore, based on the arguments presented, the following is proposed:

Hypothesis 5: There is a positive relationship between student engagement and student achievement.

Hypothesis 6: There is a negative relationship between student burnout and student achievement.

3.5 Leadership, Engagement, Burnout, and Performance

So far, I explained the relationships between leadership and both engagement and burnout (Sections 3.2 and 3.3), and both engagement and burnout and performance (Section 3.4). In this section, I describe why engagement and burnout are likely to be mechanisms in the relationship between both transformational and destructive leadership and follower performance.

3.5.1 Transformational and destructive leadership, engagement, and performance.

Transformational leaders inspire and energize followers to perform beyond normal expectations (Bass, 1990). That is, followers are "expected to strive for higher order outcomes" (Bass, 1997, p. 133). By definition, transformational leaders are expected to push followers to become highly energized or activated so that they perform beyond normal expectations. Therefore, the highly activated state of engagement should be a key mechanism through which these leaders influence followers to perform at high level. In contrast, destructive leaders can make followers feel helpless which saps or erodes their emotional, behavioural, and cognitive energies invested in the work/study role. This reduced personal investment in the work/study role is likely to reduce followers' performance.

Numerous empirical studies in organizational behaviour show that work engagement is a mechanism in the relationship between transformational leadership and employee performance (Babcock-Roberson & Strickland, 2010; Hoon Song et al., 2012; Kopperud et al., 2014; Kovjanic et al., 2013; Salanova et al., 2005; Vincent-Hoper et al., 2012). Further support for work engagement as a mechanism in the relationship between transformational leadership and employee performance is provided by studies that implicitly examine facets of work engagement

(see Appendix B[3]). Although none of the mechanisms in these studies are specified as work engagement, Macey and Schneider (2008) explain that, depending on the conceptualization, some of these mechanisms can represent dimensions of work engagement, e.g., organizational commitment, job involvement, and feelings of empowerment. The studies in Appendix B also show that, in addition to engagement, there are other mechanisms through which transformational leadership influences followers' performance, e.g., justice, leader-member exchange, self-concordant goals, needs, core job characteristics, meaningful task content, etc. Hence, work engagement represents a subset of the mechanisms through which transformational leaders influence followers' performance.

In the organizational behaviour literature, the mechanisms in the relationship between destructive leadership and follower performance have yet to be examined. All studies in Schyns and Schilling's meta-analysis examine the direct relationship between destructive leadership and outcomes (see Schyns & Schilling, 2013). Still, one can infer from the general leadership literature that some of these outcomes, e.g., well-being, may be mechanisms in the relationship between destructive leadership and follower performance (Schyns & Schilling, 2013).

In the educational approach to transformational and destructive leadership, there is limited evidence to support a relationship between these forms of instructor-leadership and student engagement and burnout. Moreover, there is a dearth of research examining the mechanisms through which these leaders influence student achievement. Based on my earlier arguments, engagement should be a key mechanism through which both transformational and destructive instructor-leaders influence student achievement. Therefore,

[3] I developed Appendix B by searching for studies of transformational leadership and mediators/mechanisms. Then, I scanned the reference lists of those studies to identify further research in this area. Finally, I merged my completed list with a list later published by van Knippenberg and Sitkin (2013).

Hypothesis 7: Student engagement mediates the relationship between both transformational and destructive instructor-leadership and student achievement.

3.5.2 Transformational and destructive leadership, burnout, and performance. Both transformational and destructive leadership behaviours are also "charged with emotions, which are … central to the burnout process" (Hetland et al., 2007, p. 59). Transformational leadership behaviours are likely to be perceived as supportive in their use of open communications, and thus followers are less likely to burn out. These leaders are more likely to protect their followers' pool of energy or resources. On the other hand, destructive leadership behaviours are more likely to cause excessive stress which may eat away at followers' available energy or resources, thus leading to detachment from the work/study role. In other words, followers are likely to be stripped of their energies and resources, and in this tattered state would likely distance themselves from the source of burnout, resulting in reduced performance. According to Halbesleben and Bowler (2007), even though much research considers burnout to be the final outcome in a causal chain, burnout is likely to be a precursor to important outcomes such as performance. Based on this premise, along with the arguments presented here, the following is proposed.

Hypothesis 8: Student burnout mediates the relationship between both transformational and destructive instructor-leadership and student achievement.

3.6 Conceptual Framework

Based on the eight hypotheses in this chapter, my conceptual framework is presented in Figure 4. The framework shows that transformational and destructive instructor-leadership are expected to be related to student achievement via student engagement and burnout. Specifically, I expected a positive relationship between transformational instructor-leadership and student achievement, which is mediated by student engagement and burnout. On the other hand, I expected a negative relationship between destructive instructor-leadership and student achievement, which is mediated by student engagement and burnout.

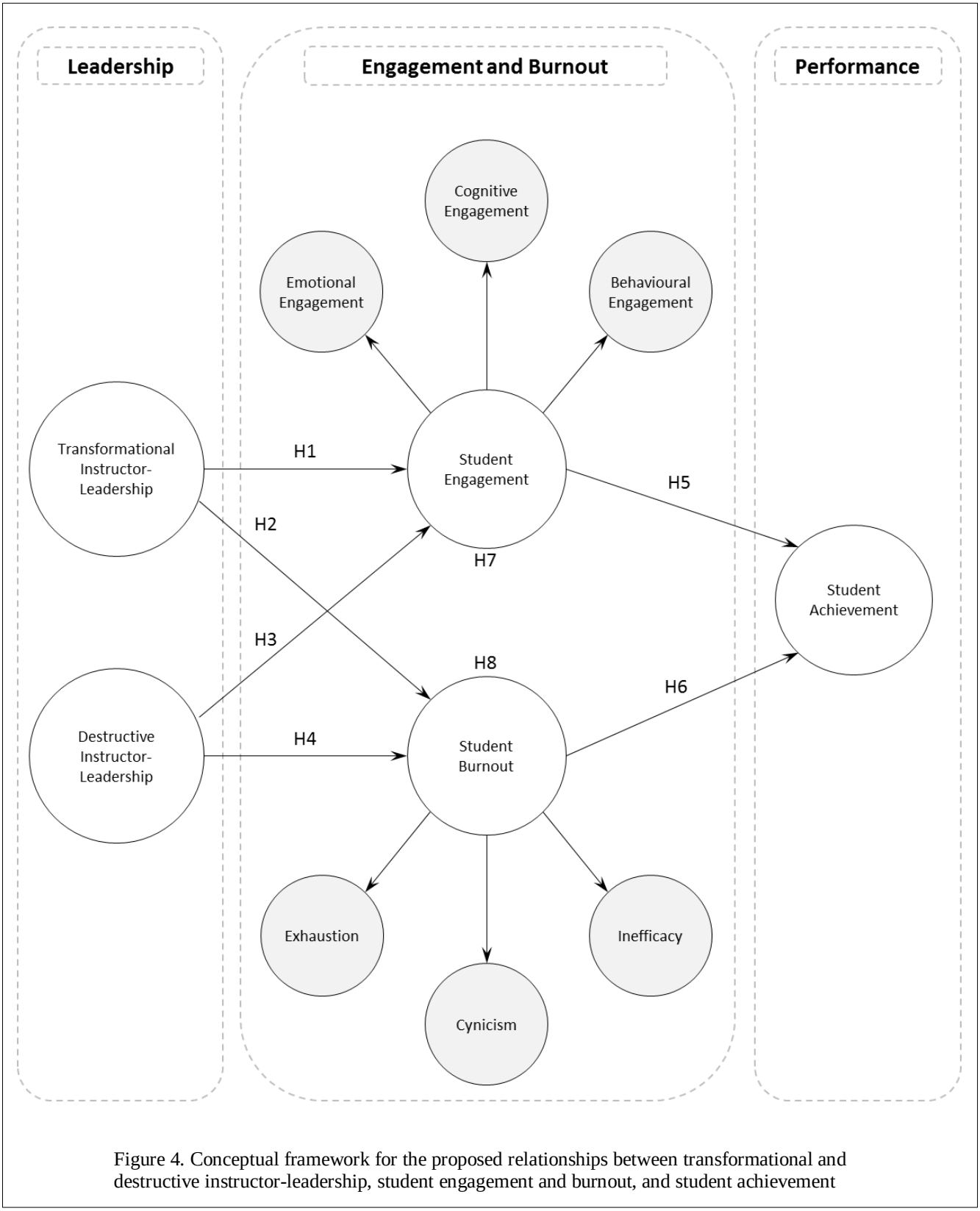

Figure 4. Conceptual framework for the proposed relationships between transformational and destructive instructor-leadership, student engagement and burnout, and student achievement

3.7 Research Questions and Studies

In the literature reviews in Chapters 2 and 3, I highlight the issues regarding the conceptualization, and thus operationalization of instructor-leadership and student engagement and burnout. Therefore, in these two literature reviews, I partly addressed both of my research questions by examining the extent to which organizational behaviour developed concepts and measures of transformational leadership, destructive leadership, student engagement, and student burnout translate to the HEI module context.

In Chapter 2, I describe instructor-leadership research, and highlight the need for more context-sensitivity in the conceptualization and operationalization of transformational and destructive instructor leadership. Following this proposition, I further address the first research question in each of the four studies in this dissertation:

1) How can (a) *transformational* (Studies 1, 2, and 4) and (b) *destructive* (Studies 3 and 4) instructor-leadership be conceptualized and operationalized?

Using the context-sensitive measures developed and refined in these four studies, I then focus on the hypotheses stated in this chapter in the fourth study (see Figure 4). That is, I test student engagement and burnout as mechanisms in the relationship between both transformational and destructive instructor-leadership and student achievement. Furthermore, based on the arguments presented in this chapter, I also test the notion that student engagement and burnout are standalone concepts. Therefore, I address the second research question primarily in the fourth study:

2) What are the relationships between (a) *transformational* and *destructive* instructor-leadership and (b) student *engagement*, *burnout*, and *achievement*? (Study 4)

Chapter 4: Teasing Out Potential Transformational Instructor-Leadership Dimensions from an Educational Measure of Instructor Behaviours (Study 1)

In chapter two, I highlighted how the uniqueness of the HEI module context can impact upon the use of transformational leadership in this context (Section 2.4.2). In this module context, I explained that certain dimensions of transformational leadership cannot be translated from corporate settings. For this reason, in Chapters 4 and 5 (i.e., Studies 1 and 2 respectively), I offer a new framework for transformational leadership in educational settings via the use of secondary data. The secondary data is derived from the use of educationally-generated measures that are commonly used for assessing student evaluations of modules and lecturers. Therefore, it would be interesting to see if transformational leadership dimensions emerge from students' evaluations of instructors. The use of such secondary data is far from ideal, but my intention is to use the data as a starting point for teasing out potential transformational leadership dimensions in a HEI module. The term 'potential' is used to describe any emergent transformational leadership dimensions because a major limitation of the secondary dataset is that it describes instructor behaviours in ways that are not always reflective of personal leadership. Therefore, Chapters 4 and 5 represent the first step towards addressing research question 1 (a), "How can transformational instructor-leadership be conceptualized and operationalized?"

4.1 Introduction

In my review of transformational instructor-leadership (Section 2.4.2), I show that studies found a myriad of positive outcomes but are limited by a potential shortcoming. This potential shortcoming stems from the fact that almost all transformational instructor-leadership studies measure instructor-leadership with the Multifactor Leadership Questionnaire (MLQ) (see the meta-analysis in Appendix A). Avolio and Bass (2004) developed the MLQ to measure corporate

leadership in supervisor-employee interactions. Therefore, the use of the MLQ to measure HEI module leadership in instructor-student interactions can be problematic because of fundamental differences between corporate settings and HEI module settings. As explained in Chapter 2, certain transformational leadership dimensions commonly examined in organizational settings, e.g., individualized consideration and vision, may not be translatable to higher education classroom teaching. Moreover, the MLQ may not tap into certain leadership behaviours that are important in the HEI module context, e.g., generalized consideration or leading students towards learning objectives. This potential shortcoming highlights the need for a more context-sensitive measure of transformational instructor-leadership.

Two key studies in educational research pave the way for the development of a more context-sensitive measure of transformational instructor-leadership. First, a study by Bolkan and Goodboy (2011) showed likely connections between transformational leadership theory and communication behaviours that instructors display. Bolkan and Goodboy (2011) used content analysis to analyze undergraduate students' written narratives with respect to perceptions of transformational leadership. In their study, students regarded (a) charisma as comprising of humour, caring, content relevance, equality, attitude homophily, availability, etc.; (b) individualized consideration as consisting of teacher availability, individualized feedback, personalized content, conveying interest, etc.; and (c) intellectual stimulation as being communicated by teaching style, challenge, independent thought, etc.

Second, a study by Baba and Ace (1989) showed that behavioural leadership dimensions can be communicated through teaching behaviours. Baba and Ace (1989) found that initiating structure and consideration can be implicitly tapped by measures not designed with the intention of assessing leadership, but to provide feedback on instructor's teaching quality. Baba and Ace's

approach suggested that these instructor-feedback measures should be able to capture unique context-specific leader behaviours that may be disregarded by more conventional leadership measures.

Building on Bolkan and Goodboy's and Baba and Ace's work, the aim of this chapter is to provide a starting point towards developing a new and improved approach to conceptualizing and operationalizing transformational instructor-leadership. This approach offers an advantage over existing approaches because, in comparison to organizational behaviour measures, it is a more context-specific approach that uses module feedback. A measure based on students' evaluation of teaching should provide a superior means of operationalizing transformational instructor-leadership in comparison to the use of established leadership measures. This is so because a HEI module-based measure is grounded in students' perceptions of the teaching-learning environment. Baba and Ace embraced the stance taken by Baird (1973) and asserted that this "perceptual method is better than other techniques because it relates directly to students' classroom experiences, that is, teacher behaviour as it is received and interpreted by the student" (Baba & Ace, 1989, p. 511). Can this perceptual method uncover transformational leadership in the module/classroom?

4.2 Transformational Instructor-Leadership Concept

In chapter two, I explained that certain transformational leadership dimensions are likely to be applicable to the HEI module context (see Section 2.4.2). While intellectual stimulation is likely to be relevant in both corporate and HEI module settings, the other transformational leadership dimensions cannot be directly translated to the module context. Specifically, because of the distance in HEI module instructor-student relationships, leadership dimensions such as attributed charisma and consideration are likely to be more relevant than behavioural charisma

and individualized consideration respectively. Additionally, because of the temporary nature of module groups, leader behaviours that direct students towards module objectives are likely to be more relevant than vision. Therefore, the uniqueness of the HEI module context means that transformational leadership may only be applicable to this context in limited ways.

To tap into these context-specific transformational leadership dimensions, I use a secondary dataset in order to begin unpicking the leadership processes in educational settings. The secondary dataset comprises of students' responses to The Experiences of Teaching and Learning Questionnaire (ETLQ). The ETLQ was specifically developed as part of the 'Enhancing Teaching-Learning Environments in Undergraduate Courses' (ETL) project, and was created by a research team comprising of staff from three universities, including Edinburgh, Coventry, and Durham. To create the questionnaire, the team triangulated information from literature reviews on general components of teaching and learning environments with interview feedback from both staff and small groups of students (Entwistle, 2005).

The ETLQ includes students' experiences of teaching and learning including, aims and congruence, autonomy, teaching for understanding, set work and feedback, assessing understanding, and sharing enthusiasm and support. Because these items measure students' 'experiences', they are mostly phrased to tap into students' perspective of the overall HEI module rather than their perceptions of their instructor's individual actions, e.g., "It was clear to me what…" or "The feedback given on my work helped me…". Evidently, there is no reference to personal leadership, e.g., who made it clear to the student or who provided the feedback to the student. Nonetheless, the course units or modules evaluated in the dataset included those for which the instructors were teaching towards both the beginning and end of a degree module (Entwistle, 2003). Therefore, in evaluating the general module, students would have likely

evaluated the instructors' actions with regards to the module components identified above, i.e., aims and congruence, teaching, feedback, etc. While this approach is far from ideal, the large and readily available dataset offered a good foundation for bridging the gap between leadership in organizational settings and module/classroom leadership. Given that the items in the dataset implicitly measure teaching behaviours, I did not expect any of the items to tap into attributed charisma. However, the items were likely to tap into other potential transformational instructor-leadership behaviours. I first examined the individual items from the ETLQ to determine the degree to which they map onto potentially relevant transformational instructor-leadership dimensions. The conceptual mapping exercise showed that the items may capture intellectual stimulation, consideration, and direction and congruence (see Table 6).

For *intellectual stimulation*, some of the items from the ETLQ seem to tap into this transformational leadership dimension. For instance, the ETLQ measures the degree to which students' thoughts and approaches to problem solving are stimulated in a module, e.g., encouraging students to rethink their understanding of aspects of the subject. This 'rethinking' is similar to two items in another popular measure of transformational leadership proposed by Rafferty and Griffin (2004). In Rafferty and Griffin's measure of intellectual stimulation, the items emphasize the leader encouraging their follower/s to rethink things or assumptions. The ETLQ also includes items which tap into student-followers being assisted in their conceptualization, comprehension, and analysis of problems and issues, e.g., encouraging students to relate the theory to practice, and helping students to think about the evidence underpinning different views. Teaching in a manner to help students to think about the evidence underpinning different views is similar to helping followers see problems in new or different ways; the latter being an item in both Rafferty and Griffin's measure and the MLQ.

Table 6

Item Comparison Between ETLQ and Transformational Leadership Measures (Study 1)

Construct	Experiences of Teaching and Learning Questionnaire	Multifactor Leadership Questionnaire (Pounder's module/classroom adaptation)	Rafferty and Griffin's Measure of Transformational Leadership
Intellectual stimulation	The teaching encouraged me to rethink my understanding of some aspects of the subject		Has ideas that have forced me to rethink some things that I have never questioned before Has challenged me to rethink some of my basic assumptions about my work
	The teaching in this unit helped me to think about the evidence underpinning different views	He/She makes me see a problem from different angles	Challenges me to think about old problems in new ways
Consideration	Staff were patient in explaining things which seemed difficult to grasp	He/She is willing to provide help outside of class (individualized consideration).	
	The feedback given on my work helped me to improve my ways of learning and studying The feedback given on my set work helped to clarify things I hadn't fully understood	He/She assists me in actualising my strengths (individualized consideration).	Behaves in a manner which is thoughtful of my personal needs (supportive leadership)
	Students' views were valued in this course unit		Sees that the interests of employees are given due consideration (supportive leadership)
Direction and congruence	It was clear to me what I was supposed to learn in this course unit		Has a clear understanding of where we are going (vision)
	What we were taught seemed to match what we were supposed to learn How this unit was taught fitted in well with what we were supposed to learn		Has a clear sense of where he/she wants our unit to be in 5 years (vision)

For *consideration*, certain items from the ETLQ appear to tap into this concept. First, the ETLQ measures the extent to which students are given support, e.g., an item from the ETLQ which reads, "Staff were patient in explaining things which seemed difficult to grasp" is similar to the MLQ individualized consideration item which examined the degree to which the instructor is willing to provide help outside of class. Here, the ETLQ measures assistance in general rather than solely outside of class. Second, the ETLQ measures the extent to which support can help students realize their potential, e.g., two ETLQ items measure the degree to which feedback helps the student to improve their understanding, learning, and studying. These two items are similar to the MLQ's individualized consideration item that measures the degree to which the teacher assists the student in developing their strengths. The only difference here is that the ETLQ specifies *how* the teacher assists (i.e., feedback) and *what* the students' strengths entail (i.e., helping to improve their understanding, learning, studying). Feedback on set work may be one of the few channels that instructors can use to deliver individualized/personalized support in large distant classes. Finally, the ETLQ includes items which taps into relationship building, e.g., staff sharing enthusiasm with students and valuing students' views. Valuing students' views is similar to interests of employees being given due consideration; the latter item forming part of Rafferty and Griffin's supportive leadership construct.

For *direction and congruence*, the ETLQ contains items which measure the extent to which teaching matches what students are supposed to learn. The terms 'goal' or 'objective' are not explicitly stated in any of the ETLQ's items. However, a learning objective describes what students are expected to learn, and such phrasing is apparent in some of the ETLQ's items, i.e., "… what we were supposed to learn" or "… what I was supposed to learn…". Therefore, the ETLQ appears to tap into objectives, which is something that is not distinctly represented in

traditional models of transformational leadership. Still, objectives are similar to goals, and the latter is a component of transformational leadership theory. Robbins and Judge (2009) explain that "goals are another key mechanism that explains how transformational leadership works". As described by Robbins in their quoting of Verisign's CEO, Stratton Sclavos sentiment, "It comes down to charting a course – having the ability to articulate … where you're headed and how you're going to get there" (p. 454). For the HEI module context, Treslan (2006b) compares transformational leadership values with effective teaching domains, and explains that components of transformational leadership that focus on goal clarification, goal consensus, and goal commitment are similar to components of effective teaching that focus on selecting instructional targets and designing coherent instruction. The key difference is that, for higher education modules, instructors may have to focus more on specific and measurable short-term objectives rather than less tangible and longer-term goals (see Table 6, which illustrates that direction and congruence appears to be a short-term translation of vision for the module context).

Overall, the ETLQ may tap into intellectual stimulation, consideration, and direction and congruence. These three dimensions are not fully representative of transformational leadership, but they are indicative of a limited application of the theory to the HEI module context, i.e., charisma or individualized consideration are omitted. Therefore, the ETLQ seems to partially capture transformational leadership behaviours. Based on the conceptual mapping exercise, I then later explore the dimensions empirically to determine whether or not the three proposed dimensions emerge from the data. These three dimensions may also emerge as distinct dimensions because they appear to be conceptually distinct. The dimensional nature of transformational leadership is a contentious topic (see van Knippenberg & Sitkin, 2013). Transformational leadership researchers are often divided on the issue of whether the dimensions

of transformational leadership should be examined as a single construct, or as individual dimensions. In my earlier explanations of transformational leadership, each dimension is described by some distinguishable characteristic that establishes conceptual boundaries between the dimensions. Van Knippenberg and Sitkin (2013) argue that there is no theoretical basis for combining the dimensions of transformational leadership into a single construct because the dimensions are conceptually distinct. Therefore, I predict that

> H1: The ETLQ measures consideration, intellectual stimulation, and direction and congruence as distinct constructs.

4.3 Transformational Instructor-Leadership, Engagement, and Student Achievement

Building on H1, for each transformational instructor-leadership dimension to be distinct, there should not only be differences in the content being measured, but there should also be unique correlates. With the exception of Harvey et al. (2003), most studies of transformational instructor-leadership examined how well a single construct of transformational instructor-leadership predicted MLQ-measured outcome variables, e.g. effectiveness, extra effort, and satisfaction. Even though these outcomes are important, there are other more fundamental outcomes in the HEI module context, e.g., student engagement. In this study, I test a first empirical model using a simple (and limited) measure of student engagement as a mechanism through which transformational instructor-leaders influence student achievement. Specifically, I examined the criterion validity of transformational instructor-leadership using novel mechanisms that are reflective of facets of student engagement.

4.3.1. Rationale for selecting facets of student engagement dimensions

In this study, I examine three mechanisms that are reflective of a highly activated and positive state, including interest and enjoyment, student collegial support, and deep approach to learning. These three facets represent student engagement in a limited way because they only tap into one facet each of emotional, behavioural, and cognitive engagement. As such, this study is exploratory, and student engagement is measured more comprehensively in Study 4.

Emotional engagement: Interest and enjoyment. For students' emotional engagement, I examine students' *interest and enjoyment*. Interest and enjoyment are both valid representations of students' emotional engagement. First, enjoyment is a highly activated (Pekrun et al., 2002) and pleasant state, and is thus reflective of engagement (see Section 3.4.2). Although I did not find any study focusing on interest in the HEI module context, Csikszentmihalyi (1991) explained that interest and enjoyment are intertwined, and thus both are likely to share the same conceptual space. Rich et al. (2010) reinforces this notion by explaining that, like enjoyment, interest is characterized by high activation and high pleasantness.

Interest and enjoyment is also worth investigating because the primary mechanism through which transformational leaders are likely to influence their followers is through emotions. As explained by Zhu, Chew, and Spangler (2005), "[m]uch of the transformational leadership literature stresses the … affective relationship between leader and organizational members". In spite of this, very few studies examine the specific emotional responses experienced by a transformational leader's followers. Transformational instructor-leadership should conjure feelings of *interest and enjoyment* amongst their students because these leaders inspire, stimulate, and treat followers with special attention.

Behavioural engagement: Student collegial support. For students' behavioural engagement, I examine the degree of support students offer each other in HEI module interactions; I refer to this concept as *student collegial support*. Students being supportive of each other and helping each other to understand module material is indicative of students being in a positive and activated state, and thus engaged. Student collegial support is similar to the organizational behaviour concept of extra-role behaviour. Extra-role behaviours are behaviours that "extend beyond typical or expected in-role performance" (Macey & Schneider, 2008, p. 15). In the HEI module context, students are not formally expected to support each other, and offer help to other students who need assistance in understanding the material. Therefore, student collegial support goes beyond what is normally displayed in the module context. According to Macey and Schneider (2008), when individuals go beyond the norm, typical, or obvious, this is indicative of engagement behaviours.

Student collegial support is also worth investigating because it is likely to be related to transformational instructor-leadership. Student collegial support is similar, but not identical, to an organizational behaviour concept called group cohesiveness. Group cohesiveness is the level of trust, cooperation, and dependence group members share between each other (Pillai & Williams, 2004). Even though trust is not a behaviour, the level of cooperation and dependence is similar to students relying on each other's' support. Transformational instructor-leaders should encourage cohesiveness between students because these leaders foster supportive environments through their use of consideration. Pillai and Williams (2004) support this notion by showing that transformational leadership is empirically related to group cohesiveness.

Cognitive engagement: Deep approach to learning. For students' cognitive engagement, I examine students' deep approach to learning. A deep approach to learning means that students

try to genuinely understand the underlying meaning of the module content through the use of active problem solving and deep thinking skills (Heikkilä & Lonka, 2006). Marton and Saljo (1997) explain that when student adopt a deep approach to learning, they focus *"on what the text was about; the author's intention, the main point, the conclusion to be drawn*" (p. 43, original emphasis). Evidently, students adopting this approach to learning are high activated as they absorb themselves in their work, persistently seeking to understand the underlying meaning of module content. In the HEI module context, a transformational instructor-leader's intellectually stimulating behaviours challenge students to engage with material, understand the relevance of what is being taught, and relate to the module's content, and thus these instructor behaviours should encourage students to adopt a deep approach to learning.

Summary. For this study, I expect that the ETLQ might measure three dimensions that are partially representative of transformational leadership. Furthermore, I test a first empirical model by examining only one facet of each dimension of student engagement. For emotional engagement, I examine interest and enjoyment; for behavioural engagement, I examine student collegial support; and for cognitive engagement, I examine a deep approach to learning. These three facets all represent student engagement in a simple way because emotional, behavioural, and cognitive engagement comprises of other facets that are not included in the secondary dataset (student engagement is represented more comprehensively in Study 4). The relationships between the proposed transformational leadership dimensions, student engagement, and student achievement are illustrated in a research framework in Figure 5. In the next subsection, I explain how I arrive at H2 to H9 in this research framework.

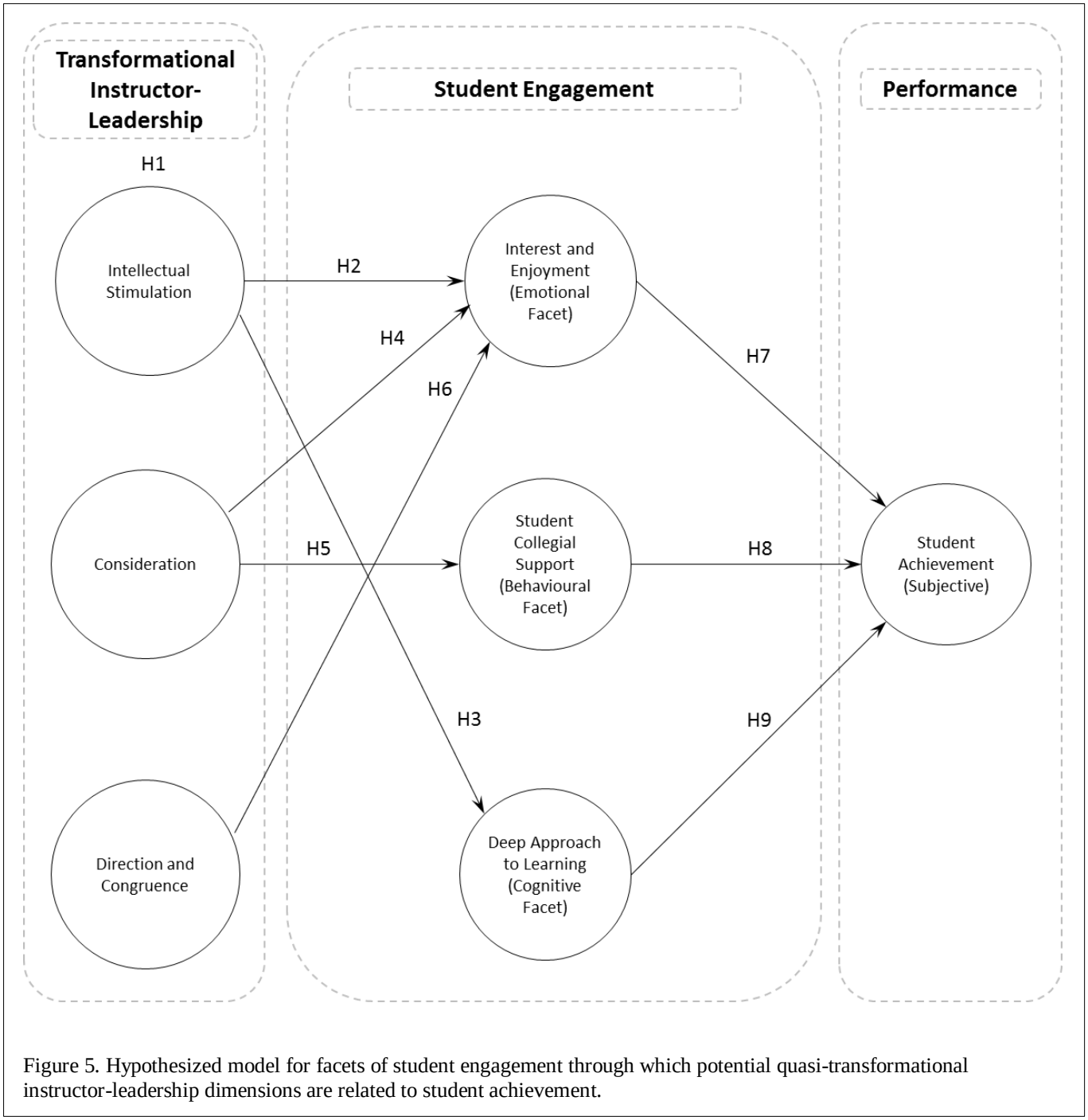

Figure 5. Hypothesized model for facets of student engagement through which potential quasi-transformational instructor-leadership dimensions are related to student achievement.

4.3.2 Hypothesized model of transformational instructor-leadership, student engagement, and student achievement.

For the research framework in Figure 5, I illustrate that each of the proposed transformational instructor-leadership dimensions may influence student

achievement via the mechanisms of emotional, behavioural, and cognitive engagement. As explained in more detail below, all three transformational instructor-leadership dimensions may influence emotional engagement. Specifically, each leadership dimension can potentially stimulate highly activated and pleasant feelings and emotions in the HEI module. Therefore, each leadership dimension is expected to be related to student achievement via interest and enjoyment. Second, intellectual stimulation may influence cognitive engagement because this instructor-leader behaviour stimulates students' thought processes and encourages them to become absorbed by the module content. Therefore, intellectual stimulation should also be related to student achievement via students' adoption of a deep approach to learning. Finally, consideration may influence behavioural engagement because this instructor-leader behaviour fosters a classroom culture of supportive and participative behaviour. Therefore, consideration should be related to student achievement via student collegial support

Intellectual stimulation and interest and enjoyment. An intellectually stimulating instructor may positively influence students' interest and enjoyment by (a) appealing to students' sensing learning style and (b) using extraordinary actions. Intellectual stimulation should appeal to students' *learning style*. Learning styles are "personal preferences [for learning] based on sensory modality, content features, degrees of structure in the learning process, physical and social characteristics of the learning environment, and types of instructional activities and degrees of student involvement" (Sternberg & Zhang, 2001, p. 28). Generally, students tend to prefer a *sensing* learning style, i.e., a practice-to-theory route to learning (Schroeder, 1993). Intellectual stimulation behaviours should appeal to students' sensing learning style because these behaviours involve the use of real-world issues to illustrate varying viewpoints and relate abstract topics. Intellectual stimulation behaviours connect practice to theory and this is "the kind

of access to experience" that students "need in order to feel connected to a subject matter" (Wenger, 1999, p. 277). Thus, intellectual stimulation should make the subject matter seem interesting and enjoyable to students because such behaviours match students' sensing learning style.

In addition to a sensing learning style, intellectual stimulation should be positively related to students' interest and enjoyment because these leader behaviours may be perceived as *extraordinary*. That is, intellectually stimulating actions go beyond simple lecturing. These instructor behaviours involve frequent questioning and discussions, and such behaviours should encourage students to think about contrasting evidence in the subject. Intellectually stimulating instructor behaviours also provide a challenge to students. The use of challenging intellectual conversations and/or debates in a HEI module should keep students interested in the subject. Harvey et al. (2003) provided empirical support for a positive relationship between intellectual stimulation and students' satisfaction with instructor. Here, I expect that intellectual stimulation should also be related to a more highly activated emotional reaction, i.e., interest and enjoyment.

H2: There is a positive relationship between instructors' use of intellectual stimulation and students' interest and enjoyment.

Intellectual stimulation and deep approach to learning. Intellectual stimulation may be related to deep approach to learning because such leader behaviour should promote engaged and empowered learning, help students to achieve module objectives, provide opportunities for internal regulation, and help students to understand the nature of evidence.

Intellectual stimulation should *promote empowered learning*. Intellectually stimulating leader behaviours should create empowered thinkers and learners. Such instructor behaviours

may create a classroom culture that encourages students to "make mistakes and learn from them", and this style of teaching should encourage students to engage with, understand, and apply module material (Biggs & Tang, 2007, p. 25). These empowering teaching methods that encourage independent learning are associated with students' adoption of deep approaches to learning (Eley, 1992; Prosser & Trigwell, 1997). In addition, Entwistle and Peterson (2004), drawing from numerous authors who studied student learning in higher education, suggest that instructors may be able to encourage students' adoption of a deep approach by using a number of behaviours that are incorporated in the concept of intellectual stimulation. These behaviours include being able to relate content "directly to prior knowledge", "clarify meanings", and encourage "reflection [and] metacognitive alertness" (Entwistle & Peterson, 2004, p. 424).

Intellectual stimulation should *help students to achieve module objectives.* While direction and congruence behaviours clarify the way towards achieving curriculum objectives, intellectual stimulation involves the use of activities that help students to achieve those objectives. Biggs (2007) assert that "teaching methods … that support the explicit aims and intended outcomes of the course" can encourage students to adopt a deep approach to learning (p. 25). Such teaching involves elicitation of "an active response from students, e.g. questioning, presenting problems, rather than teaching to expound information" (Biggs & Tang, 2007, p. 25) Furthermore, in using actions such as questioning or presenting problems, intellectual stimulation can promote "intelligence … and careful problem solving" (Robbins & Judge, 2009, p. 453). Teaching that promotes intelligence and problem solving should encourage students to adopt a deep approach to learning (Biggs & Tang, 2007).

Intellectual stimulation should *provide opportunities for internal regulation* but should not support external regulation. Vermetten, Vermunt, and Lodewijks (1995) provide evidence

that students who adopt a deep approach may desire opportunities for internal regulation, whereas those who use a surface approach may prefer external regulation. Intellectually stimulating instructor behaviours endorse students' internal regulation but they do not externally regulate students. Intellectually stimulating instructor behaviours may provide opportunities for internal regulation by encouraging students to take ownership of learning, e.g., encouraging classroom discussions or debates as well as challenging students' knowledge. As such, intellectually stimulating instruction should encourage students to adopt a deep approach to learning.

Intellectual stimulation should *help students to understand the nature of evidence*. Intellectually stimulating instructor-leader behaviours should encourage students to adopt a cynically constructive approach in their understanding of evidence. Students may be encouraged to question the nature of knowledge in a module, and become flexible with regards to varying opinions and interpretations. Thus, students may develop their reflexivity and independence in learning. When students become engaged in this process of developing their epistemic understanding, they are involved in deep learning (C. Anderson & Hounsell, 2007).

H3: There is a positive relationship between instructors' use of intellectual stimulation and students' deep approach to learning.

Consideration and interest and enjoyment. Consideration may positively influence students' interest and enjoyment (a) by positively influencing their control- and value-related appraisals and (b) through emotional contagion. Pekrun (2006) explains that students' *control- and value-related appraisals* should influence their emotions. Control-value theory is "based on the premise that appraisals of control and values are central to the arousal of … emotions"

(Pekrun, 2006, p. 315). When instructors use constructive feedback, students may perceive the learning activity as being sufficiently controllable by themselves (Pekrun, 2006). When instructors are cooperative and patient in explaining difficult material, while remaining appreciative of students' views, students may positively value the learning material and the way in which it is taught (Pekrun, 2006). Therefore, consideration should lead to positive appraisals of both control and values. This combination of positive control and values should induce students' enjoyment (Pekrun, 2006).

Consideration also involves the expression of positive emotions in giving support. Instructors' display of emotions can affect students' emotions via *emotional contagion*. Emotional contagion is "a nonconscious process by which moods [and emotions] are transferred through mimicry of displays" (Barger & Grandey, 2006, p. 1229). According to this process, when students observe an instructor-leader expressing positive emotions towards them, these students should experience similar positive emotions. In other words, positive emotions can spread from instructor to students; consequently, students should become excited about the module and experience enjoyment. Organizational behaviour research support this notion, showing that transformational leaders influence employees' work engagement through emotional contagion (Bono et al., 2007; Kopperud et al., 2014; Tims et al., 2011).

H4: There is a positive relationship between instructors' use of consideration and students' interest and enjoyment.

Consideration and student collegial support. Consideration should be related to students' perceptions of collegial support via (a) the process of social learning and (b) authentic relations.

Students may learn to be supportive in a module by observing the supportive behaviours of the module's instructor-leader. This form of *social learning* through direct experiences is called social learning theory (Bandura, 1977). According to this theory, students may imitate behaviours that they perceive would lead to desirable consequences. A transformational instructor-leader provides an ideal model for students because these leaders should be viewed positively. Students may observe transformational instructor-leaders using supportive behaviours and receiving respect and admiration for the use of such leader behaviours. Subsequently, students may decide to imitate the instructor's consideration-type behaviours to receive similar consequences.

Students may also model desirable instructor-leader actions. Leaders that are attractive and memorable incite a great degree of imitation (Johns & Saks, 2007). Consideration-type behaviours may be particularly striking in a HEI module context because lectures are characterized by impersonality and equal treatment. In addition, by showing concern for the individual student, transformational instructor-leaders may be seen as being more credible and competent; these are additional characteristics of leaders that are imitated (Johns & Saks, 2007).

In addition to social learning, consideration involves the development of trust and authentic relationships. Consideration behaviours, such as showing interest in students and valuing their views, should build students' trust in their instructor. Harvey et al. (2003) did not find any relationship between instructors' individualized consideration and students' trust. However, their finding may have been tainted by their use of an organizational behaviour measure of consideration, i.e., the MLQ. In this study, the consideration dimension describes instructors giving constructive feedback, and students may perceive such actions as being consistent with instructors' words. Instructors' use of consideration-type behaviours should also

lead to transparent, open, trustworthy, and follower-focused relationships between themselves and students. These relationship characteristics are indicative of *authentic relations*. Authentic relations should influence students through the modeling of positive behaviours (Gardner, Avolio, Luthans, May, & Walumbwa, 2005). In other words, students may model the supportive behaviours of their instructors who 'lead by example'.

H5: There is a positive relationship between instructors' use of consideration and student collegial support.

Direction and congruence and interest and enjoyment. Two key aspects of direction and congruence are teacher clarity and content relevance. *Teacher clarity* refers to "the process by which teachers are able to effectively stimulate the desired meaning of module content in the minds of students through the use of appropriately structured verbal and nonverbal messages" (Chesebro, 1999, p. 2). *Content relevance* refers to the extent to which students understand why the taught content is important, and how such content relates to learning objectives. Through the use of both teacher clarity and content relevance, instructors can steer students in a direction to achieve learning objectives. In so doing, students are likely to experience interest and enjoyment because the instructor teaches in a manner that coincides with what students expect to learn. Furthermore, through the use of such teaching, students should have a better understanding of the importance of module material, what they are expected to learn, and the necessary steps to take in order to achieve learning objectives. Chesebro (1999) empirically supports this notion by showing that teacher clarity is positively related to students' positive affect for instructor as well as for module material. Hence,

H6: There is a positive relationship between instructors' direction and congruence and students' interest and enjoyment.

Interest and enjoyment and student achievement. When students experience interest and enjoyment in a module, they should perform better academically for two reasons. First, interest and enjoyment *broadens students' momentary thought-action repertoires* that in turn build their intellectual resources (Fredrickson, 1998). Fredrickson (1998) explained that interest can create the urge to investigate, promote exploration, and lead to the absorption of new information (i.e., broadened thoughts). The outcomes of such exploration is that interest "increases an individual's knowledge base", which should translate into better academic performance (Fredrickson, 1998, p. 305). In addition, joy creates "the urge to play" in an intellectual sense (i.e., broadened actions), and such intellectual play should promote skill acquisition, which may then translate into improved academic performance (Fredrickson, 1998, p. 304). Second, positive affect slightly *increases brain dopamine levels* that in turn can improve long-term memory, working memory, and performance in problem solving tasks (Ashby, Isen, & Turken, 1999). Increased brain dopamine levels may also explain why positive affect can expand an individual's cognitive organization and improve their ability to assimilate diverse material (Stein, Leventhal, & Trabasso, 1990).

H7: There is a positive relationship between students' interest and enjoyment and their achievement.

Student collegial support and student achievement. Student collegial support may affect students' studying efforts which can, in turn, affect their performance in exams. Entwistle and McCune (2004) assert that study effort should not be thought of as a "solitary activity" (p. 340).

They found that two study inventories explicitly recognize the collaboration involved in studying. When students are supportive of each other this may lead to peer learning, either via informal discussions or the creation of more formal study groups. In both cases, when a student receives support from their peers, this may help the student to learn something from a different point of view, clarify challenging topics, and/or better recall information by discussing something in a close student-student relationship as opposed to a distant instructor-student relationship. These benefits should translate into better performance in exams, and thus I expect that

H8: There is a positive relationship between student collegial support and student achievement.

Deep approach to learning and student achievement. Deep approach to learning should influence student achievement because such learning advances the students' knowledge of subject content. Students who adopt a deep approach try to understand the underlying meaning of module content. In so doing, they should process more information and acquire more subject skills, thus improving their exam scores. Findings support this positive association between deep approach and student achievement (see meta-analysis by Watkins, 2001).

H9: There is a positive relationship between a student's deep approach to learning and their achievement.

As explained in Chapter 3, transformational instructor-leaders should activate followers in ways that drive high levels of performance. Therefore, transformational instructor-leaders' students are likely to become both passionate and immersed with respect to the module in order to achieve higher levels of performance. Consequently, interest and enjoyment, deep learning,

and student collegial support are all expected to be mechanisms in the relationship between transformational instructor-leadership and student achievement (see Figure 5 for an illustration of the expected mediated relationships).

4.4 Methods

4.4.1 Dataset and rationale. I used a secondary dataset provided by the 'Enhancing Teaching-Learning Environments in Undergraduate Courses' (ETL) project that was sponsored by the Economic and Social Research Council (ESRC) (Hounsell & Entwistle, 2001). I used this dataset because it offered a significantly larger and more representative sample than those used in previous studies of transformational instructor-leadership. The sample included students across universities and disciplines, thus improving the generalizability of any findings. Furthermore, the dataset contained teaching items that measured perceptions of *instructor-student* relationships in a HEI module.

The dataset was distributed by the UK Data Archive. In previous research, the dataset was used in factor analyses that indiscriminately included both independent and dependent variables (Entwistle, 2005; McCune, 2003). These factor analyses were improperly used to determine links between variables based on whether or not they loaded on the same factor (Hair, Black, Babin, & Anderson, 2009). Teaching items entered into factor analysis were combined into composite scores prior to the factor analysis, e.g., set work and feedback, assessing understanding, choice allowed, etc. (Entwistle, 2005). In this study, I used principal component analysis (PCA) to investigate the underlying structure of only the teaching items, and each teaching item was entered individually.

4.4.2 Participants. To test H1, I used a sample consisting of 2,707 students from five contrasting subject areas, including Economics (n = 580, 21.4%), Media and Communications (n = 84, 3.1%), Engineering (n = 414, 15.3%), History (n = 742, 27.4%), and Biological Sciences (n = 887, 32.8%). The data collectors selected these subjects because of the substantial student intakes in these areas and the diversity of the subject disciplines. The sample included 1,344 males (mean age of 1,338 males = 21 years) and 1,347 females (mean age of 1,337 females = 20 years). Gender was not stated by 16 participants.

To test the research framework, i.e., H2 to H9, I used a subsample of 1,944 students from the 2,707 students that was used to test H1. For this subsample, participants were required to complete two questionnaires; one was distributed at the start of a module (the Learning and Studying Questionnaire) and the other towards the end of a module (the ETLQ). Participants who did not complete either of the questionnaires were excluded. This subsample consisted of 1,944 students from the same five subject areas, including Economics (n = 452, 23.3%), Media and Communications (n = 54, 2.8 %), Engineering (n = 362, 18.6%), History (n = 513, 26.4%), and Biological Sciences (n = 563, 29%). This nonrandom subsample included 1,012 males (mean age = 21 years) and 932 females (mean age of 930 females = 20 years).

4.4.3 Materials. The two measures used in this study were the Experiences of Teaching and Learning Questionnaire (ETLQ) and the Learning and Studying Questionnaire (LSQ). As stated earlier, both of these measures were developed via literature reviews as well as staff and student interviews (Entwistle, 2005). The ETLQ was used to tap into students' feedback on teaching (see Appendix C), facets of student engagement[4], and student achievement (see

[4] In a preliminary analysis, I assessed unidimensionality of all of the facets of engagement. Problematic items from both the deep approach and the deep approach orientation subscales were removed prior to the analysis. These problematic items either had cross-loading issues or standardized residuals exceeding the threshold of |4.0|.

Appendix D). For the ETLQ, items measuring students' feedback on teaching, interest and enjoyment, student collegial support, and deep approach to learning were represented on a 5-point continuum (1 = disagree, 2 = disagree somewhat, 3 = unsure, 4 = agree somewhat, 5 = agree).

Students' feedback on teaching. Thirty four items from the ETLQ was used to measure students' feedback on teaching with higher scores indicating more positive evaluations of teaching for a particular module. Six teaching-related subscales were identified on the questionnaire cover page, including (a) aims and congruence (5 items), (b) choice allowed (2 items), (c), teaching for understanding (5 items), (d) set work and feedback (5 items), (e) assessing understanding (2 items), and (f) staff enthusiasm and support (2 items). These subscales closely resembled those used by McCune (2003) and, in her report, coefficient alphas were good (ranging from 0.73 to 0.84). As mentioned before, the teaching items were phrased to capture overall course unit or module evaluations rather than personal leadership. Nonetheless, these items provided a foundation for understanding the links between classroom instruction and leadership. In later studies, these items would be further refined to tap into personal leadership.

Interest and enjoyment. The ETLQ was used to measure interest and enjoyment (3 items; $\alpha = 0.77$). For this measure, higher scores indicated higher levels of interest and enjoyment. The three items used to measure interest and enjoyment include, "I enjoyed being involved in this course unit", "I found most of what I learned in this course unit really interesting", and "I can imagine myself working in the subject area covered by this unit". All three items indicated that students were passionate about the module, and thus engaged.

Student collegial support. The ETLQ was used to measure student collegial support (3 items; $\alpha = 0.75$). For this measure, higher scores indicated greater student collegial support. The

three items used to measure student collegial support include, “Students supported each other and tried to give help when it was needed”, “Talking with other students helped me to develop my understanding”, and “I found I could generally work comfortably with other students on this unit”. All three items indicated that students were activated in a positive way because they collaborated with and supported each other. Ideally, the student collegial support measurement items should specify a frame of reference (Macey & Schneider, 2008), e.g., students supported each other and tried to give help in this module ‘more than they normally would in the typical module’. Unfortunately, the use of a secondary dataset was limiting in this regard, and thus student collegial support was reflective of a limited view of students’ behavioural engagement.

Deep approach to learning. The ETLQ was used to measure deep approach to learning (4 items; $\alpha = 0.64$). For this measure, higher scores indicated a greater use of a deep approach to learning. The four items used to measure deep approach to learning include, “In reading for this course unit, I’ve tried to find out for myself exactly what the author means”, “I’ve tried to find better ways of tracking down relevant information in this subject”, “I’ve looked at evidence carefully to reach my own conclusion about what I’m studying”, and “It has been important for me to follow the argument, or to see the reasons behind things”. These four items were all indicative of students being immersed in the module, and thus engaged.

Student achievement. Student achievement can be measured both objectively and subjectively. In this study, students were asked to rate their module performance. This evaluation was an interpretation of their actual achievement in which success or failure can be seen as a psychological state (Stephanou et al., 2011). Hence, student achievement was subjective because it was estimated by students. Studies showed that perceived achievement, although open to subjectivity, was related to students’ actual achievement (Stephanou et al., 2011). The ETLQ

measured students' perception of how well they were doing in the module as a whole. Student achievement was measured using one item on a 9-point continuum with six labels, including very well, well, quite well, about average, not so well, and rather badly.

Control variables. In this study, I controlled for students orientation towards a deep approach to learning, gender, and age.

Orientation towards a deep approach to learning. Students' approaches to learning for a module were greatly influenced by their orientation towards learning in general. Therefore, I measured students' orientation towards a deep approach to learning in order to determine whether instructors can deepen students' learning beyond the students' predisposition towards a deep approach to learning (Lizzio et al., 2002). I controlled for a deep approach orientation by using the LSQ's measure of students' deep approach to learning orientation (4 items; $\alpha = 0.71$). This subscale was represented on a 5-point continuum (1 = disagree, 2 = disagree somewhat, 3 = unsure, 4 = agree somewhat, 5 = agree) with higher scores indicating a greater orientation towards a deep approach to learning.

Gender. I used gender as a control variable for predicting student achievement. In using a dataset containing student records from the 'old' universities in England and Wales for the period 1973 to 1993, McNabb, Pal, and Sloane (2002) found that, on average, female students performed better than their male counterparts. At the same time male students were significantly more likely to obtain a first class degree. This so called gender gap in degree performance was thought to exist because of (a) differences in the type and nature of subjects chosen between genders, (b) gender differences in background characteristics associated with attainment, (c) psychological and/or biological factors, or (d) assessment biases that favoured male students.

However, the results for such reasons for the gender gap in student achievement were inconsistent (see McNabb et al., 2002; Mellanby, Martin, & O'Doherty, 2000). Based on the findings reported by McNabb et al. (2002), female students were expected to perform better than male students. Gender was coded as '1' for males and '2' for females.

Age. I used actual age as a control variable in predicting student achievement. The relationship between age and performance was not straightforward. Traditionally, mature students (usually ages 21 and over) were thought to be poorer performers than their younger counterparts due to age-related impairments in intellectual abilities and their lack of learning or studying skills. In a review of mature student achievement in higher education, Richardson (1994) explained that there was sufficient evidence for rejecting these stereotypes about mature students. Although mature students might be less likely to complete their programme, such withdrawal was likely due to personal or financial reasons and not academic failure. The mature students who completed their programme did not seem to perform any differently to the younger students in terms of their final degree (J. Richardson, 1994). Some researchers showed that mature students can even perform better than younger ones (e.g., McNabb et al., 2002; J. Richardson, 1994). Additionally, McNabb et al. (2002) showed that the relationship between age and performance for their very large data-set was concave. Given the lack of justification for a relationship between age and student achievement, no relationship was expected.

4.4.4 Procedures. The ETLQ and the LSQ were distributed across 17 university departments in Great Britain. The LSQ was distributed at the start of a module to measure students' orientations towards learning in general. The ETLQ was distributed near the end of the semester to ensure that students were familiar with their instructors and the learning environments created over the semester. To ensure that students reviewed a module led by a

main instructor, the data collectors examined modules for which instructors were at least teaching both at the beginning and at the end of a module. The time gap in distribution of the ETLQ and LSQ reduced concerns about common method bias. Data were collected anonymously.

4.5 Results

The total sample size was reduced from 2,707 to 2,704 after accounting for missing data and outliers, I split this sample randomly into a test (N = 1,361) and validation sample (N = 1,343). Both the test and validation subsamples satisfied the statistical assumptions necessary for PCA, including normality, homoscedasticity, linearity, and factorability of the correlation matrix.

For the subsample of 1,944 students (i.e., those who completed both the LSQ and ETLQ) missing data values were imputed[5] and there were no problematic outliers. Furthermore, there were no issues with respect to the assumptions of linearity and homoscedasticity. For normality, some distributions appeared to have a slight positive or negative skew but this was not problematic given the very large sample size as well as the inability of transformations to appreciably improve the distributions (Hair et al., 2009; Tabachnick & Fidell, 2005).

4.5.1 Component structure. PCA was chosen as the most appropriate technique because the aim was to understand the underlying structure of a set of socially constructed variables. Using the *test* sample (N = 1,361), I conducted a PCA on 34 teaching items (see Appendix C) with oblique rotation (Promax). Various tests were used to determine the number of components to extract (i.e., Kaiser's criterion, Velicer's Revised Minimum Average Partial (MAP) test, and Horn's parallel analysis). With no consensus between the tests, I examined each

[5] Missing data ranged from 0.1% to 0.7% for all variables. Little's missing completely at random (MCAR) test confirmed that an imputation method can be used by illustrating that there was a random pattern of missing data (χ^2 was 77.07 (104), $p > 0.05$). To calculate missing data for the quantitative variables, the expectation maximization (EM) approach was used.

of the solutions recommended by each test, i.e., three-, four-, five-, and six-component solutions were tested. A three-component structure produced the clearest structure with stronger components than the other alternatives and was seen as theoretically closer to the structure proposed by Bolkan and Goodboy (2011). For the PCA, component loadings were expected to be greater than .30 because the very large sample size made small loadings statistically meaningful (Field, 2009).

Several re-specifications were conducted and 14 items were deleted in an iterative process due to poor representation by the component structure (see Appendix C for a list of all items). In the first iteration, items 3, 5, 7, 20 and 34 had communalities that were less than .3, and thus were removed because of their poor representation by the component structure. After these modifications, the PCA was re-ran a second time and the re-specified structure illustrated that all items had communalities greater than .3. Next, Cross-loading issues were removed in an iterative process with the most problematic cross-loading being removed in each iteration. A cross-loading meant that a given item loaded at .32 or higher on two or more components (Tabachnick & Fidell, 2005). The most problematic cross-loading was clearly item 31 because it loaded on all three components. Item 14 also had dual loadings. After removing these two items, a third iteration revealed that items 11, 30, and 38 had problematic cross-loadings, and thus these items were removed. In this third iteration, items 25 and 36 also had cross-loading issues. Of the two latter items, item 25 was important for theoretical purposes because it was the only item that tapped into the support aspect of consideration leadership behaviour. In contrast, item 36 covered a topic that was already addressed by other items (i.e. assessment). For these reasons, item 36 was also dropped in this third iteration. After removing these items, the fourth iteration was

markedly clearer with only item 12 not significantly loading on any of the components. Therefore, this item was removed from the analysis.

As a final check for the unidimensionality of each component, an orthogonal rotation was employed and the results were compared to the nonorthogonal solution. The Varimax rotation revealed that items 10, 23, and 33 were the most problematic. The content of items 10 (i.e., students being prompted to think about their learning and ways to improve) and 33 (i.e., students seeing how set work matched what they were supposed to learn) were somewhat represented by other items in the component structure. However, item 23 captured a unique behaviour of staff sharing their enthusiasm with students and, for that reason, this item was kept. In a fifth iteration, items 10 and 33 were removed, and the resulting component matrices provided an acceptable structure using the Varimax procedure and a clear simple structure for Promax procedure. This final re-specified component solution was represented by 20 items and explained 48.67% of the variance. Horn's parallel analysis was repeated for the reduced number of items and, again, three components were confirmed as appropriate.

I then conducted a PCA on the remaining 20 items using the *validation* portion of the sample (N = 1,343) (See Table 7). Both the communalities and component loadings for each variable between the test and validation samples were similar. However, one cross-loading issue with item 39 was highlighted in the validation sample. The primary loading for this item switched from intellectual stimulation to consideration. The reason for this cross-loading is that item 39 taps into set work as well as making connections to knowledge and experience. These two aspects are indicative of consideration and intellectual stimulation respectively. In addition to the cross-loading issue, item 39 was the weakest loading variable on both of its components and had a relatively low communality. Hence, I deleted item 39. Overall, as shown in Table 7,

Table 7

Summary of (a) Test and Validation Subsamples' Factor Loadings and Communalities for Principal Component Analysis With Promax Rotation and (b) Total Sample's Standardized Factor Loadings for Confirmatory Factor Analysis of ETLQ's Teacher-Evaluation Items (Study 1)

	Principal component analysis								Confirmatory factor analysis			
	Test components				Validation components				Constructs			
Item descriptions	1	2	3	C	1	2	3	C	Co	DC	IS	IR
The feedback given on my set work helped to clarify things I hadn't fully understood	.90			.62	.67			.50	.50			.25
The feedback given on my work helped me to improve my ways of learning and studying	.87			.60	.69			.54	.50			.25
Staff gave me the support I needed to help me complete the set work for this course unit	.82			.60	.66			.49	-			-
I was encouraged to think about how best to tackle the set work	.57			.40	.50			.41	-			-
Staff were patient in explaining things which seemed difficult to grasp	.50			.43	.78				.66			.44
Staff helped us to see how you are supposed to think and reach conclusions in this subject	.48			.48	.69			.57	.73			.54
Students' views were valued in this course unit	.46			.40	.71			.49	.66			.43
Staff tried to share their enthusiasm about the subject with us	.40			.38	.71			.50	.63			.40
It was clear to me what I was supposed to learn in this course unit		.88		.57		.79		.56		.55		.30
What we were taught seemed to match what we were supposed to learn		.81		.60		.74		.57		.71		.50
The topics seemed to follow each other in a way that made sense to me		.81		.54		.73		.52		.57		.32
The course unit was well organised and ran smoothly		.63		.46		.63		.48		.63		.40
How this unit was taught fitted in well with what we were supposed to learn		.59		.57		.60		.55		.75		.56
The handouts and other materials we were given helped me to understand the unit		.47		.36		.48		.35		.53		.28
Plenty of examples and illustrations were given to help us to grasp things better		.40		.38		.36		.36		-		-
The teaching in this unit helped me to think about the evidence underpinning different views			.82	.61			.74	.61			.70	.50
This unit has given me a sense of what goes on 'behind the scenes' in this subject area			.77	.55			.77	.56			.61	.37
This unit encouraged me to relate what I learned to issues in the wider world			.76	.47			.71	.52			.57	.33
The teaching encouraged me to rethink my understanding of some aspects of the subject			.66	.47	.30		.46	.47			.63	.40
Variance extracted (%)									38.43	39.12	39.85	
Construct reliability									.79	.79	.73	

Note. Loadings less than .30 are not shown. C = communalities; Co = Consideration; DC = Direction and congruence; IS = Intellectual stimulation; IR = Item reliabilities. Item reliabilities represent communalities and are calculated using squared factor loadings.

the validation sample showed very good support for the component structure that was derived from the test sample.

The components were named as follows:

Component 1. Consideration: The items that loaded on this component related to constructive feedback and support given on assessments; staff's support in the classroom, including patience and helping students to think; valuing students' views; and sharing enthusiasm with students.

Component 2. Direction and congruence: The items on this component related to students being taught in an organized manner in order to achieve learning objectives. To guide students towards learning objectives, students were provided with examples, handouts, and other materials.

Component 3. Intellectual Stimulation: The items that loaded on this component contained some element of students being encouraged to think and be aware of varying evidence and issues in the subject matter. Students were also encouraged to not only apply their learning to the wider world, but also to challenge their understanding of subject aspects.

The three emergent dimensions reinforced the notion that transformational leadership was applicable to the HEI module context albeit in limited ways. *First*, consideration was similar to Bass' individualized consideration dimension because it included leader behaviours that focused on relationship building and follower development, e.g., support and constructive feedback (Bass, 1990). However, consideration included more generalized behaviours instead of 'individualized' or 'personalized' behaviours as prescribed in transformational leadership theory.

These generalized consideration behaviours entail more one-to-many than one-to-one communications, and the former may be more relevant to the distant HEI module context. *Second*, intellectual stimulation was identical to Bass' conceptualization of this dimension because it described leader behaviours that invigorated followers' thought processes as well as developed their ability to apply learning to tackle problems (Bass, 1990). *Third*, direction and congruence aligns with Rafferty and Griffin's vision dimension reflecting the short-term nature of HEI modules. That is, for direction and congruence, students reported on the degree to which they were taught to match learning objectives, whereas vision describes the degree to which followers inspired towards achieving a long-term goal. Overall, H1 was supported based on EFA.

4.5.2 Confirmatory factor analysis. Confirmatory factor analysis (CFA) was subsequently used to replicate the derived 19-item three-factor solution. Using maximum likelihood estimation in Amos, the measurement model was estimated for the *total* sample. Three items were dropped from the original 19 due to issues with their standardized residuals exceeding the threshold of |2.5| (Hair et al., 2009). These three items include items 15, 32, and 37. Item 15 shared a high standardized residual covariance with numerous items, i.e., exceeding |4.0| for item 16, and exceeding |2.5| for items 1, 23, 25, and 28 (Hair et al., 2009). Item 32 had a similar wording issue as the previously deleted item 39, i.e., measuring both support towards set work (i.e., consideration) and being encouraged to think about how to tackle the set work (i.e., intellectual stimulation). This item also shared a high standardized residual covariance with numerous items, e.g., exceeding |4.0| for items 35 and 40, and exceeding |2.5| for items 1, 13, 23, 27, and 25. Item 37 appears to be a broad representation of items 35 and 40 which may explain why it shared such high standardized residual covariances with these two items (i.e.,

exceeding$|4.0|$). For these reasons, and because deletion of items 15, 32, and 37 would not change the interpretation of the factors, these three problematic items were deleted.

Details of the final CFA are given in Table 7[6]. All of the fit indices indicated good model fit (χ^2/df = 4.65, RMR = .032, CFI = 0.97, TLI = 0.97, RMSEA = 0.037, GFI = 0.98, AGFI = 0.97, PCFI = 0.79). χ^2 was 450.57 (df = 97) and significant at $p < .001$, which was to be expected given the large sample size and the known sensitivity of Chi-square to sample size (Kline, 2011). Due to the minor modifications, the final measurement model was not seen as a major departure from what was being tested.

I tested a series of competing models in order to determine whether the data could be represented by a better fitting model than my final measurement model (see Table 8). The baseline model used for all comparisons was the three-factor model from my initial CFA. *First*, a higher-order factor was tested, and the fit results were the same as the three-factor model, thus indicating that a single higher-order factor of transformational leadership can represent the data. *Second*, a one-factor model was tested, and the results showed that the three-factor model fitted significantly better than a one-factor model ($\Delta\chi^2$ [3] = 1,171.62, $p < 0.001$). This finding provided further support for the individual dimensions proposed by H1. *Third*, a model comprising of a higher-order factor for the traditional transformational leadership dimensions, i.e., intellectual stimulation and consideration, was tested. For this model, the fit results were the same as the three-factor model. *Fourth*, a model comprising of a higher-order factor for the two adapted dimensions, i.e., consideration and direction and congruence was tested. Again, the fit results were the same as the three-factor model. *Fifth*, a model combining the traditional

[6] In assessing the measurement model, modifications were made for theoretical purposes. In examining the modification indices, four pairs of error terms were allowed to correlate based on the content of the questions, e.g. pairs of items measuring feedback and clarity.

Table 8

Competing Measurement Models (CFAs) for the Potential Dimensions of Transformational Instructor-Leadership (Study 1)

Model no.	Model	Chi-sq, df	CFI	RMSEA	RMR
Baseline	Three-factor	450.57, 97	.97	.037	.032
1	Higher-order factor	450.57, 97	.97	.037	.032
2	One-factor	1,622.19, 100	.89	.075	.059
3	Higher-order for consideration and intellectual stimulation	450.57, 97	.97	.037	.032
4	Higher-order for consideration and direction and congruence	450.57, 97	.97	.037	.032
5	One factor for intellectual stimulation and consideration	969.74, 99	.94	.057	.046
6	One factor for consideration and direction and congruence	1,167.92, 99	.92	.063	.050

transformational leadership dimensions, i.e., intellectual stimulation and consideration, into a single factor fitted significantly worse than the baseline model ($\Delta\chi^2$ [2] = 519.17, $p < 0.001$). *Sixth*, a model combining the adapted transformational leadership dimensions, i.e., consideration and direction and congruence, into a single factor fitted significantly worse than the baseline model ($\Delta\chi^2$ [2] = 717.35, $p < 0.001$). For competing models 1, 3, and 4, the fit results were identical to the baseline three-factor model. This occurs because the number of parameters to be estimated in the three-factor model and each of the alternative CFAs are the same, and thus these models are empirically equivalent (S. Lee & Hershberger, 1990). Overall, the model comparisons partially supported my proposition that transformational instructor-leadership comprises of distinct dimensions, i.e., transformational instructor-leadership can also be represented as a higher-order construct that is comprised of three first-order constructs.

4.5.3 Construct, discriminant, and nomological validity. The results of the measurement model were used to evaluate construct, discriminant, and nomological validity. For construct validity, standardized factor loadings exceeded 0.5, construct reliability values

exceeded 0.70, and average variance extracted (AVE) was acceptable (see Table 7) (Hair et al., 2009). For discriminant validity, the highest interconstruct correlation did not exceed the cutoff value of 0.85 proposed by Kline (2011). Thus, H1 was supported because, although the dimensions of transformational instructor-leadership were related, they could also be distinguished from each other. The positive interconstruct correlations were also an indication of good nomological validity, i.e., suggested that all of the dimensions tapped into transformational instructor-leadership.

Further validation of the factor structure's stability was conducted via a multi-group analysis in which the sample was split into four subsamples according to subject discipline[7]. The totally free multiple group model (TF) indicated configural invariance (χ^2/df = 2.22, CFI = 0.96, TLI = 0.96, RMSEA = 0.022, PCFI = 0.78). Hence, the factor structure was stable across the subject disciplines. The configural model was compared to the metric invariance model and, given the excessive sensitivity of the Likelihood Ratio Test ($\Delta\chi^2$) to large sample sizes, differences in CFI and McDonald's NCI were examined. The thresholds for these indices were 0.01 and 0.02 respectively (Cheung & Rensvold, 2002). The metric invariance model showed mixed results for metric invariance ($\Delta\chi^2$ [39] = 105.68, $p < 0.001$; ΔNCI = 0.028; ΔCFI = 0.005). Hence, I examined modification indices along with critical ratios for differences between parameters, and four paths were relaxed in an iterative process (three for direction and congruence and one for consideration). For this revised model, there was support for partial metric invariance with at least two invariant loadings per construct ($\Delta\chi^2$[27] = 68.06, $p < 0.001$; ΔNCI = 0.018; ΔCFI = 0.003) (Hair et al., 2009). Therefore, the factor structure was stable across the subject groups.

[7] For the multi-group analysis, the media and communications group was excluded because 84 participants did not meet the minimum requirement for CFA.

4.5.4 Common method bias. To examine the potential effects of common method bias on the three transformational instructor-leadership dimensions, I used the comprehensive CFA marker technique analysis plan proposed by Williams, Hartman, and Cavazotte (2010). For this approach, a marker variable was chosen and this variable must be theoretically unrelated to any of the other latent variables in the analysis. With an appropriate marker variable, a series of five nested CFA models were then tested. The first model was the CFA model in which all latent variables, including the marker variable, were allowed to correlate. The second model was called the Baseline Model and, for this model, the marker variable was orthogonal to the other latent variables and its factor loadings, and error variances were fixed according to the data from the CFA model. The third model, referred to as the Method-C model, was similar to the Baseline Model but added equally constrained factor loadings from the marker variable to each of the indicator variables in the model. The fourth model was called the Method-U model and was similar to the Method-C model, except that the additional factor loadings were now unconstrained. Finally, the fifth model, referred to as the Method-R model used the better fitting model between Method-C and Method-U, and restricted the factor correlations to the values obtained from the Baseline Model.

The marker variable chosen for this analysis was 'perceived importance of the subject to students' because this variable should theoretically be unrelated to the other latent factors in the model[8]. A comparison of the Baseline model to the Method-C model showed that the Baseline model was superior ($\Delta\chi^2$ [1, N = 1,944] = 1,735.98, $p < 0.001$). Hence, there was no presence of method effects associated with the marker variable. The Method-U model was superior to the Method-C model ($\Delta\chi^2$ [15, N = 1,944] = 45.82, $p < 0.001$) indicating that the restrictions in the

[8] Perceived importance of the subject was measured by three indicators in the Learning and Studying Questionnaire (LSQ).

Method-C model should be rejected. Finally, the Method-R model was not superior to the Method-U model ($\Delta\chi^2$ [3, N = 1,944] = 3.32, $p > 0.05$) indicating that there was no biasing effects of the marker variable on the factor correlations. Thus, I found no evidence of common method bias.

4.5.5 Criterion validity. For criterion validity, I estimated a path model using structural equation modeling in AMOS. I developed the path model using a two-step process (J. Anderson & Gerbing, 1988). In the first step, I estimated the measurement model using all of the constructs from the research framework in Figure 5[9]. For this model, I kept the correlated error terms from the potential quasi-transformational instructor-leadership dimensions (the terms 'potential' and 'quasi' were used because respectively the item wordings did not always reflect personal leadership, and two of the three dimensions were not representative of transformational leadership as typically proposed in the organizational behaviour literature). The measurement model was estimated for the total sample using the maximum likelihood bootstrapping procedure because this procedure assessed the stability of the parameter estimates (Byrne, 2001). The number of bootstraps was set to 500 and the bias-corrected (BC) confidence interval was set to 95%. With the number of observed variables exceeding 30 and the sample size exceeding 250, Hair et al. (2009) suggested that significant *p*-values were to be expected; CFI should be above 0.90; and RMSEA should be less than .07. Based on these thresholds, all fit indices indicated good model fit (χ^2/df = 3.42, RMR = 0.05, CFI = .94, RMSEA = 0.035, GFI = .95, AGFI = .94).). χ^2 was 1,533.58 (df = 449) and significant at $p < 0.001$.

[9] For the single-item measures of age, gender, and student achievement, their loading and error terms were specified (Hair, Black, Babin, & Anderson, 2009). No measurement error was assumed, and the loadings and error terms were set to one and zero respectively. This approach was similar to multiple regression because it assumed no measurement error.

For the second step, I transformed the measurement model into a structural model to test H2 to H9 (results shown in Figure 6). Like the measurement model, 500 bootstraps were used at a 95% BC confidence interval. The structural model showed very good fit (χ^2/df = 3.4, RMR = 0.05, CFI = 0.94, RMSEA = 0.035, GFI = 0.95, AGFI = 0.94). χ^2 was 1,591.27 (df = 468) and significant at $p < 0.001$.

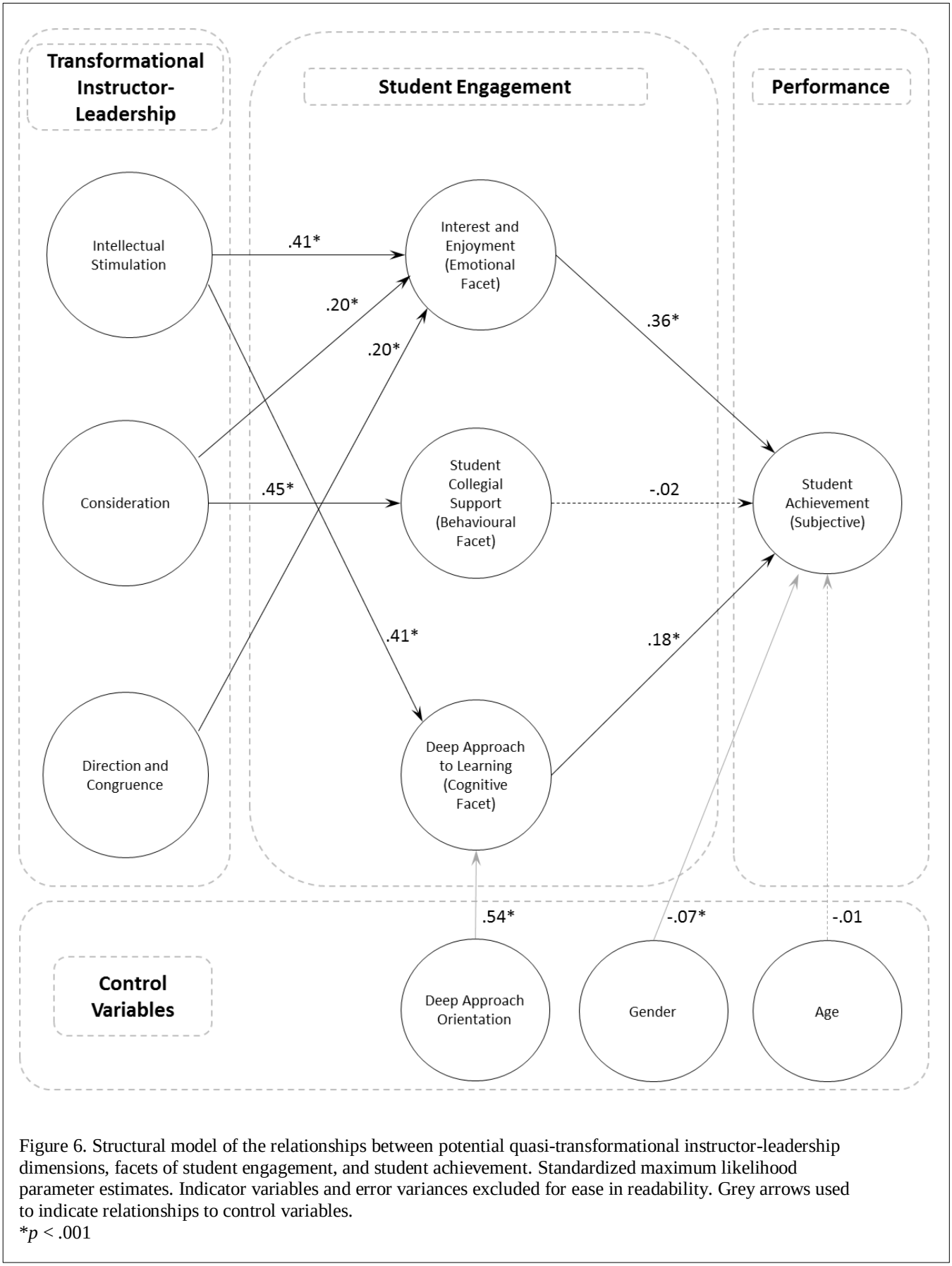

Figure 6. Structural model of the relationships between potential quasi-transformational instructor-leadership dimensions, facets of student engagement, and student achievement. Standardized maximum likelihood parameter estimates. Indicator variables and error variances excluded for ease in readability. Grey arrows used to indicate relationships to control variables.
*$p < .001$

Table 9

Parameter Estimates for the Structural Model of Potential Quasi-Transformational Instructor-Leadership Dimensions, Facets of Student Engagement, and Student Achievement (Study 1)

Structural relationship	Unstandardized parameter estimate	Standard error	Critical ratio	Standardized parameter estimate
H_2: IS → IE	0.61***	0.06	9.60	0.41
H_3: IS → DAe	0.29***	0.03	11.33	0.41
H_4: Co → IE	0.35***	0.07	4.76	0.20
H_5: Co → SCS	0.44***	0.03	12.70	0.45
H_6: DC → IE	0.35***	0.07	5.09	0.20
H_7: IE → SA	0.51***	0.04	13.27	0.36
H_8: SCS → SA	-0.04	0.06	-0.70	-0.02
H_9: DAe → SA	0.54***	0.09	6.11	0.18
DAl → DAe	0.37***	0.03	13.14	0.54
GN → SA	-0.21***	0.06	-3.65	-0.07
AG → SA	-0.00	0.01	-0.29	-0.01

Note. IS = intellectual stimulation; DC = direction and congruence; Co = consideration; IE = interest and enjoyment; SCS = student collegial support; DAe = deep approach in module; SA = student achievement; DAl = deep approach orientation; AG = age; GN = gender.

*** $p < .001$.

Table 9 shows the standardized and unstandardized structural path estimates for each hypothesis and control variable. H8 was the only unsupported hypothesis, i.e., the relationship between student collegial support and student achievement was not significant. In addition, the relationship between gender and student achievement was negative. Even though this relationship was not expected, women have been shown to underperform in some universities in England and Wales (McNabb et al., 2002). McNabb et al. (2002) ruled out differences in academic ability, male prejudice, subject specific effects, and institution-specific factors as potential causes of female academic underperformance. They suggested that the reason for women underperformance might be more biological or psychological, whereby men tend to take greater risks compared to women who preferred to take a safer route. Alternatively, the gender

difference in self-ratings of academic performance could be due to differences in modesty between genders. In a review of self-other rating agreement in leadership, Fleenor, Smither, Atwater, Braddy, and Sturm (2010) explain that, in general, men overestimate their abilities and effectiveness more than women. Therefore, men tend to inflate their self-ratings of performance, while women tend to be more accurate in their estimation of performance because they give self-ratings that are more aligned with other-ratings (Fleenor et al., 2010).

To check the mediating effects in the structural model, the first step was to establish significant relationships between the constructs. This analysis was conducted by checking (a) the direct unmediated relationship, (b) the relationship between the mediator and the 'input' construct, and (c) the relationship between the mediator and the outcome construct (see Table 10) (Hair et al., 2009). The findings in Table 10 showed that all of the relationships were statistically significant.

Table 10

Assessment of the Level of Mediation Through the Mediated Model (Study 1)

(a) Direct unmediated relationship	Cov(X,Y)	(b) Relationship between mediator and "input"	Cov(X,Y)	(c) Relationship between mediator and outcome	Cov(X,Y)
IS ↔ SA	0.34***	IS ↔ IE	0.48***	IE ↔ SA	0.63***
		IS ↔ DAe	0.21***	DAe ↔ SA	0.24***
C ↔ SA	0.24***	C ↔ IE	0.37***	IE ↔ SA	0.63***
		C ↔ SCS	0.15***	SCS ↔ SA	0.10***
DC ↔ SA	-0.26***	DC ↔ IE	0.35***	IE ↔ SA	0.24***

Note. IS = intellectual stimulation; DC = direction and congruence; Co = consideration; IE = interest and enjoyment; SCS = student collegial support; DAe = deep approach in module; SA = student achievement.

***$p < .001$.

Table 11

Model Comparisons of the Effect of Adding Direct Unmediated Relationships (Study 1)

Direct unmediated relationship	χ^2	df	CFI	$\Delta\chi^2/\Delta df$	Bootstrap two-tailed significance estimate (BC)
Baseline model	1,591.27	468	.94	-	-
IS → SA	1,591.23	467	.94	0.04/1	-0.02
Co → SA	1,590.87	467	.94	0.40/1	-0.06
DC → SA	1,588.37	467	.94	2.9/1	0.14

Note. IS = intellectual stimulation; Co = consideration; DC = direction and congruence; SA = student achievement.

Having established the relationships between the constructs, the next step was to assess the level of mediation through the mediated model. To do so, each of the direct unmediated relationships in the structural model was added separately in a series of models (see Table 11). Both the $\Delta\chi^2$ test and the bootstrap two-tailed significance (bias-corrected) indicated that none of the direct unmediated relationships significantly improved the model. This meant that the engagement facets in the model were full mediators between the potential quasi-transformational instructor-leadership dimensions and student achievement.

The magnitude of the mediating effects between the potential quasi-transformational instructor-leadership dimensions, facets of student engagement, and student achievement were decomposed into direct and indirect effects as shown in Table 12. As expected, each student engagement facet was directly associated with student achievement (although the strength of the association between student collegial support and student achievement was extremely weak). Also, the three potential quasi-transformational leadership dimensions were all indirectly associated with student achievement, indicating full mediation as mentioned before. Interestingly, of the three potential leadership dimensions, intellectual stimulation was clearly the

Table 12

Mediation Between Potential Quasi-Transformational Instructor-Leadership Dimensions; Facets of Student Engagement; And Student Achievement Decomposed Into Direct and Indirect Effects (Study 1)

Constructs in relation to SA	Direct effect	Indirect effect	Total effect
Intellectual stimulation	0.00	0.23	0.23
Consideration	0.00	0.07	0.07
Direction and congruence	0.00	0.07	0.07
Interest and enjoyment	0.36	0.00	0.36
Deep approach	0.18	0.00	0.18
Student collegial support	-0.02	0.00	-0.02

Note. SA = student achievement. Values in the table represent standardized effects.

most strongly related to student achievement via interest and enjoyment and deep approach to learning. This may be an indication that intellectual stimulation is a relatively more impactful leader behaviour in the HEI module context.

4.6 Discussion

Based on the reported findings, I now discuss (a) the proposed measure of quasi-transformational instructor-leadership dimensions, (b) the empirical model with student engagement facets as mechanisms in the relationship between transformational instructor-leadership and student achievement, and (c) limitations of the study and implications for further research.

4.6.1 Transformational instructor-leadership measure. Collectively my findings suggest that the 16-item measure developed based on the ETLQ appears to be a sound measure of potential quasi-transformational instructor-leadership dimensions. As explained at the beginning of the chapter, I use the term potential because not all of the items in the ETLQ were phrased to tap into personal leadership. Therefore, at this stage of the research, I refer to this 16-item measure as the Potential Quasi-Transformational Instructor-Leadership Questionnaire (P-

QTILQ). The content of the 16-item P-QTILQ provides descriptions of instructor-leader behaviours that embrace module/classroom dynamics, thus offering an advantage over the MLQ. That is, the P-QTILQ captures perceptions of teaching quality deemed to be of utmost importance to students, such as lecture coverage, instructor's feedback on set work, and availability of materials (Banwet & Datta, 2003). Moreover, the P-QTILQ (a) taps into one traditional transformational leadership dimension, i.e., intellectual stimulation, (b) partially taps into another traditional transformational leadership dimension, i.e., consideration, and (c) taps into a new dimension of leadership that is specific to the HEI module context, i.e., direction and congruence. For the three dimensions, there are some similarities and differences to (a) Bolkan and Goodboy's framework of instructor communication behaviours (Bolkan & Goodboy, 2011) and (b) transformational leadership theory in general.

Similar to Bolkan and Goodboy's work, P-QTILQ's *intellectual stimulation* dimension comprises of actions such as the encouragement of independent thinking and some insinuation of content relevance (Bolkan & Goodboy, 2011). Adding to Bolkan and Goodboy's work, other intellectually stimulating behaviours load on this construct. These include behaviours such as instructors encouraging students to contrast differing viewpoints, the discussion of 'behind the scenes' information in the subject area, application of subject knowledge to real-world issues, and being self-critical of one's own subject knowledge. These intellectually stimulating leader behaviours appear to reflect the intellectual stimulation dimension as proposed in transformational leadership theory.

Like Bolkan and Goodboy's study, P-QTILQ's *consideration* contains items that infer caring, immediacy, availability, and conveying interest (Bolkan & Goodboy, 2011). These four concepts are operationalized as patience in giving explanations, helping students to think and

reach conclusions, quality of feedback, valuing students' views, and sharing of enthusiasm. The use of enthusiasm has previously been regarded as a facet of inspirational motivation, but sharing enthusiasm loads on consideration in this study. This difference may signal a distinction between displaying and sharing enthusiasm, in which the former is associated with seducing followers towards a vision or objective and the latter is seen as more supportive and follower-focused. Alternatively, perhaps sharing enthusiasm loads on consideration because there is no charismatic leadership dimension or factor on which to load. The P-QTILQ items that tap into consideration infer that instructors use generalized supportive behaviours towards the class instead of individualized behaviours as proposed in transformational leadership theory. As explained in Chapter 2, these 'one-to-many' behaviours are likely to be more applicable to the HEI module context than 'one-on-one' behaviours because of the distance featured in this context.

P-QTILQ's *direction and congruence* dimension highlights the short-term nature of HEI module groups, showing that instructor-leaders need to match their teaching and module organization to the module's learning objectives, rather than focus on inspiring students towards a vision. Like transformational leaders, these instructors must focus on where the module is headed and how they are going to get students there (Robbins & Judge, 2009). Direction and congruence includes teacher clarity towards learning objectives, content relevance, the organization and execution of sensible topic sequencing and, resources given to assist students in understanding. The content relevance aspect of this dimension is regarded by students to be a charismatic behaviour (Bolkan & Goodboy, 2011). However, charisma also includes numerous other module behaviours such as humour, caring, immediacy, equality, self-disclosure, and more (Bolkan & Goodboy, 2011). Therefore, direction and congruence is different to charisma in that

the former emphasizes a task focus by expanding on content relevance to include leading students towards learning objectives.

Overall, the findings support the notion that transformational leadership theory is applicable to the HEI module context in limited ways. The P-QTILQ taps into intellectual stimulation as suggested by transformational leadership theory. However, the other two dimensions of the P-QTILQ, i.e., consideration and direction and congruence, are adapted to the module context. These dimensions are tailored to the HEI module context because the individualized and long-term vision aspects of transformational leadership theory may not translate to this context.

4.6.2 Empirical model. Each of the three dimensions is significantly related to student achievement via at least one facet of engagement. That is, the findings support all but one of the hypothesized relationships between transformational instructor-leadership, student engagement, and student achievement. First, *intellectual stimulation* is related to students' deep approach to learning beyond their orientation towards a deep approach to learning. This finding responds to the call for research on instructors' influence on students' approaches to learning beyond students' orientation towards approaches to learning (Lizzio et al., 2002). Second, *consideration* is strongly associated with student collegial support indicating that instructors may 'lead by example' when they use positive behaviours such as valuing students' views, showing interest, being transparent and open in the classroom and in evaluation, and focusing on student development. However, student collegial support is not related to student achievement. One possible reason for this finding is that when students help each other, these sessions may turn into distracting social gatherings, in which nothing is learned. Another reason may be that some students may over-rely on their colleagues' support so much so that these students suffer in exam

conditions when that support pillar is absent. Perhaps student collegial support is related to other outcomes in a HEI module, e.g., satisfaction or well-being. As expected, intellectual stimulation, consideration, and direction and congruence are indirectly related to student achievement via students' interest and enjoyment.

In addition to contributing a first step towards developing a measure of transformational instructor-leadership, the present study makes three other important theoretical contributions. First, previous studies examine the direct relationship between transformational instructor-leadership behaviours and student outcomes, with no regard for why such leadership is related to these outcomes (see Section 2.4.2). This study extends transformational instructor-leadership research by providing empirical support for two facets of student engagement, i.e., deep approach to learning (a facet of cognitive engagement) and interest and enjoyment (a facet of emotional engagement), as *mechanisms* through which potential quasi-transformational instructor-leadership dimensions are related to student achievement. This finding is consistent with (a) Kahu's conceptual framework, which illustrates student engagement as a pathway through which instructors influence student achievement (Kahu, 2013) and (b) organizational behaviour research, which shows that work engagement is a mechanism in the relationship between transformational leadership and followers' performance (e.g., Hoon Song et al., 2012; Kovjanic et al., 2013; Vincent-Hoper et al., 2012)

Second, this study contributes to the organizational behaviour literature by enhancing our understanding of how engagement works as a mechanism. Organizational behaviour research typically combines the dimensions of work engagement into one construct when examining its antecedents and outcomes. This combined approach is useful for more complex models, and when hypothesizing about engagement as a whole. However, the findings of this study show that

potential quasi-transformational instructor-leadership dimensions can work through specific *facets* of emotion, behaviour, and cognition to influence student achievement. For instance, even though intellectual stimulation is strongly related to a facet of cognitive engagement, i.e., deep approach to learning, both consideration and direction and congruence are not related to this facet of cognitive engagement.

Finally, this study contributes to educational research by examining the relationship between instructors' teaching and facets of *all three dimensions of engagement simultaneously*, i.e., emotion, behaviour, and cognition. Fredricks et al. (2004) explain that an examination of the three dimensions simultaneously, advances educational research by showing how contextual factors (e.g., instruction) can affect each of the dimensions. Specifically, the findings underscore the relative importance of one facet of emotional engagement (i.e., interest and enjoyment) in comparison to a facet each from behavioural (i.e., collegial support) and cognitive engagement (i.e., deep approach to learning) (see Table 12). Therefore, this study provides initial evidence that emotional engagement may be a key mechanism through which all of the potential dimensions of transformational instructor-leadership are related to student achievement.

In addition to these theoretical contributions, this study builds on previous transformational instructor-leadership research vis-à-vis *improved methods* (see Section 2.4.2). These improvements include (a) taking the first step towards developing a context-sensitive measure of transformational instructor-leadership and (b) the use of a markedly larger sample that is representative of five subject areas. These methodological contributions lead to improved validity of the concepts and allow for generalization of the findings to the UK context.

4.6.3 Limitations of the study and directions for future research. The contributions of this study must be viewed with caution because there are important limitations. First, the main limitation of this study is that the items in the dataset do not assess personal transformational leadership for a HEI module, but rather students' overall experiences with a HEI module in general. For instance, three of the P-QTILQ items refer to 'staff' as opposed to the instructor. This phrasing can mean that other people, such as advisors or administrative staff, may be individuals who the respondent considers when answering the question. In this sense, the P-QTILQ may not capture leadership. At the beginning of this dissertation, I described leadership as "a process whereby intentional influence is exerted by *one* [emphasis added] person over other people to guide, structure, and facilitate activities and relationships in a group or organization" (Yukl, 2009, p. 3). Therefore, leadership *is* personal because it involves the influence of *one* person over others. To determine whether the P-QTILQ can indeed tap into transformational instructor-leadership, the items should be rephrased in order to reflect the 'personal' aspect of leadership in the HEI module context. After rewording the items that tap into these leadership dimensions to reflect personal leadership, the findings can indeed change. For e.g., while the dimensions show empirical distinctiveness in this study, rewording all of the items to tap into personal leadership can lead to higher associations between the dimensions, thus offering stronger support for a single construct. Overall, the contributions in this study are all in relation to *potential* quasi-transformational instructor-leadership dimensions, and thus the items need to be revised to reflect personal leadership in future work.

A second limitation of this study is that I take only the first step towards developing a context-sensitive measure of transformational instructor-leadership from. Accordingly, I have yet to validate the P-QTILQ alongside other established measures of transformational leadership

such as the MLQ or Rafferty and Griffin's measure. Future research is needed to determine whether the P-QTILQ shares the same conceptual space as other established measures of transformational leadership, and whether the P-QTILQ can contribute variance beyond these established measures.

A third limitation of this study is that I was only able to examine one facet of each student engagement dimension. Each of the student engagement dimensions can comprise of other highly activated and positive aspects. For instance, emotional engagement may include enthusiasm, energy, excitement, etc.; behavioural engagement may include devoting energy, striving hard to perform, exerting full effort and energies, etc.; and cognitive engagement may include focus, attention, concentration, etc. (Rich et al., 2010). Therefore, the facets of student engagement used in this study are limited, and future research needs to measure student engagement more comprehensively.

A fourth limitation of this study is that the use of self-report measures for potential leadership dimensions and outcomes are prone to common method bias. I address the issue of common method bias by using the comprehensive CFA marker technique, and this analysis indicates that method effects are not present. In addition, the questionnaire measuring deep approach to learning orientation was distributed at a different point in time to the questionnaire measuring the main study's variables. This time gap further reduces concerns about common method bias. To reduce the potential for common method bias even further, future research can consider using student records to measure student achievement objectively. In addition, social desirability can be measured to control for this bias (e.g., J. Harrison, 2011).

A fifth limitation is the use of a cross-sectional design. This research design allows for causal inferences rather than causal conclusions. Cross-sectional data makes it difficult to prove that the potential quasi-transformational instructor-leadership dimensions cause students to become engaged, and that engagement causes students to achieve higher grades. It is possible that highly engaged students cause instructors to use more transformational leader behaviours (Skinner & Belmont, 1993). Therefore, future research requires experimental designs and longitudinal studies to confirm the direction of causality.

4.6.4 Conclusion. Overall, the 16-item P-QTILQ extracted from the 34 teaching items of the ETLQ appears to measure three potential dimensions that suggest a limited applicability of transformational leadership to the module context. As explained in Chapter 1, Yammarino and Bass' definition of transformational leadership suggests three dimensions of transformational leadership including a vision, intellectual stimulation, and individualized consideration (Yammarino & Bass, 1988). Yammarino and Bass' organizational behaviour conceptualization of transformational leadership is partly consistent with the three potential dimensions in this study. The differences between Yammarino and Bass' organizational behaviour conceptualization and the educational approach used in this study are that 'individualized' and 'visionary' leader behaviours did not emerge from an HEI module-based measure. Individualized leader behaviours are not likely to be relevant to the distant module context, and visionary leader behaviours are clearly irrelevant to the temporary nature of HEI module groups. The findings also confirm that each potential dimension of transformational instructor-leadership shares a positive indirect relationship with student achievement via specific facets of engagement. The main limitation of this study is that the P-QTILQ's items are phrased to assess module evaluations rather than personal leadership, and may capture the influence of other individuals

and staff in addition to that of the module instructor. In the upcoming study, I attempt to address this limitation by changing the measure to better focus students' responses towards one instructor. Therefore, in the next study, I take the first step towards rephrasing the P-QTILQ's items to tap into personal leadership. In so doing, I also examine the convergent validity of the P-QTILQ.

Chapter 5: Validation of the Transformational Instructor-Leadership Dimensions from an Educational Measure and the Enhancement of the Context-Sensitivity of an Organizational Behaviour Measure (Study 2)

5.1 Introduction

There are three aims of this study. The first aim is to amend the P-QTILQ so that it measures *personal leadership*. In the previous study, I explained that the P-QTILQ taps into HEI module evaluations rather than personal leadership. In this study, I address this issue by employing two approaches to ensure that students evaluate a single instructor in answering the questions. First, prior to answering the question items, I include a statement which informs students that they are supposed to think of only one instructor/lecturer who taught at least half of the classes for a module in answering the questions (see Appendix E). Second, I change three of the P-QTILQ item wordings to correspond with the opening statement that focuses on one instructor/lecturer. Specifically, I reword items 11, 12, and 14 from referencing 'staff' to referencing 'the teacher' (see Appendix E). The remaining items are kept in their original format, and measure students' experiences in the classroom or module. I did not change these items because (a) they were seen as similar in structure to some of Baba and Ace's behavioural leadership items, e.g., how topics flow or referencing the module (Baba & Ace, 1989), and (b) the opening statement was seen as adequate for steering students towards answering these questions based on one instructor. With these changes to the item wordings, the questionnaire should be a better measure of personal instructor-leadership. Therefore, I drop 'potential' from the P-QTILQ and herein after refer to the questionnaire as the Quasi-Transformational Instructor-Leadership Questionnaire (QTILQ).

The second aim of this study is to check the QTILQ's *convergent*, *discriminant*, and *incremental validity* vis-à-vis established measures of transformational leadership, including the MLQ (Avolio & Bass, 2004) and Rafferty and Griffin's (RG) measure (Rafferty & Griffin, 2004). The most widely used measure of transformational leadership is the MLQ (Avolio & Bass, 2004). Bass (1990) explains that transformational leadership comprises of four dimensions, including charisma, inspirational motivation, intellectual stimulation, and individualized consideration. For *convergent* validity, some of these MLQ transformational leadership dimensions are expected to correlate with some of the QTILQ transformational leadership dimensions (see the comparisons shown in Table 6 in Study 1). For instance, both intellectual stimulation subscales should correlate. Also, the MLQ's individualized consideration and the QTILQ's consideration subscales should correlate to some degree. Finally, the QTILQ's direction and congruence dimension describes the leading of student towards goals and not a vision. Therefore, direction and congruence may not be highly related to any specific dimension from the MLQ. In addition to transformational leadership, the MLQ measures transactional and laissez-faire leadership. The QTILQ dimensions are likely to be negatively associated with laissez-faire leadership because the latter represents an absence of leadership or unsupportive leadership whereas the QTILQ dimensions are characterized by highly supportive instructor behaviours. For *discriminant* validity, it is expected that each of the QTILQ dimensions should be unique enough to capture elements of transformational leadership not measured by the MLQ. Similarly, for *incremental* validity, the QTILQ should predict established outcomes beyond the MLQ. Even though Bass' MLQ dimensions are well-established in organizational behaviour literature, the MLQ has received mixed empirical support with respect to discriminant validity

(see Carless, 1998) as well as the equivalence of its factor structure across cultures like the UK (see Edwards, Schyns, Gill, & Higgs, 2012; Tejeda, Scandura, & Pillai, 2001).

In response to the mixed empirical results regarding the MLQ, Rafferty and Griffin propose five subdimensions of transformational leadership, including vision, inspirational communication, supportive leadership, intellectual stimulation, and personal recognition. Vision is defined as "[t]he expression of an idealised picture of the future based around organization values" (Rafferty & Griffin, 2004, p. 332). Inspirational communication is defined as "[t]he expression of positive and encouraging messages about the organization, and statements that build motivation and confidence" (Rafferty & Griffin, 2004, p. 332). Supportive leadership involves the leader "[e]xpressing concern for followers and taking account of their individual needs" (Rafferty & Griffin, 2004, p. 333). Intellectual stimulation involves the leader "[e]nhancing employees' interest in, and awareness of problems, and increasing their ability to think about problems in new ways" (Rafferty & Griffin, 2004, p. 333). Finally, personal recognition is defined as "[t]he provision of rewards such as praise and acknowledgement for achievement of specified goals" (Rafferty & Griffin, 2004, p. 334). Rafferty and Griffin (2004) found that the five subdimensions are correlated, but they are still distinct factors.

The Rafferty and Griffin measure (RG) is also used to examine convergent, discriminant, and incremental validity. For *convergent* validity, correlations between RG and the QTILQ are expected (again, recall the comparisons shown in Table 6 in Study 1). First, correlations between the intellectual stimulation subscales are expected. Second, QTILQ's consideration and RG's supportive leadership may be seen as similar concepts, and thus may correlate with each other. Finally, QTILQ's direction and congruence is as a translation of the vision dimension that is tailored for the temporary/short-term duration of a higher education module. Hence, direction

and congruence may be associated with RG's vision, but the correlation is likely to be low to moderate because of the differences between the concepts. For *discriminant* validity, the QTILQ's dimensions should be distinct enough from their counterpart RG dimensions in order to show that the QTILQ dimensions capture phenomena that is not measured by RG. For *incremental* validity, the QTILQ should increase the prediction of established transformational leadership outcomes beyond the RG.

The third aim of this study is to determine *criterion validity* by establishing how well the QTILQ can predict outcomes typically associated with transformational leadership and transformational instructor-leadership. Here, I did not examine engagement- or burnout-related outcomes. Instead, I investigated the relationship between transformational instructor-leadership and established transformational instructor-leadership outcomes in the literature including satisfaction, effort, and perceptions of instructors' effectiveness (recall the meta-analysis in Appendix A). As shown in the meta-analysis in Appendix A, studies reported that transformational instructor-leadership is positively related to students' satisfaction, effort, and perceptions of instructors' effectiveness. Meta-analyses for transformational leadership in non-module settings also confirm that transformational leadership is strongly related to these outcomes (e.g., Derue et al., 2011; Judge & Piccolo, 2004). Hence, these outcomes are used to test the criterion validity of the QTILQ's dimensions.

5.2 Methods

5.2.1 Participants. The final sample for this study consisted of 148 students from a university located in the northern region of the United Kingdom. The students were from seven faculties, including Science (n = 48, 32.4%); Social Sciences (n = 34, 23.0%); Arts and Humanities (n = 25, 16.9%); Engineering (n = 20, 13.5%); Medicine, Dentistry, and Health (n =

19, 12.8%); and a learning institute (n = 2, 1.4%). This nonrandom sample included 51 males (mean age = 21 years) and 97 females (mean age = 21 years).

5.2.2 Materials. Preceding the leadership questionnaires, brief instructions were given to participants asking them to choose an undergraduate course in which one lecturer taught at least half of the classes and to answer the upcoming questions based on that lecturer. Question items are provided in Appendix E.

Transformational instructor-leadership. Transformational instructor-leadership was measured by three measures, including the QTILQ, MLQ, and RG.

The Quasi-Transformational Instructor-Leadership Questionnaire (QTILQ). The QTILQ comprised of sixteen items that were represented on a 5-point Likert scale as described in the previous study. The inventory comprised of three subscales, including (a) direction and congruence (6 items) ($\alpha = 0.86$); (b) consideration (6 items) ($\alpha = 0.84$); and (c) intellectual stimulation (4 items) ($\alpha = 0.73$).

The Multi-factor Leadership Questionnaire (MLQ). The MLQ measured transformational leadership via 36 items that were represented on a 5-point continuum (0 = not at all; 1 = once in a while; 2 = sometimes; 3 = fairly often; 4 = frequently, if not always) with higher scores indicating higher transformational leadership. The MLQ items were adapted to the HEI module context using Pounder's word modifications (Pounder, 2008). Nine subscales were described for the inventory, including (a) idealized influence (behaviour) (4 items, e.g., "He/She will talk about his/her personal beliefs and value systems while teaching") ($\alpha = 0.60$); (b) idealized influence (attributed) (4 items, e.g., "He/She is not only concerned about his/her own interests, but is genuinely concerned about the progress made by students") ($\alpha = 0.84$); (c) intellectual stimulation (4 items, e.g., "He/She listens to different opinions for solving problems arising from

the course") (α = 0.76); (d) individual consideration (4 items, e.g., "He/She is willing to provide help outside of class") (α = 0.82); (e) inspirational motivation (4 items, e.g., "He/She talks optimistically about the future") (α = 0.78); (f) management by exception (passive) (4 items) (α = 0.44); (g) management by exception (active) (4 items) (α = 0.73); (h) contingent reward (4 items) (α = 0.72); and (i) laissez-faire leadership (4 items) (α = 0.60).

Rafferty and Griffin's measure (RG). RG consisted of 15 Likert items that were represented on a 5-point continuum (1 = strongly disagree; 2 = disagree somewhat; 3 = undecided; 4 = agree somewhat; 5 = strongly agree) with higher scores indicating higher transformational leadership. The wording of the original items was modified to suit the HEI module context according to word modifications provided via personal communications with Harvey and Royal (see Harvey et al., 2003). These changes included the target to lecturer, the context to class or school, and 'employees' or 'people' to 'students' where relevant. The inventory contained five subscales and each of these subscales contained three items. The subscales included (a) vision (e.g., "The lecturer has a clear understanding of where the class is going") (α = 0.87); (b) inspirational communication (e.g., "The lecturer says positive things about the class") (α = 0.80); (c) intellectual stimulation (e.g., "The lecturer challenges me to think about old problems in new ways") (α = 0.78); (d) supportive leadership (e.g., "The lecturer sees that the interests of students are given due consideration") (α = 0.83); and (e) personal recognition (e.g., "The lecturer commends me when I do better than average work") (α = 0.90).

Outcome measures. Outcomes typically associated with transformational leadership included effectiveness, extra effort, and satisfaction. In this study, I also measured student achievement.

Effectiveness, extra effort, and satisfaction. Nine items from the MLQ were used to measure (a) perceived effectiveness of the instructor (4 items) ($\alpha = 0.89$); (b) extent to which the instructor is able to motivate students to give extra effort (3 items) ($\alpha = 0.90$); and (c) satisfaction with the instructor (2 items) ($\alpha = 0.82$). All nine items were represented on a 5-point continuum (0 = not at all; 1 = once in a while; 2 = sometimes; 3 = fairly often; 4 = frequently, if not always) with higher scores indicating more positive outcomes.

Student achievement. Student achievement can be measured both objectively and subjectively. Objective ratings usually involved collecting students' actual grades whereas subjective ratings usually involved students giving self-ratings of their academic performance. Although the use of objective ratings was preferred, approval to collect such data can be difficult to obtain because objective grades required students to submit personal information that could then be cross-referenced to module marks. Also, submission of identifiable personal information can potentially bias participants' responses on surveys. For these reasons, students were asked to give subjective ratings of their course performance. Such an evaluation represented an interpretation of their actual performance in which success or failure can be seen as a psychological state (Stephanou et al., 2011). Studies showed that perceived performance was open to subjectivity, but was related to students' actual achievement (Stephanou et al., 2011).

Student achievement was measured by three items that were averaged to create a composite score. The first item read, "How well are you doing in the course as a whole? Please try to rate yourself objectively, based on any marks, grades, or comments you have been given". This item was represented on a 7-point Likert scale (Very well; Quite well; Well; About average; Not so well; Badly; Rather badly). The second item read, "What final grade do you expect to receive in this course?" This item was represented on a 7-point continuum (70-100; 60-69; 50-

59; 45-49; 40-44; 0-39; No grade). The third item read, "How would you rate your expected academic performance (or how you have performed so far) in this course in comparison with fellow students?" This item was represented on a 5-point Likert scale (Much better; Better; The same; Worse; Much worse). These three items provided a more comprehensive assessment of subjective academic performance during the course than the one item used in Study 1. Student achievement had a Cronbach's alpha value of 0.80.

Demographic. The questionnaire was preceded by questions asking about participants' age and gender. Age was measured in years. Gender was coded as '0' for male and '1' for female.

5.2.3 Procedures. The questionnaire was distributed online near the end of the semester, which is common in studies of instructor-leadership (e.g., Pounder, 2008). Before distributing the questionnaire, a small pilot study was conducted with 8 students to check for understanding of adjusted item wording and no problems were identified. For the final study, an email was initially sent to undergraduates at the institution's Management School and then re-circulated to undergraduates across all university schools in order to increase sample size. The email contained a description of the benefits for taking part in the study – each participant received (a) an information sheet assuring confidentiality and anonymity of responses; (b) a link to the online questionnaire; (c) a personality evaluation; and (d) entry into a £25 prize voucher draw. The online questionnaire data was imported into SPSS for analysis.

5.3 Results

After accounting for missing data, the sample size was reduced to 139[10].

5.3.1 Statistical assumptions. The assumptions of normality, homoscedasticity, and linearity were examined for all of the subscales in the study. For the subscales, there were issues with 10 of the variables in meeting the assumption of normality and 4 in meeting the assumption of homoscedasticity. For these variables, non-normality and heteroscedasticity were addressed using the appropriate data transformations proposed by Tabachnick and Fidell (2005) and Hair et al. (2009). The recommended data transformations helped to improve the variables in terms of meeting these assumptions. Hereafter, the 14 composite variables were used in their transformed form. For the 16 individual QTILQ items, all but one of the variables deviated from normality, i.e., all but 1 of the kurtosis *z*-scores exceeded the critical value of ±2.58, and 6 of the skewness *z*-scores exceeded the critical value of ±2.58. Because the non-normality was moderate and only 16 observed variables were included, I did not use any transformations or a corrected χ^2 statistic.

5.3.2 Validation of the QTILQ. To validate the QTILQ, I examined its factor structure for the new sample in this study along with convergent, discriminant, criterion, and incremental validity.

Factor structure of the QTILQ. Confirmatory factor analysis (CFA) was first used to further validate the 16-item three-factor solution. The measurement model was estimated for the total sample using the Bollen-Stine bootstrapping procedure because this procedure (a) performs particularly well in small samples, and (b) can provide more accurate p-values for chi-square

[10] The nine removed cases contained extremely high levels of missing data (>30%) and were removed. For the remaining sample, Little's Missing Completely at Random (MCAR) revealed that the data were completely missing at random ($\chi^2(4315) = 4{,}443.98,\ p > .05$). Hence, expectation maximization (EM) was used to impute missing data for the QTILQ and RG. For the MLQ, because there were problems with negative values in using the EM approach, a custom imputation model was used. For this model, the fully conditional specification (MCMC) method was used, and the minimum and maximum imputed values were constrained to 0 and 4 respectively.

than the maximum likelihood-based p-value when using non-normal data (Bollen & Stine, 1992; Byrne, 2001). The number of bootstraps was set to 500 and the bias-corrected (BC) confidence interval was set to 95%. According to the guidelines provided by Hair et al. (2009), the fit indices indicated acceptable model fit for such a small sample with 16 observed variables. (χ^2/df = 1.61, CFI = 0.94, RMSEA = 0.066, RMR = .074, Bollen-Stine bootstrap p = 0.196).

Like the previous study, I tested a series of competing models in order to determine whether the data could be represented by a better fitting model than the initial measurement model (see Table 13). I used the initial CFA as the baseline model for all comparisons. *First*, I tested a higher-order factor model, and the fit results were the same as the three-factor model. Therefore, as reported in the previous study, a single higher-order factor of transformational leadership can represent the data. *Second*, I tested a one-factor model, and the results showed that the three-factor model fitted significantly better than a one-factor model ($\Delta\chi^2$ [3] = 83.13, $p <$ 0.001). *Third*, a model comprising of a higher-order factor for the traditional transformational leadership dimensions, i.e., intellectual stimulation and consideration, fitted identically to the three-factor model. *Fourth*, a model comprising of a higher-order factor for the two adapted dimensions, i.e., consideration and direction and congruence, also fitted identically to the three-factor model. *Fifth*, a model combining the traditional transformational leadership dimensions, i.e., intellectual stimulation and consideration, into a single factor fitted significantly worse than the baseline model ($\Delta\chi^2$ [2] = 22.76, $p < 0.001$). *Sixth*, a model combining the adapted transformational leadership dimensions, i.e., consideration and direction and congruence, into a single factor fitted significantly worse than the baseline model ($\Delta\chi^2$ [2] = 49.06, $p < 0.001$). Like the previous study, the model comparisons showed that transformational instructor-leadership could be represented as both three dimensions as well as a second-order factor.

Table 13

Competing Measurement Models (CFAs) for the QTILQ's Dimensions of Transformational Instructor-Leadership (Study 2)

Model no.	Model	Chi-sq, df	CFI	RMSEA	RMR
Baseline	Three-factor	156.14, 97	.94	.066	.074
1	Higher-order factor	156.14, 97	.94	.066	.074
2	One-factor	239.27, 100	.87	.100	.088
3	Higher-order for consideration and intellectual stimulation	156.14, 97	.94	.066	.074
4	Higher-order for consideration and direction and congruence	156.14, 97	.94	.066	.074
5	One factor for intellectual stimulation and consideration	178.90, 99	.92	.076	.081
6	One factor for consideration and direction and congruence	205.20, 99	.90	.088	.082

Table 14

Summary of Intercorrelations, Means, and Standard Deviations for the Scores of Transformational Instructor-Leadership as Measured by QTILQ, RG, and MLQ, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement (Study 2)

Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1. TILQ: Consideration (sq)												
2. TILQ: Intellectual stimulation (sq)	.57**											
3. TILQ: Direction and congruence (cub)	.65**	.48**										
4. RG: Vision (cub)	.48**	.40**	.49**									
5. RG: Intellectual stimulation (sq)	.43**	.51**	.28**	.46**								
6. RG: Inspirational communication	.58**	.48**	.35**	.41**	.54**							
7. RG: Supportive leadership (recip)	-.46**	-.30**	-.41**	-.28**	-.32**	-.52**						
8. RG: Personal recognition	.45**	.29**	.30**	.26**	.33**	.49**	-.48**					
9. MLQ: Idealized influence (A) (sq)	.62**	.45**	.59**	.47**	.45**	.59**	-.53**	.42**				
10. MLQ: Idealized influence (B) (sq)	.45**	.46**	.33**	.36**	.47**	.55**	-.38**	.32**	.55**			
11. MLQ: Intellectual stimulation (sq)	.64**	.55**	.55**	.47**	.60**	.58**	-.44**	.51**	.70**	.63**		
12. MLQ: Inspirational motivation	.60**	.46**	.51**	.55**	.52**	.60**	-.44**	.42**	.77**	.67**	.71**	
13. MLQ: Individualized consideration	.63**	.34**	.53**	.40**	.43**	.54**	-.53**	.53**	.71**	.40**	.74**	.59**
14. MLQ: Contingent reward	.64**	.44**	.48**	.39**	.55**	.63**	-.53**	.54**	.66**	.58**	.73**	.65**
15. MLQ: Laissez-faire (sqrt)	-.41**	-.20*	-.42**	-.38**	-.17*	-.30**	.24**	-.31**	-.43**	-.07	-.33**	-.29**
16. MLQ: MBE (active)	.62**	.36**	.52**	.44**	.45**	.53**	-.55**	.53**	.64**	.53**	.62**	.63**
17. MLQ: MBE (passive)	-.24**	-.29**	-.29**	-.21*	-.11	-.21*	.08	-.20*	-.20*	-.07	-.20*	-.12
18. MLQ: Effectiveness (sq)	.69**	.54**	.60**	.54**	.51**	.59**	-.49**	.37**	.84**	.59**	.71**	.77**
19. MLQ: Satisfaction (sq)	.64**	.48**	.55**	.50**	.46**	.55**	-.50**	.40**	.76**	.48**	.66**	.64**
20. MLQ: Extra effort	.58**	.48**	.46**	.42**	.53**	.56**	-.43**	.41**	.79**	.61**	.72**	.74**
21. Student achievement (sq)	.14	.27**	.20*	.08	.30**	.22**	-.06	.20*	.23**	.18*	.34**	.27**

Note. MBE = management by exception; idealized influence (A) = attributed idealized influence; idealized influence (B) = behavioural idealized influence. For all of the leadership variables, with the exception of "RG: Supportive leadership (recip)", higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. Sq = Squared; cub = cubed; recip = reciprocal; sqrt = square root. See Appendix F for the correlation matrix for the non-transformed variables.

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 14

Summary of Intercorrelations, Means, and Standard Deviations for the Scores of Transformational Instructor-Leadership as Measured by QTILQ, RG, and MLQ, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement (Study 2)

Variables	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Mean**	**SD**
1. TILQ: Consideration (sq)									15.65	5.91
2. TILQ: Intellectual stimulation (sq)									15.60	5.89
3. TILQ: Direction and congruence (cub)									84.36	34.00
4. RG: Vision (cub)									84.63	39.52
5. RG: Intellectual stimulation (sq)									13.32	6.16
6. RG: Inspirational communication									3.43	0.93
7. RG: Supportive leadership (recip)									0.35	0.15
8. RG: Personal recognition									3.20	1.13
9. MLQ: Idealized influence (A) (sq)									8.67	4.69
10. MLQ: Idealized influence (B) (sq)									6.17	3.96
11. MLQ: Intellectual stimulation (sq)									7.42	4.51
12. MLQ: Inspirational motivation									2.76	0.90
13. MLQ: Individualized consideration									2.34	1.05
14. MLQ: Contingent reward	.67**								2.28	0.96
15. MLQ: Laissez-faire (sqrt)	-.39**	-.22**							0.83	0.49
16. MLQ: MBE (active)	.61**	.65**	-.30**						2.17	0.94
17. MLQ: MBE (passive)	-.15	-.16	.47**	-.15					1.40	0.71
18. MLQ: Effectiveness (sq)	.65**	.62**	-.47**	.66**	-.26**				9.62	5.00
19. MLQ: Satisfaction (sq)	.69**	.60**	-.43**	.59**	-.24**	.88**			9.60	5.36
20. MLQ: Extra effort	.65**	.69**	-.25**	.62**	-.13	.78**	.76**		2.50	1.19
21. Student achievement (sq)	.21*	.26**	-.10	.18*	-.14	.21*	.22**	.28**	24.22	7.02

Note. MBE = management by exception; idealized influence (A) = attributed idealized influence; idealized influence (B) = behavioural idealized influence. For all of the leadership variables, with the exception of "RG: Supportive leadership (recip)", higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. Sq = Squared; cub = cubed; recip = reciprocal; sqrt = square root. See Appendix F for the correlation matrix for the non-transformed variables.

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Convergent validity of the QTILQ. Table 14 shows the table of correlations for the transformational instructor-leadership and outcome variables. Correlations indicated that three QTILQ dimensions showed significant associations with all of the transformational leadership dimensions from the MLQ and RG. This was expected because of the typically high correlations between transformational leadership dimensions.

QTILQ's *intellectual stimulation* was correlated in the expected direction with its counterpart dimensions from RG (r = .51) and the MLQ (r = .55). QTILQ's intellectual stimulation was also moderately correlated with RG's inspirational communication (r = .48). This correlation between QTILQ's intellectual stimulation and RG's inspirational communication was not surprising given that inspirational communication included an item that described the extent to which the instructor encouraged students to see the classroom as being full of opportunities.

QTILQ's *consideration* shared a higher correlation with RG's inspirational communication (r = .58) than the expected RG dimensions including supportive leadership (r = .46) and personal recognition (r = .45). This moderate correlation between QTILQ's consideration and RG's inspirational communication may be because inspirational communication describes positive things the instructor communicates in class to make students feel proud to be part of the class. These positive communications might entail the sharing of enthusiasm, valuing students' views, helping students, etc., all of which form part of the QTILQ's consideration construct. Moreover, inspirational communication items are worded in a manner that taps into generalized communication. In contrast, the items for supportive leadership and personal recognition are worded to tap into individualized communication. Therefore, the relatively higher correlation between QTILQ's consideration and RG's inspirational

communication was likely because they both tap into more generalized communication, which I argue is more applicable to the HEI module context because of the distance in instructor-student relationships in this context. QTILQ's consideration also shared a similar moderate correlation with all of the MLQ's transformational leadership dimensions, with the exception of idealized influence (behaviour).

QTILQ's *direction and congruence* shared a moderate correlation with RG's vision dimension (r = .49). This was expected because direction and congruence captured a translation of vision for the HEI module context, e.g., instructor has a clear idea of what students are supposed to do and learn (recall Table 6 from Study 1). The correlation was expected to be moderate and not high because direction and congruence focuses more on the instructor's direction and teaching congruence during the semester, e.g., how the topics are being taught to match learning objectives or distribution of helpful handouts and materials, rather than simply where the instructor wants the students to be at the end of the module. Like QTILQ's consideration, direction and congruence shared a similar moderate correlation with all of the MLQ's transformational leadership dimensions, with the exception of idealized influence (behaviour).

Both QTILQ's consideration and direction and congruence generally shared higher correlations with the MLQ transformational leadership dimensions than RG's transformational leadership dimensions. The pattern of correlates between each of the two QTILQ dimensions and the MLQ dimensions is similar for the respective dimension, thus making it difficult to determine convergent validity for each QTILQ dimension. For instance, while QTILQ's consideration is moderately correlated with MLQ's individualized consideration (r = .63), a similar correlation exists between QTILQ's consideration and MLQ's idealized influence

(attributed) (r = .62), intellectual stimulation (r = .64), and inspirational motivation (r = .60). This may occur because the MLQ dimensions are typically highly correlated with each other (Carless, 1998; Tejeda et al., 2001). My findings support previous studies showing that, with the exception of idealized influence (behaviour), the MLQ's transformational leadership dimensions are highly correlated with each other (refer to Table 14). These high intercorrelations between the MLQ dimensions means that if one QTILQ dimension shares a moderate correlation with any one of the MLQ dimensions, this QTILQ dimension is also likely to share a moderate correlation with the other MLQ dimensions. Still, the moderate correlations between the QTILQ and MLQ dimensions indicate that the QTILQ at least partly shares the same conceptual space as the MLQ dimensions.

The MLQ also measures laissez-faire and management by exception (passive), both of which can be considered to be unsupportive leadership or the lack of leadership. As expected, the QTILQ's dimensions shared significant negative correlations with the two unsupportive leadership variables. Similarly, the MLQ and RG's transformational leadership dimensions also shared significant negative correlations with laissez-faire and management by exception (passive). Overall, convergent validity was fairly good for both intellectual stimulation and direction and congruence, but remains unclear for consideration. The next step in assessing construct validity was to examine discriminant validity.

Discriminant validity of the QTILQ. Discriminant validity "is the extent to which a construct is truly distinct from other constructs", and thus provides evidence that it captures unique phenomena not captured by other measures (Hair et al., 2009, p. 687). To rigorously test discriminant validity, I compared the AVE for each of the three QTILQ constructs to that of its squared correlation estimate with the MLQ constructs (see Table 15) (Hair et al., 2009). First,

Table 15

A Comparison of the Average Variance Extracted (AVE) and Squared Interconstruct Correlation (SIC) for the QTILQ leadership dimensions and the MLQ leadership dimensions (Study 2)

		Squared interconstruct correlation (SIC) for MLQ constructs [a]			
QTILQ Construct	AVE	IIA	IM	IC [b]	IS
Consideration	.44	.69	.60	.64	.60
Intellectual stimulation	.41	.31	.37	.34	.58
Direction and congruence	.53	.44	.36	.30	.37

Note. AVE = average variance extracted; IIA = idealized influence attributed; IM = inspirational motivation; IS = intellectual stimulation.
[a]. Idealized influence (behaviour) was not included because none of its factor loadings were significant in a CFA model with the MLQ items.
[b]. For individualized consideration, one of the MLQ items was deleted because of its problematic standardized residual covariance values in the CFA factor solution.

the findings for QTILQ's *consideration* were especially poor because the squared interconstruct correlation (SIC) for each of the MLQ constructs exceeded that of the AVE for QTILQ's consideration. Therefore, QTILQ's consideration shared more of its variance with the MLQ constructs than was explained by its latent construct. Specifically, the SIC values for idealized influence (attributed) and individualized consideration were particularly high. This SIC value for individualized consideration was expected because both constructs measured supportive leader behaviours. The high SIC for idealized influence (attributed) may be because QTILQ's consideration was measured by an item that described the sharing of enthusiasm. Second, the discriminant validity findings for QTILQ's *intellectual stimulation* were satisfactory because this latent construct's items explained more of the variance than that shared with three of the four MLQ's constructs. However, QTILQ's intellectual stimulation does not appear to be truly distinct from MLQ's intellectual stimulation construct. Finally, *direction and congruence*

captured some phenomena not measured by the MLQ, i.e., its AVE value exceeded each of the SIC values.

Taken together, the findings for both convergent and discriminant validity suggest that the construct validity of the QTILQ is questionable. Convergent validity is fair, but discriminant validity was generally poor, especially for the consideration construct. Therefore, the QTILQ appears unable to stand on its own as a distinct measure of transformational instructor-leadership. I now assess both criterion and incremental validity before drawing further conclusions regarding the QTILQ.

Criterion validity of the QTILQ. To evaluate criterion validity of the QTILQ dimensions, multiple regression models were estimated for effectiveness, satisfaction, extra effort, and student achievement. For each model, the independent variables entered included the three QTILQ dimensions as well as the control variables of age and gender (see Table 16). For the outcomes of effectiveness (R^2 = .54, F (5, 133) = 31.1, p < .001), satisfaction (R^2 = .46, F (5, 133) = 22.84, p < .001), and extra effort (R^2 = .38, F (5, 133) = 16.03, p < .001), neither age nor gender was a significant predictor.

Consideration was a relatively strong predictor of effectiveness (β = 0.44, p < .01), satisfaction (β = 0.45, p < .01), and extra effort (β = 0.40, p < .01). Of the three transformational instructor-leadership dimensions, *consideration* is the strongest predictor. This is in line with Harvey et al. (2003), who suggest that consideration predicts student involvement variables like satisfaction and extra effort because such leadership behaviour induces a sense of psychological safety. Consideration is also a strong predictor of perceived instructor's effectiveness. However, this finding is inconsistent with that of Harvey et al. (2003) because they found no relationship between individualized consideration and instructor's effectiveness. The significance of this

Table 16

Multiple Regression Analyses Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With QTILQ's Leadership Dimensions (Study 2)

Variables	Outcome Variables											
	Effectiveness			Satisfaction			Extra Effort			Student achievement		
	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Constant	-3.73	2.58		-3.80	2.99		-0.20	.71		28.74	4.99	
Age[a]	51.03	49.07	0.06	45.51	56.87	0.05	10.29	13.56	0.05	-173.69	94.81	-0.15
Gender	-0.13	0.62	-0.01	0.66	0.72	0.06	0.03	0.17	0.01	-2.39*	1.20	-0.16
Consideration	0.37**	0.07	0.44	0.40**	0.08	0.45	0.08**	0.02	0.40	-0.12	0.14	-0.10
Intellectual stimulation	0.15*	0.06	0.17	0.11	0.07	0.12	0.04*	0.02	0.20	0.35**	0.12	0.30
Direction and congruence	0.03**	0.01	0.23	0.03*	0.01	0.20	0.00	0.00	0.10	0.02	0.02	0.11
R^2	0.54			0.46			0.38			0.13		
F	31.10**			22.84**			16.03**			3.90**		

Note. N = 139.

[a] Inverse of age was used to correct for skewness and kurtosis violations.

* $p < .05$. ** $p < .01$.

relationship in this study may be because, in comparison to the MLQ, QTILQ's consideration includes more generalized classroom communications, which are more relevant to this distant context.

Both intellectual stimulation and direction and congruence predicted relevant student outcomes. First, intellectual stimulation was a significant predictor of effectiveness ($\beta = 0.17$, $p < .05$) and extra effort ($\beta = 0.20$, $p < .05$), but not satisfaction. These significant relationships were to be expected because students in higher education are "likely to have expectations of an enriched learning environment wherein the instructor challenges them intellectually" (Harvey et al., 2003, p. 400). Direction and congruence was a significant predictor of effectiveness ($\beta = 0.23$, $p < .01$) and satisfaction ($\beta = 0.20$, $p < .05$), but not extra effort. These significant relationships may be an indication that students appreciate when instructors lead them towards module goals.

For the student achievement regression model ($R^2 = .13$, $F(5, 133) = 3.90$, $p < .01$), intellectual stimulation ($\beta = 0.30$, $p < .01$) and gender ($\beta = -0.16$, $p < .05$) were significant predictors. Intellectual stimulation was expected to be related to student achievement because intellectually stimulating instructors challenge students to think and apply module content. After conducting the regression analyses, the variate for each regression was evaluated and the assumptions of linearity, homoscedasticity, and normality were met. Also, there were no issues with multicollinearity as indicated by the variance inflation factor (VIF) and tolerance statistics.

Table 17

Hierarchical Multiple Regression Analyses Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With Transformational Instructor-Leadership Dimensions as measured by the MLQ and the QTILQ (Study 2)

Step	Variables	Outcome Variables							
		Effectiveness		Satisfaction		Extra Effort		Student Achievement	
		β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
1	Age [a]	.08		.06		.07		-.12	
	Gender	-.04	.01	.03	.00	.00	.01	-.15*	.04*
2	Age [a]	-.02		-.02		-.03		-.13	
	Gender	-.01		.07		.02		-.14*	
	MLQ: Idealized influence (A)	.53***		.49***		.41***		-.02	
	MLQ: Idealized influence (B)	.08		.03		.15**		-.05	
	MLQ: Intellectual Stimulation	.12		.10		.17*		.37**	
	MLQ: Inspirational Motivation	.19		.03		.16*		.11	
	MLQ: Individualized Consideration	.04	.75***	.25***	.64***	.09	.70***	-.10	.12***
3	Age [a]	-.01		-.01		-.03		-.16*	
	Gender	.00		.06		.01		-.16**	
	MLQ: Idealized influence (A)	.48***		.45***		.43***		-.02	
	MLQ: Idealized influence (B)	.07		.02		.13*		-.06	
	MLQ: Intellectual Stimulation	.04		.02		.15		.31**	
	MLQ: Inspirational Motivation	.17**		.00		.16*		.14	
	MLQ: Individualized Consideration	.01		.23**		.12		.02	
	QTILQ: Consideration	.15**		.14*		.01		-.27**	
	QTILQ: Intellectual stimulation	.09		.10		.08		.22**	
	QTILQ: Direction & congruence	.04	.03***	.02	.02**	-.11*	.01	.03	.04*
	Total R^2	.78***		.67***		.71***		.20***	

Note. Inverse of age means that Beta coefficient values are reversed for this variable. N = 139.

*$p < .10$. ** $p < .05$. *** $p < .01$.

Table 18

Hierarchical Multiple Regression Analyses Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With Transformational Instructor-Leadership Dimensions as measured by the RG and the QTILQ (Study 2)

Step	Variables	Outcome Variables							
		Effectiveness		Satisfaction		Extra Effort		Student Achievement	
		β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
1	Age	.07		.05		.06		-.12	
	Gender	-.05	.01	.03	.00	-.01	.00	-.15	.04*
2	Age	-.04		-.04		-.03		-.16*	
	Gender	-.13**		-.04		-.06		-.16*	
	RG: Vision	.29***		.28***		.14*		-.09	
	RG: Intellectual Stimulation	.16**		.12		.26***		.31***	
	RG: Inspirational Communication	.30***		.24***		.27***		.14	
	RG: Supportive Leadership	-.23***		-.24***		-.13		.09	
	RG: Personal Recognition	-.03	.52***	.06	.47***	.10	.44***	.07	.13***
3	Age	-.01		-.01		-.00		-.17**	
	Gender	-.08		.01		-.03		-.15*	
	RG: Vision	.14**		.14*		.04		-.14	
	RG: Intellectual Stimulation	.12*		.10		.23***		.28***	
	RG: Inspirational Communication	.20**		.14		.19**		.15	
	RG: Supportive Leadership	-.14**		-.16**		-.07		.12	
	RG: Personal Recognition	-.06		.03		.08		.07	
	QTILQ: Consideration	.25***		.24**		.16		-.21*	
	QTILQ: Intellectual stimulation	.07		.04		.06		.18	
	QTILQ: Direction & congruence	.19**	.10***	.15	.08***	.11	.04	.21*	.05*
	Total R^2	.63***		.54***		.49***		.21***	

Note. Inverse of age and supportive leadership means that Beta coefficient values are reversed for these variables. N = 139.

*$p < .10$. ** $p < .05$. *** $p < .01$.

Incremental validity of the QTILQ. I used hierarchical regression to test for incremental validity of the QTILQ beyond the MLQ and, in separate models, beyond the RG measure (see Tables 17 and 18). For each model, the variate's assumptions were met and multicollinearity was not problematic. In each hierarchical model, age and gender were entered in the first step, followed by the established measure (either MLQ or RG), and then the QTILQ. The results indicated that the QTILQ explained little additional variance beyond the MLQ and noticeablly more variance than RG in predicting effectiveness, satisfaction, and student achievement.

For the MLQ and QTILQ model (see Table 17), the incremental validity results showed that the QTILQ explained 3.85%, 2.99%, and 20% additional variance beyond the MLQ in predicting effectiveness, satisfaction, and student achievement respectively. QTILQ's consideration significantly predicted effectiveness and student achievement whereas MLQ's individualized consideration was not significant in these models. Unexpectedly, QTILQ's consideration was negatively related to student achievement. QTILQ's consideration was also a significant predictor of satisfaction even when MLQ's individualized consideration was significant. Additionally, QTILQ's intellectual stimulation was a significant predictor of student achievement even when MLQ's intellectual stimulation was significant.

For the RG and QTILQ model (see Table 18), the incremental validity results showed that the QTILQ explained 15.87%, 14.81%, and 23.8% additional variance beyond the RG in predicting effectiveness, satisfaction, and student achievement respectively. In predicting effectiveness, QTILQ's consideration and direction and congruence explained additional variance beyond RG's supportive leadership and vision. Furthermore, in predicting satisfaction, QTILQ's consideration explained variance beyond RG's supportive leadership. For student achievement, QTILQ's direction and congruence and consideration explained variance beyond

RG's intellectual stimulation. Again, consideration negatively predicted student achievement, and this finding is discussed shortly.

Overall, the incremental validity findings suggest that the QTILQ indeed captures unique aspects of transformational instructor-leadership not measured by RG, but explains less incremental variance beyond the MLQ. Specifically, two QTILQ dimensions explained variance beyond two of RG's dimensions and one of the MLQ's dimensions. That is, QTILQ's consideration is suited to the distant instructor-student module relationship because it describes more generalized behaviour than RG's supportive leadership or MLQ's individualized consideration. Further reinforcing this notion, the findings show that RG's personal recognition was not a significant predictor in any of the models.

To understand why the QTILQ might explain additional variance over the established measures, I compared the measurement items of the QTILQ to those of the MLQ and RG. In so doing, some of the QTILQ items did not appear to be a substantial departure from the MLQ or RG items. For instance, for *intellectual stimulation*, instead of 'rethinking things' (RG), the QTILQ specifies what these things can be in a HEI module, i.e., understanding of subject components. Similarly, instead of making a student see a problem from different angles (MLQ), the QTILQ specifies how instructors can help students to analyze a problem, e.g., helping students think about the evidence underpinning different views or encouraging students to relate what they learn to issues in the wider world. These module specific descriptions may explain why QTILQ's intellectual stimulation explained additional variance beyond MLQ's intellectual stimulation in predicting student achievement. For *consideration*, instead of 'assisting in actualizing the students' strengths' (MLQ), the QTILQ specifies exactly what these forms of assistance may be in a HEI module, i.e., feedback to improve ways of learning and studying or

helping students to see how to think and reach conclusions in the subject. Furthermore, with respect to consideration-type behaviours the MLQ and RG contain individualized behaviours, e.g., treats student as a person, caring about student's personal needs and feelings, personal compliments, etc. The QTILQ also taps into similar behaviours but in a more generalized manner that is arguably better suited to the distant instructor-student module relationship, e.g., patience in explaining things in class or students' views being valued in the module. *Direction and congruence* elaborates on the completion of module objectives, which is only one aspect of inspirational motivation (MLQ). This dimension appears to be a replacement for the visionary aspects of transformational leadership because of the temporary nature of module groups.

Overall, the similarities between the QTILQ and both the MLQ and RG indicate that the QTILQ partly inhabits the same conceptual space as the MLQ and RG. However, the QTILQ's items are sometimes more specific with regards to the module, and some of the items are phrased in a way that is more applicable to the HEI module context, e.g., generalized supportive behaviours, achievement of short-term objectives, and congruence. The QTILQ's context-sensitive items may explain why the QTILQ explains additional variance over the MLQ and RG. However, the additional variance explained by the QTILQ beyond the MLQ is still small.

From the incremental validity tests, two interesting points are noted. First, MLQ's idealized influence (attributed) is a strong predictor of effectiveness, satisfaction, and extra effort. This is to be expected because, as explained in Chapter 2, students may be more prone to an instructor's use of impression management because they lack information about the distant instructor (Antonakis & Atwater, 2002). Subsequently, Antonakis and Atwater (2002) suggest that attributed charisma is likely to be more applicable than charismatic behaviours in these distant relationships. This finding signals a shortcoming of the QTILQ because it does not

measure a dimension such as idealized influence. Second, even though QTILQ's consideration is not a significant predictor of student achievement in the regression analyses, it shares a significant and negative relationship to student achievement in the hierarchical models that control for the MLQ and RG leadership variables. This negative relationship may be because consideration encourages a 'dependency syndrome'. That is, consideration was related to student collegial support in Study 1, and both satisfaction and perceptions of instructor effectiveness in the present study. Hence, students may become dependent upon the instructor and their classmates for feedback, support, and encouragement. Perhaps, when students become overly dependent on these external support pillars, they perform worse in exams because these pillars are absent in exam conditions. More research is needed here given that this is one of the few studies to examine the relationship between transformational instructor-leadership and student achievement, and the relationship existed only in the hierarchical models.

Summary of validity tests for the QTILQ. The findings for convergent and criterion validity of the QTILQ were fair, but findings for both discriminant and incremental validity of the QTILQ were generally weak. In particular, for discriminant validity, both of the latent constructs for QTILQ's consideration and intellectual stimulation did not explain more of its variance in its item measures than it shared with its MLQ counterpart constructs, i.e., individualized consideration and intellectual stimulation respectively. Moreover, the QTILQ failed to capture attributed charisma – a dimension that should be particularly relevant to the distant HEI module context. For incremental validity, the QTILQ explained little variance beyond the MLQ. Therefore, the QTILQ offered little beyond the already well-established MLQ. For this reason, I cannot recommend the use of the QTILQ as a standalone measure of transformational instructor-leadership. Nonetheless, given the high correlations between the

MLQ and QTILQ dimensions, along with the little additional variance explained by the QTILQ beyond the MLQ, it is worth investigating whether the QTILQ items can be used to improve the context sensitivity of the MLQ in order to measure transformational instructor-leadership.

5.3.3 Combining the MLQ and QTILQ. In order to better tap into transformational leadership while harnessing HEI module-specific behaviours, I engaged in explorative testing to determine whether the QTILQ could be useful for enhancing the MLQ in the HEI module context. Augmenting the MLQ's dimensions with the QTILQ items should enhance the context-sensitivity of the MLQ's latent constructs. For instance, Bogler et al. (2013) showed that 48.5% and 28.1% of students in their sample were unable to answer one of the MLQ's intellectual stimulation and one of the MLQ's idealized influence behaviour items respectively. Moreover, in their study, inspirational motivation was poorly answered by students as well, i.e., two of the four MLQ's inspirational motivation items were removed in their analysis because of the extremely high non-response to these items, and the remaining two items were still unanswered by approximately 19% of the students in their study's sample. This further reinforces the notion that vision is not applicable to this context. The findings by Bogler et al. (2013) reinforces the notion that the MLQ dimensions need to be enhanced in order to better measure transformational leadership in the HEI module context.

I thus attempted to use the MLQ as a starting point, and build upon this established measure in order to enhance its context sensitivity in the unique HEI module context. The MLQ and its factor structure have been validated across many studies (Antonakis, Avolio, & Sivasubramaniam, 2003; Bass et al., 2003; Derue et al., 2011; Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996; Muenjohn & Armstrong, 2008). Therefore, I investigated its factor structure for instructor-student relationships in the HEI module context. The MLQ

comprised of 20 observed variables used to tap into transformational leadership. In this study, 15 of the 20 variables were non-normal, i.e., 6 of the kurtosis *z*-scores exceeded the critical value of ±2.58, and 10 of the skewness *z*-scores exceeded the critical value of ±2.58. Given the large number of non-normal variables, I used maximum likelihood with the Satorra-Bentler adjustment to the χ^2 for non-normality (Tabachnick & Fidell, 2005). I used this estimation procedure via the Lavaan package (Yves, 2012) for R (R Core Team, 2013).

For the MLQ, all but one of the dimensions appear to be relevant to the HEI module setting. The findings from the hierarchical regression models in this study suggested that there was some closeness in instructor-student relationships, contrary to what I proposed earlier. That is, idealized influence (behaviour) and individualized consideration were both significant predictors of extra effort and satisfaction respectively. In particular, the findings suggested that instructors can interact with students on a one-to-one basis and give individualized attention to students (i.e., MLQ's individualized consideration). However, the findings also suggested that instructors may not be able to personally commend students for their achievements (i.e., RG's personal recognition was not significant in any of the models in this study). This latter finding was reasonable because students usually remain anonymous during the marking of examinations. Even when instructors assess coursework components that may not be anonymously marked, it is difficult for instructors to recall individual student performance in large classes. Therefore, while the instructor-student relationship is distant, the distance is not great enough to invalidate individualized consideration and idealized influence behaviour, and thus these two dimensions were included in the upcoming analysis.

The only MLQ dimension that was excluded in the upcoming analysis was inspirational motivation because it was not applicable to the HEI module context, i.e., there is no vision in the

module context. This notion was supported because MLQ's inspirational motivation was not significant in any of the hierarchical regression models. Unlike MLQ's inspirational motivation, RG's vision was significant in two of the hierarchical regression models even though both concepts describe the vision aspect of transformational leadership. The likely reason for this is that my module-adapted items for RG's vision focused on the module, and were thus short-term oriented (e.g., "The instructor/lecturer has a clear understanding of where the class is going" or "The instructor/lecturer has a clear sense of where he/she wants our class to be at the end of the course"), whereas Pounder's module-adapted items for MLQ's inspirational motivation focused on after the module was completed, and were thus long-term oriented (e.g., "He/She talks optimistically about the future" or "He/She makes me look forward to the future after completing the course"). Therefore, RG's module-adapted 'vision' dimension does not measure vision in a typical long-term sense, and instead highlights the limited applicability of vision to the HEI module context. Based on these arguments, along with the MLQ's factor structure findings reported by Antonakis et al. (2003), I first tested a four-factor model for the MLQ, which comprised of four correlated first-order factors for idealized influence attributed, idealized influence behaviour, intellectual stimulation, and individualized consideration.

The hypothesized four-factor model for the MLQ did not fit well (Satorra-Bentler χ^2 (98) = 210.05, $p < .05$, Robust CFI = .88, RMSEA = .091). For the model, one item measuring individualized consideration appeared very problematic because two of its standardized residual covariances greatly exceeded$|4.0|$. Therefore, this item was deleted. Furthermore, none of the factor loadings for idealized influence behaviour were significant. Therefore, I attempted to fit a model combining both idealized influence attributed and behaviour in line with the seventh model proposed by Antonakis et al. (2003). The revised three-factor model fitted the data fairly

well (Satorra-Bentler χ^2 (87) = 162.43, $p < .05$, Robust CFI = .91, RMSEA = .079). However, one item measuring idealized influence behaviour had a factor loading of .07, and was thus removed. Additionally, one item measuring idealized influence attributed contained two standardized residual covariances that exceeded$|4.0|$, and thus this item was deleted. After this revision, the final model fitted fairly well (Satorra-Bentler χ^2 (62) = 121.11, $p < .05$, Robust CFI = .92, RMSEA = .083). The resulting three-factor model for the MLQ still indicated a limited applicability of transformational leadership theory to the HEI module context because a long-term vision is not relevant in this context. Furthermore, similar to Bogler et al. (2013), one item each was removed from individualized consideration, idealized influence attributed, and idealized influence behaviour because they did not fit well in the factor solution.

Therefore, to enhance the context-sensitivity of the MLQ, I augmented the MLQ with the QTILQ. *First*, I supplemented the three MLQ dimensions with conceptually similar items from the QTILQ. For QTILQ's consideration, I added all but one of the factor's items to buffer the three MLQ's individualized consideration items. My intention here was to measure both individualized and generalized consideration, given the moderate distance in the HEI module context. The discriminant validity test (Section 5.3.2) showed that QTILQ's consideration was not only similar to MLQ's individualized consideration, but also similar to MLQ's idealized influence attributed as well. For this reason, the item that measured sharing of enthusiasm was not added to consideration, but was instead added to idealized influence[11]. For QTILQ's intellectual stimulation, I used the module specific behaviours for this construct in order to buffer the MLQ's intellectual stimulation construct. The discriminant validity findings also supported this addition, showing that intellectual stimulation for the MLQ and QTILQ were not truly

[11] A separate analysis confirmed that an instructor's sharing of enthusiasm loaded more strongly on idealized influence than individualized consideration.

distinct from each other. *Second*, I addressed the issue of vision not being applicable to the HEI module context by adding QTILQ's direction and congruence to the three MLQ leadership dimensions. With these additions, I then tested the factor structure of the combined MLQ-QTILQ.

I first tested a four-factor model for transformational instructor-leadership which comprised of four correlated first-order factors for idealized influence (attributed and behaviour), intellectual stimulation, consideration (individual and general), and direction and congruence. The hypothesized four-factor model did not fit well (Satorra-Bentler χ^2 (371) = 646.40, $p < .05$, Robust CFI = .80, RMSEA = .074). Post hoc model modifications were performed based on (a) factor loadings, (b) the modification indices in combination with theoretical reasoning, and (c) the standardized residual covariance matrix. First, the factor loading for items 5, 7, and 10 from the QTILQ fell below .5 and each of these items was thus removed. Second, three residual covariances were estimated[12]. Third, item 9 from the QTILQ appeared very problematic because two of its standardized residual covariances exceeded$|4.0|$, with one of these values being extremely high. Therefore, item 9 was deleted. The final model fitted the data fairly well (Satorra-Bentler χ^2 (266) = 366.23, $p < .05$, Robust CFI = .92, RMSEA = .052). Details of the factor solution are shown in Table 19.

[12] For the consideration, three error terms were allowed to correlate based on the content of the questions, e.g. a pair of items describe feedback, valuing students' views and being patient when explaining difficult concepts, and valuing students' views together with assisting students in actualizing their strengths.

Table 19

Summary of Standardized Factor Loadings for Confirmatory Factor Analysis of MLQ with Supporting QTILQ Items (Study 2)

		Constructs				
Item no.	Item description[a]	IIAB	Co	IS	DC	IR
MLQ21	His/Her behaviour has earned my respect.	.85				.72
MLQ10	He/She makes me feel proud to be associated with him/her.	.75				.56
MLQ18	*Removed for copyright reasons*	.73				.53
MLQ23	*Removed for copyright reasons*	.64				.41
QTILQ11	The teacher tried to share his/her enthusiasm about the subject with us.	.63				.40
MLQ34	*Removed for copyright reasons*	.59				.35
MLQ14	*Removed for copyright reasons*	.55				.30
QTILQ12	The teacher was patient in explaining things which seemed difficult to grasp.		.72			.52
MLQ31	He/She assists me in actualising my strengths.		.72			.52
QTILQ14	The teacher helped us to see how you are supposed to think and reach conclusions in this subject.		.67			.45
MLQ15	*Removed for copyright reasons*		.65			.42
QTILQ13	Students' views were valued in this course unit.		.61			.37
MLQ19	*Removed for copyright reasons*		.59			.35
QTILQ16	The feedback given on my set work helped to clarify things I hadn't fully understood.		.55			.30
QTILQ15	The feedback given on my work helped me to improve my ways of learning and studying.		.55			.30
MLQ30	He/She makes me see a problem from different angles.			.73		.53
MLQ32	He/She suggests various approaches to successfully completing assignments.			.72		.52
MLQ2	*Removed for copyright reasons*			.63		.40
MLQ8	*Removed for copyright reasons*			.61		.37
QTILQ6	The teaching encouraged me to rethink my understanding of some aspects of the subject.			.60		.36
QTILQ8	The teaching in this unit helped me to think about the evidence			.54		.29

Table 19

Summary of Standardized Factor Loadings for Confirmatory Factor Analysis of MLQ with Supporting QTILQ Items (Study 2)

		Constructs				
Item no.	Item description[a]	IIAB	Co	IS	DC	IR
	underpinning different views.					
QTILQ3	The course unit was well organized and ran smoothly.				.81	.66
QTILQ2	The topics seemed to follow each other in a way that made sense to me.				.78	.61
QTILQ4	What we were taught seemed to match what we were supposed to learn.				.75	.56
QTILQ1	It was clear to me what I was supposed to learn in this course unit.				.70	.49
	Average variance extracted (%)	46.79	40.42	41.20	57.93	
	Construct reliability	.86	.84	.81	.85	

Note. IIAB = Idealized influence (attributed and behaviour); Co = Consideration (individual and general); IS = Intellectual stimulation; DC = Direction and congruence; IR = Item reliabilities calculated using squared factor loadings.

[a]. Only five MLQ item descriptions were included in this dissertation when submitting to White Rose eTheses Online (WREO) because of copyright reasons.

Competing models for the MLQ-QTILQ. I tested a series of competing models in order to determine whether the data could be represented by a better fitting model than that in Table 19 (see Table 20). The baseline model used for all comparisons was the four-factor model comprising of four first-order constructs. First, a higher-order factor was tested, and the fit results indicated that there was no significant difference between the higher-order model and the baseline model ($\Delta\chi^2$ [2] = 2, $p > .05$). Therefore, a single higher-order factor of transformational leadership can represent the data. Second, a one-factor model was tested, and this model fitted significantly worse than the baseline model ($\Delta\chi^2$ [6] = 104.1, $p < 0.001$). Third, I tested every pair of the four dimensions (i.e., Models 3 to 8), and only Model 7 was not significantly different to the baseline model ($\Delta\chi^2$ [3] = 2.31, $p > .05$). Finally, the fit results for a higher-order factor for the conventional transformational leadership dimensions, i.e., Model 9, showed that there was no significant difference between this model and the baseline model ($\Delta\chi^2$ [2] = 2, $p > .05$). Overall, the model comparisons do not support my proposition from Study 1 that transformational instructor-leadership comprises of distinct dimensions, i.e., the dimensions are highly correlated. Therefore, transformational instructor-leadership can also be represented by either (a) a single second-order construct or (b) a first-order construct measuring direction and congruence and a second-order construct that is comprised of idealized influence, consideration, and intellectual stimulation. For the sake of parsimony and consistency with the literature, transformational instructor-leadership is perhaps best represented by a single-second-order factor. I now proceed to test the validity of the MLQ-QTILQ vis-à-vis convergent, discriminant, criterion, and incremental validity.

Table 20

Competing Measurement Models (CFAs) for the MLQ-QTILQ Dimensions of Transformational Instructor-Leadership (Study 2)

Model no.	Model	Chi-sq, df	CFI	RMSEA	SRMR
Baseline	Four-factor	366.23, 266	.92	.052	.059
1	Higher-order factor	368.23, 268	.92	.052	.060
2	One-factor	470.33, 272	.84	.072	.070
3	One-factor for idealized influence and direction and congruence	444.01, 269	.86	.068	.067
4	One-factor for idealized influence and consideration	381.01, 269	.91	.055	.061
5	One-factor for idealized influence and intellectual stimulation	384.69, 269	.91	.056	.061
6	One-factor for consideration and direction and congruence	446.24, 269	.86	.069	.068
7	One-factor for consideration and intellectual stimulation	368.54, 269	.92	.052	.060
8	One-factor for intellectual stimulation and direction and congruence	450.84, 269	.86	.070	.068
9	Higher-order factor for idealized influence, consideration, and intellectual stimulation	368.23, 268	.92	.052	.060

Convergent validity of the MLQ-QTILQ. To assess convergent validity of the MLQ-QTILQ, I examined the measurement model for factor loadings, construct reliability, and average variance extracted (AVE) (Hair et al., 2009). *First*, high factor loadings meant that the observed variables converged on a common latent construct (Hair et al., 2009). Table 19 showed that all factor loadings exceeded the minimum threshold of .5, and at least two factor loadings for each latent construct exceeded .7 (Hair et al., 2009). *Second*, construct reliability of .7 or higher indicates that all measures consistently represent the latent construct. In this study, construct reliability exceeded .8 for each dimension, thus indicating high internal consistency (see Table 19). *Third*, Table 19 showed that the AVE was less than .5 for idealized influence, consideration,

and intellectual stimulation. While these values are not ideal, Malhotra and Dash (2011) explain that "AVE is a more conservative measure than CR [i.e., construct reliability]. On the basis of CR alone, the researcher may conclude that the convergent validity of the construct is adequate, even though more than 50% of the variance is due to error." (p. 702). Therefore, using these three methods, I conclude that convergent validity of the MLQ-QTILQ was acceptable.

Discriminant validity of the MLQ-QTILQ. For discriminant validity, the interconstruct correlations between idealized influence, consideration, and intellectual stimulation all exceeded the cutoff value of 0.85 proposed by Kline (2011). This was not surprising given that Model 9 and the baseline model were not significantly different with respect to the fit indices (See Table 20). The findings for Model 9 also showed that direction and congruence and charismatic support and stimulation were also positively correlated (.70), thus indicating fair discriminant and good nomological validity, i.e., suggested that both dimensions tapped into transformational instructor-leadership. Overall, when combining the educational approach with the organizational behaviour approach, the transformational instructor-leadership constructs are highly interrelated, and thus can be parsimoniously represented as a single second-order factor as proposed in Model 1 in Table 20.

Table 21

A Comparison of the Average Variance Extracted (AVE) and Squared Interconstruct Correlation (SIC) for the MLQ-QTILQ leadership dimensions and the RG leadership dimensions (Study 2)

	Squared interconstruct correlation (SIC) for RG constructs					
MLQ-QTILQ Construct	AVE	IC	IS	SL	PR	Vision
Idealized influence	.47	.57	.36	.52	.23	.27
Consideration	.40	.60	.39	.57	.37	.23
Intellectual stimulation	.41	.56	.64	.33	.29	.23
Direction & congruence	.58	.15	.17	.23	.09	.21

Note. AVE = average variance extracted; IC = inspirational communication; IS = intellectual stimulation; SL = supportive leadership; PR = personal recognition.

To further assess discriminant validity, I compared the AVE for each of the four MLQ-QTILQ constructs with that of its squared correlation estimate with the RG constructs (see Table 21) (Hair et al., 2009). For this approach, the findings were mixed as expected. Some of the MLQ-QTILQ AVE values exceeded the SIC values for RG constructs including (a) idealized influence and RG's intellectual stimulation, personal recognition, and vision; (b) consideration and RG's intellectual stimulation, personal recognition and vision; (c) intellectual stimulation and RG's supportive leadership, personal recognition, and vision; and (d) direction and congruence and all five of the RG constructs. However, some noteworthy and expected overlap between the MLQ-QTILQ and RG constructs include (a) idealized influence and inspirational communication, (b) consideration and both inspirational communication and supportive leadership, and (c) intellectual stimulation and both inspirational communication and RG's intellectual stimulation. The lack of discriminant validity between these constructs were to be expected given the similarities between these MLQ-QTILQ dimensions and the RG's dimensions.

Criterion validity of the MLQ-QTILQ. To assess criterion validity of the MLQ-QTILQ dimensions, I estimated multiple regression models for effectiveness, satisfaction, extra effort, and student achievement. For each model, the independent variables entered were the four MLQ-QTILQ dimensions as well as the control variables of age and gender (see Table 22). For the outcomes of effectiveness (R^2 = .75, F (6, 132) = 65.17, p < .001), satisfaction (R^2 = .61, F (6, 132) = 34.70, p < .001), extra effort (R^2 = .68, F (6, 132) = 46.58, p < .001), and student achievement (R^2 = .19, F (6, 132) = 5.13, p < .01), neither age nor gender was a significant predictor. Comparing these findings to my earlier findings that used only the QTILQ, we see that the R^2 values are now much higher, indicating that a larger proportion of the variance in each of the dependent variables is explained by the transformational instructor-leadership dimensions.

Like my earlier findings, consideration remained a good predictor of effectiveness (β = 0.17, p < .05) and satisfaction (β = 0.39, p < .01). However, consideration was no longer a predictor of extra effort. This difference was likely because of two reasons. First, recall that sharing of enthusiasm was now part of idealized influence and not consideration, and the former leadership dimension was a strong predictor of extra effort. Second, the consideration leadership dimension was now measured by personal leadership behaviours, and thus some variance explained by other faculty support may now be lost.

The new measure of intellectual stimulation remained a significant predictor of extra effort (β = 0.25, p < .01), but was no longer a predictor of perceived instructor effectiveness. This difference may be because intellectual stimulation was now primarily measured by the MLQ rather than the QTILQ. Specifically, only two of the four QTILQ items were added to the six-item measure of intellectual stimulation. Therefore, the two removed items relating to (a) the

Table 22

Multiple Regression Analyses Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With MLQ-QTILQ's Leadership Dimensions (Study 2)

	Outcome Variables											
MLQ-QTILQ	Effectiveness			Satisfaction			Extra Effort			Student achievement		
Variables	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Constant	1.06	1.94		-0.36	2.57		0.85	0.52		28.97	4.87	
Age[a]	-19.11	37.16	-0.02	0.36	49.42	0.00	-6.79	9.95	-0.04	-179.47	93.55	-0.15
Gender	-0.21	0.46	-0.02	0.54	0.61	0.05	0.00	0.12	0.00	-2.02	1.16	-0.14
Idealized influence (Sq)	0.69**	0.08	0.62	0.46**	0.11	0.39	0.16**	0.02	0.61	0.11	0.20	0.07
Consideration (Sq)	0.16*	0.07	0.17	0.40**	0.10	0.39	0.02	0.02	0.07	-0.41*	0.18	-0.31
Intellectual stimulation (Sq)	0.10	0.08	0.10	0.05	0.11	0.04	0.06**	0.02	0.25	0.66**	0.21	0.45
Direction and congruence (Cub)	0.01	0.01	0.06	0.01	0.01	0.04	-0.00	0.00	-0.08	0.03	0.02	0.15
R^2	0.75			0.61			0.68			0.19		
F	65.17**			34.70**			46.58**			5.13**		

Note. N = 139.

[a] Inverse of age was used to correct for skewness and kurtosis violations.

* $p < .05$. ** $p < .01$.

unit providing students with a sense of what takes place ‘behind the scenes’ for the subject and (b) the unit encouraging students to relate what they learn to issues in the wider world, may have accounted for intellectual stimulation previously predicting instructor effectiveness.

Direction and congruence was no longer a significant predictor of effectiveness and satisfaction. One reason for this is that two of direction and congruence’s measurement items were removed because of their poor representation in the new component structure. This finding may also be because idealized influence subsumed some of the variance explained by direction and congruence. Of the four transformational instructor-leadership dimensions, *idealized influence* is the strongest predictor of effectiveness ($\beta = 0.62$, $p < .01$), satisfaction ($\beta = 0.39$, $p < .01$), and extra effort ($\beta = 0.61$, $p < .01$). These significant relationships indicate the importance of charismatic leadership in the HEI module context.

For the student achievement regression model, not only did intellectual stimulation remain a significant predictor ($\beta = 0.45$, $p < .01$), but consideration was also now a significant predictor ($\beta = -0.31$, $p < .05$). The latter finding reinforces my earlier findings from the hierarchical regression models. Specifically, when examining both individual and general supportive behaviours (rather than only general), the negative association between consideration and student achievement is even stronger. Therefore, individualized consideration seems to further encourage the ‘dependency syndrome’ explained earlier. After conducting the regression analyses, the variate for each regression was evaluated and all assumptions were met. In addition, there were no issues with multicollinearity as indicated by the variance inflation factor (VIF) and tolerance statistics.

Incremental validity of the MLQ-QTILQ. I used hierarchical regression to test for incremental validity of the MLQ-QTILQ beyond the RG (see Table 23). For each model, the variate's assumptions were met and multicollinearity was not problematic. For each hierarchical model, age and gender were entered in the first step, followed by the RG, and then the MLQ-QTILQ. The results indicated that the MLQ-QTILQ explained noticeably more variance than RG in predicting all of the outcomes. Specifically, the incremental validity findings showed that the MLQ-QTILQ explained 31.17%, 27.12%, 36.36%, and 44.44% more variance than RG in predicting effectiveness, satisfaction, extra effort, and student achievement respectively. In predicting effectiveness, satisfaction, and extra effort, the RG dimensions no longer remained significant after adding the MLQ-QTILQ dimensions. This indicated that the MLQ-QTILQ dimensions might be better predictors than the RG dimensions for these outcomes. Generally, the MLQ-QTILQ dimensions from the earlier multiple regression models (i.e., when testing criterion validity) remained significant with the exception of intellectual stimulation. MLQ-QTILQ's intellectual stimulation offered mediocre incremental validity over RG's intellectual stimulation when predicting extra effort ($\beta = 0.19$, $p < .10$) and student achievement ($\beta = 0.28$, $p < .10$). Like my earlier findings, MLQ-QTILQ's consideration is again negatively related to student achievement perhaps because of the dependency syndrome discussed earlier. Overall, the validity findings of the MLQ-QTILQ were superior to that of the QTILQ by itself. These findings emphasize the usefulness of combining the educational and organizational behaviour approaches to measuring transformational instructor-leadership.

Table 23

Hierarchical Multiple Regression Analyses Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With Transformational Instructor-Leadership Dimensions as measured by the RG and the MLQ-QTILQ (Study 2)

Step	Variables	Outcome Variables							
		Effectiveness		Satisfaction		Extra Effort		Student Achievement	
		β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
1	Age	-.07		.05		.06		-.12	
	Gender	-.05	.01	.03	.00	-.01	.00	-.15	.04
2	Age	-.04		-.04		-.03		-.16	
	Gender	-.13		-.04		-.06		-.16	
	RG: Vision	.29**		.28**		.14		-.09	
	RG: Intellectual Stimulation	.16		.12		.26**		.31**	
	RG: Inspirational Communication	.30**		.24**		.27**		.14	
	RG: Supportive Leadership	-.23**		-.24**		-.13		.09	
	RG: Personal Recognition	-.03	.52**	.06	.47**	.10	.44**	.07	.13**
3	Age	-.06		-.03		-.05		-.16	
	Gender	-.05		.02		-.00		-.12	
	RG: Vision	.10		.12		-.03		-.16	
	RG: Intellectual Stimulation	.04		.03		.11		.22*	
	RG: Inspirational Communication	.05		.03		.00		.12	
	RG: Supportive Leadership	-.07		-.10		.01		.13	
	RG: Personal Recognition	-.13		-.06		-.00		.08	
	MLQQTILQ: Idealized Influence	.57**		.32**		.61**		.08	
	MLQQTILQ: Consideration	.17*		.36**		.07		-.31*	
	MLQQTILQ: Intellectual Stimulation	.09		.03		.19		.28	
	MLQQTILQ: Direction and Congruence	.04	.24**	.02	.16**	-.07	.24**	.22*	.08*
	Total R^2	.77**		.59**		.66**		.18**	

Note. Inverse of age and supportive leadership means that Beta coefficient values are reversed for these variables. N = 139.

* $p < .05$. ** $p < .01$.

5.4 Discussion

At the beginning of this study my goal was to improve the QTILQ as a measure of personal leadership, and consequently provide evidence for the validity of this educationally-developed measure of transformational instructor-leadership. Criterion validity of the QTILQ was good, and convergent validity was adequate. However, discriminant and incremental validity were generally poor. Specifically, the QTILQ explained little additional variance beyond the already well-established MLQ. From the QTILQ, both consideration and intellectual stimulation were not truly distinct from their counterpart dimensions in the MLQ, and offered little additional variance beyond the MLQ.

The findings in this study further expose another limitation of the educational approach as a standalone measure transformational leadership in the HEI module context. Specifically, the educational approach of using module evaluations to measure transformational leadership fails to capture charisma. This is not surprising given that module evaluations are not typically designed to tap into charisma. However, as explained in Chapter 2, attributed charisma is likely to be relevant to the distant module context. The findings in this study confirmed the importance of attributed charisma because it was strongly related to effectiveness, satisfaction, and extra effort.

In spite of these shortcomings, the QTILQ appears to be useful for improving the context sensitivity of the MLQ. While the MLQ's factor structure is mostly supported in the HEI module context, some of the items are not well represented by its factor structure. Given that other researchers have also shown a limited applicability of the MLQ in the module context (see Bogler et al., 2013; Kuchinke, 1999), I proceeded to improve the MLQ's context sensitivity in this context via the QTILQ dimensions. Specifically, both consideration and intellectual stimulation from the QTILQ are useful for enhancing three of the MLQ constructs including

individualized consideration, intellectual stimulation, and, to a lesser extent, idealized influence. MLQ's 'individualized' consideration was expanded to now include general supportive behaviours that are typically present in the distant module context, and is thus renamed 'consideration'. In addition to enhancing the context sensitivity of the MLQ, another contribution of the QTILQ is the addition of direction and congruence. This dimension appears to be a theoretically sound replacement for a vision-oriented dimension, i.e., vision or inspirational motivation. However, direction and congruence was generally a weak predictor of the outcomes examined in this study, raising doubts about its importance in the HEI module context. In the final study, I further examine direction and congruence in relation to student outcomes.

Overall, this study shows that the QTILQ cannot adequately capture transformational instructor-leadership on its own. The QTILQ (a) overlaps considerably with the already existing and well-validated MLQ, (b) does not offer much incremental variance beyond the MLQ, and (c) fails to tap into charisma. In addition, the MLQ is not without faults because (a) vision is not applicable to the HEI module context, i.e., inspirational motivation, and (b) some of the measurement items do not appear to be well represented by the factor structure in the HEI module context. Taken together, I propose that instead of using solely the QTILQ or the MLQ to measure transformational instructor-leadership, it is better to use the educationally-developed QTILQ to address the weaknesses of the organizational behaviour MLQ, and thus enhance the context-sensitivity of the MLQ in the education context. In summary, linking the conclusions of this study to research question 1 (a) in this dissertation, it appears that a combination of the educational and organizational behaviour approaches is a sound strategy for operationalizing transformational instructor-leadership in the HEI module context. For both simplicity and consistency with other organizational behaviour surveys that are adapted to the HEI module

context, I hereafter refer to the combined MLQ-QTILQ simply as the MLQ-Student Survey (MLQ-SS).

5.4.1 Limitations and future directions. The major limitation of this study is that the newly proposed factor structure based on the combined MLQ-SS needs to be validated beyond this sample of students. In a follow-up validation study, it is worth examining whether the transformational instructor-leadership dimensions remain highly correlated. If so, then this would provide further evidence that the dimensions are not truly distinct from each other, and would best be represented as a single second-order factor as in this study.

Future research should also consider refining and further developing the leadership measures. In this study, I partially measure personal transformational leadership with the QTILQ by (a) adding an opening statement specifically requesting that students evaluate a single instructor when answering the questions, and (b) changing the item wording of three items to reference 'the teacher' rather than 'staff'. Even though this approach is consistent with that used by Baba and Ace (1989), established leadership measures, e.g., MLQ and RG, reference the leader for *all* items. Therefore, in the final study of this dissertation, I reword each of the twelve supplementary QTILQ items so that they all fully reflect personal transformational leadership.

Additionally, future research should take into account the differences in cultural context when referencing a unit of teaching or series of lectures on a subject. In this study, I use the term 'course unit' for the QTILQ, and 'course' for the adapted MLQ and RG. 'Course unit' was used in the initial ETLQ, and thus I used course for items in the rest of the questionnaire. However, when describing a unit of teaching over an academic term, 'course' is typically used in the US and Canada, whereas 'module' is typically used in the UK and Australia. Moreover, in the UK, a course is used to refer to an entire program of modules. Therefore, this difference in terminology

can cause confusion for UK students when responding to the questionnaire. To address this issue in the final study of this dissertation, I further change the item wordings from ‘course’ to ‘module’ because I once again use a sample of students from UK universities.

5.4.2 Conclusion. This study contributes to the notion that instructors are in a fundamental position of leadership and may apply certain tenets of transformational leadership to enhance students’ effort, satisfaction, perceptions of instructor effectiveness, and achievement (Anding, 2005). Given that instructors are in a fundamental state of leadership, they may also employ other types of leadership that are not necessarily constructive. As explained in Chapter 2, there is a paucity of research on instructors’ use of harmful behaviours in HEI modules, e.g., offensiveness and disconfirmation. Moreover, the uniqueness of the HEI module context with respect to students’ perceptions of distance, short-term pressures in temporary groups, and the follower-customer perspective means that instructors can be perceived by students as being destructive leaders. In light of this, I investigate the concept of destructive instructor-leadership in HEI modules in the next study.

Chapter 6: Conceptualizing Destructive Instructor-Leadership (Study 3)

At the outset of this dissertation, I describe Robert E. Quinn's experiences at a university campus (Anding, 2005). In this interview, Robert states that in his walks around a university campus, he would look through the windows of classrooms to observe the body language of students. In a few of the classrooms, "the students were on the edge of their seats [and] deeply involved" whereas in the majority of classes, "students were draped over their desks, only half awake" (Anding, 2005, p. 488). Robert believed that the few classes in which students were highly engaged were led by teachers "who turned ordinary students into extraordinary students" (Anding, 2005, p. 488). Robert goes on to explain the potential usefulness of constructive leadership theory in creating highly engaged classes. But, how do we explain those classrooms with slumped students? Was such body language simply indicative of 'ordinary teachers' as suggested by Robert or could it be that, in some of these classes, students were being taught by leaders of a more destructive nature? To conceptualize and measure destructive leadership in the educational context, I use a combination of (a) the corporate definition and its measurement and (b) an inductive investigation of the HEI module context. In this chapter, I first define destructive instructor-leadership based on the theory proposed in corporate contexts, and then inductively investigate the potential underlying dimensions of destructive instructor-leadership. Therefore, I partially address research question 1(b); "How can destructive instructor-leadership be conceptualized and operationalized?" I then use the findings from this study to propose a measure of destructive instructor-leadership in the next study.

6.1 Introduction

Research on instructor-leadership has focused on positive leader behaviours, specifically those related to both behavioural and transformational leadership. Comparatively, little research

has been conducted on destructive leadership in the HEI module context (see Section 2.5 for definition of destructive leadership), and such leadership could be costly as explained in Chapter 1 (i.e., monetary and social costs). As discussed in Section 2.5.2, the uniqueness of the module context in higher education may be particularly conducive to the emergence of destructive instructor-leadership. Specifically, students may perceive the *distant* instructor-student relationship as indicative of instructor misbehaviour – a concept that is similar to one manifestation of destructive leadership. Moreover, the *temporary* nature of module groups is likely to induce pressures than can incite an instructor to use destructive leader behaviours. Finally, the 'followers as *customers*' perspective in a module context, means that students may feel entitled to receive better service, and thus they may be especially sensitive to destructive instructor behaviours.

Of the three unique features, both distance and temporary module groups are also likely to influence how destructive leadership operates in this context. In particular, the relatively distant relationship in the HEI module context means that the accepted conceptualization and measurement of destructive leadership from the organizational behaviour context may not be wholly applicable to the HEI module context. For instance, in the previous study, I explained that personal recognition requires a very close leader-follower relationship in order for instructors to personally commend students. Similarly, a very close leader-follower relationship may be needed for students to perceive their instructors as not giving credit for work requiring a lot of effort (one of the measurement items from Tepper's Abusive Supervision Scale - the most prominent organizational behaviour measure of destructive leadership). Another destructive leadership measurement item that requires both closeness and a longer-term relationship is "reminds me of my past mistakes and failures" (Tepper, p. 190). In the HEI module context,

instructors would need to be familiar with students' performance over a long period of time, and also be close enough to students in order to recall and individually communicate with them regarding such performance. The short-term distant HEI module context cannot facilitate such leader behaviour.

In addition to the inapplicability of some of these supervisor-employee leader behaviours, Tepper's measure may also fail to capture destructive leader behaviours that are unique to the HEI module context. For instance, instructors may lead students towards goals that are contradictory to that of the institution, e.g., an instructor may encourage cheating whereas the HEI promotes fair assessment. Overall, the uniqueness of the HEI module context indicates that the concept of destructive instructor-leadership, including its dimensionality and manifestations, is worth examining via an inductive process.

6.1.1 Destructive leadership dimensionality. Despite the growing body of research on destructive leadership, little attention has been given to the dimensionality of this concept. Some researchers examine the dimensionality of counterproductive work behaviour (CWB) (e.g., Gruys & Sackett, 2003). However, CWB is not the same as destructive leadership because CWB is not used in the process of leading, e.g., stealing and gossiping (Krasikova et al., 2013, p. 1310).

Mitchell and Ambrose (2007) found that abusive supervision can comprise of two dimensions, including active personal abuse (e.g., ridiculing) and passive acts of abuse (e.g., not giving credit for hard work). However, their passive-aggressive dimension includes certain behaviours that describe active abuse, e.g., expressing anger towards the follower when the

leader is angry for another reason. Furthermore, Mitchell and Ambrose (2007) examined only the active dimension because aggressive behaviour was the focus of their study.

Goodyear, Crego, and Johnston (1992) offered another dimensional concept in their study of ethical issues in the supervision of student research. Using critical incident technique, Goodyear et al. (1992) found that unethical supervision comprises of dimensions such as incompetence, inadequate supervision, supervision abandonment, intrusion of values, abusive supervision, exploitive supervision, dual relationships, encouragement to fraud, and authorship issues. Some of these behaviours are indicative of destructive leadership (e.g., abusive supervision or exploitive supervision) whereas others indicate an absence of leadership (e.g., inadequate supervision or supervision abandonment). Even though Goodyear et al. (1992) offer insight into potential dimensions of destructive leadership, their focus was on ethical issues as opposed to the use of harmful behaviours in the process of leading followers towards a goal.

6.1.2 Manifestations of destructive instructor-leadership. In addition to the dearth of research on destructive leadership dimensions, researchers have yet to simultaneously examine the two manifestations of destructive leadership (Krasikova et al., 2013). These two manifestations are leaders (a) encouraging followers to pursue goals that conflict with the organization's interests and (b) using harmful methods in influencing followers towards a goal (Krasikova et al., 2013). The educational approaches to destructive leadership in higher education module interactions, i.e., teacher disconfirmation (Ellis, 2000) and offensive misbehaviour (Kearney et al., 1991), reflect only the second manifestation, i.e., use of harmful methods. The educational approaches do not reflect the first manifestation, i.e., contradictory organizational goals. The question then arises, can instructors lead students towards goals that conflict with HEIs' interests?

6.1.3 Purpose of the study. In order to address the research gaps in destructive leadership research, the purpose of this study was twofold: (1) to conceptualize destructive instructor-leadership and its potential dimensionality; and (2) to determine whether destructive instructor-leaders influence students towards goals that conflict with HEIs' interests.

6.2 Methods

6.2.1 Research approach. I conducted an inductive investigation by using critical incident technique in combination with open-ended interview questions. Such an inductive approach enables insight into the nature of destructive instructor-leadership and is particularly adequate considering (a) the lack of empirical research on destructive instructor-leadership; (b) the limited focus of existing quantitative measures, i.e., representative of only the harmful methods manifestation (e.g., Tepper, 2000); and (c) the sensitivity involved in the nature of the subject matter.

To determine an appropriate sample size, the main issue was theoretical saturation (Glaser & Strauss, 1967). Theoretical saturation means sampling continues until no additional theoretical insight can be gained from extra data (Baker & Edwards, 2012). This approach required data collection and data analysis to occur simultaneously rather than separate stages (Baker & Edwards, 2012). Accordingly, at the end of each interview, I read over my notes to summarize the incidents, and determine whether both manifestations of destructive leadership were adequately captured. In particular, I examined the transcripts to determine whether students reported the most common manifestation of using harmful methods to lead followers.

For theoretical saturation, I followed the two stages for data saturation for theory-based interview studies proposed by Francis et al. (2010). For the first stage, Francis et al. (2010)

proposed an initial sample of 10 interviews. Following these 10 interviews, the second stage involves collecting data from 3 additional interviews to determine whether any new themes emerge. This 10+3 saturation approach is consistent with the recommended 12 interviews for data saturation that was proposed by Guest et al. (2006). Following the 10+3 approach, I first collected data from 10 respondents, and then data from an additional 3 respondents indicated that no new theoretical insights emerged, i.e., theoretical saturation was met. Therefore, the search for additional participants was halted[13].

6.2.2 Participants. The total sample for this study consisted of 13 graduates and current students from management undergraduate programmes (n = 11, 84.6%) and postgraduate studies in management (n = 2, 15.4%). Participants attended HEIs situated in Trinidad (n = 5, 38.5%), United Kingdom (n = 2, 15.4%), Canada (n = 2, 15.4%), United States of America (n = 1, 7.7%) Mexico (n = 1, 7.7%), Nigeria (n = 1, 7.7%), and China (n = 1, 7.7%)[14]. The participants from Trinidad were from three different HEIs and those from the UK and Canada each attended a different HEI. The sample included 6 males (mean age = 25.8 years) and 7 females (mean age = 24.7 years).

6.2.3 Materials. Interviews were conducted using a topic guide (see Appendix G). The topic guide was divided into 8 sections and the average length of an interview was 51 minutes (*SD* = 9 minutes). The information sought in each section of the topic guide was appropriate for an interview seeking depth of information. Sections 1 to 3 were used for this study. Section 1 elicited demographic data. Section 2 included a definition of leadership and an opening question

[13] In the process of conducting interviews, the sample consisted of 7 females and 4 males. At that stage, the sample was not balanced by gender. Because of the slight gender imbalance, 2 potential female participants were turned away and I actively sought 2 to 3 additional male participants.

[14] One student did part of her undergraduate programme in China and completed it in the UK. Her experiences were described from the HEI in China and so she was not regarded as part of the UK sample.

on supportive instructor-leadership[15]. Section 3 entailed two questions. First, "How would you define destructive instructor-leadership?" This question was followed by the interviewer stating the formal definition of destructive leadership proposed by Schyns and Schilling (2013). Second, "From your undergraduate courses, describe, in detail, two to three incidents in which you have experienced a lecturer/s using destructive instructor-leader behaviours in the classroom?" Two pilot interviews were conducted to ensure that the topic guide was adequate for its purpose. Because the topic guide elicited contributions that were clear and met the required depth of data, no changes were made after the pilot interviews, and these interviews were included in the study.

6.2.4 Procedures. Maximum variation sampling was used to obtain the sample. Maximum variation sampling is the purposeful selection of participants to maximize heterogeneity (Patton, 1990). To maximize variation, I chose HEI attended as the diversity criteria; a limit of two students were selected from a single HEI. Maximum variation sampling according to HEI was used for two reasons. First, this variation prevented responses from being associated with a single HEI, thus avoiding potential harm to a HEI's reputation. Second, "any patterns that emerge from great variation are of … value in capturing the core experiences and central, shared aspects" of a concept (Patton, 1990, p. 172).

Maximum variation sampling was used in combination with snowball sampling. Snowball sampling is the identification and potential selection of participants based on referrals from a member of the target population. Snowball sampling was a reasonable approach because a participant might have been more likely to recommend a second potential participant from their HEI for another interview.

[15] The aim of the supportive leadership question was to (a) start the interview on a positive note and (b) acclimatize candidates to the notion of leadership behaviours in the classroom.

In addition to HEI attended, a balanced gender distribution was also sought in order to prevent any potential gender bias in perceptions of destructive instructor-leadership. To meet the HEI and gender requirements, participants were screened in advance of any interviewing. Screening took place via email, telephone or face-to-face. In each case, if the candidate met the gender and/or HEI criteria, arrangements for interviewing were made.

The use of in-depth interviews was in line with postmodernism in that emphasis was placed on how the interviewee constructed reality. Interviewing was used to emphasize "free expression" (Ritchie & Lewis, 2003, p. 140). To facilitate such free expression, students were interviewed on a one-to-one basis. These personal settings were also conducive to soliciting potentially sensitive information involved in describing experiences with destructive instructor-leaders. Students were asked to recall incidents in which they experienced an instructor using destructive leader behaviours in the module. Probing questions such "can you tell me a little bit more about…?" or "can you give me an example of…?" were used to solicit in-depth descriptions of each incident (see Appendix G for more examples). Details of the interviewing process are provided in Appendix H (Cooper & Schindler, 2002; Ritchie & Lewis, 2003).

Interviews were carried out during the period from December 2012 to April 2013. The data derived from the interviews were transcribed into a word processing program and the transcripts were imported into NVivo for analysis. Prior to transcription, I replaced participants' actual names with pseudonyms.

6.2.5 Data management. The raw data comprising of verbatim transcripts was managed in two steps. In step 1, the data relevant to each incident was tagged. For each incident, all manually tagged data was brought together making the data digestible and allowing for deeper

familiarization of the descriptions. In step 2, the tagged material was synthesized. This process was conducted by reading through the data chronologically and summarizing. All key terms, phrases, or expressions were kept as close to the original data as possible to avoid losing content or context (Ritchie & Lewis, 2003). The summary of each incident for each participant is presented in Appendix I (see column A).

6.3 Results

The participants described 53 critical incidents in total and the mean number was 4.1 (*SD* = 1.38). Some of the descriptions (*n* = 8) were not of behavioural incidents (e.g., uncontrollable spitting while talking, old and about to retire, accent) and were removed from the analysis.

The summarized data from the data management process (see Section 6.2.5) was used to conduct a thematic analysis. Thematic analysis is the process of classifying and organizing data to arrive at key themes (Ritchie & Lewis, 2003). In thematic analysis, the researcher moved beyond the emergent categories of data using interpretation to develop more abstract and conceptual themes. The benefit of using this approach was that it allowed for transparency and rigour in the data management process; the researcher can move back and forth between the raw data and different levels of abstraction.

To conduct the thematic analysis, I followed three key steps suggested by Ritchie and Lewis (2003). First, *detection* involved repeatedly reading through all of the destructive instructor-leadership incidents (shown in column A of Appendix I), “noting the range of perceptions, views, experiences, or behaviours” (Ritchie & Lewis, 2003, p. 238). The second step involved *identification and categorization* of broader and more refined elements (see column B of Appendix I). This stage represented the first level of abstraction in which the

descriptions remained close to the original data. For the third step, the categorized data was then classified into higher level classes (see column C of Appendix I). The labels assigned in the classification stage went beyond the original text and was more of a conceptual interpretation.

During the classification stage, each element along with its original description was read and judged as being either a new class or part of a class that had been created based on a previous description. As this process unfolded, classifications were often refined and updated. The classification process was completed once each element was exhausted. At the end of the classification stage, I arrived at nine classes.

The nine classes were then further summarized into three abstract thematic dimensions. The process of moving from the nine classes to thematic dimensions required interpretation and judgement. Hence, inter-rater agreement was sought by hiring a second researcher to independently conduct the same task of moving from nine classes to a more abstract and condensed list of thematic dimensions. There was very good inter-rater agreement for the classificatory reduction task because the dimensions arrived at by the secondary researcher partially replicated my thematic dimensions[16]. The movement from elements to classes and classes to thematic dimensions is illustrated in Figure 7. I labelled the three emergent dimensions as callous communication, chaotic carelessness, and irresponsibility.

[16] The only difference between my thematic dimensions and that of the second researcher was that of the "irresponsibility" dimension. The second researcher created a similar category labelled "professionalism" but his category also contained lack of interest in student and embarrassment. Closer inspection of the data revealed that lack of interest and embarrassment appeared to be more relevant to teaching methods and communication respectively.

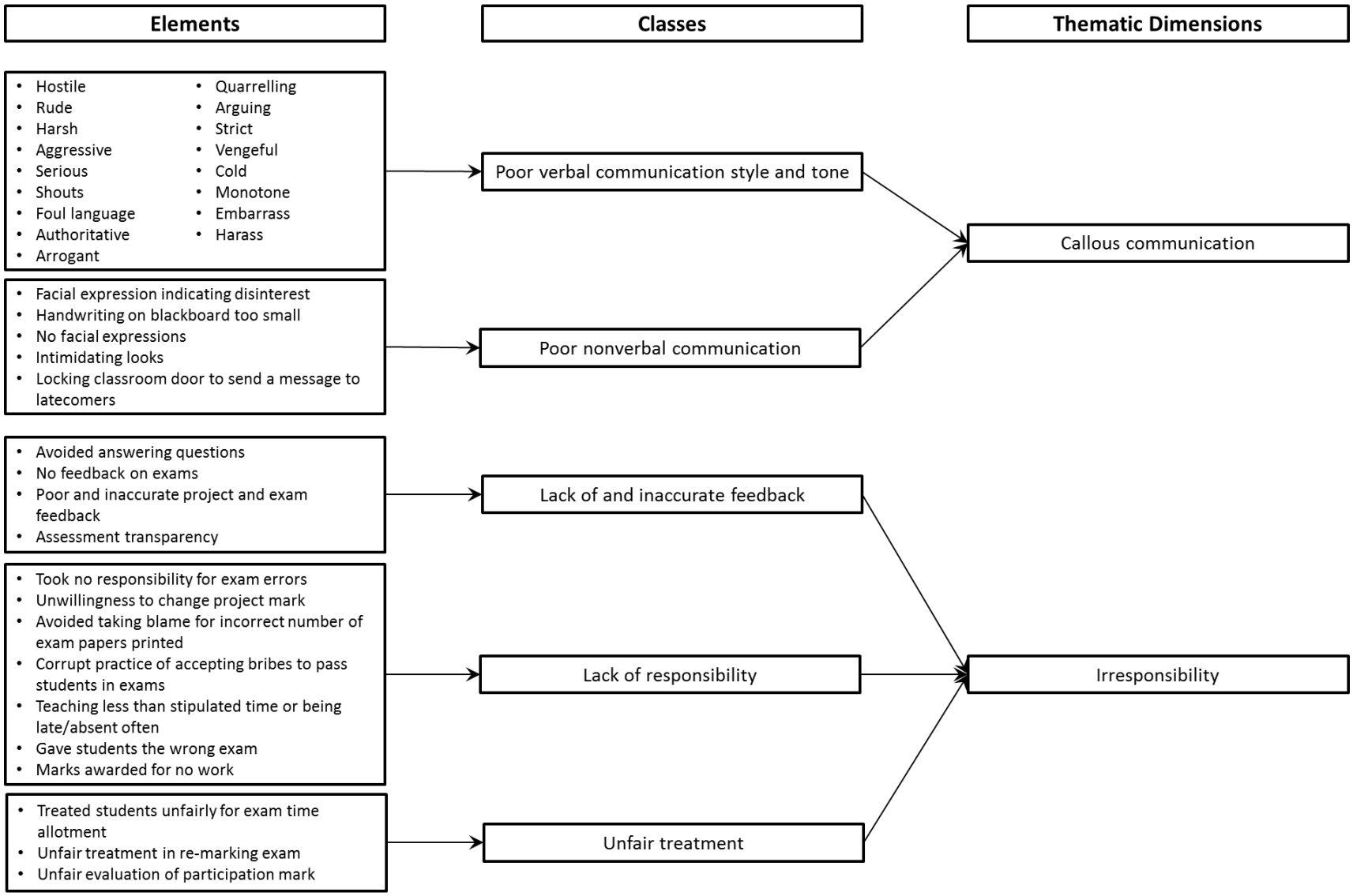

Figure 7. Analytical coding process to induce destructive instructor-leadership thematic dimensions (Continued on next page).

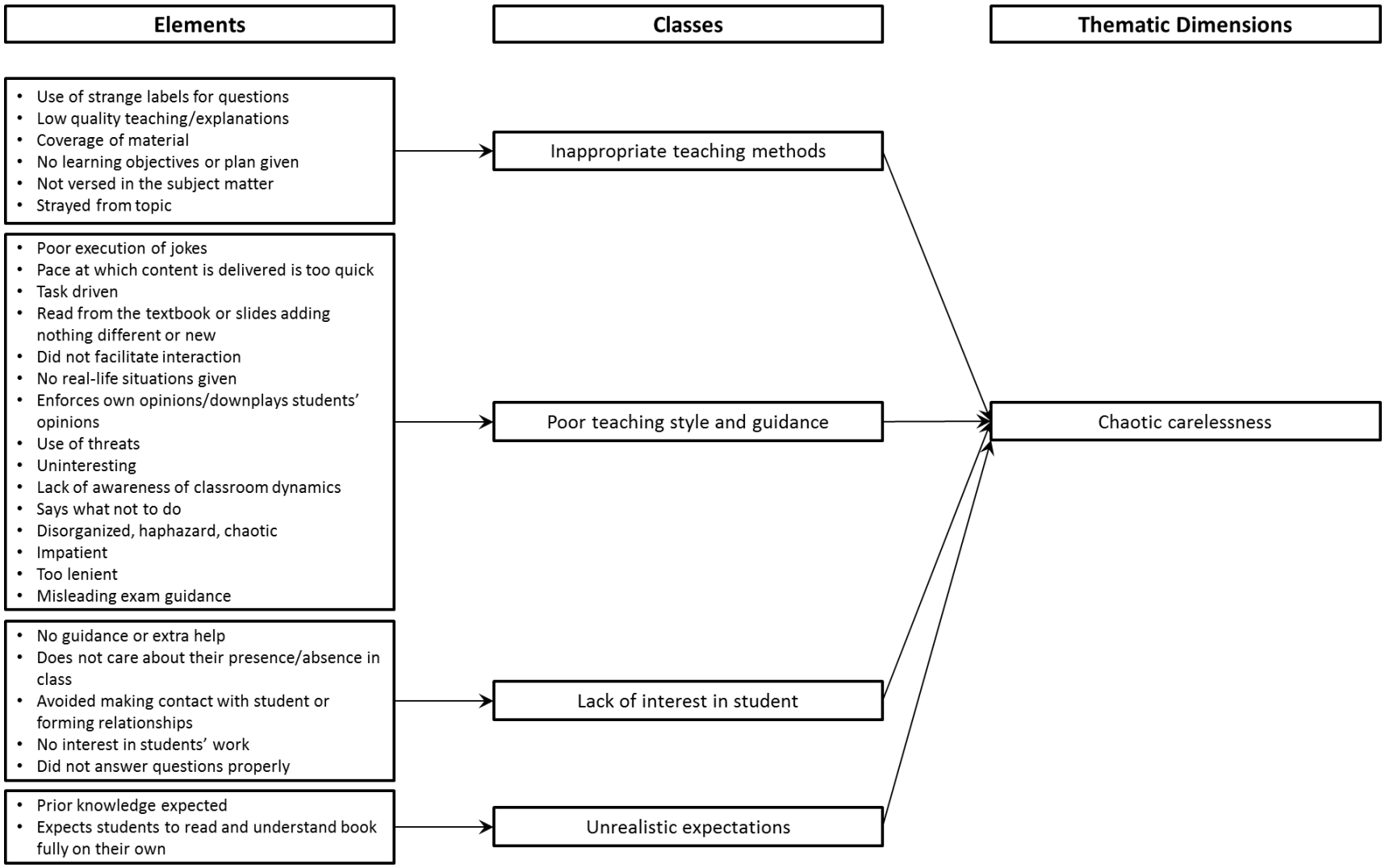

Figure 7 (Continued). Analytical coding process to induce destructive instructor-leadership thematic dimensions.

Callous communication. Callous communication refers to a leader's disregard and insensitivity towards followers via the display of harmful verbal and nonverbal behaviours. Similar to Tepper's conceptualization of abusive supervision, these behaviours include hostile behaviours such as rudeness, harsh exclamations or shouting, aggressiveness, intimidating looks, etc. For instance, one student said that she politely informed her instructor that his microphone was off and he responded, "What! What! Girl, you [are] probably off!" The same student described another instructor giving guidance for a presentation, and this instructor exclaimed, "I don't want you to speak like this, I don't want you to say these things, [and] I don't want you to do this!" One student said "… if you do something wrong, he [the instructor] might just be like, how could you get this wrong?! … How could you not know this?! … like aggressive." Another student said, "I asked her [the instructor] if I could see the notes and she said *no* … she basically put me down … right there in front of people." A final example is a student who observed an instructor "… shout[ing] at [a] guy in class … in front of everyone."

Chaotic carelessness. Chaotic carelessness refers to the creation of disorder that is reinforced by a leader's negligence of followers. The behaviours in this dimension can be grouped into two aspects. First, chaotic carelessness with regards to *negligence of student-followers*. For instance, instructors showing a lack of interest in students, e.g., one student said that "she [the instructor] didn't go through any of the midterm [exam] with us, so she didn't really care how we did in our final exam. [She gave] the exam because this is protocol." In addition, instructors also displayed chaotic carelessness with respect to contact with students, e.g., a student said, "He [the instructor] never really seemed to want to make contact with me … he just always had a meeting, or he had a meeting with somebody else, or that's not a good time for him. He just never really said anything specific."

Second, instructors are described as being chaotic and careless with respect to *teaching*. One example of this is instructors' enforcing their views or ways, e.g., one student said, "she [the instructor] was … one of those people who, if you do not repeat *exactly* the way in which she said something … [then] you do not understand. It was only her way or the highway." Similarly, another student described an instance in which the instructor said, "Get rid of the Freudian perspective, because, let's face it, it's bullshit." Other examples of chaotic carelessness in teaching include unrealistic expectations, e.g., one student said, "He [the instructor] would look at you as though … you [are] supposed to know this. I'm waiting for your answer, give it to me"; poor quality of explanations, e.g., one student said "… we [the class] were thinking that he [the instructor] was not good enough to like explaining," while another student said "… he [the instructor] [is] just not very good at … transferring his knowledge to the students because he wasn't very good at explaining things"; and reading off of slides, e.g., one student said "…he'd have … his slides that he'll put up and he'll just read over the slides…the slides [are] basically just a summary of the text."

Irresponsibility. The irresponsibility dimension refers to a leader's use of behaviours that contradict their formal duties and responsibilities. One of these irresponsible instructor behaviours is a lack of and/or inaccurate feedback, e.g., one student said, "… that's a basic piece of knowledge, which he [the instructor] is then leading that student, through feedback, into [thinking] that's a wrong answer, but in fact it's the right answer." Similarly, another student describes an instructor not taking responsibility to give feedback regarding exam errors, e.g., the student said that "… she [the instructor] messed up some of the questions so we [the students] had to go through our own paper, come to [the instructor], [and] tell her … we have to get more marks for this ... She didn't … tell the class about it, she didn't tell the class it was a general

mistake. So … if you didn't notice there was an error … then you just wouldn't get the mark for it." In addition to poor or inaccurate feedback, another irresponsible behaviour is that of unfair treatment, e.g., one student referred to how their participation mark awarded was unfair. The student stated that the instructor said, "Once you say something valuable, it could be once every three classes, you are good. I think we [the student's peer group] contributed almost every class in saying something. But, just because … we [are] not going up to him … in his face and talking at the end of class [or] sitting down in front of class, our grade was in the low 70s … [even though] we all entered the exam with over 88 and 90." [The downgrade was] because he used the participation grade." A final example of irresponsible behaviour is that of corrupt practices, e.g., a student said that "… those who failed can just pay him [the instructor] maybe £100 or maybe buy him expensive cigarettes … and they will pass … everybody knows this."

I did not assume that these three dimensions were the only dimensions that could have been identified. Nevertheless, the three dimensions represented all of the reported incidents of destructive instructor-leadership. The three dimensions also illustrated a clear conceptual structure and, while they were an abstract interpretation, they were not pulled far away from the original data.

6.4 Discussion

6.4.1 The concept of destructive instructor-leadership. Although there is some conceptual overlap between unethical supervision, disconfirmation, offensive misbehaviour, and destructive leadership, there is no consensus on the definition and conceptualization of destructive instructor-leadership. Given this problem, this study contributes to the educational approach to destructive leadership by offering a definition and conceptualization of destructive leadership in the unique HEI module context. Based on the findings, which are discussed in more

detail in this subsection, I define destructive instructor-leadership as an instructor's sustained and volitional use of harmful behaviour that involves the (a) use of harmful methods of influence in the process of leading students toward a goal and/or (b) encouragement of students towards a goal that is contradictory to the HEI's interests. This definition highlights four characteristics of destructive instructor-leadership, including leadership in the process of goal achievement, two manifestations of destructive leadership, volition, and sustained actions (Krasikova et al., 2013; Schyns & Schilling, 2013).

First, for some of the incidents, participants describe the actions of their instructor as part of the *process of leading* them towards a goal. Some goals are relevant to module/classroom learning, e.g., increased understanding of module content or achievement of the session's learning goals. Other goals are relevant to project completion, e.g., some students believe that instructors use harsh and forceful behaviours to guide them towards producing higher quality work.

Second, the findings add to the general organizational behaviour literature by demonstrating the existence of both *manifestations* of destructive leadership as proposed by Krasikova et al. (2013). First, all three dimensions from Figure 7 indicate that instructors can use a leadership style that entails harmful teaching methods (i.e., the second manifestation of destructive leadership). In particular, callous communication describes numerous behaviours that are linked to this second manifestation of destructive leadership, e.g., intimidating looks, shouting, foul language, etc. Second, both *chaotic carelessness* and especially *irresponsibility* indicate that instructors can lead students towards goals that conflict with the HEI's interests (i.e., the first manifestation of destructive leadership). For instance, for irresponsibility, instructors can discourage learning (a HEI goal) by promoting bribery as a means for success or

by allowing students to submit blank sheets of paper for marks. Also, for chaotic carelessness, the first manifestation was also evident in the reports by two students in which they felt that they were purposely misled by the instructor with respect to exam guidance and project feedback respectively. According to one of these students, "It was difficult to pass because [the] instructor was misleading in that he gave important chapters that you need to know how to do the questions for exam, but then changed the questions in the exam." Such intentional misdirection is akin to sabotaging followers' performance, and given that students' performance is directly linked to graduation rates, these leadership behaviours conflict with the HEIs' goals.

The third characteristic of *volition* is difficult to determine because the data is based on students' input and not information from the instructor as to whether they *choose* to follow the destructive goal or style or both. This difficulty is compounded because volition means that the leader can intend to harm, but is not consciously aware that the chosen goal or actions are harmful. Regardless, the findings indicate that certain students perceive that their instructors purposely choose to follow destructive goals, e.g. bribery.

Finally, all of the incidents are indicative of *sustained* behaviours. Even when students describe one-off incidents, probing questions reveal that instructors continue to enact the behaviours in the future, e.g., on a weekly basis for the entire semester, or in other situations, e.g., during office hour meetings or during a class break.

Overall, students' accounts of destructive instructor-leadership resonate with the definition of destructive leadership in the organizational behaviour literature. Specifically, the interview findings indicate that destructive instructor-leadership is associated with leadership in

the process of goal achievement, both manifestations of destructive leadership, volition, and sustained actions (Krasikova et al., 2013; Schyns & Schilling, 2013).

6.4.2 Dimensions of destructive instructor-leadership. In addition to contributing the concept of destructive instructor-leadership, this study extends previous organizational behaviour research on destructive leadership by offering a multidimensional concept. The findings suggest that destructive instructor-leadership comprises of three dimensions, including callous communication; chaotic carelessness; and irresponsibility.

The callous communication dimensions adds to Tepper's (2000) conceptualization. Tepper's conceptualization focuses on hostile behaviours, but the callous communication dimensions also includes behaviours that are not necessarily perceived as hostile. Still, these callous communication behaviours are perceived as harmful. For instance, disinterested facial expressions, e.g., one student described his visit to an instructor's office to ask a question. The student said, "His [the instructor's] facial expression, if I put words to it, it was I don't want to see you … he was serious." Another form of communication that was perceived as harmful is the instructor being monotone, e.g., a student said, "[The instructor's] tone is *flat* … and there's no facial expression … just like a robot." Overall, callous communication appears to be directly linked to the manifestation of destructive leadership regarding the use of harmful methods in the process of leading.

The behaviours described for chaotic carelessness are associated with both manifestations of destructive leadership. First, chaotic carelessness with respect to interactions between instructor-leader and student-follower appears to be linked primarily to the manifestation regarding use of harmful methods in the process of leading, i.e., avoiding students. Second,

chaotic carelessness with respect to teaching can be linked to both harmful methods as well as leading students towards goals that are contradictory to a HEI's interests. An example of the latter is an instructor that enforces his or her own point of view without exposing students to all sides of a topic, thus restricting students' learning (a HEI goal).

The irresponsibility dimension seems to add the most to Tepper's (2000) conceptualization because it is associated primarily with leading students towards goals that conflict with the HEI's interests. e.g., bribery provides opportunities to avoid learning; thus, bribery is contradictory to HEIs' interests of developing students' intellectual capabilities. Similarly, inaccurate feedback means that students may acquire incorrect knowledge which contradicts the goals of HEIs. Irresponsibility may also include the use of harmful methods, e.g., unfair treatment.

Callous communication, chaotic carelessness, and irresponsibility appear to be three conceptually distinct dimensions of destructive leadership. These three dimensions do not represent the lack of transformational leadership. Instead, callous communication may be considered the opposite of idealized influence or inspirational motivation. Also, chaotic carelessness appears to contrast directly with direction and congruence and/or consideration. These destructive leadership dimensions are unique leadership dimensions that extend the conceptuality of destructive leadership. The three dimensions can also be used to operationalize destructive leadership for various research designs, i.e., the three behaviours can be itemized in a survey, used in structured or semi-structured interviews, expressed in an experiment, etc. This implication for future research is discussed in the next subsection.

6.4.3 Limitations of the study and directions for future research. This is the first study that focuses on destructive leadership in the HEI module context. The aim of this inductive study is to take the first step towards conceptualizing and thus operationalizing destructive instructor-leadership. As is discussed later on in this subsection, the findings in this study should be used as a basis for scale development with respect to the measurement of destructive instructor-leadership. After developing such a scale, further research can then attempt to replicate the findings in a corporate context in order to determine whether the dimensions of destructive instructor-leadership are applicable to the work environment.

A second limitation of this research is that students' perceptions are used to determine instructors' volition. Although these perceptions can be valid, students generally struggled to answer questions pertaining to instructors' intentions in this study. Students sometimes responded by stating that they were unsure of the instructor's intention. Future research should consider using multi-source methods to measure volition. Information can be obtained on instructors' views regarding their intentions, and this information can be triangulated with students' input.

A third limitation is that the sample is biased because of the use of convenience sampling. Convenience sampling is useful for conducting interviews and employing maximum variation sampling. However, to improve representativeness of the results, future quantitative studies should use random or systematic random sampling techniques to improve the validity of my findings.

In using maximum variation sampling, I interviewed students from different national cultures, and these cultural differences can potentially affect the perceptions of destructive

leadership. In countries with a high power distance, e.g., China or Nigeria (Hofstede, 2001), students may perceive certain destructive leader behaviours as a cultural norm, and thus an acceptable form of communication. For instance, even though the British students in this study easily identified incidents they perceived as destructive leadership in UK HEI module settings, the Chinese student said that "it's really hard to find a destructive instructor in Britain." This may be because the Chinese student comes from a high power distance culture in which the teacher-student relationship is more unequal than that in Great Britain (Spencer-Oatey, 1997). Chinese students tend to prefer this unequal authoritarian leadership style because they liken the teacher-student relationship to that of a father-son relationship (Spencer-Oatey, 1997). Conversely, British students may perceive such authoritarianism as a negative form of domination (Spencer-Oatey, 1997). Therefore, certain instructor-leader behaviours perceived as destructive by British students are likely to be perceived as standard ways of expressing unequal power for the Chinese student. Future research should examine the potential relationship between national culture and the proposed dimensions of destructive instructor-leadership. For instance, perhaps callous communication, comprising largely of hostile behaviours, may be perceived as more destructive in lower power distance cultures than in higher power distance cultures.

Future research can also utilize the dimensions in this study to create a measure of destructive instructor-leadership. Specifically, future research can use the findings of this study to build upon Tepper's (2000) measure of the instructor-student relationship. Such research would help to further our understanding of the three emergent dimensions from this study (see Appendix J for a comparison of the study's findings to the items in Tepper's (2000) measure).

Here, I provide suggestions for enhancing Tepper's (2000) measure for callous communication, chaotic carelessness, and irresponsibility.

With respect to operationalizing callous communication, Tepper's (2000) Abusive Supervision Scale already covers a range of harmful behaviours such as rudeness, ridiculing, putting students down in front of others, giving students the silent treatment, etc. To fully measure callous communication, Tepper's measure (2000) may be expanded to include items that cover other harmful communication behaviours, e.g., disinterested facial expressions or monotone voice (see Table 24 for suggested items based on this qualitative study).

In operationalizing chaotic carelessness, some of Tepper's (2000) items may tap into this concept. For instance, giving students the silent treatment or breaking promises that he/she makes (Tepper) is similar to Jennifer's incident in which the instructor repeatedly avoided making contact with her, and instead constantly made excuses for not meeting. In addition, telling students that they are incompetent (Tepper) may be related to having unrealistic expectations of students. Tepper's (2000) measure also includes items that may be regarded as part of the chaotic carelessness concept, but was not prominent in my interview findings, e.g., not allowing students to interact with each other or reminding students of their past mistakes and failures. Adding to Tepper's (2000) items, some suggestions for operationalizing chaotic carelessness are given in Table 24.

In operationalizing irresponsibility, Tepper's (2000) measure covers certain aspects of this concept. For instance, lying to students (Tepper) may include not informing students of exam errors. Also, while not giving students credit for work requiring a lot of effort may not be applicable to the somewhat distant module context (Tepper), there is some similarity here to

Table 24

Suggested Supplementary Destructive Instructor-Leadership Items for Adapting Tepper's Abusive Supervision Scale to the Higher Education Module Context (Study 3)

Dimension	Definition of dimension	Item description
Callous communication	An instructor's use of harmful verbal and non-verbal behaviours in communicating with students	Displays facial expressions that indicate disinterest in me. Speaks in a monotone or flat voice during lectures.
Chaotic carelessness	An instructor's creation of disorder in the module that is accompanied by neglect of students	Ignores me. Enforces his/her own views on me. Has unrealistic expectations of me. Provides poor explanations to me. Reads from the textbook or slides as the primary way of teaching. Threatens me. Teaches in a disorganized fashion. Misleads me.
Irresponsibility	Instructors use behaviours that contradict their formal duties and responsibilities	Gives poor feedback to me. Gives inaccurate feedback to me. Takes no responsibility for evaluation/marking errors. Partakes in unethical activities with me. Treats me unfairly.

students perceiving unfairness in evaluation. Finally, one of Tepper's (2000) items that measures the degree to which instructors invades students' privacy may also be regarded as irresponsible behaviour, although the extent to which invasion of privacy is applicable to the somewhat distant HEI module context is questionable. Building on Tepper's (2000) measure, in order to measure irresponsibility, I offer some suggestions based on my interview findings (see Table 24).

Overall, Tepper's measure can be expanded to include the suggestions in Table 24. In the next study, I enhance Tepper's measure with these suggestions, and use the measure in a larger quantitative study in order to validate the three dimensions beyond this sample of students.

6.4.4 Conclusion. This study is an inductive investigation of the concept of destructive instructor-leadership. The results suggest that the features and conceptual boundaries of destructive leadership proposed by Krasikova et al. (2013) and Schyns and Schilling (2013) are relevant to HEI module instruction. Furthermore, I offer a three-dimensional conceptualization, and potential operationalization, of destructive leadership. This multidimensional representation of destructive leadership is consistent with previous research on other forms of leadership, e.g., transformational and behavioural.

Based on the known effects of destructive leadership in the general organizational behaviour literature, HEIs may wish to eliminate such leadership in the higher education module context. However, this suggestion is based primarily on research from the corporate context. Further research is needed to determine how the three dimensions of destructive instructor-leadership are related to student outcomes, e.g., student engagement, student burnout, and student achievement. In the next chapter, I explore these relationships as proposed in my research framework from Chapter 3 (recall Figure 4).

Chapter 7: The Association between Transformational and Destructive Instructor-Leadership, Student Engagement and Burnout, and Student Achievement (Study 4)

Studies 1, 2, and 3 set the stage for this final study. In this study there are four aims which focus on addressing the two research questions identified in Chapter 1. The first two aims of this study are to address the first research question. Specifically, in this study, I develop the operationalizations of both transformational and destructive instructor-leadership. The third aim is a prerequisite to addressing the second research question. That is, I clarify whether student engagement and burnout can be represented as distinct concepts as proposed in organizational behaviour literature. The final aim is to address the second research question by testing the conceptual framework proposed at the end of Chapter 3. That is, I test the relationships between transformational and destructive instructor-leadership, student engagement and burnout, and student achievement.

Regarding the structure of this chapter, I first introduce the four aims of this study in detail (Section 7.1), and these aims are as follows:

- Aim 1: Operationalize transformational instructor-leadership (Section 7.1.1).
- Aim 2: Operationalize destructive instructor-leadership (Section 7.1.2).
- Aim 3: Test the notion that student engagement and burnout are distinct dimensions (Section 7.1.3)
- Aim 4: Test the conceptual framework for transformational and destructive instructor-leadership, and student engagement, burnout, and achievement (Section 7.1.4).

Second, I describe the methods used to address the four aims of the study (Section 7.2). Third, I breakdown the results into four sections according to the aims of this study (Sections 7.3 to 7.6).

Finally, I discuss the contributions of this study, along with its limitations and suggestions for future research (Section 7.7).

7.1 Introduction

7.1.1 Operationalizing personal transformational leadership. The first aim of this study is to extend studies 1 and 2 by amending the MLQ-SS so that all of the items *fully reflect personal transformational leadership* in higher education modules. To do so, I move a step beyond Study 2, and change the item wording so that each of the MLQ-SS items (particularly the supplementary items added to the MLQ) references the instructor-leader by his/her name (see Table 25 for an item by item comparison). Therefore, each of the MLQ-SS items now emphasizes the leader's actions rather than overall module evaluation. To clarify the leadership context, I further change the item wordings by replacing 'course unit' or 'unit' with 'module'. Module is appropriate because this study was being carried out in the UK. Finally, I change the object of some of the items from 'students' or 'we' to 'I' or 'me' to (a) measure the individual's perception of the leader's actions and (b) maintain consistency between the items. With the newly reworded items, I then go on to further validate the MLQ-SS that was proposed in Study 2.

Table 25

Item Wording Changes for the Supplementary Items Added to the Multifactor Leadership Questionnaire (MLQ) to create the MLQ-Student Survey (MLQ-SS) (Study 4)

Item	Study 1	Study 2	Study 4	Changes made in Study 4
1	It was clear to me what I was supposed to learn in this course unit.	It was clear to me what I was supposed to learn in this course unit.	<Name> made it clear to me what I was supposed to learn in the module.	Item now references the leader's actions. Course unit changed to module.
2	The topics seemed to follow each other in a way that made sense to me.	The topics seemed to follow each other in a way that made sense to me.	<Name> presented the topics in an order that made sense to me.	Item now references the leader's actions.
3	The course unit was well organized and ran smoothly.	The course unit was well organized and ran smoothly.	<Name> organized and ran the module smoothly.	Item now references the leader's actions. Course unit changed to module.
4	What we were taught seemed to match what we were supposed to learn.	What we were taught seemed to match what we were supposed to learn.	What was taught by <Name> seemed to match what I was supposed to learn.	Item now references the leader's actions. Changed 'we' to 'I'.
5	The handouts and other materials we were given helped me to understand the unit.	The handouts and other materials we were given helped me to understand the unit.	Deleted in Study 2	N/A
6	The teaching encouraged me to rethink my understanding of some aspects of the subject.	The teaching encouraged me to rethink my understanding of some aspects of the subject.	<Name>'s teaching encouraged me to rethink my understanding of some aspects of the subject.	Item now references the leader's actions.
7	This unit has given me a sense of what goes on 'behind the scenes' in this subject area.	This unit has given me a sense of what goes on 'behind the scenes' in this subject area.	Deleted in Study 2	N/A.
8	The teaching in this unit helped me to think about the evidence underpinning different views.	The teaching in this unit helped me to think about the evidence underpinning different views.	<Name>'s teaching in this module helped me to think about the evidence underpinning different views.	Item now references the leader's actions. Unit changed to module.
9	How this unit was taught fitted in well with what we were supposed to learn.	How this unit was taught fitted in well with what we were supposed to learn.	Deleted in Study 2	N/A
10	This unit encouraged me to	This unit encouraged me to relate	Deleted in Study 2	N/A

Table 25

Item Wording Changes for the Supplementary Items Added to the Multifactor Leadership Questionnaire (MLQ) to create the MLQ-Student Survey (MLQ-SS) (Study 4)

Item	Study 1	Study 2	Study 4	Changes made in Study 4
	relate what I learned to issues in the wider world.	what I learned to issues in the wider world.		
11	Staff tried to share their enthusiasm about the subject with us.	The teacher tried to share his/her enthusiasm about the subject with us.	<Name> tried to share his/her enthusiasm about the subject with me.	Lecturer's name replaces staff/the teacher. Changed 'us' to 'me'.
12	Staff were patient in explaining things which seemed difficult to grasp.	The teacher was patient in explaining things which seemed difficult to grasp.	<Name> was patient in explaining things which were difficult for me to grasp.	Lecturer's name replaces staff/the teacher. Emphasizes individual perception.
13	Students' views were valued in this course unit.	Students' views were valued in this course unit.	<Name> valued my views in this module.	Item now references the leader's actions. Changed 'students' to 'my'.
14	Staff helped us to see how you are supposed to think and reach conclusions in this subject.	The teacher helped us to see how you are supposed to think and reach conclusions in this subject.	<Name> helped me to see how I am supposed to think and reach conclusions in this subject.	Lecturer's name replaces staff/the teacher. Changed 'us' to 'me'.
15	The feedback given on my work helped me to improve my ways of learning and studying.	The feedback given on my work helped me to improve my ways of learning and studying.	<Name>'s feedback on my work helped me to improve my ways of learning and studying.	Item now references the leader's actions.
16	The feedback given on my set work helped to clarify things I hadn't fully understood.	The feedback given on my set work helped to clarify things I hadn't fully understood.	<Name>'s feedback on my set work helped to clarify things I had not fully understood.	Item now references the leader's actions.

Note. <Name> refers to the instructor's name that is inputted by students when completing the online questionnaire.

7.1.2 Operationalizing destructive instructor-leadership. The second aim of this study is to extend Study 3 by taking the first step towards *developing a context-sensitive measure of destructive instructor-leadership*. To do so, I follow Hinkin's conceptual framework and guide for the development of scales that is based upon established psychometric principles in survey research (Hinkin, 1998). Hinkin's scale development process comprises of six steps. First, *item generation* entails the construction of items to measure the construct. Here, I use the Abusive Supervision Scale (Tepper, 2000) items as a starting point, and then add items based on the interview findings from Study 3. In other words, I combine the well-established items from Tepper's Abusive Supervision Scale with newly created items derived from an inductive approach (as outlined in Study 3/Chapter 6). In writing these items, I kept the statement simple and short, used language that should be familiar to students, and phrased items in a manner that was similar to Tepper's items in order to maintain a consistent perspective (Hinkin, 1998) (see Table 26). Again, for consistency, I used the same five-point scale used in Tepper's Abusive Supervision Scale. Each point describes the frequency with which the instructor uses the behaviour stated in the item. With respect to 'content adequacy' of the newly created items (Hinkin, 1998), I provided each student with the definition of destructive leadership, and asked students to describe incidents that were coherent with the provided definition. Therefore, the items created based on these incidents should reasonably measure destructive leadership.

Table 26

Destructive Instructor-Leadership Total Item Set (Study 4)

Source of Items	Item No.	Item Description	Factor/Deleted
Tepper's Abusive Supervision Scale	1	Ridiculed me	Callous communication
	2	Told me my thoughts or feelings are stupid	Deleted after iteration 2
	3	Gave me the silent treatment	Callous communication
	4	Puts me down in front of other people/students	Callous communication
	5	Invaded my privacy	Victimization
	6	Reminded me of my past mistakes and failures	Deleted after iteration 2
	7	Did not give me credit for work requiring a lot of effort	Deleted after iteration 5
	8	Blamed me to save himself/herself embarrassment	Victimization
	9	Broke promises he/she made	Deleted after iteration 1
	10	Expressed anger at me when he/she was mad for another reason	Victimization
	11	Made negative comments about me to others	Victimization
	12	Was rude to me	Victimization
	13	Did not allow me to interact with other students	Deleted after iteration 1
	14	Told me that I am incompetent	Deleted after iteration 3
	15	Lied to me	Irresponsibility
Supplementary items from interview findings in Study 3	16	Displayed facial expressions that indicated disinterest in me.	Callous communication
	17	Spoke in a monotone or flat voice during lectures.	Deleted after iteration 2
	18	Ignored me.	Deleted after iteration 4
	19	Enforced his/her own views on me.	Deleted after iteration 1
	20	Had unrealistic expectations of me.	Deleted after iteration 2
	21	Provided poor explanations to me.	Deleted after iteration 2
	22	Read from the textbook or slides as the primary way of teaching.	Deleted after iteration 1
	23	Threatened me.	Irresponsibility
	24	Gave poor feedback to me.	Deleted after iteration 3
	25	Took no responsibility for evaluation/marking errors.	Deleted after iteration 6
	26	Partook in unethical activities with me.	Irresponsibility
	27	Treated me unfairly.	Deleted after iteration 3
	28	Taught in a disorganized fashion.	Deleted after iteration 2
	29	Misled me.	Irresponsibility
	30	Gave inaccurate feedback to me.	Deleted after iteration 3

The second step is *questionnaire administration* (Hinkin, 1998). In distributing the questionnaires to a sample of students, the 'new' measure, i.e., my newly created items along with Tepper's already established items, is administered along with other established measures, e.g., the MLQ. Accordingly, I later use the MLQ outcomes along with student achievement to examine criterion-related validity. The MLQ outcomes of satisfaction and extra effort, as well as individual performance are all established outcomes in destructive leadership literature (Schyns & Schilling, 2013). Destructive instructor-leadership is expected to be negatively related to satisfaction because a significant part of a HEI module is the delivery of its content by instructors. Therefore, an instructor's use of harmful behaviours to deliver module content, e.g., ridiculing students, can lead to students having an unpleasant experience in the module, and thus becoming dissatisfied. Students may also respond to destructive instructor-leadership by reducing their efforts and performance when they try to distance themselves from the source of distress, e.g., withdrawing mentally and/or physically from the instructor's classes.

Third, Hinkin (1998) suggests that for *initial item reduction*, exploratory factor analysis (EFA) should be used to refine the scale. EFA is useful for determining the underlying structure of the item set. Here, I expect that three factors would emerge from the data, i.e., callous communication, chaotic carelessness, and irresponsibility. The EFA is described in more detail later on. After assessing the dimensionality of the measure, internal reliability can then be assessed using Cronbach's alpha. Hinkin (1998) suggests a coefficient alpha of at least 0.70 for exploratory measures.

For the fourth and fifth steps, Hinkin describes the statistical techniques to be used. The fourth step is *confirmatory factor analysis*. This technique is used to confirm the prior analyses and provide further evidence of construct validity. The fifth step is *convergent, discriminant, and*

criterion validity. For these two steps, Hinkin (1998) goes on to explain conventions in using relevant statistical techniques, e.g., chi-square, goodness of fit indices, and correlations between constructs (recall the statistical techniques used in studies 1 and 2). For this study, I check all three forms of validity. For convergent validity, I examine the relationship between destructive and transformational instructor-leadership. However, I do not check for correlations between my measure of destructive leadership and another established measure of destructive leadership because adding an additional measure to the questionnaire in this study may have induced questionnaire fatigue. I elaborate on the fourth and fifth steps in more detail when presenting the findings later on.

The final step is *replication* (Hinkin, 1998). This step involves the use of an independent sample in order to improve the generalizability of the developed measure. This step goes beyond the scope of this study, which is to provide a starting point towards the development of a survey measure of destructive instructor-leadership. Hinkin (1998) explains that the use of an independent sample enhances the generalizability of the developed measure. At the end of this study, I provide guidelines for convergent validity and replication.

7.1.3 Hypothesized model of student engagement and burnout. The third aim of this study is to test an empirical model of student engagement and burnout. Recall from Chapter 3, that I adopted the stance by Schaufeli et al. (2002) that engagement and burnout are standalone concepts. However, the most common measure of engagement – the UWES – fails to capture engagement as a standalone concept (Cole et al., 2012). To address this issue, I follow the recommendation by Cole et al. (2012) to measure engagement more in line with its original conceptualization proposed by Kahn (1990). Specifically, student engagement is comprised of cognitive, emotional, and behavioural dimensions. Measuring student engagement in this manner

may offer a means of empirically distinguishing student engagement from student burnout as comprised of exhaustion, inefficacy, and cynicism.

H1: Six distinct first-order factors best represent the measurement model for student engagement and burnout.

7.1.4 Hypothesized model of instructor-leadership, student engagement and burnout, and student achievement. The fourth aim of this study is to test the conceptual framework proposed in Chapter 3 (see p. 132). The framework illustrates that transformational and destructive instructor-leadership are expected to be related to student achievement via student engagement and burnout. In this subsection, I present a brief recap of the relationships proposed in Chapter 3.

First, transformational instructor-leadership is expected to be positively related to student engagement and negatively related to student burnout. As explained in Chapter 3, transformational instructor-leadership is expected to be positively related to student engagement because these leaders help their followers to realize their full potential (Vincent-Hoper et al., 2012), spread emotions to their followers, and provide challenges that are perceived as positive (Kopperud et al., 2014). On the other hand, transformational instructor-leadership is expected to be negatively related to burnout because these leaders are likely to be perceived by their followers as providing support (Twigg, 2011) and using open communication (Gill et al., 2006) thereby reducing stress and burnout. Therefore, as stated in Chapter 3,

H2: There is a positive relationship between transformational instructor-leadership and student engagement.

H3: There is a negative relationship between transformational instructor-leadership and student burnout.

Second, destructive instructor-leadership is expected to be negatively related to student engagement and positively related to student burnout. In Chapter 3, I used the three-stage process of psychological adjustment (Ashforth, 1989) to explain that students may experience helplessness in a destructive instructor-leader's class. Helplessness may result in students experiencing an erosion of engagement and an increase in burnout. Furthermore, destructive instructor-leaders may also create role conflicts (Krasikova et al., 2013) and perceived injustice (Tepper, 2000), both of which can result in excessive stress, and thus burnout (R. T. Lee & Ashforth, 1996). Finally, destructive instructor-leaders may provide devaluing feedback, which is also likely to lead to burnout (Duffy et al., 2002). Hence, as stated in Chapter 3,

H4: There is a negative relationship between destructive instructor-leadership and student engagement.

H5: There is a positive relationship between destructive instructor-leadership and student burnout.

Finally, student engagement and burnout are expected to be positively and negatively related to student achievement respectively. As explained in Chapter 3, engaged students should invest their emotional, behavioural, and cognitive energies in their module which, in turn, should improve academic performance (Heikkilä & Lonka, 2006; Pekrun et al., 2009; Reinsch & Wambsganss, 1994). Conversely, according to COR, burnt out students may distance themselves from the sources of burnout and/or offset losses using certain coping strategies (Hobfoll, 1989).

In both cases, students extract themselves from the instructor and/or module, and thus are likely to experience poor academic performance for said module. Thus, as stated in Chapter 3,

> H6: There is a positive relationship between student engagement and student achievement.
>
> H7: There is a negative relationship between student burnout and student achievement.

The six hypotheses (i.e., H2 to H7) are illustrated in the research frameworks in Figures 8 and 9. For both forms of leadership, I use the context-sensitive operationalizations of transformational and destructive instructor-leadership which are validated and developed in this study respectively.

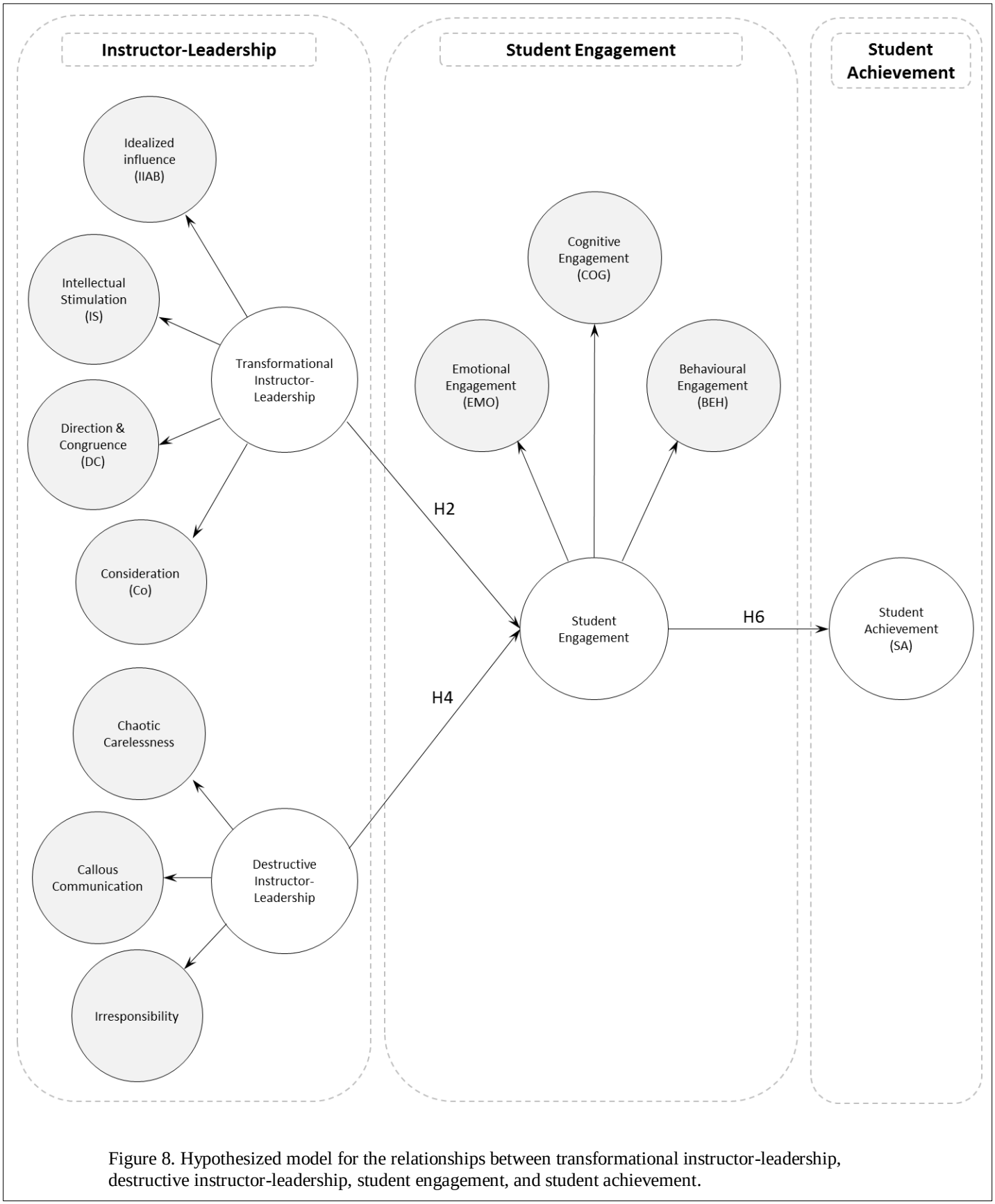

Figure 8. Hypothesized model for the relationships between transformational instructor-leadership, destructive instructor-leadership, student engagement, and student achievement.

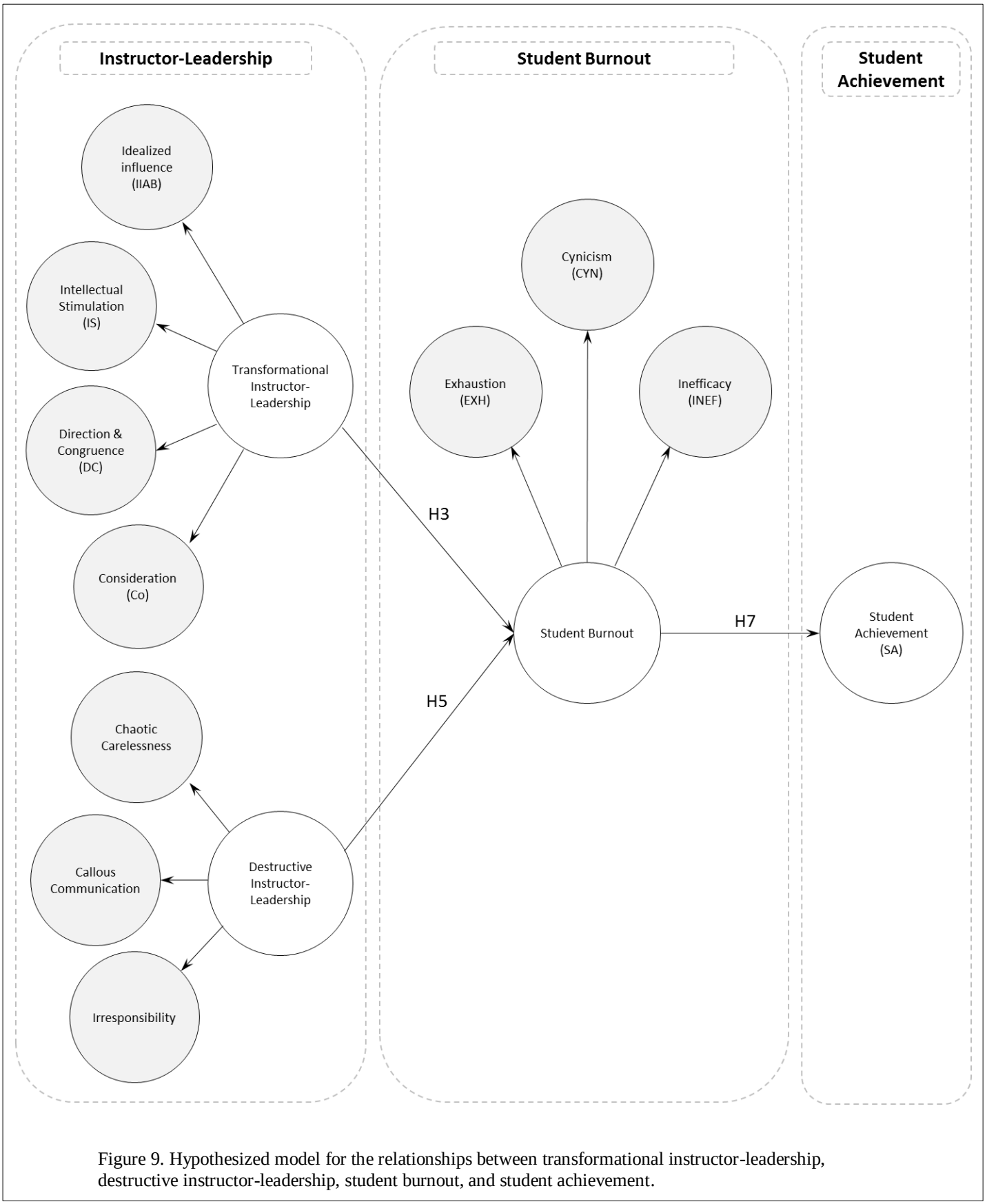

Figure 9. Hypothesized model for the relationships between transformational instructor-leadership, destructive instructor-leadership, student burnout, and student achievement.

7.2 Methods

7.2.1 Participants. The sample for this study consisted of 207 students studying at universities located in England (n = 193, 93.2%), Scotland (n = 7, 3.4%), Wales (n = 6, 2.9%), and Northern Ireland (n = 1, 0.5%). The students were from various faculties including Social Sciences (n = 54, 26.1%), Natural Sciences (n = 36, 17.4%), Arts and Humanities (n = 35, 16.9%), Medicine, Dentistry, and Health (n = 19, 9.2%), Engineering (n = 16, 7.7 %), Law (n = 9, 4.3%), Film (n = 7, 3.4%), and other faculties (n = 5, 2.4%). The sample included 53 males (mean age = 22 years) and 127 females (mean age = 20 years).

7.2.2 Materials. Preceding the questionnaire, brief instructions were given to participants asking them to rate one specific lecturer who taught them in the previous semester (i.e., autumn semester). In so doing, participants were required to (a) choose a lecturer who taught at least half of the classes for the module and (a) recall the grade received for said module. Participants were also provided with a definition of a module, which may have been useful for international students. A module was defined as a series of lectures on a subject that typically lasts a semester. Participants were then asked to provide the lecturer's name, and this name was subsequently used in framing the upcoming questions (see Appendix K for the questionnaire).

Transformational instructor-leadership. I measured transformational instructor-leadership using the *Multi-factor Leadership Questionnaire – Student Survey (MLQ-SS)* as proposed in Study 2. The original MLQ items were represented on a 5-point continuum (0 = not at all; 1 = once in a while; 2 = sometimes; 3 = fairly often; 4 = frequently, if not always) with higher scores indicating higher transformational leadership. These items were adapted to the HEI module context using Pounder's word modifications (Pounder, 2008). The supplementary items added to the MLQ (i.e., the QTILQ items from Study 2) were represented on a 5-point

continuum (1 = disagree, 2 = disagree somewhat, 3 = unsure, 4 = agree somewhat, 5 = agree) with higher scores indicating higher transformational leadership. In this study, these supplementary items were reworded in order to better tap into personal transformational leadership.

In Study 2, I proposed that transformational instructor-leadership can be best represented as four dimensions that are measured using the 25-item MLQ-SS. These four dimensions include (a) idealized influence (attributed and behaviour) (7 items) ($\alpha = 0.88$); (b) consideration (individual and general) (8 items) ($\alpha = 0.91$); (c) intellectual stimulation (6 items) ($\alpha = 0.81$); and (d) direction and congruence (4 items) ($\alpha = 0.88$) (see Table 25 in this study for sample items). Cronbach's α for the 25-item transformational instructor-leadership measure was .96. The MLQ also included measures for other forms of leadership including (a) management by exception (active) (4 items) ($\alpha = 0.71$); (b) contingent reward (4 items) ($\alpha = 0.68$); and (c) laissez-faire leadership (4 items) ($\alpha = 0.73$).

Destructive instructor-leadership. I measured destructive instructor-leadership using Tepper's Abusive Supervision Scale along with the supplementary items provided in Study 3 (see Table 26). That is, both measures were combined in order to improve the context sensitivity of Tepper's measure (recall Section 6.1 in which I explained the potential shortcomings of Tepper's measure in the HEI module context). Both measures were moderately correlated (r = .50) indicating that while they may both tap into the same concept, the supplementary items from Study 3 still tap into unique behaviours that may be specific to the HEI module context. For the destructive instructor-leadership items, students were given instructions to indicate how often the instructor intentionally used the leader behaviours.

Tepper's Abusive Supervision Scale. The Abusive Supervision Scale comprised of 15 items that were represented on a 5-point continuum (1 = I cannot remember <Name> ever using this behaviour with me; 2 = <Name> very seldom used this behaviour with me; 3 = <Name> occasionally used this behaviour with me; 4 = <Name> used this behaviour moderately often with me; 5 = <Name> used this behaviour very often with me) with higher scores indicating more abusive supervision. Sample items include "<Name> ridiculed me", "<Name> was rude to me", and "<Name> lied to me" ($\alpha = 0.83$).

Callous communication, chaotic carelessness, and irresponsibility: Supplementary items. The 15 supplementary items from Study 3 were represented on the same 5-point continuum used in Tepper's Abusive Supervision Scale, and therefore higher scores were indicative of higher destructive instructor-leadership. Some sample items include, "<Name> displayed facial expressions that indicated disinterest in me", "<Name> threatened me", and "<Name> misled me" ($\alpha = 0.83$).

Cronbach's α for the 30 items, including both Tepper's measure and the supplementary items from Study 3, was .96.

Student engagement. I measured student engagement using Rich et al.'s (2010) Job Engagement Questionnaire, which was adapted to the HEI module context. Unlike Study 1, in which I measured only one facet each for emotional, behavioural, and cognitive engagement, Rich et al.'s measure more thoroughly taps into each dimension of engagement. The authors searched the literature for scales and items that fitted with Kahn's (1990) conceptualization, and the factor structure was supported in three separate samples in their study. Moreover, Peters (2014) also provided evidence for the stability of Rich et al.'s (2010) measure and factor structure when measuring student engagement. Rich et al.'s (2010) measure comprised of 18

items that were represented on a 7-point continuum[17] (1 = never; 2 = rarely; 3 = occasionally; 4 = sometimes; 5 = frequently; 6 = usually; 7 = always). The inventory comprised of three subscales, including (a) behavioural engagement (6 items, e.g., "I worked with intensity for <Name>'s module") (α = 0.94); (b) emotional engagement (6 items, e.g., "I was enthusiastic in <Name>'s module") (α = 0.96); and (c) cognitive engagement (6 items, e.g, "My mind was focused on <Name>'s module") (α = 0.95). Cronbach's α for the 18-item scale was .97.

Student burnout. I measured student burnout using the Maslach Burnout Inventory – Student Survey (MBI-SS) (Schaufeli, Martínez, et al., 2002), which was then adapted to a specific HEI module. I used the MBI-SS because this measure of student burnout has been validated for student samples across three different European countries (after allowing correlations between error terms belonging to the same subscale or contain domain) (Schaufeli, Martínez, et al., 2002). The MBI-SS comprised of 15 items on a 7-point continuum (1 = never; 2 = rarely; 3 = occasionally; 4 = sometimes; 5 = frequently; 6 = usually; 7 = always). In addition, the MBI-SS comprised of three subscales including (a) exhaustion (5 items, e.g., "I felt emotionally drained by my studying for <Name>'s module") (α = 0.91); (b) cynicism (4 items, e.g., "I became less interested in <Name>'s class since the beginning of the module) (α = 0.95); and (c) efficacy (6 items, e.g., I believe that I made an effective contribution to the classes that I attended for <Name>'s module.) (α = 0.77). Efficacy was reverse coded to represent inefficacy. Cronbach's α for the 15-item scale was .91.

[17] The engagement measure designed by Rich et al. (2010) is a 5-point Likert scale ranging from strongly agree to strongly disagree. For consistency between the engagement and burnout measures, and also because engagement and burnout scale anchors are traditionally measured as a frequency, I changed the engagement measure's scale anchors to a frequency scale.

Student achievement. Student achievement was measured by students' self-reported final grade for a completed module[18]. Students provided either their actual grade percentage or the range in which their grade percentage lie. I converted the commonly used UK grade percentages to a 7-point scale (1 = no grade, 2 = 1-39, 3 = 40-44, 4 = 45-49, 5 = 50-59, 6 = 60-69, 7 = 70-100). The use of self-reported grades for a completed module (current study) should more objectively measure student achievement than students' perceived performance during a module (the latter was used in Studies 1 and 2).

Perceived importance of subject area. To address common method bias, I measured students' perceived importance of subject area as a marker variable. This variable was used as a marker variable in Study 1, and should theoretically be unrelated to both transformational and destructive instructor-leadership. This scale comprised of three items that were represented on a 5-point Likert scale (5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree, 1 = strongly disagree). A sample item read, "I hope the things I learn will help me to develop as a person and broaden my horizons" ($\alpha = 0.84$).

Demographic. At the end of the questionnaire, participants were asked to provide information regarding their background. Age was measured in years. Gender was coded as '0' for male and '1' for female.

7.2.3 Procedures. The questionnaire was distributed during the second semester of the 2014/2015 academic year, and students were asked to rate instructors from the first semester of said academic year. This approach of examining a completed module ensured that (1) students were sufficiently familiar with their instructor and (2) a grade could be provided for the module.

[18] I only used reported grade, and not students' perceived relative performance, because both items were not highly correlated ($r = .42$). Cronbach's α for a two-item factor comprising of reported grade and relative performance was poor, i.e., 0.53.

Prior to distributing the questionnaire, a small pilot study with five students was conducted to check for understanding of item wordings, and no issues were identified. After the pilot study, the questionnaire was distributed in two ways.

First, an email was sent to all undergraduate students at a university located in England. In the email message, participants were given a brief description of the study, a link to an information sheet (Appendix W), a link to the online questionnaire, and details regarding the benefits of taking part. Like Study 2, each participant could opt to receive a free personality evaluation along with entry into a £40 prize voucher draw. The sample from this survey consisted of 102 students.

Second, the questionnaire was distributed to students at other UK universities via Qualtrics panel service. Qualtrics were paid US $763.00 to source 100 undergraduate students from the UK, and each student was likely paid a small sum (less than £5) for completing the survey. Because each of the participants from the Qualtrics panel was likely rewarded with an external incentive, I used two attention filters in the questionnaire to improve the quality of the data, i.e., verify that respondents were reading the questions carefully and following instructions. The first attention filter in the MLQ-SS was, “Please select ‘Strongly agree’ for this statement”. The second attention filter at the end of the MLQ-SS read, “Please select ‘Once in a while’ for this statement”. From the Qualtrics panel, 205 students completed the questionnaire, with 100 students being filtered out via the attention filters. Therefore, the Qualtrics panel was used to source a total of 105 students. Note that for the Qualtrics panel, participants were not (a) offered the option to receive a free personality evaluation and (b) entered into the prize draw.

7.3 Results 1: Operationalizing Transformational Instructor-Leadership

7.3.1 Missing data and statistical assumptions. Prior to upcoming statistical tests, I accounted for missing data with respect to the MLQ variables, and this resulted in the sample size being reduced to 187[19]. The assumptions of normality, homoscedasticity, and linearity were examined for all of the transformational instructor-leadership variables. For the 13 original MLQ items, all but one of the variables deviated from normality, i.e., 3 of the kurtosis *z*-scores exceeded the critical value of ±2.58, and 12 of the skewness *z*-scores exceeded the critical value of ±2.58. For the 12 supplementary transformational instructor-leadership items, all of the variables deviated from normality, i.e., 6 of the kurtosis *z*-scores exceeded the critical value of ±2.58, and all 12 of the skewness *z*-scores exceeded the critical value of ±2.58. For the combined scales, there were issues with 12 of the 13 composite variables in meeting the assumption of normality and 1 of the variables in meeting the assumption of homoscedasticity. For these 12 variables, non-normality and heteroscedasticity were addressed using the appropriate data transformations proposed by Tabachnick and Fidell (2005) and Hair et al. (2009). These data transformations helped to improve the variables with respect to meeting the assumptions. Hereafter, the 12 composite variables were used in their transformed form.

The MLQ-SS that now fully measures personal leadership was validated in this study. First, I validated the factor structure via CFA. Then, I checked convergent validity via correlation analysis. Finally, I tested criterion and incremental validity using multiple regression analyses.

[19] Twenty cases contained extremely high levels of missing data (> 30%) and were removed. For the remaining sample, Little's Missing Completely at Random (MCAR) test indicated that the MLQ data were completely missing at random ($\chi^2(1006) = 1065.77,\ p > .05$). Hence, expectation maximization (EM) was used to impute missing data for the MLQ. For the two student achievement variables, gender, and age missing data was very low (i.e., < 4%), and thus EM was used to impute missing data for these variables as well.

7.3.2 Validation of the component structure. Prior to the CFA, missing data were imputed for two values using the EM approach. CFA was then used to validate the 25-item four-factor solution. Given the non-normality of 24 of the 25 observed variables, I used maximum likelihood with the Satorra-Bentler adjustment to the χ^2 for non-normality (i.e., the same method used in Study 2) (Tabachnick & Fidell, 2005). Like Study 2, I used this estimation procedure via the Lavaan package (Yves, 2012) for R (R Core Team, 2013). The hypothesized four-factor model fitted fairly well for a small sample with 25 observed variables (Satorra-Bentler χ^2 (262) = 428, $p < .05$, Robust CFI = .91, RMSEA = .059)[20].

Like the previous studies, I tested a series of competing models in order to determine whether the data could be represented by a better fitting model than the initial measurement model (see Table 27). I used the CFA results for the four-factor structure comprising of four first-order constructs as the baseline model for all comparisons. *First*, a higher-order factor was tested, and the fit results indicated that there was no significant difference between the higher-order model and the baseline model ($\Delta\chi^2$ [2] = 3.76, $p > .05$). Therefore, a single higher-order factor of transformational leadership can represent the data. *Second*, a one-factor model was tested, and this model fitted significantly worse than the baseline model ($\Delta\chi^2$ [6] = 94.12, $p < 0.001$). *Third*, I tested every pair of the four dimensions (i.e., Models 3 to 8). According to $\Delta\chi^2$ test, all six of these models were significantly different to the baseline model ($p < .05$). *Finally*, the fit results for a higher-order factor for the traditional transformational leadership dimensions, i.e., Model 9, showed that there was no significant difference between this model and the baseline model ($\Delta\chi^2$ [2] = 3.76, $p > .05$). Like Study 2, the model comparisons do not support my earlier proposition that transformational instructor-leadership comprises of distinct dimensions. Therefore, later in the empirical model for transformational instructor-leadership and student

[20] Five additional residuals were estimated given their similarities in measuring the same content domain.

engagement, burnout, and achievement, I use a single second-order factor to measure transformational instructor-leadership.

Table 27

Competing Measurement Models (CFAs) for the MLQ-SS Dimensions of Transformational Instructor-Leadership (Study 4)

Model no.	Model	Chi-sq, df	CFI	RMSEA	SRMR
Baseline	Four-factor	428.00, 262	.91	.059	.054
1	Higher-order factor	431.76, 264	.91	.059	.055
2	One-factor	522.12, 268	.87	.072	.059
3	One-factor for idealized influence and direction and congruence	479.24, 265	.89	.067	.057
4	One-factor for idealized influence and consideration	457.93, 265	.90	.063	.056
5	One-factor for idealized influence and intellectual stimulation	438.28, 265	.91	.060	.055
6	One-factor for consideration and direction and congruence	503.74, 265	.88	.070	.059
7	One-factor for consideration and intellectual stimulation	436.95, 265	.91	.060	.055
8	One-factor for intellectual stimulation and direction and congruence	486.67, 265	.89	.068	.058
9	Higher-order factor for idealized influence, consideration, and intellectual stimulation	431.76, 264	.91	.059	.055

7.3.3 Common method bias. To examine the potential effects of common method bias on the three transformational instructor-leadership dimensions, I used the comprehensive CFA marker technique analysis plan as in Study 1 (Williams et al., 2010). A comparison of the Baseline model to the Method-C model showed that there were no significant differences between the models ($\Delta\chi^2$ [1] = 3.55, $p > .05$). Hence, there appears to be little to no presence of method effects associated with the marker variable (i.e., the Method-C model was not superior). The Method-U model was not superior to the Method-C model ($\Delta\chi^2$ [24] = 18.33, $p > .05$) indicating that the unrestricted Method-U model should be rejected. Finally, the Method-R model was not superior to the Method-C model ($\Delta\chi^2$ [6] = 0.41, $p > 0.05$) indicating that there was no biasing effects of the marker variable on the factor correlations. Overall, I found no evidence of substantial common method bias. Still, given that the Method-C model was not significantly different to the Baseline model (i.e., the Baseline model was not superior), I further examined the Method-C model to determine the levels of marker variance (see Table 28).

Table 28

Marker Variance on the MLQ-SS Transformational Instructor-Leadership Dimensions' Indicator Variables: Method-C Model Standardized Factor Loadings (Study 4)

Item	Idealized Influence	Consideration	Intellectual Stimulation	Direction and Congruence	Marker Variable
QTILQ11	0.68**				-0.09*
MLQ34	0.50**				-0.08*
MLQ23	0.65**				-0.07*
MLQ14	0.54**				-0.08*
MLQ21	0.86**				-0.08*
MLQ18	0.82**				-0.08*
MLQ10	0.86**				-0.07*
MLQ31		0.76**			-0.07*
MLQ19		0.75**			-0.07*
MLQ15		0.71**			-0.09*
QTILQ16		0.81**			-0.08*
QTILQ15		0.77**			-0.07*
QTILQ14		0.70**			-0.08*
QTILQ13		0.77**			-0.08*
QTILQ12		0.73**			-0.08*
QTILQ8			0.53**		-0.09*
QTILQ6			0.70**		-0.08*
MLQ32			0.75**		-0.08*
MLQ30			0.80**		-0.08*
MLQ8			0.61**		-0.08*
MLQ2			0.47**		-0.08*
QTILQ4				0.63**	-0.11*
QTILQ3				0.86**	-0.10*
QTILQ2				0.78**	-0.10*
QTILQ1				0.78**	-0.09*
ORI1					0.80[a]
ORI2					0.76[a]
ORI3					0.79[a]

Note. Factor loadings taken from the Baseline Model and constant through the model comparisons are identified by the letter 'a'.
* $p = .047$. ** $p < .001$

In Table 29, I reported the overall reliability values for each of the four transformational instructor-leadership dimensions using the estimates from the Baseline model. Overall reliability for each dimension was good (ranging from 0.80 to 0.89). In Table 29, I also showed the reliability values decomposed using the Method-C estimates. The decomposition values indicated that minimal method effects were present, i.e., they did not markedly affect any of the individual dimensions (the highest method component value was 0.01). As a percentage, the method components accounted for 1.27%, 1.01%, 1.57%, and 1.67% of the reliability values for idealized influence, consideration, intellectual stimulation, and direction and congruence latent variables respectively. Therefore, even with the minor presence of method effects, the substantive reliability values remained at acceptable levels (ranging from 0.78 to 0.88). Overall, the marker variable technique indicated that methods effects were very minor.

Table 29

Reliability Decomposition for the MLQ-SS Transformational Instructor-Leadership Dimensions (Study 4)

	Reliability Baseline Model	Decomposed Reliability Method-C Model		
Latent Variable	Total Reliability	Substantive Reliability	Method Reliability	% Reliability Marker Variable
Idealized influence	0.86	0.85	0.01	1.27%
Consideration	0.89	0.88	0.01	1.01%
Intellectual stimulation	0.80	0.78	0.01	1.57%
Direction and congruence	0.89	0.87	0.01	1.67%
Marker variable	0.88	0.88	0.00	-

Table 30

Summary of Intercorrelations, Means, and Standard Deviations for the Scores of Transformational Instructor-Leadership as Measured by MLQ-SS, Contingent Reward, Management by Exception, Laissez-Faire, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement
(Study 4)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD
1. Idealized influence (Sq)													16.41	5.90
2. Consideration (Sq)	.82**												15.90	6.44
3. Intellectual stimulation (Sq)	.79**	.81**											15.86	5.65
4. Direction and congruence (Cub)	.71**	.66**	.64**										91.65	35.27
5. Transformational leadership (Sq)	.93**	.94**	.90**	.79**									16.52	5.53
6. Contingent reward (Sq)	.76**	.72**	.68**	.52**	.77**								13.89	6.02
7. MBE active (Sq)	.69**	.67**	.60**	.42**	.69**	.68**							13.27	5.59
8. MBE passive	-.17*	-.18*	-.20**	-.23**	-.20**	.02	.05						2.47	0.83
9. Laissez-faire (Sqrt)	-.25**	-.28**	-.23**	-.33**	-.29**	-.05	-.12	.45**					1.53	0.18
10. Perceived instructor effectiveness (Sq)	.85**	.79**	.73**	.73**	.86**	.67**	.57**	-.26**	-.34**				17.93	6.93
11. Satisfaction (Sq)	.81**	.81**	.70**	.65**	.84**	.66**	.59**	-.22**	-.30**	.87**			17.07	7.34
12. Extra effort (Sq)	.80**	.77**	.70**	.66**	.82**	.62**	.54**	-.20**	-.25**	.78**	.78**		16.12	7.41
13. Achievement: Self-reported grades (Sq)	.20**	.21**	.20**	.16*	.22**	.16*	.08	-.07	-.14	.31**	.29**	.25**	37.53	13.34

Note. For all of the leadership variables, higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. Like Study 2, variables were transformed to improve their distribution. Sq = Squared; cub = cubed; sqrt = square root. Correlations for raw scores provided in Appendix L.

N = 187
*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

7.3.4 Convergent validity. To assess convergent validity, I examined the correlation matrix for the expected correlations between the transformational instructor-leadership dimensions and other leadership dimensions (see Table 30), factor loadings, construct reliability, and AVE (Hair et al., 2009) (see Table 31). *First*, the transformational instructor-leadership dimensions were all significantly positively associated with each other as expected. Similarly, as is typically reported in the transformational leadership literature (e.g., Hartog, Van Muijen, & Koopman, 1997), the transformational instructor-leadership dimensions were also (a) significantly positively associated with active forms of leadership, including contingent reward and active management by exception, and (b) significantly negatively associated with passive forms of leadership or nonleadership, including passive management by exception and laissez-faire. *Second*, overall factor loadings were much improved in this larger sample with the reworded items, e.g., all of the factor loadings for consideration now exceeded .7. Note that one item that measured intellectual stimulation now had a factor loading that was less than .5 (i.e., MLQ item 2 had a loading of .48). Similarly, an item measuring idealized influence also had a weak loading as in Study 2 (i.e., .MLQ 34 had a loading of .51). These two items can be deleted from the factor structure because (a) the loading values were problematic (Hair et al., 2009) and (b) each of the factors for which these items loaded were represented by three strong item loadings (i.e., > .7) (see Appendix M for the reduced 23-item factor structure). *Third*, there was very good internal consistency because all construct reliability values exceeded .80, with the reliability value for consideration now exceeding .90. *Fourth*, the AVE values were also much improved in this larger sample, with all but one of the values exceeding .5. Overall, the four approaches suggested that convergent validity for the MLQ-SS was not only good, but markedly improved in this larger sample with the modified item wordings.

Table 31

Summary of Standardized Factor Loadings for Confirmatory Factor Analysis of the Multifactor Leadership Questionnaire – Student Survey (MLQ-SS) (Study 4)

		Constructs				
Item no.	Item description[a]	IIAB	Co	IS	DC	IR
MLQ21	<Name>'s behaviour has earned my respect.	.87				.76
MLQ10	<Name> made me feel proud to be associated with him/her.	.86				.74
MLQ18	*Removed for copyright reasons*.	.83				.69
MLQ23	*Removed for copyright reasons*.	.68				.46
QTILQ11	<Name> tried to share his/her enthusiasm about the subject with me.	.69				.48
MLQ34	*Removed for copyright reasons*.	.51				.26
MLQ14	*Removed for copyright reasons*.	.55				.30
QTILQ12	<Name> was patient in explaining things which were difficult for me to grasp.		.73			.53
MLQ31	<Name> assisted me in actualising my strengths.		.77			.59
QTILQ14	<Name> helped me to see how I am supposed to think and reach conclusions in this subject.		.71			.50
MLQ15	*Removed for copyright reasons*.		.72			.52
QTILQ13	<Name> valued my views in this module.		.78			.61
MLQ19	*Removed for copyright reasons*.		.77			.59
QTILQ16	<Name>'s feedback on my set work helped to clarify things I had not fully understood.		.82			.67
QTILQ15	<Name>'s feedback on my work helped me to improve my ways of learning and studying.		.78			.61
MLQ30	<Name> made me see a problem from different angles.			.81		.66
MLQ32	<Name> suggested various approaches to successfully completing assignments.			.76		.58
MLQ2	*Removed for copyright reasons*.			.48		.23
MLQ8	*Removed for copyright reasons*.			.61		.37
QTILQ6	<Name>'s teaching encouraged me to rethink my understanding of some aspects of the subject.			.72		.52

Table 31

Summary of Standardized Factor Loadings for Confirmatory Factor Analysis of the Multifactor Leadership Questionnaire – Student Survey (MLQ-SS) (Study 4)

		Constructs				
Item no.	Item description[a]	IIAB	Co	IS	DC	IR
QTILQ8	<Name>'s teaching in this module helped me to think about the evidence underpinning different views.			.54		.29
QTILQ3	<Name> organized and ran the module smoothly.				.87	.76
QTILQ2	<Name> presented the topics in an order that made sense to me.				.79	.62
QTILQ4	What was taught by <Name> seemed to match what I was supposed to learn.				.64	.41
QTILQ1	<Name> made it clear to me what I was supposed to learn in the module.				.79	.62
	Average variance extracted (%)	52.94	57.83	43.72	59.90	
	Construct reliability	.88	.92	.82	.86	

Note. MLQ = Multifactor Leadership Questionnaire (original MLQ items that are used in the MLQ-SS); QTILQ = Quasi-Transformational Instructor-Leadership Questionnaire (supplementary items that are added to the MLQ to create the MLQ-SS); IIAB = Idealized influence (attributed and behaviour); Co = Consideration (individual and general); IS = Intellectual stimulation; DC = Direction and congruence; IR = Item reliabilities calculated using squared factor loadings.

[a]. Only five MLQ item descriptions were included in this dissertation when submitting to White Rose eTheses Online (WREO) because of copyright reasons.

7.3.5 Discriminant validity. Similar to Study 2, the interconstruct correlations between idealized influence, consideration, and intellectual stimulation all exceeded the cutoff value of 0.85 proposed by Kline (2011). Idealized influence, consideration, and intellectual stimulation were also strongly associated with direction and congruence (cov = .81, .73, and .76 respectively). Again, this lack of discriminant validity between the dimensions reinforced the notion that transformational instructor-leadership is best represented as a single second-order factor.

7.3.6 Criterion validity. To assess criterion validity, multiple regression models were estimated for effectiveness, satisfaction, extra effort, and student achievement. For each model, the independent variables entered included the four MLQ-SS dimensions as well as the control variables of age and gender (see Table 32). For each regression model there were no issues with linearity, homoscedasticity, normality, and multicollinearity. As in Study 2, for all of the outcomes including effectiveness (R^2 = .76, F (6, 180) = 96.92, p < .001), satisfaction (R^2 = .72, F (6, 180) = 76.75, p < .001), extra effort (R^2 = .69, F (6, 180) = 65.32, p < .001), and student achievement (R^2 = .05, F (6, 180) = 1.61, p > .05), neither age nor gender was a significant predictor. In comparison to Study 2, the R^2 values were (a) noticeably higher for the satisfaction model, (b) about the same for the effectiveness and extra effort models, (c) and markedly less for the student achievement model. After comparing the findings for the individual transformational instructor-leadership dimensions between Studies 1 and 2, I then provide some possible reasons for these R^2 differences.

Table 32

Multiple Regression Analyses Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With MLQ-SS Leadership Dimensions (Study 4)

Variables	Outcome Variables											
	Effectiveness (Sq)			Satisfaction (Sq)			Extra Effort (Sq)			Student achievement (Sq)		
	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Constant	.82	2.58		2.31	2.98		-.20	3.19		35.75	9.96	
Age (Inv)	-12.42	50.54	-.01	-64.41	58.34	-.05	-27.70	62.36	-.02	-78.26	194.96	-.03
Gender	.04	.57	.00	.32	.66	.02	.01	.70	.00	-1.76	2.19	-.06
Idealized influence (Sq)	.58**	.09	.49	.52**	.10	.42	.56**	.11	.45	.15	.33	.07
Consideration (Sq)	.23**	.08	.21	.49**	.09	.43	.33**	.10	.29	.18	.30	.09
Intellectual stimulation (Sq)	.05	.08	.04	-.04	.10	-.03	.03	.10	.02	.16	.32	.07
Direction and congruence (Cub)	.04**	.01	.21	.02	.01	.09	.03*	.01	.14	.01	.04	.03
R^2		.76			.72			.69			.05	
F		96.92**			76.75**			65.32**			1.61	

Note. As in Study 2, non-normal variables were transformed to improve their distributions. Inv = inverse; Sq = squared; Cub = cubed. Multiple regression analyses with raw (i.e., non-transformed) values provided in Appendix N.
* $p < .05$ ** $p < .01$.

In comparison to Study 2, there were similarities and differences with respect to the individual dimensions. Some similarities in this study include (a) idealized influence was a significant and strong predictor of effectiveness ($\beta = 0.49$, $p < .01$), satisfaction ($\beta = 0.42$, $p < .01$), and extra effort ($\beta = 0.45$, $p < .01$); and (b) consideration was a significant predictor of effectiveness ($\beta = 0.21$, $p < .01$) and satisfaction ($\beta = 0.43$, $p < .01$). One difference in this study was that direction and congruence was now a significant predictor of effectiveness ($\beta = 0.21$, $p < .01$) and extra effort ($\beta = 0.14$, $p < .05$). Another difference is that consideration was a significant predictor of extra effort ($\beta = 0.29$, $p < .01$), but not a significant predictor of student achievement ($\beta = 0.09$, $p > .05$). A final difference in this study is that intellectual stimulation was no longer a significant predictor of extra effort ($\beta = 0.02$, $p > .05$) and student achievement ($\beta = 0.07$, $p > .05$).

The differences in findings between Study 2 and the current study were likely due to two major reasons. *First,* in this study the supplementary MLQ-SS items were reworded to better capture personal leadership. For instance, direction and congruence now measured the degree to which an instructor led students towards the achievement of learning objectives (current study), rather than general statements that described the module and topics (Study 2). Therefore, the focus on individual leadership behaviours for direction and congruence was likely to be more strongly associated with perceived effectiveness of the instructor and satisfaction in the module. Similarly, consideration was now measured by the individual instructor's supportive leadership behaviours rather than broad module evaluation items as used in Study 2, particularly with respect to valuing students' views and giving feedback. This sharpened focus on personal leadership in the instructor-student relationship may explain why consideration was now associated with extra effort. *Second,* differences in this study for the student achievement model

was likely because of the fundamental difference in measurement of achievement between Studies 2 and 4. As explained earlier, student achievement was now measured by students' self-reported final performance for a module (current study) rather than the more subjective evaluations of their performance during a module (Study 2). In addition, perhaps intellectual stimulation was a better predictor of students' progress during the module rather than their final grade. Alternatively, perhaps transformational instructor-leadership was not a good predictor of more objective indicators of student achievement.

7.4 Results 2: Operationalizing Destructive Instructor-Leadership

After accounting for missing data and outliers with respect to the destructive instructor-leadership variables, the sample size was reduced to 174[21].

7.4.1 Statistical assumptions. The assumptions of normality, homoscedasticity, and linearity were examined for all of the destructive instructor-leadership variables. For the 30 individual variables, all were severely non-normal, i.e., all of the kurtosis *z*-scores greatly exceeded the critical value of ±2.58 (ranging from 12.69 to 275.77), and 16 of the skewness *z*-scores greatly exceeded the critical value of ±2.58 (ranging from 12.31 to 53.63). With such large deviations from normality, χ^2 derived from maximum likelihood estimation gets excessively large (Blunch, 2008; Byrne, 2001). Also, such non-normality could lead to analyses failing to converge, improper solutions, and underestimated fit indices (Blunch, 2008; Byrne, 2001). Because the deviations from normality were so severe, data transformations recommended by Tabachnick and Fidell (2005) and Hair et al. (2009) did not lead to any notable improvements in normality, i.e., all of the problematic values still greatly exceeded the kurtosis

[21] Four cases had extremely high levels of missing data, and were deleted from the analysis. For the remaining destructive instructor-leadership variables, missing data was very low (< 2%). Therefore, I used the EM approach to estimate missing data for these variables.

and skewness thresholds. When deviations from normality are so severe that no transformation improves the distributions, Tabachnick and Fidell (2005) suggest dichotomizing the variable. Therefore, I dichotomized all of the destructive instructor-leadership variables as 0 for 'instructor-leader did not use the behaviour' and 1 for 'instructor-leader used the behaviour'. This change in coding meant that the destructive instructor-leadership variables now measured use of destructive leadership rather than frequency of leadership behaviour.

7.4.2 Component structure. Following Hinkin's guidelines, I conducted a PCA on the 30 destructive instructor-leadership items for initial item reduction. For the PCA I used oblique rotation (Promax) in order to allow the components to correlate as expected. Various tests were used to determine the number of components to extract (i.e., Kaiser's criterion = 9, Velicer's Revised Minimum Average Partial (MAP) test = 2, and Horn's parallel analysis = 3). Given that Kaiser's criterion led to 5 components with weak loadings, I tested two-, three-, and four-component solutions. Both the three-component and four-component structures produced the clearest structures with stronger components than the two-component solution. However, the final four-component solution contained one component that comprised of only two feedback items (inaccurate and poor feedback). In a four-component structure, this component would need to be enhanced, perhaps by adding more feedback oriented questions to the survey. Moreover, in the four-component structure, the remaining three components contained fewer stronger loadings than the three-component solution. For these reasons, along with the parallel analysis results, I specified a three-component structure.

For the three-component structure, several re-specifications were conducted and 17 items were deleted in an iterative process due to poor representation by the component structure. Component loadings were expected to be greater than .425 based on a sample size of 174 (Hair

et al., 2009). Additionally, communalities should be greater than .5 (Hair et al., 2009). In the *first iteration*, items 9, 13, 19, and 22 had communalities that were less than .3, and thus these items were deleted first because of their very poor representation by the component structure. After these modifications, the findings of a *second iteration* indicated that items 2, 6, 17, 20, 21, and 28 had communalities that were less than .4, and thus were deleted. With all communalities now greater than .4, I addressed items with low communalities along with cross-loading issues. A cross-loading meant that a given item loaded at .32 or higher on two or more components (Tabachnick & Fidell, 2005). For the *third iteration*, very problematic cross-loadings for items 14, 24, 27, and 30 were identified and deleted. For the *fourth iteration*, the communality for item 18 dropped below .4, and therefore this item was deleted. For the *fifth* iteration, the communality for item 7 was less than .5, and the item was dissimilar to other items on its component, i.e., item 7 described not giving credit for work whereas the other items on that component described communication behaviours. For these reasons, I deleted item 7. For the *sixth iteration*, the communality for item 25 dropped below .5, and this item was the weakest loading item on its five-item component. For these reasons, I deleted item 25. For the *seventh iteration*, all communalities were acceptable, and there was a clear component solution with no cross-loadings. Therefore, after six iterations of item reduction, the final component solution was represented by 13 items and explained 70.10% of the variance (see Table 33).

Table 33

Summary of (a) Component Loadings and Communalities for Principal Component Analysis With Promax Rotation and (b) Standardized Factor Loadings for Confirmatory Factor Analysis of Destructive Instructor-Leadership Items (Study 4)

		Principal component analysis				Confirmatory factor analysis			
		Test components				Constructs			
Item Source	Item descriptions: <Instructor's name>…	1	2	3	C	IRR	VIC	CC	IR
Study 3	Misled me.	.90			.82	.81			.66
Study 3	Threatened me	.90			.81	.85			.72
Study 3	Partook in unethical activities with me	.88			.80	.89			.79
Tepper	Lied to me.	.85			.80	.87			.76
Tepper	Made negative comments about me to others.		.95		.76		.62		.38
Tepper	Invaded my privacy		.78		.63		.66		.44
Tepper	Blamed me to save himself/herself embarrassment.		.68		.68		.81		.66
Tepper	Expressed anger at me when he/she was mad for another reason.		.68		.60		.72		.52
Tepper	Was rude to me.		.65		.55		.74		.55
Study 3	Displayed facial expressions that indicated disinterest in me.			.89	.72			.70	.49
Tepper	Put me down in front of other people/students.			.86	.74			.74	.55
Tepper	Gave me the silent treatment			.72	.60			.70	.49
Tepper	Ridiculed me.			.65	.61			.75	.56
Variance extracted (%)		40.64	18.77	10.69					
Cronbach's alpha		.91	.83	.81					
Average variance extracted (%)						73.19	50.84	52.25	
Construct reliability						.92	.83	.80	

Note. Loadings less than .3 are not shown. C = communalities; IRR = irresponsibility; VIC = victimization; CC = callous communication; IR = Item reliabilities. Item reliabilities represent communalities, and are calculated using squared factor loadings.

The components were named as follows:

Component 1. Irresponsibility: The items that loaded on this component related to unscrupulous and dishonourable leadership actions for which students are deceived.

Component 2. Victimization: The items on this component related to an instructor-leader harassing and picking on a student.

Component 3. Callous communication: The items that loaded on this component described harmful communication actions by the instructor-leader.

The subscale for each of the three components was reliable given that each Cronbach's alpha value exceeded .7 as shown in Table 33 (Hinkin, 1998).

These findings partially supported the three dimensions proposed in Study 3. Specifically, both callous communication and irresponsibility were fairly well represented. However, chaotic carelessness was not an emergent dimension. Still, two items that were initially expected to load on a chaotic carelessness factor loaded on the other two factors instead. For instance, misleading behaviour loaded on the factor that seems to represent irresponsible behaviour. Also, giving the silent treatment loaded on a factor that appears to represent callous communication. These loadings indicate that chaotic carelessness may overlap more with the other dimensions than initially expected in Study 3. On that note, the lack of and inaccurate feedback would have emerged as a separate two-item fourth factor instead of with irresponsibility as stated in Study 3. Also, the victimization dimension is not proposed in Study 3, but is an emergent factor from Tepper's (2000) scale. Note that Tepper's measure by itself would severely underrepresent the irresponsible dimension – the dimension that is most closely tied to the manifestation of leading students towards goals that contradict with the HEI's goals

(see Appendix O for an in-depth comparison between the findings in this study and Tepper's measure by itself).

7.4.3 Confirmatory factor analysis. Following Hinkin's (1998) guide, for the next step I conducted a CFA to replicate the derived 13-item three-factor solution. Given that all of the observed variables were categorical, I used diagonally weighted least squares (DWLS) estimation. DWLS provides more accurate estimates and fit indices for models when variables have a small number of categories (Mîndrilă, 2010). I estimated the measurement model using the Lavaan package (Yves, 2012) for R (R Core Team, 2013). Details of the final CFA are given in Table 33. All of the robust fit indices indicated good model fit (χ^2/df = 1.02, CFI = 0.97, RMSEA = 0.01). χ^2 was 63.03 (df = 62) and $p > .05$.

I tested a series of competing models in order to determine whether the data could be represented by a better fitting model than the proposed measurement model (see Table 34). The baseline model used for all comparisons was the three-factor model from my initial CFA. *First*, a higher-order factor was tested, and the fit results were the same as the three-factor model, thus indicating that a single higher-order factor of destructive instructor-leadership could represent the data. This result was expected because, as explained in Chapter 4, the number of parameters to be estimated in both the baseline and higher-order models was the same, i.e., these two models were empirically equivalent (S. Lee & Hershberger, 1990). *Second*, I tested a one-factor model, and this model fitted significantly worse than the baseline three-factor model ($\Delta\chi^2$ [3] = 24.37, $p < 0.001$). *Third*, I tested a two-factor model combining the irresponsibility and victimization factors. For this model, the fit results were significantly worse than the baseline three-factor model ($\Delta\chi^2$ [2] = 9.96, $p < 0.05$). *Fourth*, I tested a two-factor model combining the victimization and callous communication factors. Again, the fit results were significantly worse than the

baseline model ($\Delta\chi^2$ [2] = 18.07, $p < 0.001$). *Fifth*, I tested a two-factor model combining the irresponsibility and callous communication factors into a single factor, and this model fitted significantly worse than the baseline model ($\Delta\chi^2$ [2] = 15.03, $p < 0.001$). Overall, the model comparisons indicated that destructive instructor-leadership can be represented by either a single second-order construct or three first-order constructs.

Table 34

Competing Measurement Models (CFAs) for the Destructive Instructor-Leadership Dimensions (Study 4)

Model No.	Model	Chi-sq, df	CFI	RMSEA	SRMR
Baseline	Three-factor	63.03. 62	.97	.010	.076
1	Higher-order factor	62.99. 62	.97	.010	.076
2	One destructive leadership factor	87.40. 65	.27	.045	.185
3	One factor for irresponsibility and victimization	72.99, 64	.71	.028	.160
4	One factor for victimization and callous communication	81.10, 64	.45	.039	.105
5	One factor for irresponsibility and callous communication	78.06, 64	.54	.036	.182

Table 35

Summary of Intercorrelations, Means, and Standard Deviations for the Scores of Destructive Instructor-Leadership as Measured by Tepper-Study 3, Transformational Instructor-Leadership as Measured by MLQ-SS, Contingent Reward, Management by Exception, Laissez-Faire, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement (Study 4)

	Variables	1	2	3	4	5	6	7	8	9
1	DIL: Irresponsibility									
2	DIL: Victimization	.33**								
3	DIL: Callous Comm	.21**	.47**							
4	DIL (combined)	.64**	.83**	.76**						
5	TIL: IIAB (Sq)	-.15	-.15	-.33**	-.28**					
6	TIL: Co (Sq)	-.13	-.09	-.31**	-.24**	.80**				
7	TIL: IS (Sq)	-.29**	-.16*	-.29**	-.29**	.81**	.82**			
8	TIL: DC (Cub)	-.20**	-.10	-.26**	-.24**	.69**	.63**	.63**		
9	TIL (combined)	-.18*	-.12	-.33**	-.28**	.92**	.93**	.91**	.77**	
10	Cont. Reward (Sq)	-.02	-.06	-.12	-.09	.72**	.69**	.68**	.47**	.73**
11	MBE active (Sq)	-.09	-.06	-.20**	-.15*	.68**	.67**	.60**	.40**	.66**
12	MBE passive	.11	.22**	.20**	.24**	-.12	-.13	-.19*	-.18*	-.15
13	Laissez-faire (Sqrt)	.17*	.14	.15	.20**	-.23**	-.25**	-.23**	-.30**	-.27**
14	Effectiveness (Sq)	-.21**	-.21**	-.36**	-.35**	.83**	.75**	.74**	.70**	.85**
15	Satisfaction (Sq)	-.18*	-.16*	-.36**	-.31**	.80**	.78**	.70**	.62**	.83**
16	Extra effort (Sq)	-.21**	-.14	-.35**	-.31**	.78**	.75**	.72**	.64**	.81**
17	Achievement (Sq)	-.13	-.14	-.16*	-.19*	.14	.15	.16*	.12	.18*

Note. For all of the leadership variables, higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. IIAB = idealized influence (attributed and behaviour); Co = consideration (individual and general); IS = intellectual stimulation; DC = direction and congruence; TIL = transformational instructor-leadership; DIL = destructive instructor-leadership; Sq = squared; Cub = cubed; Sqrt = square root. Correlation with raw (non-transformed) scores shown in Appendix P.

N = 174

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 35 (Continued)

Summary of Intercorrelations, Means, and Standard Deviations for the Scores of Destructive Instructor-Leadership as Measured by Tepper-Study 3, Transformational Instructor-Leadership as Measured by MLQ-SS, Contingent Reward, Management by Exception, Laissez-Faire, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement (Study 4)

	Variables	10	11	12	13	14	15	16	Mean	SD
1	DIL: Irresponsibility								0.00	1.00
2	DIL: Victimization								0.00	1.00
3	DIL: Callous Comm								0.00	1.00
4	DIL (combined)								0.00	1.00
5	TIL: IIAB (Sq)								17.17	5.80
6	TIL: Co (Sq)								16.28	6.22
7	TIL: IS (Sq)								16.55	5.58
8	TIL: DC (Cub)								93.47	34.27
9	TIL (combined)								4.07	0.71
10	Cont. Reward (Sq)								14.18	5.94
11	MBE active (Sq)	.68**							13.44	5.59
12	MBE passive	.09	.09						2.45	0.83
13	Laissez-faire (Sqrt)	-.02	-.10	.43**					1.53	0.19
14	Effectiveness (Sq)	.64**	.56**	-.21**	-.33**				18.37	6.62
15	Satisfaction (Sq)	.63**	.58**	-.17*	-.28**	.85**			17.51	7.05
16	Extra effort (Sq)	.59**	.54**	-.17*	-.24**	.77**	.77**		16.55	7.22
17	Achievement (Sq)	.11	.04	-.02	-.10	.26**	.24**	.21**	38.09	13.13

Note. For all of the leadership variables, higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. IIAB = idealized influence (attributed and behaviour); Co = consideration (individual and general); IS = intellectual stimulation; DC = direction and congruence; TIL = transformational instructor-leadership; DIL = destructive instructor-leadership; Sq = squared; Cub = cubed; Sqrt = square root. Correlation with raw (non-transformed) scores shown in Appendix P.

N = 174

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

7.4.4 Convergent validity. To assess convergent validity, I examined the correlation matrix for the expected correlations between the destructive instructor-leadership dimensions and other leadership dimensions (see Table 35), factor loadings, AVE, and construct reliability (Hair et al., 2009). *First*, each of the destructive instructor-leadership dimensions shared at least one significant and negative association with a transformational instructor-leadership dimension. More importantly, the combined destructive instructor-leadership construct was significantly and negatively associated with the combined transformational instructor-leadership construct as expected (β = -.28, p < .01). In addition, the destructive instructor leadership dimensions and construct also (a) shared expected negative associations with active forms of leadership (i.e., contingent reward and active management by exception), and (b) expected positive associations with other forms of negative leadership (i.e., passive management by exception and laissez-faire). These correlations all indicate good convergent validity. *Second*, all factor loadings exceeded the minimum threshold of .5, and most loadings met or exceeded the ideal threshold of .7 (Hair et al., 2009). *Third*, AVE was greater than 50% for each dimension (Hair et al., 2009). *Fourth*, all construct reliability values exceeded 0.70 (see Table 33 for reported factor loadings, AVE, and construct reliabilities). Overall, there appeared to be good convergent validity for the three-factor solution.

7.4.5 Discriminant validity. The discriminant validity for the destructive instructor-leadership dimensions were all fairly good because the highest interconstruct correlation was 0.62, and thus did not exceed the cutoff value of 0.85 proposed by Kline (2011). Nonetheless, all three interconstruct correlations were positive, which was an indication of good nomological validity, i.e., this finding suggested that the three dimensions tapped into destructive instructor-leadership.

To further investigate discriminant validity, I compared the AVE for each of the three destructive instructor-leadership constructs with that of its squared correlation estimate with the MLQ-SS constructs (see Table 36) (Hair et al., 2009). This comparison should reveal whether the destructive instructor-leadership constructs are truly distinct from the transformational instructor-leadership constructs (i.e., not simply opposite leadership behaviours). The findings suggested excellent discriminant validity because the AVE values for irresponsibility, victimization, and callous communication all greatly exceed the SIC values for each of the MLQ-SS dimensions. Therefore, there was good evidence that the destructive instructor-leadership constructs capture phenomena that the transformational instructor-leadership constructs do not.

Table 36

A Comparison of the Average Variance Extracted (AVE) and Squared Interconstruct Correlation (SIC) for the Destructive Instructor-Leadership Dimensions and the MLQ-SS Transformational Instructor-Leadership dimensions (Study 4)

	Squared interconstruct correlation (SIC) for MLQ-SS constructs				
Destructive instructor-leadership constructs	AVE	IIAB	Co	IS	DC
Irresponsibility	.74	.04	.02	.05	.05
Victimization	.52	.05	.02	.03	.01
Callous communication	.53	.19	.14	.12	.12

Note. AVE = average variance extracted; IIAB = idealized influence (attributed and behaviour); Co = consideration; IS = intellectual stimulation; DC = direction and congruence.

7.4.6 Criterion validity. To establish criterion-related validity, multiple regression models were estimated for effectiveness, satisfaction, extra effort, and student achievement. For each model, the independent variables entered included the three destructive instructor-leadership dimensions[22] as well as the control variables of age and gender (see Table 37). For all of the outcomes, including effectiveness (R^2 = .16, F (5, 165) = 6.26, p < .001), satisfaction (R^2 = .15, F (5, 165) = 5.58, p < .001), extra effort (R^2 = .15, F (5, 165) = 5.98, p < .001), and student achievement (R^2 = .05, F (5, 165) = 1.57, p > .05), neither age nor gender was a significant predictor. Callous communication was a significant and strong predictor of effectiveness (β = -0.32, p < .001), satisfaction (β = -0.36, p < .001), and extra effort (β = -0.36, p < .001) in the expected direction. Irresponsibility was also a significant predictor of extra effort (β = -0.17, p < .05) in the expected direction. Victimization was not significant in any of these models. Moreover, none of the destructive instructor-leadership dimensions were significant predictors in the student achievement model. Overall, these findings partially correspond with previous research which showed that destructive leadership was negatively related to individual performance (i.e., effort and performance) and satisfaction (Schyns & Schilling, 2013). After conducting the regression analyses, the variate for each regression was evaluated and the assumptions of linearity, homoscedasticity, and normality were met. In addition, there were no issues with multicollinearity as indicated by the variance inflation factor (VIF) and tolerance statistics.

[22] Each destructive instructor-leadership dimension was measured by their respective EFA regression weight.

Table 37

Multiple Regression Analyses Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With Destructive Instructor-Leadership Dimensions (Study 4)

Variables	Outcome Variables [b]											
	Effectiveness			Satisfaction			Extra Effort			Student achievement		
	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Constant	11.34*	4.59		14.03**	4.92		11.48*	5.00		6.70	1.07	
Age [a]	147.54	91.34	0.12	65.10	97.76	0.05	113.70	99.51	0.08	-7.04	21.34	-0.03
Gender	-0.13	1.08	-0.01	0.13	1.15	0.01	-0.32	1.17	-0.02	-0.21	0.25	-0.07
Irresponsib.	-0.96	0.51	-0.15	-0.89	0.55	-0.13	-1.22*	0.56	-0.17	-0.12	0.12	-0.08
Victim.	-0.16	0.56	-0.02	0.35	0.59	0.05	-0.58	0.61	-0.08	-0.15	0.13	-0.10
Callous Comm.	-2.12**	0.54	-0.32	-2.50**	0.57	-0.36	-2.56**	0.58	-0.36	-0.12	0.13	-0.09
R^2	0.16			0.15			0.15			0.05		
F	6.26**			5.58**			5.98**			1.57		

Note.

[a] Inverse of age was used to correct for skewness and kurtosis violations.

[b] All outcome variables, with the exception of student achievement, were squared to address non-normality.

Multiple regression with raw (non-transformed) scores shown in Appendix Q.

* $p < .05$. ** $p < .01$.

7.4.7 Incremental validity. I used hierarchical regression to further test for incremental validity of the destructive instructor-leadership constructs beyond other negative forms of instructor-leadership, i.e., laissez-faire and passive management by exception (see Table 38). As explained by Krasikova et al. (2013), destructive leadership and *ineffective* leadership are conceptually different because the former describes volitional behaviour, whereas the latter deals with a leader's inability to mobilize followers towards goals. Therefore, empirically, destructive instructor-leadership should contribute additional variance above laissez-faire and passive management by exception.

For the hierarchical regression model, the variate's assumptions were met and multicollinearity was not problematic. Age and gender were entered in the first step, followed by laissez-faire and passive management by exception in step 2, and then the three destructive instructor-leadership dimensions in step 3. The incremental validity findings showed that (a) one of the destructive instructor-leadership dimensions explained additional variance above laissez-faire and passive management by exception in predicting effectiveness (50% more variance), and satisfaction (60% more variance), and (b) two of the destructive instructor-leadership dimensions explained additional variance above extra effort (68.42% more variance). Specifically, callous communication and irresponsibility remained significant in their respective models from Table 37, even when laissez-faire was a significant predictor. These findings support the notion that destructive instructor-leadership goes beyond these other forms of negative instructor-leadership, i.e., unsupportive leadership or non-leadership.

Table 38

Hierarchical Multiple Regression Analyses Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With Unsupportive Leadership as measured by the MLQ and Destructive Instructor-Leadership (Study 4)

Step	Variables	Outcome Variables [b]							
		Effectiveness		Satisfaction		Extra Effort		Student Achievement	
		β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
1	Age [a]	.08		.02		.05		-.05	
	Gender	.05	.01	.06	.01	.04	.01	-.04	.01
2	Age [a]	.08		.02		.05		-.05	
	Gender	-.01		.02		-.00		-.06	
	MBE (passive)	-.09		-.06		-.09		.01	
	Laissez-faire	-.29**	.11**	-.25**	.08**	-.19*	.06**	-.10	.01
3	Age [a]	.11		.04		.08		-.03	
	Gender	-.03		-.01		-.04		-.07	
	MBE (passive)	-.04		-.02		-.05		.04	
	Laissez-faire	-.25**		-.21**		-.15		-.08	
	Irresponsibility	-.12		-.11		-.15*		-.08	
	Victimization	-.01		.06		.10		-.11	
	Callous communication	-.31**	.12**	-.35**	.12**	-.35**	.13**	-.08	.04
	Total R^2	.24		.20		.19		.05	

Note. MBE = management by exception.
[a] Inverse of age was used to correct for skewness and kurtosis violations.
[b] All outcome variables, with the exception of student achievement, were squared to address non-normality.
* $p < .05$. ** $p < .01$.

7.5 Results 3: Engagement and Burnout Distinctiveness and Dimensions

Prior to examining the factor structure of student engagement and burnout, I used the EM approach to estimate missing data for 11 variables, which each contained 1.1% or less missing data. Univariate and multivariate tests indicated that there were no problematic outliers. All of the student engagement variables were negatively skewed, with skewness *z*-scores ranging from -2.89 to -6.54. For the student burnout variables, all but two of the skewness *z*-scores exceeded the critical value ±2.58, with the highest *z*-score being 8.6. Also, for student burnout, three of the variables exceeded the kurtosis *z*-score threshold of ±2.58, with the highest *z*-score being 4.35. Therefore, like the transformational instructor-leadership variables, both student engagement and burnout variables were non-normal. Because of the large number of non-normal observed variables in the upcoming models, I used maximum likelihood with the Satorra-Bentler adjustment to the χ^2 for non-normality (Tabachnick & Fidell, 2005). I used this estimation procedure via the Lavaan package (Yves, 2012) for R (R Core Team, 2013).

For student engagement, good support was found for the hypothesized model (Satorra-Bentler χ^2 (132) = 232.45, $p < .05$, Robust CFI = .96, RMSEA = .067). Post hoc model modifications were performed based on (a) the modification indices in combination with theoretical reasoning, and (c) the standardized residual covariance matrix. First, three residual covariances were estimated[23]. Second, item 16 appeared very problematic because five of its standardized residual covariances exceeded$|2.5|$. Therefore, item 16 was deleted. The final model fitted the data very well (Satorra-Bentler χ^2 (113) = 147.65, $p < .05$, Robust CFI = .99, RMSEA = .042). Also, a higher-order factor fitted equally as well. However, a one-factor model

[23] For the student engagement CFA, error terms were allowed to correlate based on the content of the questions, e.g. enthusiasm and energy, working with intensity and exerting full effort, and focusing attention.

fitted significantly worse (Satorra-Bentler $\chi^2_{difference}$ (3) = 337.01, $p < .05$, Robust CFI = .84, RMSEA = .136).

For student burnout, only marginal support was found for the hypothesized model (Satorra-Bentler χ^2 (87) = 215.32, $p < .05$, Robust CFI = .91, RMSEA = .092). Like the student engagement model, post hoc model modifications were performed based on (a) the modification indices in combination with theoretical justification, and (c) the standardized residual covariance matrix. First, four residual covariances were estimated[24]. Second, item 10 appeared very problematic because its factor loading sign was opposite to that of the other items for its factor, and four of its standardized residual covariances exceeded$|2.5|$. Therefore, I deleted item 10. The final model fitted the data very well (Satorra-Bentler χ^2 (70) = 95.49, $p < .05$, Robust CFI = .98, RMSEA = .046). In addition, a higher-order factor fitted equally as well. However, a one-factor model fitted significantly worse (Satorra-Bentler $\chi^2_{difference}$ (3) = 214.72, $p < .05$, Robust CFI = .82, RMSEA = .137).

For a model comprising of both student engagement and burnout, I tested a series of competing models as shown in Table 39. The baseline model comprised of the six-dimensions, three each for student engagement and burnout, fitted very well. The first competing model comprising of a second-order two-factor model, one factor each for student engagement and burnout, fitted significantly worse than the baseline model (Satorra-Bentler $\chi^2_{difference}$ (8) = 82.79, $p < .05$). The second competing model comprising of a single second-order factor also fitted significantly worse than the baseline model (Satorra-Bentler $\chi^2_{difference}$ (10) = 178.78, $p < .05$). The third competing model comprised of a single factor for all of the observed variables,

[24] For the student burnout CFA, I allowed four pairs of error terms to correlate based on the content of the questions, e.g., feeling drained and used up or cynical about the usefulness of studying and doubting the significance of studying.

Table 39

Competing Measurement Models (CFAs) for Student Engagement and Burnout Dimensions (Study 4)

Model no.	Model	Satorra-Bentler χ^2, df	Robust CFI	RMSEA	SRMR
Baseline	Six-factor	532.84, 412	.97	.041	.053
1	Higher-order two-factor	615.63, 420	.95	.052	.089
2	Higher-order one factor	711.62, 422	.93	.063	.244
3	One factor	1,335.41, 427	.77	.111	.111
4	One factor for exhaustion and emotional engagement	699.88, 417	.93	.063	.070
5	One factor for exhaustion and behavioural engagement	898.93, 417	.88	.082	.149
6	One factor for exhaustion and cognitive engagement	825.96, 417	.90	.076	.100
7	One factor for cynicism and emotional engagement	610.30, 417	.95	.052	.062
8	One factor for cynicism and behavioural engagement	753.95, 417	.91	.069	.144
9	One factor for cynicism and cognitive engagement	711.71, 417	.92	.064	.099
10	One factor for inefficacy and emotional engagement	662.42, 417	.94	.058	.071
11	One factor for inefficacy and behavioural engagement	687.75, 417	.93	.061	.073
12	One factor for inefficacy and cognitive engagement	696.81, 417	.93	.062	.064

and this model also fitted significantly worse than the baseline model (Satorra-Bentler $\chi^2_{difference}$ (15) = 802.57, $p < .05$). Competing models 4 to 12 combined each student burnout dimension with each student engagement dimension in separate models. These models were compared to the baseline model in order to determine whether any of the student engagement and burnout dimensions were bipolar opposites. All of these models fitted significantly worse than the baseline model, thus providing support for H1. Taken together, my findings suggest that when examining student engagement and burnout separately, each concept can be represented as

either three dimensions or a single higher-order factor. However, when investigating student engagement and burnout simultaneously, both concepts are best represented as three dimensions each[25].

7.6 Results 4: Instructor-Leadership, Student Engagement and Burnout, and Student Achievement

Prior to testing the hypothesized models, I first conducted a multi-group analysis for the factor structures for transformational instructor-leadership, student engagement and student burnout. I conducted this analysis to ensure that the factor structure was stable across the students from the first sample (non-Qualtrics) and students from other UK universities who were sourced via Qualtrics[26]. Following the thresholds recommended by Cheung and Rensvold (2002), there was metric invariance for all three measurement models. Specifically, the models for transformational instructor-leadership ($\Delta\chi^2$ [22] = 35.82, $p > .01$; ΔCFI = 0.005), student engagement ($\Delta\chi^2$ [16] = 17.33, $p > .05$; ΔCFI = 0.000), and student burnout ($\Delta\chi^2$ [12] = 18.70, $p > .05$; ΔCFI = 0.003) all had equivalent factor loadings between both subsamples.

To test the models that were hypothesized in Figures 9 and 10, I used structural equation modeling. A full model comprising of the relationships between the seven leadership dimensions, and the six student engagement-burnout dimensions was very convoluted. Moreover, such a model along with the deviations from multivariate normality for most of the observed variables, was difficult to estimate given the sample size (Hair et al., 2009). Therefore, for parsimony and estimation purposes, I estimated two separate structural models, each comprising of fewer parameters to be estimated than a full model, i.e., a separate model for both

[25] For a further investigation of the fine-grained relationships between the individual dimensions of student engagement and burnout, see Appendix R.
[26] Multi-group analysis for the destructive instructor-leadership model could not be computed because two of the indicator variables, i.e., Tepper's items 5 and 8, were a constant in one of the subsamples.

student engagement and burnout. I decided to divide the full model into two simpler models according to engagement-burnout because I was more interested in the differences between transformational and destructive instructor-leadership. For both path models, I used Anderson and Gerbing's two-step process (J. Anderson & Gerbing, 1988). For the two-step process, I first attempted to estimate the models using the DWLS estimation procedure in the Lavaan package (Yves, 2012) because of the dichotomized destructive instructor-leadership variables. However, a larger sample size was needed to estimate these complex models using DWLS estimation. Therefore, I instead used maximum likelihood with the Satorra-Bentler correction

7.6.1 Student engagement empirical model. For the student engagement model, I used a single higher-order factor to represent student engagement. While it may prove useful to examine each engagement dimension in relation to each leadership dimension, I hypothesized that both transformational and destructive instructor-leadership were related to the overall concept of student engagement. Following the two-step process, I first estimated the student engagement measurement model using all of the constructs in Figure 8. For this model, I added four additional correlated error terms for the transformational instructor-leadership model, and one additional correlated error term for student engagement.

Given the complexity of the model along with the small sample size, the fit indices for the measurement model indicated acceptable model fit (Satorra-Bentler χ^2 (1351) = 1,722.42, p < .05, Robust CFI = .91, RMSEA = .040). For the second step, I converted the measurement model into a structural model to test H2, H4, and H6 (see Figure 10). Good support was found for the hypothesized model (Satorra-Bentler χ^2 (1353) = 1,724.68, p < .05, Robust CFI = .91, RMSEA = .040). From Figure 10, we see that H2 was supported because transformational instructor-leadership shared a strong significant and positive relationship with student

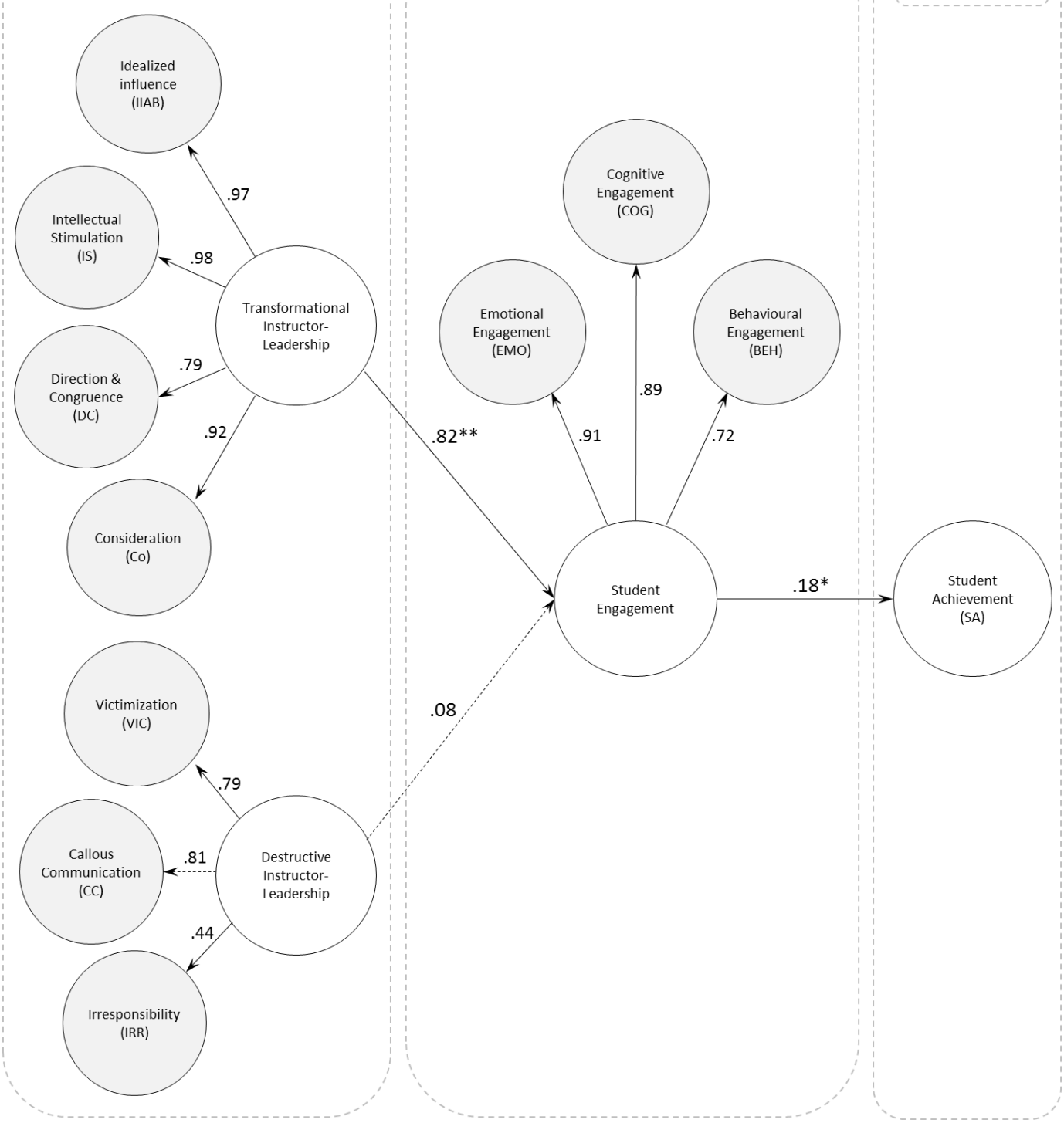

Figure 10. Structural model of the relationships between transformational and destructive instructor-leadership, student engagement, and student achievement. Standardized parameter estimates. Indicator variables and error variances excluded for ease in readability. Dashed lines indicate non-significant relationships. All first-order latent variable indicators were significant ($p < .001$). ** $p < .01$. * $p < .05$.

engagement. H4 was not supported because destructive instructor-leadership was not related to student engagement. As explained in Chapter 3, one possible reason for this non-significant finding is that students are not likely to reduce engagement to 'get even' with their instructor, because this ultimately harms the student more than the instructor or the HEI. Finally H6 was supported because student engagement was significantly and positively related to student achievement.

To check the mediating effect in the structural model, the first step was to establish the significant relationships between the constructs. This analysis was conducted by checking (a) the direct unmediated relationship between transformational instructor-leadership and student achievement (0.14, $p < .10$), (b) the relationship between student engagement and transformational instructor-leadership (0.79, $p < .001$), and (c) the relationship between student engagement and student achievement (0.18, $p < .05$) (Hair et al., 2009). I then assessed the level of mediation by adding a direct unmediated path from transformational instructor-leadership to student achievement. This direct unmediated path was not significant, and did not significantly improve the fit of the model (Satorra-Bentler $\chi^2_{difference}$ [1] = 0.41, $p > 0.05$). Therefore, this path was not added. The strength of the indirect relationship between transformational instructor-leadership and student achievement was 0.12.

After testing the hypothesized model, I then examined a separate model for which destructive instructor-leadership was decomposed into its individual dimensions. I tested this model because even though a second-order factor for destructive instructor-leadership showed good model fit, the first-order factors were not strongly related to the second-order factor (e.g., callous communication was no significantly related to the second-order destructive instructor-leadership factor). Therefore, in comparison to the transformational instructor-leadership

dimensions, the destructive instructor-leadership dimensions appear to be more distinct from each other.

For the individual destructive leadership dimensions model, I again followed the two-step process. The measurement model indicated acceptable model fit (Satorra-Bentler χ^2 (1345) = 1,714.27, $p < .05$, Robust CFI = .91, RMSEA = .040). For the second step, I converted the measurement model into a structural model. Good support was found for the hypothesized model (Satorra-Bentler χ^2 (1349) = 1,718.66, $p < .05$, Robust CFI = .91, RMSEA = .040). The findings for this model supported the earlier model because none of the individual destructive instructor-leadership dimensions were significantly related to student engagement. Interestingly, victimization shared an unexpected small positive (but non-significant) relationship with student engagement ($\beta = .11$, $p < .10$). This positive relationship means that victimization was accompanied by students making a conscious effort to invest more resources, e.g., study harder, focus more, be highly interested, work harder, etc. Perhaps victimization drives up effort to a very small degree because students fear being singled out, and thus fully invest themselves in the module to avoid being victimized. The weak non-significant relationship found in this study indicates that further research is needed with respect to students' reactions in response to an instructor's victimization behaviours.

7.6.2 Student burnout empirical model. For the student burnout model, I used a single higher-order factor to represent student burnout. Again, while it may be useful to examine each dimension of student burnout in relation to each leadership dimension, I hypothesized that both transformational and destructive instructor-leadership were related to student burnout as a single concept. Also, examining each student burnout dimension would lead to a highly complex and less parsimonious model.

Following the two-step process, I first estimated the student burnout measurement model using all of the constructs in Figure 9[27]. For this model, I kept the four additional correlated error terms for transformational instructor-leadership from the student engagement model, and kept three of the correlated error terms from the earlier burnout model. Again, given the complexity of the model along with the small sample size, the fit indices for the measurement model indicated acceptable model fit (Satorra-Bentler χ^2 (1150) = 1,415.14, $p < .05$, Robust CFI = .90, RMSEA = .036). For the second step, I converted the measurement model into a structural model to test H3, H5, and H7 (see Figure 11). Good support was found for the hypothesized model (Satorra-Bentler χ^2 (1152) = 1,416.62, $p < .05$, Robust CFI = .90, RMSEA = .036).

Again, there was partial support for my hypotheses. From Figure 11, we see that H5 was not supported because destructive instructor-leadership was not related to student burnout. However, H3 was supported because transformational instructor-leadership shared a significant and strong negative relationship with student burnout. Finally, H7 was supported because student burnout was significantly and negatively related to student achievement.

To check the mediating effect in the structural model, the first step was to establish the significant relationships between the constructs. This analysis was conducted by checking (a) the direct unmediated relationship between transformational instructor-leadership and student achievement (0.14, $p < .10$), (b) the relationship between student burnout and transformational instructor-leadership (-0.79, $p < .001$), and (c) the relationship between student burnout and student achievement (-0.25, $p < .05$) (Hair et al., 2009). I then assessed the level of mediation by adding a direct unmediated path from direction and congruence to student achievement. This

[27] For inefficacy, item 11 was deleted because of its very weak loading in the earlier models, i.e., Section 7.5. This deletion was not seen as problematic because inefficacy was still represented by four items with strong loadings.

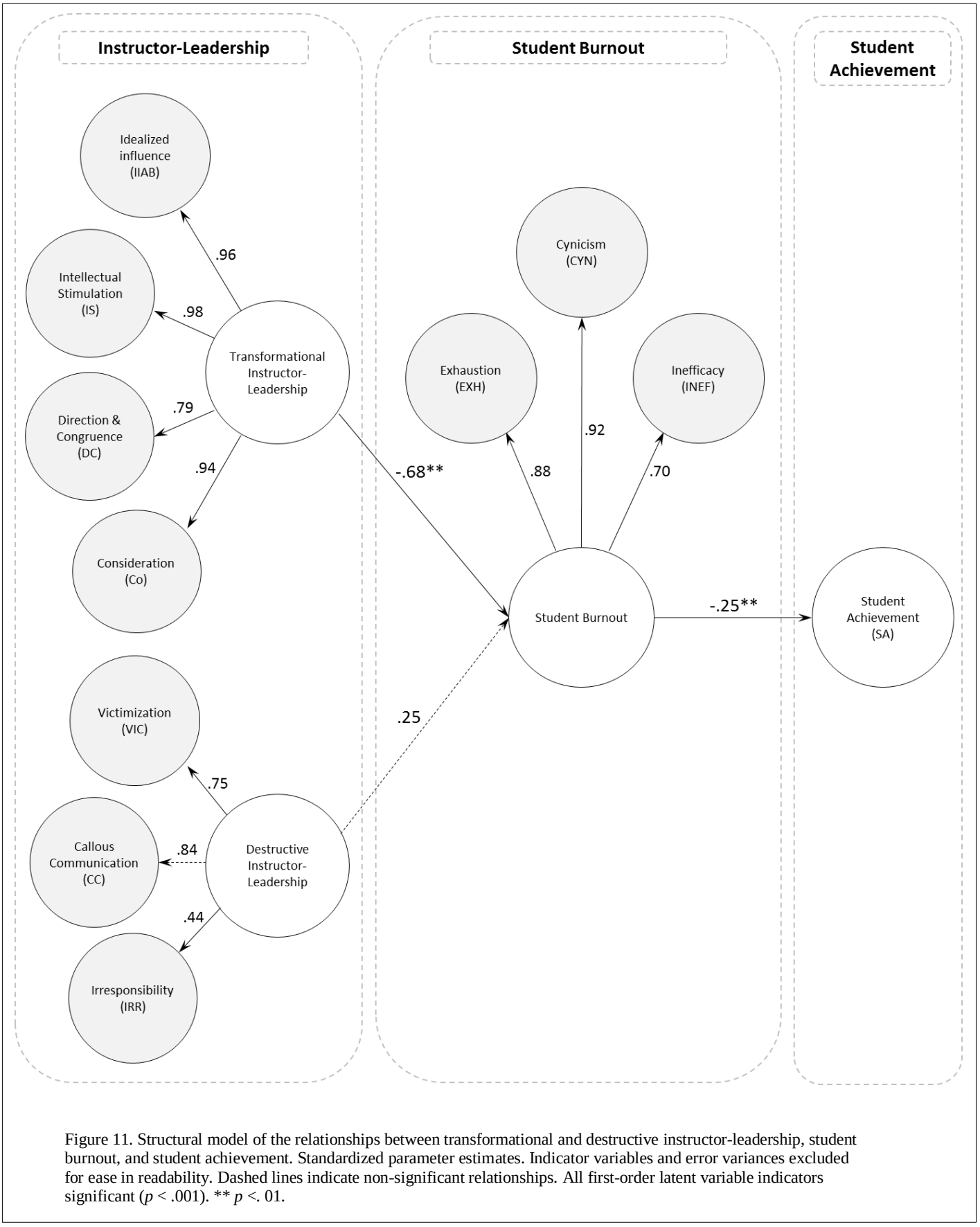

Figure 11. Structural model of the relationships between transformational and destructive instructor-leadership, student burnout, and student achievement. Standardized parameter estimates. Indicator variables and error variances excluded for ease in readability. Dashed lines indicate non-significant relationships. All first-order latent variable indicators significant ($p < .001$). ** $p <. 01$.

direct unmediated path was not significant, and did not significantly improve the fit of the model (Satorra-Bentler $\chi^2_{difference}$ [1] = 1.69, $p > 0.05$). Therefore, this path was not added. The strength of the indirect relationship between transformational instructor-leadership and student achievement was 0.17.

Next, for the student burnout model, I again examined the individual destructive instructor-leadership dimensions for the same reason stated earlier. The measurement model indicated acceptable model fit (Satorra-Bentler χ^2 (1144) = 1,407.55, $p < .05$, Robust CFI = .90, RMSEA = .036). For the second step, I converted the measurement model into a structural model. Good support was found for the hypothesized model (Satorra-Bentler χ^2 (1148) = 1,410.68, $p < .05$, Robust CFI = .90, RMSEA = .036). The findings from this model largely supported the second-order factor model because both callous communication (β = .18, p = .10) and victimization (β = -0.01, $p > .05$) were not significantly related to student burnout. However, irresponsibility was highly significant and positively related to student burnout (β = .13, $p <$ .001; indirect association with student achievement = -.03). This finding provides only partial support for H7.

7.7 Discussion

7.7.1 A transformational instructor-leadership measure. The first aim of the present study was to validate the MLQ-SS as a measure of transformational instructor-leadership. In this study, the supplementary items for the MLQ-SS were reworded to fully reflect personal leadership. The findings not only supported the factor structure proposed in Study 2, but also showed much improved convergent validity. For criterion validity, the findings showed some similarities and differences to Study 2, and, as explained earlier, that was largely because the constructs were now a better measure of personal leadership. Therefore, to address research

question 1 (a), I show that transformational instructor-leadership can be operationalized using the 23-item MLQ-SS.

In using the MLQ-SS, this study contributes to the organizational behaviour literature by providing further support for examining transformational leadership as *a single second-order factor*. While the criterion validity tests show differences between the dimensions, these tests are not as rigorous as structural equation modeling, i.e., they do not account for measurement error. Using structural equation modeling techniques, we see that the MLQ-SS constructs are highly intercorrelated, and thus well represented as a single second-order factor. Therefore, the findings appear to support the additive model of transformational leadership, and this is explained further in the final chapter.

7.7.2 A destructive instructor-leadership measure. The second aim of this study was to develop a context-sensitive measure of destructive instructor-leadership. In following Hinkin's (1998) framework, I (a) adapted items from Tepper's (2000) measure and generated items from Study 3, (b) administered the questionnaire, (c) reduced the number of items via exploratory factor analysis, and (d) conducted a confirmatory factor analysis. The findings showed that destructive instructor-leadership can be represented by three emergent dimensions including, callous communication, victimization, and irresponsibility.

The findings also indicated a somewhat limited application of destructive leadership theory to the HEI module context because six of the fifteen items from Tepper's (2000) measure were not well represented by the factor structure. Perhaps these items may indicate that certain destructive leadership behaviours from the corporate context are not applicable to the unique HEI module context. For e.g., given the short-term distant nature of higher education modules, it

is unlikely that instructors would be able to recall past instances of students' mistakes and failures (item 6). Alternatively, some of Tepper's items may need to be reworded or supplemented by similar behavioural items in developing other destructive instructor-leadership dimensions. For e.g., not giving credit for work requiring a lot of effort (item 7) is likely to be applicable to higher education teaching, and may need to be further refined. Given that destructive leadership is applicable to the HEI module context to a degree, it should also be noted that this form of instructor-leadership is very rare as evidenced by the highly skewed distributions in the data. The rarity of destructive leadership in the HEI module context coincides with its rarity in corporate contexts (Hubert & van Veldhoven, 2001). This means that the majority of students do not necessarily perceive the inherent distance in instructor-student relationships as harmful, contradictory to what is proposed by Thweatt and McCroskey (1996).

There was fair support for the criterion validity of the destructive instructor-leadership dimensions. Callous communication dimension is the only dimension that significantly predicted extra effort, satisfaction, and perceived effectiveness. Still, both victimization and irresponsibility were negatively related to extra effort, perceived effectiveness, and student achievement, even though neither dimension was significant in any of these models. Overall, this study contributes the first step towards developing a *context-sensitive measure of destructive instructor-leadership* that is built using 9 items from Tepper's 15-item measure and 4 items from my interview study, i.e., Study 3.

In taking the first step towards developing the destructive instructor-leadership measure, this study further contributes to the *dimensionality of destructive leadership*. As explained in Study 3, the dimensionality of destructive leadership has largely been ignored in leadership research. In most previous studies, a single construct representing destructive leadership was

found to be negatively related to individual performance and satisfaction (Schyns & Schilling, 2013). In this study, I showed the importance of examining the individual dimensions of destructive instructor-leadership. Specifically, callous communication was the strongest predictor extra effort and satisfaction. Irresponsibility also significantly predicted extra effort. However, victimization, as measured by 5 of Tepper's items, was not a significant predictor in any of these models. Furthermore, structural equation modeling techniques illustrated that the three destructive instructor-leadership constructs were not nearly as highly correlated as the transformational instructor-leadership constructs. As a result, a single second-order factor for destructive instructor-leadership masked the association between one of its dimensions, i.e., irresponsibility, and student burnout. Therefore, unlike transformational instructor-leadership, destructive instructor-leadership may be best represented by its individual dimensions. Overall, the findings provide initial evidence that the dimensionality of destructive leadership is important for distinguishing how different aspects of such leadership are related to follower outcomes. To address research question 1 (b), I show that destructive instructor-leadership can be operationalized using the 13-item measure derived from both Tepper's (2000) Abusive Supervision Scale and my interview findings. For this destructive instructor-leadership measure, the construct is best represented as three individual factors. Also, this measure captures a limited application of destructive leadership to the HEI module context.

7.7.3 Student engagement and burnout as distinct dimensions. The third aim of this study was to test student engagement and burnout as independent concepts. I conceptualized and operationalized student engagement as three dimensions including emotional, behavioural, and cognitive. I measured student burnout using the MBI, for which burnout comprises of exhaustion, cynicism, and inefficacy. The findings indicated that when using Rich et al.'s (2010)

measure of student engagement, which taps into emotional, behavioural, and cognitive engagement as originally proposed by Kahn (1990), the student engagement dimensions are distinguishable from the student burnout dimensions. This finding supports the view of Schaufeli et al. (2002) by providing initial evidence that *engagement and burnout comprise of standalone dimensions*. Further evidence from the final empirical models, indicated that student engagement and burnout can have different antecedents, i.e., student engagement was not predicted by any of the destructive instructor-leadership dimension, but student burnout was predicted by one of the destructive instructor-leadership dimensions.

7.7.4 Student engagement and burnout as mechanisms. The final aim of this study was to address research question 2, by testing the conceptual framework proposed in Chapter 3. The findings supported the notion that student engagement and burnout are mechanisms in the relationship between transformational instructor-leadership and student achievement. However, student engagement was not related to destructive instructor-leadership, and there was only partial support for burnout as a mechanism in the relationship between destructive instructor-leadership and student achievement. Comparing transformational with destructive instructor-leadership, transformational instructor-leadership was indirectly related to student achievement, but destructive instructor-leadership shared a very weak indirect relationship with student achievement (i.e., irresponsibility was the only destructive instructor-leadership dimension that was related to student burnout).

These findings from the final empirical models contribute to both transformational instructor-leadership and destructive leadership research. Previous transformational instructor-leadership studies (see meta-analysis in Appendix A) primarily focused on the association between transformational instructor-leadership and student outcomes, without explaining the

processes underlying these associations. Therefore, this study contributes to this body of research by showing that *engagement and burnout can be mechanisms in the relationship between transformational instructor-leadership and student achievement*. Additionally, previous destructive leadership research has focused primarily on the direct association between leadership and outcomes. Hence, Schyns and Schilling (2013) have called for the development of ideas with respect to the mechanisms underlying the relationship between destructive leadership and its consequences. Therefore, a smaller contribution of this study is that I provide initial evidence to partially support my hypothesized model by showing that *burnout can be a mechanism in the relationship between the irresponsible dimension of destructive instructor-leadership and student achievement*.

A final contribution of this study is that I add to educational research by fully examining the relationship between teaching behaviours and all *three dimensions of student engagement simultaneously*. As stated in Study 1, Fredricks et al. (2004) have called for educational research that examines all three dimensions of student engagement simultaneously. In this study, I take a step further than Study 1, because instead of focusing on only one facet each from emotional, behavioural, and cognitive engagement, I now better measure the three dimensions.

7.7.5 Limitations and directions for future research. The first potential weakness in this study is the *item wording of the destructive instructor-leadership measure*. Here, the items are worded so that each student is asked to rate his/her instructor's actions towards him/her. This phrasing is used in the original version of Tepper's Abusive Supervision Scale, and ensures consistency between the destructive and transformational instructor-leadership measures. However, the findings in Study 3 indicate that students sometimes perceive their instructor as being a destructive leader based on the instructor's actions towards the class in general.

Therefore, the personal leadership measure used in this study does not tap into students perceptions of destructive instructor-leadership that is based upon their observations of the instructor's actions towards other students. This limitation may explain why the destructive instructor-leadership variables are severely positively skewed.

To address this issue, future research can include an opening statement such as "Report how frequently you observe your instructor using the following actions towards you and/or other students". Each item would then state the instructor's actions towards the student and/or other students, e.g., ridiculed me and/or other students; gave me and/or other students the silent treatment; displayed facial expressions that indicated disinterest in me and/or other students. Alternatively, future research may even compare findings between (a) students who experience destructive leader instructor-leadership on a personal one-on-one level and (b) students who experience an instructor using destructive leader behaviour towards others (i.e., a bystander's perspective). Such a comparison can reveal whether destructive instructor-leadership effects vary according to the type of interaction between instructor and student.

To further increase variation in the destructive instructor-leadership responses, future research may include a priming question which asks students to think about a memorable instructor in answering the questions. A memorable instructor may stimulate thoughts of both transformational and destructive instructor-leaders. Alternatively, for a replication of the present study, questionnaires can be distributed to two different groups of students, each being given different instructions. One group can be asked to report on a transformational instructor-leader and the other group can be asked to report on of a destructive instructor-leader. Using this method, students should be given a clear definition of each type of instructor-leader prior to

answering the questions. This method may elicit more variation in the destructive instructor-leadership responses.

A second weakness of the present study is that I rely on *cross-sectional data* to draw my conclusions. As explained in Study 1, cross-sectional data cannot be used to determine direction of causality. For instance, it is plausible to expect that an instructor-leader may react to disengaged students by using more destructive instructor-leadership behaviours. Alternatively, instructors may use more transformational leadership behaviours if faced with students who are highly engaged.

A third limitation is that, like Study 1, most of the data is based on a *UK sample of students*[28]. Therefore, the findings cannot be generalized to countries of different cultures. That is, perceptions of destructive leader behaviours may vary between cultures (Aasland, Skogstad, Notelaers, Nielsen, & Einarsen, 2010). Tepper (2007) reinforces this notion by explaining that destructive leadership may be more accepted in countries with higher power distance (see the example in Section 6.4.3). For instance, given that the majority of the students in this study were from the UK – a country with a moderately low power distance – interpretations of destructive leader behaviour may be contingent upon the power distance in the UK. In higher power-distance countries, certain destructive leader behaviours in this study may be considered acceptable behaviour. Consequently, students' reactions to destructive instructor-leadership in this sample, e.g., engagement, burnout, and achievement, may be more intense than students' reactions in higher power-distance cultures (Tepper, 2007). Hence, future research is needed to further validate my three-factor solution and the related outcomes across national cultures.

[28] 74.2% of the students in this study completed their primary education in the UK

A fourth limitation of this study is that of *common method bias*. For the transformational instructor-leadership dimensions, the CFA marker technique (Williams et al., 2010) indicated that method effects were present but minor. I attempted to use the same CFA marker technique to examine the potential effects of common method bias for the destructive instructor-leadership dimensions, but some of the models were just identified, and this made comparisons between models impossible. For this reason, future survey research should consider directly measuring and controlling for potential causes of method bias when validating the destructive instructor-leadership measure, e.g., controlling for social desirability, positive affectivity, or negative affectivity (Podsakoff et al., 2003). Further suggestions for minimizing common method bias are provided in the final chapter.

A fifth limitation of this study is that *convergent validity for the newly developed destructive instructor-leadership measure was only partially examined* (i.e., factor loadings, AVE, and construct reliability). Additional tests for convergent validity is needed to determine how well the developed measure correlates with other measures that tap into the same concept. For this purpose, I initially included Duffy et al.'s (2002) Social Undermining Scale in the questionnaire. This measure is better aligned with abusive supervision than other constructs used in abusive supervision literature (Tepper, 2007). However, to avoid bloating the already moderately long questionnaire, and thus to prevent potential questionnaire fatigue, I removed the Social Undermining Scale. Future research focusing primarily on validating the newly developed measure from this study should include the Social Undermining Scale in order to further ensure convergent validity. Moreover, such replication research with an independent sample will enhance the generalizability of the newly developed measure in this study (Hinkin, 1998).

Finally, future research should consider measuring student engagement as originally conceptualized by Kahn (1990). In this study, I adopt this stance by using the measure provided by Rich et al. (2010). The factor solution strongly supports the three proposed dimensions of engagement. Moreover, this measure has an added advantage over the UWES because it taps into engagement as a concept that is distinct to burnout.

7.7.6 Conclusion. This study adds to the limited body of research on instructor-leadership research by taking initial steps towards developing measures of both transformational and destructive instructor-leadership. In so doing, I contribute to the ongoing discussion about the dimensionality of transformational leadership, and provide support for a dimensional construct representing destructive leadership. In addition to these contributions to instructor-leadership and leadership in general, I also add to the current engagement literature by showing the independence of engagement and burnout dimensions. Specifically, I showed that student engagement and burnout are best represented simultaneously as distinct dimensions, and each concept can have different antecedents. Moreover, I provided initial support for a conceptual framework showing the relationships between these engagement and burnout dimensions. Finally, this study partially supported my hypothesized conceptual framework that student engagement and burnout are mechanisms in the relationship between instructor-leadership and student achievement. Even though not all hypotheses were supported, the findings suggested that transformational instructor-leadership is related to student engagement and burnout, and one destructive instructor-leadership dimension, i.e., irresponsibility, is related to student burnout. In the next and final chapter, I present an overall discussion of the dissertation's findings along with the implications from this research.

Chapter 8: General Discussion and Conclusion

This chapter summarizes the outcomes of the dissertation in five sections. First, I illustrate how the dissertation addresses the two research questions (Section 8.1). Second, I explain the theoretical contributions of the dissertation (Sections 8.2 and 8.3). Third, the limitations of the dissertation are discussed, and I offer suggestions for future research (Section 8.4). Fourth, practical implications of the dissertation are proposed (Section 8.5). Finally, I present a brief closing summary (Section 8.6).

8.1 Research Questions

In the opening chapter, I stated two research questions which guided the dissertation. Here, I not only discuss how my dissertation addresses these questions, but also suggest potential extensions of my findings to the corporate context where applicable (see Table 40 for a summary of the links between my research questions and the individual chapters/studies).

Table 40

Summary of Research Questions in Relation to the Individual Chapters and Studies

Research questions	Chapter number and title					
	2	3	4	5	6	7
	Literature review: Instructor-leadership and leadership theories	Literature review: Engagement and burnout as mechanisms in the relationship between leadership and performance	Study 1: Teasing out potential transformational instructor-leadership dimensions from an educational measure of instructor behaviours	Study 2: Validation of the transformational instructor-leadership dimensions from an educational measure and the enhancement of the context-sensitivity of an organizational behaviour measure	Study 3: Conceptualizing DIL	Study 4: The association between TIL, DIL, student engagement and burnout, and student achievement
1. How can (a) TIL and (b) DIL be conceptualized and operationalized?	TIL and DIL can be conceptualized using OB frameworks, but unique HEI module context impacts how leadership works. Because of unique context, best strategy may be to supplement OB approach (supervisor leader behaviours) with educational approach (module-specific leader behaviours).	N/A	Used purely an educational approach, i.e., secondary dataset with module-specific behaviours, to measure TIL (i.e., development of P-QTILQ).	P-QTILQ amended to better measure personal leadership (now called QTILQ). QTILQ showed fair validation, but did not offer much beyond the MLQ. Therefore, started with MLQ then enhanced its context sensitivity with QTILQ, i.e., combined OB with educational approach to arrive at MLQ-SS.	Defined the conceptual boundaries of destructive instructor-leadership, and used interviews to understand the thematic structure for such leadership. From the themes, items created (i.e., inductively) to supplement Tepper's measure (i.e., OB measure).	Used both the 'MLQ-SS' and 'Tepper-Study 3' items to measure TIL and DIL respectively. TIL = idealized influence, consideration, intellectual stimulation, and direction and congruence. DIL = callous communication, victimization, and irresponsibility.

Table 40

Summary of Research Questions in Relation to the Individual Chapters and Studies

Research questions	Chapter number and title					
	2	3	4	5	6	7
	Literature review: Instructor-leadership and leadership theories	Literature review: Engagement and burnout as mechanisms in the relationship between leadership and performance	Study 1: Teasing out potential transformational instructor-leadership dimensions from an educational measure of instructor behaviours	Study 2: Validation of the transformational instructor-leadership dimensions from an educational measure and the enhancement of the context-sensitivity of an organizational behaviour measure	Study 3: Conceptualizing DIL	Study 4: The association between TIL, DIL, student engagement and burnout, and student achievement
2. What are the relationships between (a) TIL and DIL and (b) student engagement, burnout, and achievement?	Meta-analysis findings showed that TIL shared a relatively weak relationship with student achievement.	OB rarely applied to understanding of student engagement, and burnout. OB useful for improving the conceptualizations of student engagement and burnout. Theoretically, both student engagement and burnout are likely mechanisms in the relationship between both TIL and DIL and student achievement.	Student engagement measured in a simple way, and student achievement measured as perceived performance. Findings suggested that one facet each for emotional and cognitive engagement were mechanisms in the relationship between potential quasi-TIL behaviours and student achievement.	Student achievement measured as perceived, expected, and comparative performance. For TIL, intellectual stimulation was positively related to student achievement, but consideration was negatively related to student achievement.	N/A	Student engagement and burnout measured comprehensively, and student achievement measured as self-reported grade. Both student engagement and burnout were mechanisms in the relationship between TIL and student achievement. Student burnout was a mechanism in the relationship between one DIL dimension, i.e., irresponsibility, and student achievement.

Table 40

Summary of Research Questions in Relation to the Individual Chapters and Studies

	Chapter number and title					
	2	3	4	5	6	7
Research questions	Literature review: Instructor-leadership and leadership theories	Literature review: Engagement and burnout as mechanisms in the relationship between leadership and performance	Study 1: Teasing out potential transformational instructor-leadership dimensions from an educational measure of instructor behaviours	Study 2: Validation of the transformational instructor-leadership dimensions from an educational measure and the enhancement of the context-sensitivity of an organizational behaviour measure	Study 3: Conceptualizing DIL	Study 4: The association between TIL, DIL, student engagement and burnout, and student achievement

Note. OB = organizational behaviour literature; TIL = transformational instructor-leadership; DIL = destructive instructor-leadership; P-QTILQ = Potential Quasi-Transformational Instructor-Leadership Questionnaire; QTILQ = Quasi-Transformational Instructor-Leadership Questionnaire; MLQ = Multi-factor Leadership Questionnaire; MLQ-SS = Multi-factor Leadership Questionnaire (Student Survey).

8.1.1 Research question 1: Conceptualization and operationalization of transformational and destructive instructor-leadership. The first research question was "How can (a) transformational and (b) destructive instructor-leadership be conceptualized and operationalized?**"** I addressed this research question in Chapter 2 as well as in Studies 1 to 4 (Chapter 4 to 7) (see Table 40). In Chapter 2, I explored to what extent concepts and measures of transformational and destructive leadership developed in organizational behaviour literature are applicable to instructor-leadership in the HEI module context. Both transformational and destructive instructor-leadership can be conceptualized as proposed in the organizational behaviour literature, but the uniqueness of the HEI module context must be taken into account when doing so. Specifically, the module context is characterized by moderate distance, a 'follower as customer' perspective, and short-term group length, and these factors may influence how both the organizational behaviour conceptualizations of transformational and destructive instructor-leadership translate to the module context.

In studies 1 to 4, I used organizational behaviour conceptualizations of leadership, while taking into account the uniqueness of the HEI module context, in order to operationalize both transformational and destructive instructor-leadership. Specifically, I used a combination of organizational behaviour (i.e., corporate/organization-oriented measures) and educational (i.e., behaviours grounded in module interactions) approaches (see Table 41 for a comparison of both approaches). The organizational behaviour approach is useful for linking the measurement of instructor-leadership to the leadership theory itself. However, the organizational behaviour approach does not seem to fit neatly with the unique HEI module context, i.e., some behaviours were irrelevant, e.g., vision/inspirational motivation for transformational leadership, and other module specific behaviours were omitted. To address this minor misfit, the educational approach

was used to enhance the context-sensitivity of the organizational behaviour measures. Specifically, the educational approach is useful for augmenting the already established leadership dimensions, and, in this dissertation, led to the development of a new dimension each for transformational instructor-leadership, i.e., direction and congruence, and destructive instructor-leadership, i.e., irresponsibility.

Table 41

Advantages and Disadvantages of The Educational And Organizational Behaviour Approaches to Operationalizing Instructor-Leadership

Approach	Advantage/s	Disadvantages
Organizational behaviour (corporate-developed)	• Measures leadership in line with theory. • Psychometrically sound, and well-validated across numerous samples.	• Does not 'fit' perfectly with the unique HEI module context, i.e., some dimensions may be irrelevant. • May not tap into leadership actions that are specific to the unique module context.
Educational (HEI module-emergent)	• Captures module-relevant leader behaviours that may be disregarded by corporate measures, e.g., direction and congruence and irresponsibility.	• Measurement items need to be reworded to tap into leadership. • May fail to capture leader behaviours that are both in line with leadership theory and relevant to the module context, e.g., charisma or victimization. Therefore, not recommended as a standalone measure. Instead, useful for supplementing the organizational behaviour measures.

The use of the educational approach to enhance the organizational behaviour approach when operationalizing both transformational and destructive instructor-leadership, indicates a limited application of both leadership theories to the module context. This begs the question as to whether there are other unique contexts or circumstances that warrant an adjusted application of transformational and destructive leadership theories. For instance, for transformational instructor-leadership, I focus on direction and congruence instead of vision or inspirational motivation because of the temporary nature of HEI module groups. Perhaps, in the corporate context, direction and congruence may be more applicable than vision in task forces or ad hoc groups because these groups are designed to accomplish a short-term task. For transformational instructor-leadership, I also focus on both individualized and general consideration because of the moderate distance in the HEI module context. Perhaps, both general and individual consideration are also applicable in corporate leader-follower relationships that are characterized by moderate distance. In very distant leadership situations, e.g., relationships between top-level leaders or CEOs and lower-level employees, Antonakis and Atwater (2002) argue that these leaders do not have opportunities to practice individualized consideration with their employees at all. In these very distant situations, perhaps general consideration is the only aspect of supportive leadership that is applicable.

In addition to direction and congruence for transformational instructor-leadership, the educational approach uncovered the irresponsibility dimension for destructive instructor-leadership. This dimension is closely related to the first manifestation of destructive leadership that is proposed by Krasikova et al. (2013), i.e., the leader's pursuit of destructive goals. However, Tepper's measure of abusive supervision is mostly silent on this manifestation, and instead focuses on the second manifestation, i.e., the use of harmful actions in leading (recall

Appendix O). Therefore, the irresponsibility dimension enhances Tepper's measure by tapping into a leader's pursuit of destructive goals. It is worth examining whether this dimension can apply to the corporate context, e.g., misleading followers towards a leader's personal goals even if these goals contradict with the organization's interests.

I also contributed two general methodological improvements with respect to the leadership measures. *First*, I directly included the leader's name in the phrasing of question items, thus ensuring that respondents were clear on the leader's personal actions. While this approach can be used for online distribution of leadership measures, the researcher must prioritize anonymity and confidentiality because leaders' actual names are used. *Second*, I adopted the opening statement from the Social Undermining Scale (Duffy et al., 2006) in order to tap into volitional behaviours for the destructive instructor-leadership measurement items. This statement asks respondents to describe how often the leader *intentionally* used the stated behaviours. Therefore, in order to better align the conceptualization of destructive leadership with its measurement, Tepper's (2000) measure could be enhanced by not only including an irresponsibility dimension, but also adding an opening statement that acknowledges volition.

Overall, my intention was to build on the established leadership frameworks from organizational behaviour, to develop context-sensitive measures of transformational and destructive instructor-leadership. I take initial steps towards developing these context-sensitive measures, and as such, I do not propose that these measures are in a 'final' state. Both the transformational and destructive instructor-leadership measures need to be validated in separate samples. Furthermore, my analysis suggests that other potential dimensions that are linked to transformational leadership theory may warrant further investigation in the HEI module context (these potential dimensions are explained in more detail in Section 8.3). My initial findings

suggest that (a) transformational instructor-leadership can be operationalized using a 23-item measure that taps into a single second-order factor of transformational instructor-leadership, which comprises of four first-order factors including idealized influence, consideration, intellectual stimulation, and direction and congruence, and (b) destructive instructor-leadership can be operationalized using a 13-item measure that taps into three first-order factors including irresponsibility, victimization, and callous communication. Both of these measures provide a starting point for operationalizing their respective form of instructor-leadership.

8.1.2 Research question 2: The relationship between instructor-leadership, student engagement and burnout, and student achievement. The second research question was "What are the relationships between (a) transformational and destructive instructor-leadership and (b) student engagement, burnout, and achievement?**"** I addressed this research question in Chapter 3, 4 (Study 1), and 7 (Study 4).

In Chapter 3, I first establish the concepts of student engagement and burnout. Student engagement and burnout have been avidly discussed by educational researchers for many years, but these concepts have largely remained unclear in this literature. Moreover, the relatively well-developed organizational behaviour literature has rarely been consulted when conceptualizing student engagement or burnout. Given that the organizational behaviour literature is beginning to offer well-defined conceptual boundaries for engagement and burnout, I propose that these boundaries can be applied to the educational context in order to clarify the meaning of student engagement and burnout. In Chapter 3, I then propose a conceptual framework for which student engagement and burnout are mechanisms in the relationships between (a) transformational and destructive instructor-leadership and (b) student achievement.

In Chapter 4 (Study 1), I partially tested the conceptual framework from Chapter 3. Specifically, I examined links between potential quasi-transformational instructor-leadership behaviours, one facet each for emotional, behavioural, and cognitive engagement, and student achievement. This was an exploratory study, examining the use of a secondary dataset to measure potential transformational instructor-leadership, i.e., the P-QTILQ. Even though I later supplanted the P-QTILQ with the MLQ-SS, Study 1 still provided some early insight into relationships between potential quasi-transformational instructor-leadership, student engagement, and student achievement. The findings mainly supported my propositions that student engagement can be a mechanism in the relationship between transformational instructor-leadership and student achievement.

To confirm and add to these findings, I then conducted Study 4 with improved measures of transformational instructor-leadership, student engagement, and student achievement (see Figure 12). In this study, I also simultaneously compared both transformational and destructive instructor-leadership in relation to student engagement, burnout, and achievement. I proposed that student engagement and burnout are mechanisms in the relationships between transformational and destructive instructor-leadership on the one hand and student achievement on the other hand. There was partial support for my propositions. Support was overall stronger for transformational compared to destructive instructor-leadership. Student engagement and burnout were mechanisms in the relationship between transformational instructor-leadership and student achievement, thus supporting my propositions as well as the exploratory findings from Study 1. The strong relationships between transformational instructor-leadership and both student engagement and burnout suggest that even though students may expect to receive good

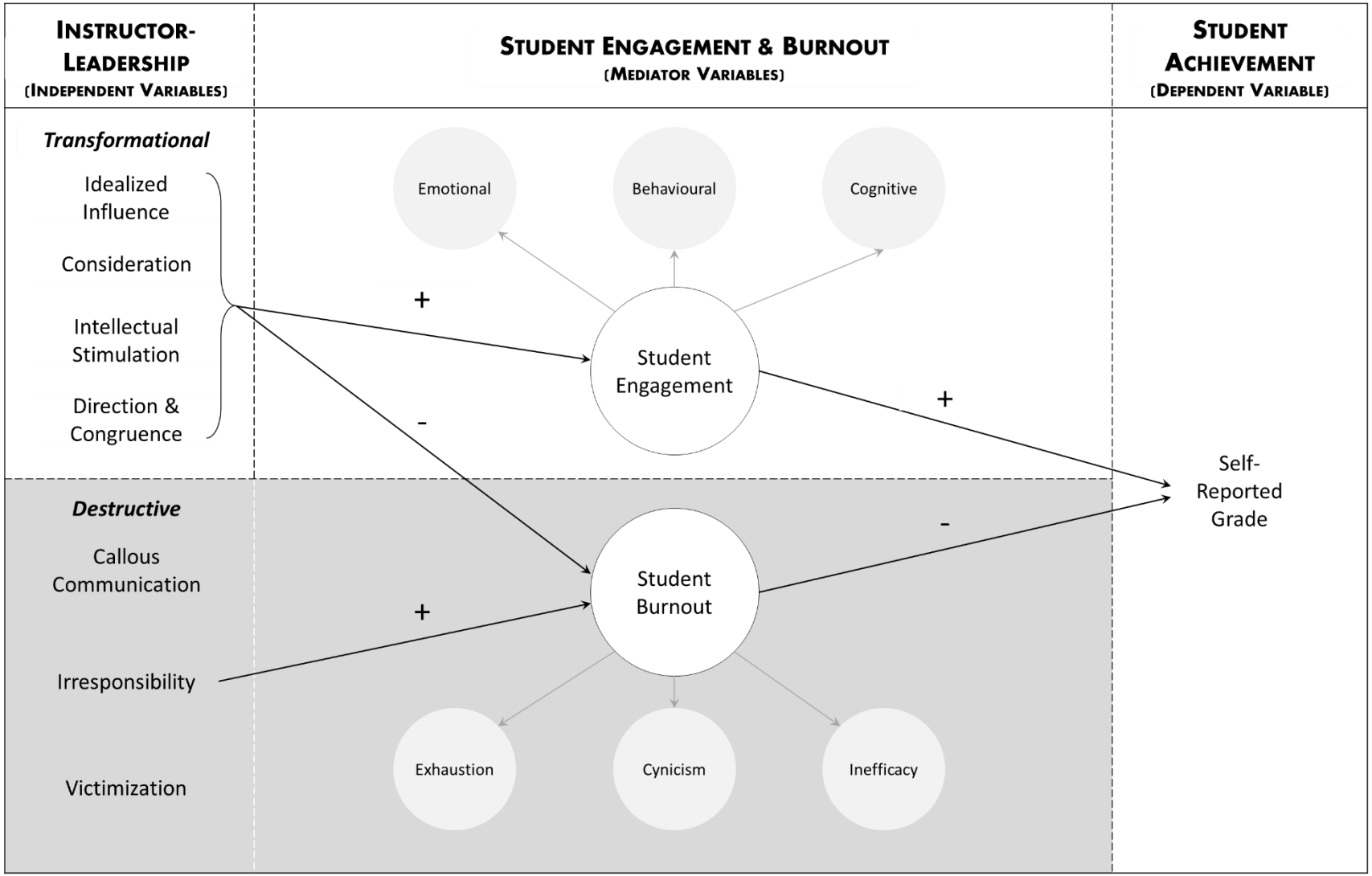

Figure 12. Summary of the main findings from the dissertation. The top portion of the figure summarizes the findings for transformational instructor-leadership. The bottom portion of the figure summarizes the findings for destructive instructor-leadership.

teaching (i.e., academic entitlement), transformational teaching is still associated with desirable student outcomes.

In contrast to my propositions regarding transformational instructor-leadership, my propositions relating to destructive instructor-leadership were only partially supported. Specifically, my findings showed that only student burnout was a mechanism in the relationship between one destructive instructor-leadership dimension, i.e., irresponsibility, and student achievement. The (a) non-significant relationship between destructive instructor-leadership and student engagement, and (b) relatively weak relationship between destructive instructor-leadership and student burnout, suggest that perhaps destructive instructor-leadership does not have a strong impact on students in the HEI module context. This lack of any strong relationship contradicts my argument that students as customers should respond strongly to harmful teaching behaviours. Another explanation for these weak findings is the low variation in and occurrence of destructive instructor-leadership (i.e., very few instructors in Study 4 were perceived as destructive). This also contradicts my argument that distance can be perceived by students as instructor misbehaviour (Thweatt & McCroskey, 1996). Instead, destructive instructor-leadership is rare. Therefore, to better understand how such leadership can impact students, changes to the research design are suggested at the end of Study 4.

In Study 4, I further examined the indirect relationships between both transformational and instructor-leadership and student achievement. This indirect relationship means that both forms of instructor-leadership were related to student achievement through the influence of student engagement and burnout. My findings showed that transformational instructor-leadership shared a weak indirect relationship with student achievement, and destructive instructor-

leadership shared an even weaker indirect relationship with student achievement (recall that only one destructive instructor-leadership dimension was significantly related to student burnout).

The findings for transformational instructor-leadership in Study 4 coincides with the meta-analysis findings (Appendix A), indicating that transformational instructor-leadership shares an overall weak relationship with student achievement. Comparing the effect size for the relationship between transformational instructor-leadership and student achievement from the meta-analysis ($\hat{\bar{\rho}}$ = .19) with the indirect effect sizes for this same relationship in Study 4 (.12 and .17 for the student engagement and burnout models respectively), student engagement and burnout seem to offer fairly good explanations for why transformational instructor-leadership is related to student achievement. The generally weak relationship between transformational instructor-leadership and student achievement (both in Study 4 and in the meta-analysis) may be because of the moderately distant context. Specifically, Howell and Hall-Merenda (1999) showed that transformational leadership was more strongly related to follower performance in close than in distant situations. Perhaps destructive leadership is also more likely to be related to followers' engagement, burnout, and performance in closer situations. That is, in a close and intimate leader-follower relationships, not only can leaders demonstrate more individualized and empathetic behaviours (Antonakis & Atwater, 2002), but they can also more intimately direct harsh communications, harassment, embarrassment, and other destructive behaviours in leading followers towards goals. Therefore it is worth examining the relationships between leadership, engagement, burnout, and performance in contexts with varying distance in order to determine whether the findings do indeed vary (see Antonakis & Atwater, 2002 for different distance typologies that can be examined).

At the end of Studies 1 to 4, theoretical implications are discussed. In the next section, I relate these specific implications to the broader implications that were stated at the beginning of the dissertation.

8.2 Theoretical Contributions

This dissertation makes theoretical contributions to both organizational behaviour and educational research. These contributions include (1) a balanced view of leadership, (2) context-sensitive conceptualizations and operationalizations of transformational and destructive instructor-leadership, (3) the dimensionality of transformational and destructive instructor-leadership, and (4) support for student engagement and burnout as mechanisms in the relationship between instructor-leadership and student achievement.

8.2.1 A balanced view of instructor-leadership. I contribute to organizational behaviour research by simultaneously examining both transformational and destructive leadership, albeit in a unique HEI module context. Extant research on both leadership in general and instructor-leadership focus primarily on transformational leadership theory. In contrast to the growing body of research on transformational leadership and transformational instructor-leadership, little attention has been given to destructive leadership and destructive instructor-leadership. Therefore, in this dissertation, I provide a more accurate view of leadership, and improve our understanding of leadership in general as well as in the HEI module context (Einarsen et al., 2007, p. 208). Contrary to the supposition advanced by Baumeister et al. (2001) that ‘bad is stronger than good’, my findings suggest that ‘good is stronger than bad’ in the HEI module context, even in relation to negative outcomes such as burnout. Specifically, transformational instructor-leadership was more strongly related to student engagement and burnout than destructive instructor-leadership. This may occur because, as explained in Chapter

3, students may attempt to distance themselves from their destructive instructor-leader, which can limit the impact of the instructor's destructive behaviours (Baumeister et al., 2001). Another explanation as to why destructive instructor-leadership behaviours may share a relatively weaker relationship with student engagement and burnout than transformational instructor-leadership behaviours is that students may engage in a 'self-enhancement effect' whereby bad memories are suppressed and/or positive memories are more readily accessed (Baumeister et al., 2001). Overall, the balanced perspective to instructor-leadership adopted in this dissertation suggests that students are more engaged and experience less burnout when they perceive their instructor as using 'good' transformational instructor-leadership behaviours rather than 'bad' destructive instructor-leadership behaviours.

8.2.2 Context-sensitive conceptualizations and operationalizations of transformational and destructive instructor-leadership. I contribute to both organizational behaviour and instructor-leadership research by highlighting the importance of context for leadership theories. Specifically, nuances of the HEI module context including distance, temporary groups, and follower as customer perspective, have implications for applying well-established organizational behaviour leadership models to this unique HEI module context. Specifically, I propose and empirically support my arguments that the unique features of the HEI module context can limit the translation of transformational and destructive leadership theories to this context. In other words, certain aspects of both theories do not work in the HEI module context, and this limited applicability has theoretical merit because it shows the degree to which established research is applicable to new settings (Johns, 2006; Whetten, 1989).

Transformational instructor-leadership. I contribute an enhanced context-sensitive concept and measurement of transformational leadership for the HEI module context. Previous

instructor-leadership research conceptualize and measure transformational instructor-leadership using established organizational behaviour frameworks. However, as explained in Chapter 2, these organizational behaviour frameworks are limited in the HEI module context because certain leadership dimensions are unlikely to be applicable to this context. Specifically, the short-term and distant HEI module context means that respectively vision or inspirational motivation is not applicable, and certain individualized leader behaviours may not be feasible. For these reasons, I operationalized transformational instructor-leadership by augmenting the most prominent organizational behaviour measure of transformational leadership (i.e., the MLQ) with a novel educational approach (i.e., secondary dataset comprised of instructor behaviours). The resulting MLQ-SS measures transformational instructor-leadership as four dimensions including idealized influence (attributed and behaviour), consideration (individual and general), intellectual stimulation, and direction and congruence. The MLQ-SS is better suited to the HEI module context than the original MLQ because it takes into account the unique interactions between instructor and students, e.g., e.g., feedback on set work, clear learning goals, evidence-based teaching, etc.

Destructive instructor-leadership. Research on destructive instructor-leadership is in its infancy and there is no agreed upon definition or conceptualization. I adapt the definitions of destructive leadership proposed by Krasikova et al. (2013) and Schyns and Schilling (2013) to offer a definition of destructive instructor-leadership that comprises of four characteristics. These characteristics include (a) the process of leading towards a goal, (b) the use of harmful methods and/or leading students towards goals that are contradictory to the HEI's interests, (c) volition, and (d) sustained actions. My interview findings corroborate these four characteristics and add to

the organizational behaviour conceptualization by providing support for two manifestations of destructive leadership, i.e., harmful methods and contradictory goals.

Based on the conceptualization of destructive instructor-leadership, I then contribute a context-sensitive measurement of destructive leadership for the HEI module context. To develop this measure, I augment the well-established organizational behaviour measure of destructive leadership (i.e., Tepper's Abusive Supervision Scale) with behaviours from my interview study. This approach was superior than using Tepper's measure by itself because (a) Tepper's measure included certain behaviours that were unlikely to be relevant to the HEI module context, and (b) Tepper's measure did not include behaviours that adequately captured the manifestation of destructive leadership that describes leading followers towards goals that conflict with the organization's interests (this manifestation of destructive leadership was identified in the interview study).

8.2.3 The dimensionality of transformational and destructive instructor-leadership. I contribute to organizational behaviour research by further examining the dimensionality of transformational and destructive leadership in the HEI module context.

Transformational leadership dimensionality. I add to the debate regarding the dimensionality of transformational leadership. A higher-order model of transformational instructor-leadership, comprising of four first-order factors including idealized influence, consideration, intellectual stimulation, and direction and congruence, suggests that the leadership dimensions are conceptually distinct to a certain degree. According to Bass (1985), the higher-order model indicates that transformational leadership dimensions are different to each other, but individuals who score high on one dimension, score high on the others. This additive model of

transformational leadership can mean that the dimensions are interactive in that they work together to influence student outcomes. Overall, followers do not appear to markedly distinguish between the dimensions, and therefore there is little justification for investigating the individual dimensions. Perhaps followers regard each of the dimensions as going beyond ordinary leader behaviours. As it is, then, further research in needed in both corporate and HEI module contexts in order to understand how and why transformational leadership dimensions combine to affect follower outcomes (van Knippenberg & Sitkin, 2013).

Destructive leadership dimensionality. There is a dearth of research with respect to the dimensionality of destructive leadership, and thus destructive instructor-leadership. As explained in Chapter 1, the proposed conceptualization of destructive instructor-leadership suggests that leader behaviours may cluster around the manifestations of destructive leadership. Specifically, certain destructive leader behaviours may be closely linked to leading followers towards goals that contradict with the organization's interests whereas other destructive leader behaviours may be tied closely to the use of harmful methods in leading followers. My empirical findings from Studies 3 and 4 support this notion for the three dimensions of destructive instructor-leadership. For instance, callous communication appears to be closely tied to the manifestation that describes the use of harmful methods in leading followers whereas irresponsibility captures leader behaviours that steer followers towards goals that conflict with the organization's interests. This multi-dimensional concept and measure has further implications for studying the outcomes of destructive instructor-leadership. For instance, my findings indicate that callous communication is a significant predictor of effectiveness, extra effort, and satisfaction, whereas irresponsibility predicts only extra effort. Similarly, in the final empirical model, only irresponsibility was a significant predictor of student burnout. However, victimization is not a significant predictor of

any of the outcomes examined in this dissertation. Taken together, these findings suggest that it is important to distinguish between the dimensions of destructive instructor-leadership. Previous research in organizational behaviour largely neglects this topic, but my dissertation shows that dimensionality is important for understanding (a) how both manifestations of destructive leadership are represented in the HEI module context, and (b) the unique outcomes for each dimension of destructive leadership in the HEI module context. Given these important implications in the HEI module context, it is worth examining whether the three destructive instructor-leadership dimensions translate to the organization/corporate context.

8.2.4 Student engagement and burnout as mechanisms. Previous research on transformational instructor-leadership and destructive leadership focus on direct relationships between leadership and follower outcomes, with little regard for the mechanisms underlying these relationships. This dissertation extends this body of research by demonstrating that student engagement and burnout are mechanisms in the relationship between transformational instructor-leadership and student achievement. To a lesser extent, student burnout is also a mechanism in the relationship between destructive instructor-leadership and student achievement. Therefore, I contribute a moderate level of theory building by identifying two novel mechanisms to instructor-leadership research (i.e., student engagement and burnout), and showing ‘how’ and ‘why’ these mechanisms are related to transformational and destructive instructor-leadership and student achievement. By identifying and investigating these mechanisms, this dissertation shifts instructor-leadership research towards a more mature level.

8.3 Other Theoretical Implications

In addition to the major contributions, I also (1) meta-analyze the fractionated literature on transformational instructor-leadership, (2) offer conceptualizations and operationalizations of student engagement and burnout, and (3) contribute to the engagement-burnout debate.

8.3.1 Meta-analytic review of transformational instructor-leadership. Albeit a minor contribution, I meta-analyze the findings from 22 studies of transformational instructor-leadership. This meta-analytic review was important to improve the power of the moderate number of small studies, and thus answer questions relating to the outcomes of transformational instructor-leadership. Moreover, assimilating studies across various domains was useful for identifying opportunities for improving research in this area, most of which I address in this dissertation.

For the meta-analysis, the Hunter-Schmidt approach was adopted, and thus correlations were corrected for attenuation due to measurement error. The findings indicated that transformational instructor-leadership is positively associated with students' motivation, satisfaction, perceptions of instructor credibility, affective learning, and cognitive learning. The findings also partially supported a positive association between transformational instructor-leadership and academic performance. Overall, this meta-analysis combines research that was previously fractionated across diverse fields, and provides good support for the application of transformational leadership theory to instructor-student relationships in higher education modules.

8.3.2 Conceptualization and operationalization of student engagement and burnout. This dissertation contributes a clear conceptualization of student engagement and burnout.

Previous educational research can be likened to a ‘melting-pot’ in which any element of student involvement or detachment was included as an indicator of student engagement and burnout respectively. In this dissertation, I clarify the conceptual boundaries of both student engagement and burnout via lessons from organizational behaviour research. Specifically, student engagement and burnout are conceptualized by the degree of activation and positivity/negativity. Engagement is a positive and highly activated state whereas burnout is characterized by a negative and low activation state. Based on these conceptualizations, I utilize HEI module adaptations of corporate measures of engagement and burnout that are provided by Schaufeli et al. (2002). In measuring student engagement, I extend previous research on student engagement in higher education by investigating the full three-dimensional concept as opposed to one or two dimensions as was examined in previous studies (Fredricks et al., 2004).

8.3.3 Student engagement and burnout as distinct concepts. This research adds to the engagement-burnout debate by showing that both concepts can be distinctly represented when measures are more in sync with their conceptualizations. While Schaufeli et al. (2002) assert that engagement and burnout are distinct concepts, the most common measures of engagement and burnout do not support this argument (Cole et al., 2012). Following the recommendation of Cole et al. (2012), I measure engagement more in line with its original conceptualization proposed by Kahn (1990), and the findings indicated that both student engagement and burnout are best represented as standalone constructs. Specifically, student engagement, as comprised of emotional, behavioural, and cognitive dimensions, was distinct to student burnout, as comprised of exhaustion, cynicism, and inefficacy. Moreover, in this dissertation, the antecedents of student engagement and burnout were also different in one instance. Taken together, these findings

suggest that engagement is not a repackaging of burnout from a positive psychology perspective – instead they are both standalone concepts that are related to each other.

In a separate investigation, I also examine the relationships between student engagement and burnout. Here, I propose a model for the relationships between the underlying student engagement and burnout dimensions (see Appendix R). The My findings largely supported this model, providing preliminary evidence that (a) cognitive engagement can act as a catalyst for emotional and behavioural engagement, (b) exhaustion may be the first step in the burnout process with inefficacy occurring in parallel, and (c) burnout can result from an erosion of engagement. This model contributes to our understanding of the potential relationships between engagement and burnout dimensions – an area that has received little attention in the literature. However, these findings must be viewed with caution because they were based on cross-sectional data.

8.4 Limitations and Future Research

My theoretical contributions should be considered in light of certain limitations of the dissertation. One limitation stems from the use of self-report questionnaires (Studies 1, 2, and 4) and interviews (Study 3). These methods are prone to social desirability bias. Social desirability is the tendency for individuals to consistently present themselves positively (Podsakoff et al., 2003). This tendency can bias the mean responses as well as the relationships between variables (Podsakoff et al., 2003). For instance, students may overstate their performance in a course or understate the extent to which they felt burnt out. As such, I attempt to minimize social desirability bias in Study 3 by reconciling inconsistencies in students' responses. However, for Studies 1, 2, and 4, social desirability was not controlled. I recommend that future research on

instructor-leadership control for social desirability by using an established measure (e.g., Fischer & Fick, 1993).

The use of self-report measures to measure instructor-leadership, student engagement and burnout, and student achievement also means that the findings can be affected by common method bias (Studies 1, 2, and 4). Although the effects of common method bias are not usually strong enough to invalidate research findings, it can be a cause for concern (Doty & Glick, 1998). For Studies 1 and 4, I used the comprehensive CFA marker technique to demonstrate that common method bias did not substantially inflate relationships. Additionally, for Study 1, the questionnaire measuring control variables was distributed at a different point in time, thus further reducing the risk of common method bias. Future research should consider taking further precautions to reduce the potential effects of common method bias.

Common method bias can be reduced by obtaining predictor, mediator, and outcome variables from different sources (Podsakoff et al., 2003). For instance, in the early stages of this dissertation, I intended to obtain students' actual tests scores which would then be cross-referenced to students' survey responses regarding instructor-leadership. However, using this approach for all departments at a university, meant that ethical approval was needed from each department. Also, ethical approval would likely have been difficult to obtain because instructors' names as well as students' identification would need to be provided to cross-reference survey responses to grades from a database. To overcome the ethical approval issue while still using actual grades, perhaps future research can focus on a small group of classes for which each instructor agrees to be part of the study. In addition to student achievement, indicators of student engagement and burnout dimensions can be obtained from sources that are different to the survey measures of instructor-leadership. For instance, recent advancements in technology allow

researchers to measure students' emotions and attention via the use of nonintrusive biosensors (Rebolledo-mendez et al., 2009). These sensors can be worn during classes and the results can be cross-referenced to students' survey responses.

Another limitation of using self-report measures of leadership is that they can create challenges for the accuracy of leadership ratings. Hansbrough, Lord, and Schyns (2015) explain that follower ratings of leadership are prone to numerous *individual* biases, e.g., personality, affectivity, needs and motives, and attribution styles; *psychological* biases, e.g., stereotyping, perceived similarity, liking, and mood; and *contextual* biases, e.g., leader individual differences, distance, national culture, and research methods. To minimize these biases in future instructor-leadership studies, numerous techniques can be employed, including the training of student-raters; the use of more explicit and accurate instructions; use of scripts, events, and/or critical incidents in framing questions; and controlling for individual differences (Hansbrough et al., 2015).

A main limitation of this dissertation is that cross-sectional (Studies 1, 2, and 4) and interview data (Study 3) do not allow for causal conclusions. It is possible that the reverse relationships are true. For instance, engaged students can cause their instructors to become transformational (Skinner & Belmont, 1993) and disengaged students can potentially cause their instructors to become destructive. The use of cross-sectional data is also particularly problematic for assessing the stages of the dimensions underlying student engagement and burnout.

To test causality, future research can adopt randomized experimental designs. For randomized trials, higher education students from the same subject-discipline can be randomly assigned to either a group led by either a transformational instructor-leader or a group led by a

destructive instructor-leader (actors can be hired to portray the instructor-leadership behaviours). In each group, students can be taught a 'module' in a similar fashion to a HEI module, i.e., one or two lectures a week for a specific number of weeks. Both groups should be taught on the same day and same time of day to minimize the effects of potential confounding variables (D. Bligh, 1998). During each session, engagement and burnout can be measured over time by using biosensors and/or repeated surveys. Student achievement can be measured via module tests that should be administered at specific intervals (e.g., mid-module and/or end of module). This type of research design minimizes the effects of confounding variables, greatly minimizes selection and common method bias, and provides strong evidence of causality.

An ethical issue in using randomized trials is the exposure of students to destructive instructor-leadership behaviours. One way to minimize this potential harm is to screen participants and exclude those that suffer from depression or social anxiety. However, this selection bias can affect the validity of the results. An alternative and potentially superior approach is to use a computer-simulation. Students can be immersed into a computer-simulated classroom environment that simulates the experience of being exposed to a transformational or destructive instructor-leader. The use of a simulated instructor-leader minimizes the ethical issue of having 'real-life' instructors use harmful behaviours towards students. Simulated environments can be further enhanced via the use of virtual reality technology; virtual reality is becoming increasingly popular and feasible for research purposes (Kiss, 2014).

An alternative to experimental trials is situational judgement tests. Situational judgement test items can be used to present students with hypothetical destructive instructor-leadership scenarios that they are likely experience in HEI module interactions. Using one incident from my research, an example of a situational judgement test item is as follows: "You are seated in the

classroom and the instructor asks the class a question. After no response from the class, the instructor points to you. You reply that you do not know the answer. In an aggressive tone, the instructor asks how could you *not* know the answer. Of the following options, indicate how you would likely react to…" Participants can then be presented with options regarding engagement and burnout reactions. The incidents from my interview findings (i.e., Study 3) can be used for creating these situational judgement test items.

Another limitation of this research is that Studies 1, 2, and 4 were conducted in one cultural context, i.e., the UK. Even though some students were from various backgrounds (e.g., interviews in Study 3 and 25.8% of the sample in Study 4), the majority of the sample in this dissertation are students from the UK. As such, the derived measures for and outcomes of transformational and destructive instructor-leadership need to be confirmed across cultures. For instance, the UK culture may emphasize more supportive type leader behaviours, e.g., consideration, whereas the US culture may favor more charismatic behaviour (Alimo-Metcalfe & Alban-Metcalfe, 2005). This notion is in line with the Global Leadership and Organizational Behavior Effectiveness (GLOBE) research findings, which suggest that different cultures have different implicit theories about outstanding and acceptable leaders (Javidan, Dorfman, Luque, & House, 2006). Following these cultural arguments, at the end of Studies 3 and 4, I emphasized the potential for power distance to influence students' perceptions of destructive leadership, and gave an example based on the interview data. Therefore, future research needs to assess measurement equivalence or measurement invariance across cultures. Measurement invariance occurs "when members of different populations who have the same standing on the construct being measured receive the same observed score on the test" (N. Schmitt & Kuljanin, 2008, p.

211). To assess measurement invariance, CFA can be used in a series of invariance tests (see Vandenberg & Lance, 2000).

Future studies can expand the MLQ-SS to include further dimensions of transformational leadership. Other potential transformational instructor-leadership dimensions are inferred by items that were deleted in Study 1. More specifically, the ETLQ contains items describing level of challenge and empowerment, and both are associated with transformational leadership. *Level of challenge* describes the requirement for students to think critically and show understanding. This is sometimes associated with intellectual stimulation (Bolkan & Goodboy, 2011), but a separate analysis indicates that level of challenge may be better represented as a distinct dimension of transformational instructor-leadership. *Empowerment* entails the degree of choice students are given regarding the module content, and how they are allowed to learn such content. This is similar to a transformational leadership dimension referred to as enabling (Alimo-Metcalfe & Alban-Metcalfe, 2005). Both dimensions can be developed in future work.

Finally, future research should examine the dynamics of authentic and ethical leadership theories in instructor-student relationships. Authentic leadership is "a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate" (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008, p. 94). Educational research examines concepts linked to authentic leadership, e.g., warmth, caring, support, and emphasis on well-being (Freeman, Anderman, & Jensen, 2007; Teven & McCroskey, 1997). Thus, authentic leadership theory may provide a conceptual framework for integrating and advancing research on authentic instructor-student relations. In the corporate context, authentic leadership is associated with increases in followers' OCB, including helping of associates and behaving politely; feelings of empowerment (Walumbwa, Wang, Wang, Schaubroeck, & Avolio,

2010); group performance (Clapp-Smith, Vogelgesang, & Avey, 2009); and firm performance (Hmieleski, Cole, & Baron, 2012). It is worth examining whether an instructor's use of authentic leadership behaviours is related to similar desirable outcomes in the HEI context.

Ethical leadership is defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (M. E. Brown, Treviño, & Harrison, 2005, p. 120). The norm for appropriate conduct is universally determined by levels of integrity, altruism, collective motivation, and encouragement (Resick, Hanges, Dickson, & Mitchelson, 2006). There is little research on ethics in HEI module interactions, but organizational behaviour research shows that ethical leadership positively influences followers' moral reasoning; prosocial or citizenship behaviours; and work attitudes, including satisfaction, motivation, and commitment (M. E. Brown & Treviño, 2006). Therefore, like authentic leadership, it is worth examining the impact of ethical leadership in instructor-student relationships.

8.5 Practical Implications

In addition to implications for future research, this dissertation also provides some practical implications. A major practical implication of my research is that it can be used as a basis for training and developing higher education instructors. I develop a comprehensive training and development programme, which is included in Appendix S. This programme is based on my findings from both the transformational and destructive instructor-leadership studies.

The training and development of instructor-leadership can be described in four phases, including assessment, design, implementation, and evaluation (DeSimone & Werner, 2006). In the *needs assessment* phase, teaching performance gaps can be identified using student feedback questionnaires, discussions with heads of departments, and/or the use of trained observers. Once a teaching performance gap has been identified, the programme can be *designed* and *implemented* by following key activities. First, objectives should be set and these can be based on the instructor-leadership behaviours identified in this dissertation, e.g., a consideration objective can be, "Be able to show students how to think and arrive at conclusions in the subject". Second, the trainer or vendor can be selected by using the HEI's own staff and/or external trainers. Third, training methods and media can comprise of discussion method and behaviour role modeling. For behaviour role modeling the use of both positive and negative role models can be useful for training transformational instructor-leadership behaviours and eliminating destructive instructor-leadership behaviours.

Fourth, the training programme can be scheduled in the form of modules for each dimension of leadership. That is, the transformational leadership lens allows us to categorize numerous behaviours from educational research into a classification of four leadership behaviours that can be translated into four modules. For the four modules, leadership training techniques such as behaviour role modeling, case discussion, and/or simulations can be delivered through short term interventions or workshops (Yukl, 2009). Also, given the time pressures many instructors face, self-training through videos or interactive computer programs can be used as a substitute for formal training (Yukl, 2009), e.g., a video on consideration can show an instructor using constructive feedback, showing patience in explaining things, offering help outside of class, etc. The video can even highlight the students' point of view showing how they

model the instructor's behaviours. Instructors may be required to attend one or two modules depending on where their largest performance gap lies. This approach reduces the likelihood of stretching an instructor beyond their repertoire of teaching methods (Bourner, 1997). The MLQ-SS can be used to design the four training modules. A modular design is intuitive, efficiently uses resources, and does not stretch instructors beyond their capabilities. After design and implementation, the final phase is the *evaluation* of the training programme. For this phase, Kirkpatrick's model can be used to judge trainees' reaction, learning, behaviour, and results (D. Kirkpatrick, 2004).

For training and development, it is often unrealistic to expect that all instructors can adopt the varied number of behaviours and methods that are often proposed in educational research. A reality that has to be faced is the teaching staff's breadth of their repertoire of teaching methods (Bourner, 1997). According to Bourner (1997), "[i]f the teaching repertoire of academic staff is limited to only a few of the methods then that is the real choice available to us" (p. 348). Therefore, educational research, which advocates training programmes geared towards development of a various behaviours and methods, may not only be impractical but may also represent a wastage of resources. Instead of this scattershot approach, what is needed is for performance feedback to feed directly into training and development.

For performance feedback, most HEIs use some form of teaching evaluation instrument. It is likely that some items in these instruments may be similar to those of the revised MLQ-SS from Study 4. Therefore, the MLQ-SS can be incorporated in a subset of all module evaluations sent to students. That is, a smaller subset of students can be randomly selected to complete module evaluations that comprise of the MLQ-SS because the MLQ is an additional expense. However, the additional expense of purchasing the MLQ may be worthwhile because of the

strong relationships between transformational instructor-leadership and both student engagement and burnout. Specifically, data derived from these MLQ-SS can be used to train instructors to develop transformational instructor-leadership behaviours according to their performance gap, i.e., to address the instructor's weakest dimension/s. The one limitation of this approach is that modules with shared teaching responsibilities cannot be evaluated unless one instructor is the primary module coordinator, and also teaches the majority of classes.

In addition to training and development, transformational and destructive instructor-leaders can be identified when hiring instructors. During the selection process, instructors can be screened using psychometric assessments. Psychometric assessments can be used to measure personality traits indicative of different types of instructor-leaders. Personality traits such as extraversion and agreeableness can be indicative of transformational instructor-leaders (Judge & Bono, 2000). Narcissism, factors related to arrogance (Hogan & Hogan, 2001; Padilla, Hogan, & Kaiser, 2007), and integrity (Craig & Gustafson, 1998) can be indicative of destructive instructor-leaders.

To further reduce the potential for destructive instructor-leadership, HEIs should employ strategies that focus on power equalization. The instructor-student relationship in higher education is characterized by power differentials that heavily favour instructors. Students can be given more power by directly including their input as part of a performance management system for instructors. Students' input regarding instructor-student relations can be solicited via student feedback surveys, online student forums, interviews, etc. Allowing students to directly assess their instructors, helps to balance the power differentials in instructor-student relationships. Furthermore, student feedback on specific dimensions of instructor-leadership and/or student

engagement and burnout can be used as input for the needs assessment phase of the training and development programme.

8.6 Summary

This dissertation advances our understanding of instructor-leadership, student engagement, and student burnout. Specifically, I highlight key mechanisms (i.e., student engagement and burnout) through which instructor-leadership relates to student achievement. There are some limitations regarding social desirability, common method bias, and causality. Despite these limitations, I make important contributions by providing a balanced view of instructor-leadership, offering context-sensitive measures of transformational and destructive instructor-leadership, and showing that student engagement and burnout are mechanisms in the relationship between instructor-leadership and student achievement. In addition to these contributions, I meta-analyze transformational instructor-leadership research thus contributing to the instructor-leadership literature. Furthermore I offer more robust conceptualizations of student engagement and burnout which show that engagement and burnout are distinct constructs, thus adding to the educational literature.

The dissertation also has practical implications with respect to training and development programmes, selection screening methods, and power equalization tactics in order to develop transformational instructor-leaders and eliminate destructive instructor-leaders. HEIs that use these strategies to develop their instructor-leaders may create a competitive advantage in attracting student-customers because of (a) the importance students place on teaching (J. Douglas et al., 2006) and (b) the increasing use of social media and websites such as ratemyprofessor.com. Students use these outlets to communicate their instructor-student experiences to other students worldwide, thus influencing perceptions of HEIs' teaching service.

Both HEIs and students may benefit from the development of transformational instructor-leaders because the presence of such leaders in the HEI module is associated with higher student engagement, lower student burnout, and slightly higher student achievement. Therefore, these leaders can potentially increase graduation rates of our future leaders. As stated by Robert E. Quinn, “If we want to teach our students to become great leaders, we might consider embedding them in great organizations, meaning great [HEI modules]” (Anding, 2005, p. 492). With great leaders in great HEI modules, students are less likely to be draped over their desks and more likely to be engaged.

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Appendix A

A Meta-Analytic Review of Transformational Leadership in the Higher Education Module Context

Hypotheses

Prior to presenting the hypotheses, I first address the multidimensional nature of transformational leadership. Van Knippenberg and Sitkin (2013) argue that charisma, inspirational motivation, individualized consideration, and intellectual stimulation are conceptually distinct dimensions. However, when empirically measured by the MLQ, the dimensions lack discriminant validity (see Carless, 1998). For the MLQ, the mean correlations between the transformational leadership dimensions are very high (Judge & Piccolo, 2004). For this reason, and to compare the present review's findings to a previous meta-analysis, I treat transformational instructor-leadership as a single concept. The upcoming hypotheses are developed from this perspective.

I examine transformational instructor-leadership in relation to six outcomes. First, I examine motivation because "transformational leadership involves motivating others" (Avolio, 1999, p. 41). Second, I examine perceived instructor credibility because the positive effects of transformational leaders should translate into followers rating the leader more favourably (Judge & Piccolo, 2004). Third, I examine satisfaction because the level of autonomy and challenge provided by a transformational leader is expected to promote follower satisfaction (Bass, 1999). Fourth, I examine students' performance because, by definition, transformational leadership behaviours are expected to push followers' performance beyond expectations (Bass, 1985). Finally, I examine both affective and cognitive learning because both are module-specific

student outcomes that are important for understanding the degree to which learning is taking place in a HEI module.

***Motivation*.** Motivation is defined as "those forces that push or propel [an individual]" to exert effort toward achieving a goal (Pardee, 1990, p. 3). A motivated individual is characterized by energy, effort, and direction. Transformational leadership has long been associated with the motivation of others (Avolio, 1999). Transformational instructor-leaders may encourage their students to exert more effort in order to help the students realize their full potential or higher order needs (Bass, 1997). Additionally, transformational leaders can influence students' motivation via the process of emotional contagion. Emotional contagion is "a nonconscious process by which moods [and emotions] are transferred through mimicry of displays" (Barger & Grandey, 2006, p. 1229). According to this theory, a transformational instructor-leader – one who is energetic and arousing – can transfer their positive moods and emotions to students. Consequently, these students may then experience increased enthusiasm and motivation. Therefore, I predict that:

H1: Transformational instructor-leadership is positively related to students' motivation.

***Perceived instructor-leader credibility*.** A credible leader is one who followers perceive as convincing, dependable, competent, trustworthy, and believable. A transformational leader should be perceived as credible because these leaders are seen as extraordinary. According to Weber (1947), these leaders are "endowed with exceptional qualities" (p. 249). Such superhuman powers and qualities, should foster students' admiration and respect for the transformational instructor-leader (Conger, Kanungo, & Menon, 2000). Conger et al. (2000) add that transformational leaders can be perceived as credible because (a) they show concern for their individual followers' needs as opposed to their own self-interests and (b) they are typically

perceived as knowledgeable and experts in their field. For these reasons, the following is proposed:

H2: Transformational instructor-leadership is positively related to students' perception of instructor's credibility.

Satisfaction with leader. Satisfaction refers to a feeling of gratification or contentment. In the HEI module context, students' satisfaction is conceptualized as "the positive emotion students feel … because of instructor-student interactions" (Noland, 2005, p. 11). Transformational instructor-leaders should enhance students' satisfaction because these leaders provide meaningful goals and exhibit exemplary behaviours (Conger et al., 2000). Transformational instructor-leaders link HEI module goals to students' lives, which increases the meaningfulness of these goals, and thus improves students' satisfaction with the leader (Conger et al., 2000). These leaders also display acts of self-sacrifice and expertize in helping students to realize module goals, and such exemplary behaviours are likely to build students' affect towards the leader (Conger et al., 2000). For these reasons, I propose that:

H3: Transformational instructor-leadership is positively related to students' satisfaction with instructor-leader.

Academic performance. I broadly define academic performance as the degree to which students accomplish an academic-related task or goal, e.g., grades or grade point average (GPA). Transformational instructor-leaders should enhance students' academic performance because these leaders are both inspiring and supportive. In a HEI module, such instructor-leaders should inspire student-followers to perform beyond normal expectations (Bass, 1990). Additionally, transformational instructor-leaders use supportive coaching and mentoring behaviours. These behaviours should improve students' beliefs in their abilities to achieve module goals, i.e., self-

efficacy towards the module. Increased self-efficacy should enhance students' academic performance (Bandura, 1986). Therefore, I expect that:

H4: Transformational instructor-leadership is positively related to students' academic performance.

Affective learning. Affective learning is defined as feelings or emotions directed toward the subject (Krathwohl, Bloom, & Masia, 1956). Transformational leaders influence their followers through emotions because these leaders inspire, stimulate, and support followers. Transformational instructor-leaders can increase students' affective learning because these leaders use behaviours that enhance students' self-efficacy. For instance, transformational instructor-leaders use intellectually stimulating behaviours that are likely to connect practice to theory, thus helping students to connect to the subject (Wenger, 1999). When students feel connected to the subject matter, this should enhance their beliefs in their abilities to tackle the subject, thus leading to students' experiencing positive feelings and emotions towards the subject and its content.

H5: Transformational instructor-leadership is positively related to students' affective learning.

Meta-analyses confirm the relationships between transformational leadership and followers' motivation, perceptions of leader credibility, satisfaction with leader, performance, and satisfaction with context (Derue et al., 2011; Judge & Piccolo, 2004; G. Wang et al., 2011). However, these analyses did not focus on the HEI module context, and thus ignored other outcomes that are particularly relevant to this setting. In this higher education setting, one outcome that is often examined by educational psychologists is that of cognitive learning.

Cognitive learning. Cognitive learning deals with "the recall or recognition of knowledge and the development of intellectual abilities and skills" (Bloom, 1984, p. 7). A transformational leader uses intellectually stimulating behaviours that encourage followers to "think about problems, issues, and strategies in new ways" (Johns & Saks, 2007, p. 314). Therefore, in an instructor-student relationship, intellectually stimulating leader behaviours should encourage students to think about HEI module content and issues in novel ways, thus improving their recall and knowledge development. Moreover, a transformational instructor-leader uses charismatic behaviours that are likely to be seen as extraordinary and memorable. Therefore, charismatic behaviours may help students to better recall what they have learned. Hence, I expect that:

H6: Transformational instructor-leadership is positively related to students' cognitive learning.

Methods

The purpose of this study is to conduct a meta-analytic review of transformational instructor-leadership literature in higher education, and to analyze research in which such leadership has been empirically linked to the hypothesized student outcomes. In comparison to individual studies, a meta-analysis provides more precise estimates of the effect sizes for the association between transformational instructor-leadership and student outcomes including its generalizability.

Inclusion criteria. In this review, I included quantitative studies derived from higher education research. The reason for limiting the search to quantitative studies was that the objective of this review was to examine empirical relationships between transformational instructor-leadership and student outcomes. No restrictions were placed on geographic location, gender, and age. The transformational instructor-leadership construct had to explicitly reference

transformational or charismatic leadership theory including its dimensions. Transformational leadership theory in HEI module interactions was the focus of the search. Outcome measures were restricted to the hypothesized outcomes.

Search methods for identification and selection of studies. Both published and unpublished works qualified for the search. Electronic searches were conducted using SciVerse Scopus, Web of Knowledge, and Google Scholar. Keywords used in these searches are shown in Table A1. No language or date restrictions were applied. Any articles found in the initial electronic search were used as a basis for conducting both a backward and forward search.

A backward search refers to the reviewing of citations from articles identified in the keyword search to find prior articles on the topic (Webster & Watson, 2002). For the backward search process, I conducted both a backward reference search and a backward authors search. A backward reference search involved reviewing all relevant references from the articles to find further relevant research on the topic (Levy & Ellis, 2006). This sometimes involved second and third level backward searching in which I reviewed "references of the references" (Levy & Ellis, 2006). A backward authors search involved reviewing previous publications of the authors (Levy & Ellis, 2006).

A forward search involves identifying articles which cited the key articles identified during keyword and backward searches (Webster & Watson, 2002). Similar to a backward search, forward searching also involved reference and author searches. A forward reference search involved reviewing articles that cited the article (Levy & Ellis, 2006). A forward authors search involved a review of the authors follow-up work after the article (Levy & Ellis, 2006).

In conducting the backward and forward search, I collaborated with authors to source full-text copies of relevant studies when these studies were not available via electronic databases.

Table A1

Study Flow Table for Review of Transformational Instructor-Leadership

Keywords	SciVerse Scopus	Web of Knowledge, Web of Science	Google Scholar	Number of results	Selection by abstract
Instructor teacher leadership	56	62	150 of 132,000	268	3
Classroom leadership higher education	168	116	150 of 696,000	434	6
Transformational teaching	380	299	150 of 102,000	829	7
Transformational teacher leader	76	59	150 of 42,800	285	2
Transformational teacher leadership	184	267	150 of 68,100	601	8
Instructor transformational leadership	17	32	150 of 20,800	199	15
Transformational classroom leadership	30	24	150 of 41,500	204	14
Transformational leadership and students	210	231	150 of 73,400	591	14
Professor as a leader and students	220	115	150 of 678,000	485	4
Total number of records	1,341	1,205	1,350	3,896	73
Records after duplicates removed					35
Records from backward/forward search and author communications					5
Studies removed					18
Total studies included in review					22

In addition to the electronic, backward, and forward searches, I further attempted to minimize publication bias by consulting colleagues publishing in this field regarding any unpublished studies[29]. The cut-off date for the search was April, 2015.

[29] I communicated with San Bolkan and Alan Goodboy in searching for unpublished works.

Search findings. For the keyword search, the databases retrieved 3,896 records. For Google Scholar's database, I set a limit of 150 results for each keyword due to the large number of search results that resulted for this database. After screening the results, I retrieved 73 abstracts. After removing duplicates from the 73 abstracts, 35 remained and I retrieved full-text versions of these studies (see Table A1).

I then conducted a backward and forward search using the 35 retrieved studies. Based on these searches, along with consultations with authors, I sourced 5 additional studies. Therefore, I found a total of 40 studies, and these studies comprised of 35 articles and 5 dissertations. From these 40 studies, 18 were excluded. Of the 18 excluded studies, one did not provide enough information to calculate correlation coefficients, one was a conference publication that could not be sourced even after emailing the authors, and the remaining 16 did not comply with the inclusion criteria, e.g., 1 was a case study, 2 did not measure any of the hypothesized outcomes, 2 examined only intellectual stimulation, and a few did not examine any outcomes. Hence, the final number of studies included in the meta-analysis was 22 (see Table A2 for a summary of the findings).

Meta-analytic procedures. I conducted the analyses using Microsoft Excel, and then verified the values using SPSS syntax provided by Field and Gillett (2010). For the analyses, I used the meta-analytic methods proposed by Hunter and Schmidt (2004). Following this approach, I corrected each effect size for attenuation due to measurement error for both the predictor and the criterion in each study. This correction provided an estimated 'true-score' correlation. To calculate the true-score correlation, I used the reliability coefficients reported in each study. For two of the studies, reliability was not reported, and thus I used the average of the reliabilities reported in other studies. The mean reliabilities were .88 for transformational

Table A2

Summary of Findings

Author/s	Source of study	Country	Module/program	Sample	Module delivery	Type of student	Measure of TIL	Dependent variables used
Nischan (1997)	ProQuest Dissertations & Theses	USA	Business	Students	Face-to-face	Undergraduate	MLQ	Extra effort, effectiveness, satisfaction
Kuchinke (1999)	Journal of Vocational Education Research	USA	Instructional design, instructional technology, T&D, business principles	Students	Face-to-face	Graduate	MLQ (adapted - 15 of 24 items used)	Extra effort, effectiveness, satisfaction
Ojode et al. (1999)	Midwest Academy of Management Annual Meeting Proceedings	USA	Human Resource Education	Students	Face-to-face	Graduate	MLQ	Extra effort, effectiveness, satisfaction
Harvey et al. (2003)	Psychological Reports	Canada	Humanities, Social Sciences, Business Admin., Education, Natural Sciences	Students	Face-to-face	Undergraduate	MLQ	Instructor's performance rating, student involvement
Walumbwa et al. (2004)	Journal of Management Development	USA	N/A	Students	Face-to-face	Undergraduate and Graduate	MLQ	Extra effort, effectiveness, satisfaction
Noland (2005)	Masters dissertation	USA	Numerous departments	Students	Face-to-face	Undergraduate	MLQ	Cognitive and affective learning, satisfaction
Pounder (2008)	Leadership	Hong Kong	Strategic Management (Business)	Students	Face-to-face	Undergraduate	MLQ	Extra effort, effectiveness, satisfaction
Bolkan and Goodboy (2009)	Journal of Instructional Psychology	USA	Communication	Students	Face-to-face	Undergraduate	MLQ	Cognitive and affective learning, satisfaction, participation,

Table A2

Summary of Findings

Author/s	Source of study	Country	Module/program	Sample	Module delivery	Type of student	Measure of TIL	Dependent variables used
								instructor credibility
Gill et al. (2011)	Business and Economics Journal	India	Commerce	Students	Face-to-face	Undergraduate	Created scale	Student performance
Livingston (2010) 2010	Doctoral dissertation	USA	Business Administration	Students/ Lecturers	Online	Undergraduate	MLQ	Extra effort, effectiveness, satisfaction
Harrison (2011)	Emerging Leadership Journeys	USA	Leadership	Students	Online	Graduate	MLQ	Cognitive and affective learning, teacher credibility, satisfaction, grade
Shiva Prasad (2011)	Proceedings of the World Congress on Engineering	India	Engineering	Students	Face-to-face	Undergraduate	MLQ	Cumulative grade point average
Khan et al. (2011)	Interdisciplinary Journal of Research in Business	Pakistan	Numerous departments	Lecturers	Face-to-face	Not stated	MLQ	Extra effort and satisfaction
Gill et al. (2010)	The Open Education Journal	Canada	N/A	Students	Face-to-face	Undergraduate and Graduate	Created scale	Educational satisfaction
Cerda Suarez and Hernandez (2012)	European Journal of Engineering Education	Portugal & Spain	Market Research (masters); Signals and Systems Theory (undergraduate)	Students	Face-to-face	Graduate and undergraduate	Created scale	Performance of the professor
Young-In and Nan-Hee (2012)	Korea Women's Sport Association	Korea	Physical education	Students	Face-to-face	Not stated	Created scale	Satisfaction and trust

Table A2

Summary of Findings

Author/s	Source of study	Country	Module/program	Sample	Module delivery	Type of student	Measure of TIL	Dependent variables used
Bogler et al. (2013)	Educational Management Administration & Leadership	Israel	Numerous modules	Students	Online	Not stated	MLQ (adapted - invalid items removed)	Satisfaction, participation, academic achievement
Kahai et al. (2013)	British Journal of Educational Technology	USA	Introduction to Management Information Systems	Students	Online	Undergraduate	MLQ	Cognitive effort, discussion satisfaction, decision quality
Murua and Piédrola (2013)	Journal of Education/Revista de Educación	Spain	Numerous modules	Students	Face-to-face	Undergraduate	MLQ	Cognitive and affective learning
Peters (2014)	Doctoral dissertation	USA	Introductory Psychology	Students	Face-to-face	Undergraduate	TLI	Effort, satisfaction, and performance
Balwant et al. (2014)[a]	Academy of Management Best Paper Proceedings	UK	Various faculties	Students	Face-to-face	Undergraduate	MLQ	Extra effort, effectiveness, satisfaction, student achievement
Hardee (2014)	Doctoral dissertation	USA	Business department	Students	Face-to-face and hybrid	Undergraduate	MLQ	Extra effort, effectiveness, satisfaction

Note. TIL = transformational instructor-leadership; TLI = Transformational Leadership Inventory.

[a.] Only the MLQ subsample is used in this study.

instructor-leadership, .86 for motivation, .84 for instructor credibility, .84 for satisfaction with leader, .94 for academic performance, .92 for affective learning, and .87 for cognitive learning. For the correlations, I also reported the variability of these estimates. I provided both 80% credibility intervals and 90% confidence intervals. The credibility intervals indicate variability in the correlations for the individual studies, whereas the confidence intervals estimate the variability for the mean correlation.

In conducting this meta-analysis, there were three issues to consider. First, clear coding definitions along with consensus among raters was necessary to ensure coder consistency (N. W. Schmitt & Klimoski, 1990). For the studies that met the inclusion criteria, two raters collaborated to code the outcome variables into categories. Then, using these categories and an 'other' option, two final-year doctoral students independently coded the outcome variables. Inter-coder agreement was 95%, and this indicated high inter-rater agreement. Second, two of the studies each provided values for two independent samples. For these two studies, I treated each subsample as a separate study. Therefore, in presenting the findings later on, *k* represents the number of samples or correlations rather than the number of studies. Third, as mentioned earlier, I treated transformational instructor-leadership as a single higher-order factor. This was a sensible approach because (a) most studies used a composite score for transformational instructor-leadership and (b) it allows for a comparison between the present review's findings and the meta-analysis conducted by Judge and Piccolo (2004). For the few studies that provided multiple correlations and reliabilities for the individual transformational leadership dimensions, I adopted the approach used in other transformational leadership meta-analyses by computing the average of the correlations (e.g., Judge & Piccolo, 2004; G. Wang et al., 2011).

Table A3

Relationships Between Transformational Instructor-Leadership and Students' Outcomes

Criterion	k	N	$\bar{r}$	$\hat{\bar{\rho}}$	80% CV_{ρ}		90% $CI_{\hat{\bar{\rho}}}$		Q
					Lower	Upper	Lower	Upper	
Motivation	17	2676	0.40	0.47	0.05	0.89	0.34	0.60	1263.69
Perceived instructor credibility	15	1889	0.62	0.72	0.50	0.95	0.65	0.80	798.79
Satisfaction with leader	20	3362	0.53	0.62	0.33	0.90	0.53	0.70	4948.77
Academic performance	7	1493	0.16	0.19	-0.08	0.46	0.05	0.33	85.62
Affective learning	4	665	0.68	0.73	0.63	0.83	0.66	0.80	20.28
Cognitive learning	4	665	0.47	0.52	0.38	0.66	0.42	0.62	19.52

Note. k = number of samples/correlations; N = combined sample size; $\bar{r}$ = sample-size weighted mean uncorrected correlation; $\hat{\bar{\rho}}$ = estimated corrected mean correlation or true-score correlation; CV = credibility interval; CI = confidence interval.

Results

The findings supported H1 to H3, H5, and H6 (see Table A3). Transformational instructor-leadership was positively related to students' motivation ($\hat{\bar{\rho}}$ = .47), perceived instructor credibility ($\hat{\bar{\rho}}$ = .72), and satisfaction with leader ($\hat{\bar{\rho}}$ = .62). These three outcomes were most commonly studied, likely due to the fact that measures for these criteria were included in the MLQ. Transformational instructor-leadership was also positively related to learning outcomes. The findings showed that transformational instructor-leadership was positively related to students' affective learning ($\hat{\bar{\rho}}$ = .73) and cognitive learning ($\hat{\bar{\rho}}$ = .52). For these five criteria, the mean correlations were distinguishable from zero, in that the 90% confidence intervals did not include zero. Additionally, the 80% credibility intervals excluded zero indicating that more than 90% of the individual correlations were greater than zero. In comparison to the other criteria, transformational instructor-leadership had a relatively weaker, yet still positive relationship with students' academic performance ($\hat{\bar{\rho}}$ = .19). Also, the 90% confidence intervals did not include zero. However, the 80% credibility intervals included zero, indicating that more than 10% of the correlations included in the analysis were negative. Therefore, these findings partially support H4.

Regardless of the strength and generalizability of most of the estimates, the Q-statistic values were all significant, indicating that there was significant heterogeneity among the included studies. To determine the source of the heterogeneity, I investigated whether the correlations varied according to *culture* (1 = Western, 0 = Eastern), *module delivery* (1 = face-to-face, 0 = online), *use of MLQ* (1 = MLQ, 0 = other measure), *and gender ratio* (percentage of

males to females)[30]. To do so, I employed full-information maximum-likelihood weighted generalized least squares regressions (i.e., meta-regressions) specifying random effects models (see Tables A4 and A5). I conducted these analyses using the software provided by Lipsey and Wilson (2000).

The moderator analyses showed that each of the four moderators were significant in at least one of the regression analyses. For culture, effect sizes for the relationship between transformational instructor-leadership and motivation, instructor credibility, and satisfaction with leader were significantly larger in Western cultures than in Eastern cultures (respectively β = .51, .75, .56; $p < 0.01$)[31]. Pounder (2008) explained that the cultural values of Eastern cultures might temper the impact of transformational instructor-leadership behaviours. For instance, students from Eastern cultures tend to value reflective interactions with instructors in which they take time to process responses rather than rapid 'off the cuff' interactions that may work better in Western cultures.

For module delivery, the effect sizes for the relationship between transformational instructor-leadership and both motivation and academic performance were significantly larger in face-to-face modules than in online modules (respectively β = .43, .97; $p < 0.01$). This was not surprising given that face-to-face interaction is the 'natural' state for leadership behaviour (Avolio, Walumbwa, & Weber, 2009). Bogler et al. (2013) explained that many of the status symbols that are featured in face-to-face teaching are absent in online interactions, e.g., standing in front of the room, controlling the physical space, allocating time, etc. The absence or less explicit representation of these leadership mechanics in online settings may explain why

[30] I did not examine any moderator effects of transformational instructor-leadership on affective and cognitive learning because only a few studies investigated these relationships (k = 4 for each of these outcomes).
[31] Given that culture was a significant moderator, I conducted separate meta-regressions using Hofstede's cultural dimensions. However, none of Hofstede's dimensions were significant in any of these models.

Table A4

Inverse Variance Weighted Regression Analyses (Random Intercept, Fixed Slopes Model) Showing the Moderation Effect of Culture, Delivery, and MLQ Usage on the Relationship Between Transformational Instructor-Leadership and Students' Motivation, Perceptions of Instructor Credibility, Satisfaction With Leader, and Academic Performance.

	Motivation			Instructor credibility			Satisfaction with leader			Academic performance		
Variables	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Constant	-.51*	.22	.00	.36**	.11	.00	.44**	.15	.00	-.06	.14	.00
Culture	.38**	.11	.51	.33**	.07	.75	.30**	.10	.56	-.16	.08	-.35
Delivery	.34**	.12	.43	.04	.08	.06	-.13	.10	-.24	.44**	.11	.97
MLQ usage	.53*	.17	.45	.10	.07	.21	.12	.11	.20	.14	.11	.31
Mean ES		.56			.73			.66			.22	
k		17			15			20			7	
R^2		.61**			.73**			.43**			.75**	

Note. MLQ = Multifactor Leadership Questionnaire; ES = effect size; k = number of samples/correlations.

*$p < .05$

**$p < .01$

Table A5

Inverse Variance Weighted Regression Analyses (Random Intercept, Fixed Slopes Model) Showing the Moderation Effect of Gender on the Relationship Between Transformational Instructor-Leadership and Students' Motivation, Perceptions of Instructor Credibility, Satisfaction With Leader, and Academic Performance.

	Motivation			Instructor credibility			Satisfaction with leader			Academic performance		
Variables	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Constant	.71**	.16	.00	.76**	.05	.00	.64**	.06	.00	.02	.09	.00
Gender	-.19	.19	-.32	-.01	.01	-.23	.00	.01	.12	.16**	.06	.78
Mean ES		.57			.75			.65			.20	
k[a]		13			12			15			5	
R^2		.07			.05			.01			.61**	

Note. MLQ = Multifactor Leadership Questionnaire; ES = effect size; k = number of samples/correlations

[a.] A reduced sample size was used to examine the moderating effects of gender because not all studies provided this information.

*$p < .05$

**$p < .01$

transformational instructor-leadership is more strongly associated with students' motivation and performance in more formal face-to-face settings.

For MLQ usage, the effect size for the relationship between transformational instructor-leadership and motivation was significantly larger for studies that measured transformational instructor-leadership with the MLQ than in one study that used the Transformational Leadership Inventory (TLI) (i.e., Peters, 2014) (β = .45, p < 0.05). This may be a signal that the TLI does not fully tap into aspects of transformational instructor-leadership that promote students' motivation. Alternatively, another plausible explanation is that the MLQ studies used a measure of motivation that was more likely to be highly associated with transformational leadership.

Finally, for gender, the effect size for the relationship between transformational instructor-leadership and academic performance was significantly larger for males than for females (β = .78, p < 0.01). C. Douglas (2012) explained that, in comparison to female followers, male followers might be more sensitive to the degree to which their leader uses transformational leadership behaviours. Perhaps males' biological or psychological characteristics might explain why they respond better academically to transformational instructor-leaders than females (McNabb et al., 2002). In a similar vein, Bellou (2011) explained that men and women may attempt to fit into certain roles according to societal stereotypes, i.e., social-role theory. Following this thought, male students might be more hierarchical, dominant, and aggressive than female students who might be more cooperative, unselfish, and nurturing (Bellou, 2011). Perhaps these male characteristics complement dynamic and charismatic teaching, thus leading to improved academic performance under these teaching conditions. There is a dearth of research on followers' gender and transformational leadership, and this association requires further exploration in order to improve our understanding of such gender findings.

Discussion

In recent times, leadership researchers are paying more attention to transformational instructor-leadership, drawn to its potential to capture effective teaching via a leadership lens. My meta-analytic findings show that transformational instructor-leadership is positively associated with desirable student outcomes. Hence, transformational leadership theory is very relevant to higher education teaching.

The findings in the present review follow a similar pattern to that of the meta-analysis conducted by Judge and Piccolo (2004). Table A6 shows that, in this review, the effect sizes for the relationship between transformational leadership and motivation, satisfaction with leader, and performance, are marginally smaller than those reported by Judge and Piccolo (2004). The relatively weak relationship between transformational instructor-leadership and academic performance is particularly surprising because these leaders are expected to motivate followers to achieve high levels of performance. Perhaps the relationship between transformational instructor-leadership and performance may differ across performance criteria (G. Wang et al., 2011). For instance, even though I analyze academic performance in the present review, transformational instructor-leadership may be more strongly related to students' extra-role performance, e.g., helping students in class (see Balwant et al., 2014), or students' creative performance (G. Wang et al., 2011). Moreover, as explained earlier, the findings show that while the overall effect size for transformational instructor-leadership and academic performance is relatively weaker than other effect sizes, both delivery and gender moderate this relationship. The effect sizes for the relationship between transformational leadership and perceived leader credibility and affect towards context are both notably larger in the HEI module context than in other settings examined by Judge and Piccolo (2004). These latter findings highlight the potential

Table A6

Comparison Between Transformational Instructor-Leadership and Transformational Leadership Effect Sizes

Criterion	$\widehat{\bar{\rho}}$ [a]	$\widehat{\bar{\rho}}$ [b]
Motivation	0.47	0.53
Perceived leader credibility	0.72	0.54[c]
Satisfaction with leader	0.62	0.71
Affect towards module/job	0.73[d]	0.58[d]
Performance	0.19	0.26

Note. $\widehat{\bar{\rho}}$ = estimated corrected mean correlation or true-score correlation.
a. Transformational leadership in HEI module settings (present review).
b. Transformational leadership in corporate, military, and other formal leadership positions (Judge & Piccolo, 2004).
c. Sample-size weighted mean correlation calculated using 'leader follower performance' and 'leader effectiveness' from Judge and Piccolo (2004).
d. Affective learning was compared to job satisfaction because they both measured satisfaction with the context.

value of transformational instructor-leadership in shaping students' impressions and feelings towards instructor and module.

This meta-analysis contributes the first integrative review of transformational leadership theory in HEI module settings. Previous meta-analyses examine transformational leadership primarily in corporate, administrative, military, and religious settings (see Derue et al., 2011; Judge & Piccolo, 2004; Lowe et al., 1996). As such, the relationships between transformational leadership and student outcomes in higher education module settings were previously not well understood. This review shows that there is value in employing transformational leadership principles in higher education teaching. Furthermore, in instructor-student relationships, transformational leadership is even more strongly related to certain follower outcomes than in other formal leadership settings.

Another contribution of this meta-analysis is that I draw upon data from various disciplines. Prior to this review, transformational instructor-leadership research was fractionated across diverse domains such as education, management, psychology, economics, engineering, sports, etc. (see Table A2). This topic is examined in various disciplines because of two reasons. First, the multidisciplinary nature of transformational instructor-leadership means that it crosses disciplinary boundaries between education, communication, management, and psychology. Second, transformational instructor-leadership describes higher education teaching, and thus research on this topic can exist in *any* discipline. Research on the same topic across distinct domains can be problematic when advancements are occurring in parallel vacuums. Therefore, I assimilate transformational instructor-leadership research, and in the dissertation I discuss how recent advancements can be used for developing future research (see Chapter 2, Section 2.4.2).

Appendix B

Mediators in Transformational Leadership Research

Mediator	Definition of Mediator	Outcome	Author/s	Med.	TFL Measure
Interpersonal justice	Perceived fairness with respect to interpersonal treatment (Cho & Dansereau, 2010).	Leader-directed OCB (+)	Cho and Dansereau (2010)	Full	MLQ (individualized consideration)
Procedural justice	The perceived fairness of procedures used to determine outcomes.	Trust (+)	Pillai et al. (1999)	N/A	MLQ
		Group-directed OCB (+)	Cho and Dansereau (2010)	Full	MLQ (charisma)
		OCB or extra-role behaviours (+)	Kirkman et al. (2009)	Full	Podsakoff et al. (1990)
Trust	"[F]aith in and loyalty to the leader" (Pillai et al., 1999, p. 904).	OCB (+)	Podsakoff et al. (1990)	Full	Podsakoff et al. (1990)
			Pillai et al. (1999)	Full	MLQ
		Satisfaction (+)	Jung and Avolio (2000)	Partial	MLQ
		Positive affective well-being (job satisfaction) (+)	Liu et al. (2010)	Partial	Li and Shi (2008)
		Negative affective well-being (perceived work stress) (-)	Liu et al. (2010)	Full	Li and Shi (2008)
		Physiological well-being (stress symptoms) (-)	Liu et al. (2010)	Full	Li and Shi (2008)
		In-role performance (+)	Bartram and Casimir (2007)	Full	MLQ
		Satisfaction (+)	Bartram and Casimir (2007)	Partial	MLQ
Leader-member	An exchange relationship between leader and	OCB (+)	Wang et al.	Full	Modified

Mediators in Transformational Leadership Research

Mediator	Definition of Mediator	Outcome	Author/s	Med.	TFL Measure
exchange	follower with respect to role expectations and rewards (H. Wang, Law, Hackett, Wang, & Chen, 2005).		(2005)		Podsakoff et al. (1990) (see Chen & Fahr, 2001)
		Task performance (+)	Wang et al. (2005)	Full	Modified Podsakoff et al. (1990) (see Chen & Fahr, 2001)
Psychological empowerment	"[I]ncreased intrinsic task motivation manifested in a set of four cognitions reflecting an individual's orientation to his or her work role: meaning, competence, self-determination, and impact" (Spreitzer, 1995, p. 1443).	Commitment (+)	Avolio et al. (2004)	Full[3]	MLQ
		Intention to quit (-)	Avey, Hughes, Normal, and Luthans (2008)	Full	MLQ
		Employee satisfaction (+)	Barroso Castro, Villegas Perinan, and Casillas Bueno (2008)	Full	MLQ
		Affective commitment (+)	Barroso Castro et al. (2008)	Full	MLQ
		In-role performance (+)	Bartram and Casimir (2007)	Full	MLQ
		Organizational innovation (-)	Jung, Chow, and Wu (2003)	Partial	MLQ
Self-concordant goals	"[T]he extent to which activities … express individuals' authentic interests and values" (Bono & Judge, 2003, p. 556).	Job satisfaction (+)	Bono and Judge (2003)	Partial	MLQ
		Organizational commitment (+)	Bono and Judge (2003)	Partial	MLQ

Mediators in Transformational Leadership Research

Mediator	Definition of Mediator	Outcome	Author/s	Med.	TFL Measure
Autonomy (need fulfilment)	"[R]efers to being able to self-organize one's behavior" (Kovjanic, Schuh, Jonas, Van Quaquebeke, & Van Dick, 2012, p. 1033).	Job satisfaction (+)	Kovjanic et al. (2012)	Partial	MLQ
Competence (need fulfilment)	"[C]oncerns feelings of mastery and effectiveness" (Kovjanic et al., 2012, p. 1033).	Job satisfaction (+)	Kovjanic et al. (2012)	Partial	MLQ
		Occupational self-efficacy (+)	Kovjanic et al. (2012)	Full	MLQ
Relatedness (need fulfilment)	"[R]efers to a feeling of connectedness and association" (Kovjanic et al., 2012, p. 1033).	Job satisfaction (+)	Kovjanic et al. (2012)	Partial	MLQ
		Commitment to the leader (+)	Kovjanic et al. (2012)	Partial	MLQ
Core job characteristics	Five characteristics of a job that can be enhanced to increase motivation. These characteristics include skill variety, task identity, task significance, autonomy, and feedback.	Intrinsic motivation (+)	Piccolo and Colquitt (2006)	Partial	MLQ
		Goal commitment (+)	Piccolo and Colquitt (2006)	Partial	MLQ
		Citizenship performance/extra-role performance (+)	Purvanova, Bono, and Dzieweczynski (2006)	Full	MLQ
Meaningful task content	Tasks that allow autonomy or promote skill development (Korek, Felfe, & Zaepernick-Rothe, 2010).	Affective commitment (+)	Korek et al. (2010)	Full	MLQ
Goal commitment	"[T]he determination to try for a goal and the persistence in pursuing it over time" (Hollenback, Williams, & Klein, 1989, p. 18).	Task performance (+)	Piccolo and Colquitt (2006)	N/A	MLQ
Intrinsic motivation	Involvement in "an ongoing process of seeking and conquering challenges" (Deci, 1976, p. 131).	Task performance (+)	Piccolo and Colquitt (2006)	N/A	MLQ
		OCB (+)	Piccolo and Colquitt (2006)	N/A	MLQ
Value congruence	"[S]hared values between employees, supervisors and/or within the organization's culture" (Jung &	Objective performance (+/-)[4]	Jung and Avolio (2000)	Partial	MLQ

Mediators in Transformational Leadership Research

Mediator	Definition of Mediator	Outcome	Author/s	Med.	TFL Measure
	Avolio, 2000, p. 952).				
Social identification	"[I]mplies that an individual's belief about a group … is self-referential or self-defining" (Kark, Shamir, & Chen, 2003, p. 247).	Self-efficacy (+)	Kark et al. (2003)	Full	MLQ
		Organization-based self-esteem (+)	Kark et al. (2003)	Full	MLQ
		Collective efficacy (+)	Kark et al. (2003)	Full	MLQ
		Voice towards peers (+)	Liu et al. (2010)	Partial	MLQ
		Extra role behaviour (+)	Liu et al. (2010)	Full	MLQ
Self-efficacy	"…[B]eliefs in one's capabilities to organize and execute courses of action" (Bandura, 1997, p. 2).	Individual performance (+)	Walumbwa et al. (2008)	Partial[1a]	MLQ
		Performance quality (+)	Kirkpatrick and Locke (1996)	Partial	Vision, task cues, communication style
		Perceptions of unit performance (+)	Pillai and Williams (2004)	Partial	Podsakoff et al. (1990)
		Positive affective well-being (job satisfaction) (+)	Liu et al. (2010)	Partial	Li and Shi (2008)
		Negative affective well-being (perceived work stress) (-)	Liu et al. (2010)	Full	Li and Shi (2008)
		Physiological well-being (stress symptoms) (-)	Liu et al. (2010)	Full	Li and Shi (2008)
Creative self-efficacy	"[T]he belief that one has the knowledge and skills to produce creative outcomes" (Gong, Huang, & Farh, 2009, p. 766).	Employee creativity (+)	Gong et al. (2009)	Full	MLQ

Mediators in Transformational Leadership Research

Mediator	Definition of Mediator	Outcome	Author/s	Med.	TFL Measure
Identification with work unit	"[T]hat part of an individual's identity that derives from his or her association with a social group" (Walumbwa, Avolio, & Zhu, 2008, p. 796).	Individual performance (+)	Walumbwa et al. (2008)	Full[1b]	MLQ
Quality goals	Personal goal regarding acceptable number of errors which can be made (S. Kirkpatrick & Locke, 1996).	Performance quality (+)	Kirkpatrick and Locke (1996)	Full	Vision, task cues, communication style
Quantity goals	Personal goal for quantity of pages inserted (the task was a simulated assembly task derived from a binding task used by printing companies) (S. Kirkpatrick & Locke, 1996).	Performance quantity (+)	Kirkpatrick and Locke (1996)	Partial	Vision, task cues, communication style
Idea generation effectiveness	The approaches used to generate solutions as well as the originality of such solutions (Sosik, Avolio, & Kahai, 1997).	Report quality and effectiveness (-)	Sosik et al. (1997)	Partial[2]	TFL program scripts developed by Bass and Avolio
Report quality effectiveness	The creativeness of reports based on imaginativeness, innovation, and value added (Sosik et al., 1997).	Group potency (+)	Sosik et al. (1997)	Partial	TFL program scripts developed by Bass and Avolio
Group potency	"[T]he shared belief that a group is generally effective" (Sosik et al., 1997, p. 91).	Report quality and effectiveness (+)	Sosik et al. (1997)	Partial	TFL program scripts developed by Bass and Avolio
		Group potency in a follow-up session (+)	Sosik et al. (1997)	Partial	TFL program scripts developed by Bass and Avolio
		Platoon performance (+)	Bass et al. (2003)	Partial	MLQ
Personal identification	"[W]hen an individual's belief about a person (a leader) becomes self-referential or self-defining" (Kark et al., 2003, p. 247).	Dependence (+)	Kark et al. (2003)	Full	MLQ
		Voice towards	Liu et al. (2010)	Full	MLQ

Mediators in Transformational Leadership Research

Mediator	Definition of Mediator	Outcome	Author/s	Med.	TFL Measure
		supervisor (+)			
		Extra role behaviour (+)	Liu et al. (2010)	Full	MLQ
Meaningful work	"[F]inding a purpose in work that is greater than the extrinsic outcomes of the work" (Arnold, Turner, Barling, Kelloway, & McKee, 2007, p. 195).	Psychological well-being (+)	Arnold et al. (2007)	Partial and full (2 studies)	Carless et al. (2000)
Group cohesiveness	"[T]he degree to which group members are attracted to and motivated to stay with a group" (Pillai & Williams, 2004, p. 146)	Self-efficacy (+)	Pillai and Williams (2004)	Partial	Podsakoff et al. (1990)
Collective efficacy	An individual's belief in their "group's collective capability to perform job-related behaviours" (Walumbwa, Peng Wang, Lawler, & Kan shi, 2004, p. 515)	Organizational commitment (+)	Walumbwa et al. (2004)	Partial	MLQ
		Job satisfaction (+)	Walumbwa et al. (2004)	Partial	MLQ
		Job and work withdrawal (-)	Walumbwa et al. (2004)	Full	MLQ
Innovation-supporting organizational climate	A collective social construction that values initiative and innovative approaches (Jung et al., 2003)	Organizational innovation (+)	Jung, Chow, and Wu (2003)	Partial	MLQ
Positive Moods	Positive "feelings that tend to be less intense than emotions and that often lack a contextual stimulus" (Robbins & Judge, 2009, p. 285)	Task performance (+)	Tsai, Chen, and Cheng (2009)	Partial	MLQ
		Helping coworker behaviour (+)	Tsai, Chen, and Cheng (2009)	Partial	MLQ
Psychological safety	"[T]he belief that engaging in risky behaviors like voice will not lead to personal harm" (Detert & Burris, 2007, p. 871)	Voice	Detert and Burris (2007)	Partial	MLQ Individualized consideration, inspirational motivation
Climate of	A climate that "places authority in the hands of those	OCB (+)	H. Richardson	Partial	Podsakoff et al.

Mediators in Transformational Leadership Research

Mediator	Definition of Mediator	Outcome	Author/s	Med.	TFL Measure
involvement	most capable of making a given decision or taking action, and rewards them for doing so" (H. Richardson & Vandenberg, 2005, p. 563)		and Vandenberg (2005)		(1990)
		Absenteeism (-)	H. Richardson and Vandenberg (2005)	Full	Podsakoff et al. (1990)
Dyadic goal importance congruence	[T]he similarity between leader and followers' perceptions about the importance of specific goals to the organization (Colbert, Kristof-Brown, Bradley, & Barrick, 2008)	Overall job satisfaction, organizational commitment, and satisfaction with leader (second-order factor) (+)	Colbert et al. (2008)	Partial	MLQ
Organizational learning (influenced performance)	"[A] collective capability based on experiential and cognitive processes" (Aragón-Correa, García-Morales, & Cordón-Pozo, 2007, p. 350)	Innovation (+) (influenced performance)	Aragón-Correa et al. (2007)	Partial	Podsakoff, MacKenzie, and Bommer (1996)
Perceived organizational instrumentality	"[T]he extent to which employees believe OCB has an impact on the functionality and effectiveness of the work unit" (Jiao, Richards, & Zhang, 2011, p. 12)	OCB (+)	Jiao et al. (2011)	Partial	Podsakoff et al. (1990)
Perceived individual instrumentality	"[T]he extent to which employees believe that OCB is important to their own interests" (Jiao et al., 2011, p. 11)	OCB (+)	Jiao et al. (2011)	Partial	Podsakoff et al. (1990)

Note. OCB = organizational citizenship behaviour; Med. = type of mediation, TFL = transformational leadership; MLQ = Multifactor Leadership Questionnaire; N/A = not available.

[1a]Moderated mediation: The interaction of self-efficacy and means efficacy.

[1b]Moderated mediation: The interaction of identification and means efficacy.

[2]Transactional leadership had a stronger effect on idea generation effectiveness than transformational leadership.

[3]Hypothesis supported only at the indirect senior level of leadership and not at the direct immediate supervisory level of leadership. This suggests that structural distance between leader and follower was a potential moderator.

[4]Performance was measured by quality and quantity. For quantity, the indirect relationship was positive, but the direct relationship was negative. For quality, both relationships were positive.

Appendix C

ETLQ Teaching Items' Description

Item name	Description
exp1	It was clear to me what I was supposed to learn in this course unit.
exp2	The topics seemed to follow each other in a way that made sense to me.
exp3	We were given a good deal of choice over how we went about learning.
exp4	The course unit was well organized and ran smoothly.
exp5	We were allowed some choice over what aspects of the subject to concentrate on.
exp6	What we were taught seemed to match what we were supposed to learn.
exp7	We were encouraged to look for links between this unit and others.
exp9	The handouts and other materials we were given helped me to understand the unit.
exp10	On this unit, I was prompted to think about how well I was learning and how I might improve.
exp11	I could see the relevance of most of what we were taught in this unit.
exp12	We weren't just given information; staff explained how knowledge is developed in this subject.
exp13	The teaching encouraged me to rethink my understanding of some aspects of the subject.
exp14	The different types of teaching (lectures, tutorials, labs, etc.) supported each other well.
exp15	Plenty of examples and illustrations were given to help us grasp things better.
exp16	This unit has given me a sense of what goes on 'behind the scenes' in this subject area.
exp17	The teaching in this unit helped me to think about the evidence underpinning different views.
exp18	How this unit was taught fitted in well with what we were supposed to learn.
exp19	This unit encouraged me to relate what I learned to issues in the wider world.
exp20	The web pages provided by staff helped me to understand the topics better.
exp23	Staff tried to share their enthusiasm about the subject with us.
exp25	Staff were patient in explaining things which seemed difficult to grasp.
exp27	Students' views were valued in this course unit.
exp28	Staff helped us to see how you are supposed to think and reach conclusions in this subject.
exp30	This course unit provided plenty of opportunities for me to discuss important ideas.
exp31	It was clear to me what was expected in the assessed work for this course unit.
exp32	I was encouraged to think about how best to tackle the set work.
exp33	I could see how the set work fitted in with what we were supposed to learn.
exp34	You had really to understand the subject to get good marks in this course unit.
exp35	The feedback given on my work helped me to improve my ways of learning and studying.
exp36	Doing the set work helped me to think about how evidence is used in this subject.

ETLQ Teaching Items' Description

Item name	Description
exp37	Staff gave me the support I needed to help me complete the set work for this course unit.
exp38	To do well in this course unit, you had to think critically about the topics.
exp39	The set work helped me to make connections to my existing knowledge or experience.
exp40	The feedback given on my set work helped to clarify things I hadn't fully understood.

Note. The item name was the name assigned by the creators of the dataset. Items 8, 21, 22, 24, 26, and 29 were not designed to measure teaching behaviours, and thus are not included here.

Appendix D

Item Scale Type, Description, and Construct Label (Study 1)

Item name	Scale type	Description	Const-ruct
exp13	1-5 Likert, Disagree-Agree	The teaching encouraged me to rethink my understanding of some aspects of the subject.	IS
exp16	1-5 Likert, Disagree-Agree	This unit has given me a sense of what goes on 'behind the scenes' in this subject area.	IS
exp17	1-5 Likert, Disagree-Agree	The teaching in this unit helped me to think about the evidence underpinning different views.	IS
exp19	1-5 Likert, Disagree-Agree	This unit encouraged me to relate what I learned to issues in the wider world.	IS
exp23	1-5 Likert, Disagree-Agree	Staff tried to share their enthusiasm about the subject with us.	Co
exp25	1-5 Likert, Disagree-Agree	Staff were patient in explaining things which seemed difficult to grasp.	Co
exp27	1-5 Likert, Disagree-Agree	Students' views were valued in this course unit.	Co
exp28	1-5 Likert, Disagree-Agree	Staff helped us to see how you are supposed to think and reach conclusions in this subject.	Co
exp35	1-5 Likert, Disagree-Agree	The feedback given on my work helped me to improve my ways of learning and studying.	Co
exp40	1-5 Likert, Disagree-Agree	The feedback given on my set work helped to clarify things I hadn't fully understood.	Co
exp1	1-5 Likert, Disagree-Agree	It was clear to me what I was supposed to learn in this course unit.	DC
exp2	1-5 Likert, Disagree-Agree	The topics seemed to follow each other in a way that made sense to me.	DC
exp4	1-5 Likert, Disagree-Agree	The course unit was well organized and ran smoothly.	DC
exp6	1-5 Likert, Disagree-Agree	What we were taught seemed to match what we were supposed to learn.	DC
exp9	1-5 Likert, Disagree-Agree	The handouts and other materials we were given helped me to understand the unit.	DC
exp18	1-5 Likert, Disagree-Agree	How this unit was taught fitted in well with what we were supposed to learn.	DC
exp8	1-5 Likert, Disagree-Agree	I can imagine myself working in the subject area covered by this unit.	IE
exp22	1-5 Likert, Disagree-Agree	I found most of what I learned in this course unit really interesting.	IE
exp26	1-5 Likert, Disagree-Agree	I enjoyed being involved in this course unit.	IE
exp21	1-5 Likert, Disagree-Agree	Students supported each other and tried to give help when it was needed.	SCS
exp24	1-5 Likert, Disagree-Agree	Talking with other students helped me to develop my understanding.	SCS
exp29	1-5 Likert, Disagree-Agree	I found I could generally work comfortably with other students on this unit.	SCS
eue35	1-5 Likert, Disagree-Agree	I've looked at evidence carefully to reach my own conclusion about what I'm studying.	DAe
eue24	1-5 Likert, Disagree-Agree	It has been important for me to follow the argument, or to see the reasons behind things.	DAe
emk34	1-5 Likert, Disagree-Agree	I've tried to find better ways of tracking down relevant information in this subject.	DAe
eiu33	1-5 Likert, Disagree-Agree	In reading for this course, I've tried to find out for myself exactly what the author means.	DAe
eri13	1-5 Likert, Disagree-Agree	Ideas I've come across in my academic reading often set me off on long chains of thought.	DAe[a]
emk2	1-5 Likert, Disagree-Agree	When I've been communicating ideas, I've thought over how well I've got my points across.	DAe[a]
eselfrat	1-9 Likert, Rather badly – Very well	How well do you think you're doing on this course unit as a whole? Please try to rate yourself objectively, based on any marks, grades, or comments you have been given.	SA

Item Scale Type, Description, and Construct Label (Study 1)

Item name	Scale type	Description	Const-ruct
mu14	1-5 Likert, Disagree-Agree	If I'm not understanding things well enough when I'm studying, I try a different approach.	DAl
iu33	1-5 Likert, Disagree-Agree	When I'm reading for a course, I try to find out for myself exactly what the author means.	DAl
mk34	1-5 Likert, Disagree-Agree	I try to find better ways of tracking down relevant information in my subject.	DAl
ue35	1-5 Likert, Disagree-Agree	I look at evidence carefully to reach my own conclusion about what I'm studying.	DAl
mu26	1-5 Likert, Disagree-Agree	I go over the work I've done to check my reasoning and see that it makes sense.	DAl[a]
ri13	1-5 Likert, Disagree-Agree	Ideas I come across in my academic reading often set me off on long chains of thought.	DAl[a]
ue24	1-5 Likert, Disagree-Agree	It's important for me to follow the argument, or to see the reason behind things.	DAl[a]
esex	Nominal, Male and Female	Background information.	GN
eage	Numeric, 2 spaces	Background information.	AG

Note. The item name was the name assigned by the creators of the dataset. IS = intellectual stimulation; DC = direction and congruence; Co = consideration; CS; IE = interest and enjoyment; SCS = student collegial support; DAe = deep approach in course; SA = student achievement; DAl = deep approach orientation; AG = age; GN = gender.

[a] Deleted items.

Appendix E

Online Questionnaire (Study 2)

Please read the following statements and ensure that you have understood them:

1. I confirm that I have read and understood the information sheet explaining the research project (the information sheet can be accessed using this address: http://sdrv.ms/16rUqtp) and I have had the opportunity to ask questions about the project.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.

3. I understand that my responses will be kept strictly confidential. I give permission for members of the research team to have access to my anonymous responses. I understand that I will not be identified or identifiable in the report or reports that result from the research.

4. I agree to take part in the above research project.

By completing this survey, you are agreeing that:
(1) You have read and understood the Information Sheet.
(2) Questions about your participation in this study have been answered satisfactorily.
(3) You are taking part in this research study voluntarily (without coercion).

(Questionnaire begins on next page)

Instructor-Leadership Questionnaire

Background information

Questions concerning age, gender, nationality, faculty, and year of study. Question for entry into Amazon gift voucher prize draw and, if so, email address for sending the prize.

General instructions (IMPORTANT): Think of ONE instructor/lecturer from your university who taught at least half of the classes for a course this semester. For sections 1 to 3, answer all of the questions based on your experiences with this instructor for that one course. Please answer this questionnaire anonymously.

SECTION 1: **Click the circle to indicate how strongly you agree with each of the following statements.**

✓ = *agree* ✓*?* = *agree somewhat* ×*?* = *disagree somewhat* × = *disagree*

Try not to use *??* = *unsure* unless you really have to, or if it cannot apply to you or your course.

		✓	✓*?*	*??*	×*?*	×
1.	It was clear to me what I was supposed to learn in this course unit.	○	○	○	○	○
2.	The topics seemed to follow each other in a way that made sense to me.	○	○	○	○	○
3.	The course unit was well organized and ran smoothly.	○	○	○	○	○
4.	What we were taught seemed to match what we were supposed to learn.	○	○	○	○	○
5.	The handouts and other materials we were given helped me to understand the unit.	○	○	○	○	○
6.	The teaching encouraged me to rethink my understanding of some aspects of the subject.	○	○	○	○	○
7.	This unit has given me a sense of what goes on 'behind the scenes' in this subject area.	○	○	○	○	○
8.	The teaching in this unit helped me to think about the evidence underpinning different views.	○	○	○	○	○
9.	How this unit was taught fitted in well with what we were supposed to learn.	○	○	○	○	○
10.	This unit encouraged me to relate what I learned to issues in the wider world.	○	○	○	○	○
11.	The teacher tried to share his/her enthusiasm about the subject with us.	○	○	○	○	○
12.	The teacher was patient in explaining things which seemed difficult to grasp.	○	○	○	○	○
13.	Students' views were valued in this course unit.	○	○	○	○	○
14.	The teacher helped us to see how you are supposed to think and reach conclusions in this subject.	○	○	○	○	○
15.	The feedback given on my work helped me to improve my ways of learning and studying.	○	○	○	○	○
16.	The feedback given on my set work helped to clarify things I hadn't fully understood.	○	○	○	○	○

SECTION 2: **The questions in this section are used to describe the classroom leadership style of your teacher as you perceive it.**

Using the same instructor/lecturer from the previous section (Section 1), answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.

Indicate how strongly you agree with each of the following statements. Click the appropriate circle, using the following rating scale. The instructor/lecturer…

Strongly disagree	**Disagree somewhat**	**Undecided**	**Agree somewhat**	**Strongly agree**
1	2	3	4	5

		1	2	3	4	5
1.	…has a clear understanding of where the class is going	○	○	○	○	○
2.	…has a clear sense of where he/she wants our class to be at the end of the course	○	○	○	○	○
3.	…has no idea where the class is going	○	○	○	○	○
4.	…says things that make students proud to be a part of this class	○	○	○	○	○
5.	…says positive things about the class.	○	○	○	○	○
6.	…encourages students to see the classroom environment as being full of opportunities	○	○	○	○	○
7.	…challenges me to think about old problems in new ways	○	○	○	○	○
8.	…has ideas that have forced me to rethink some things that I have never questioned before	○	○	○	○	○
9.	…has challenged me to rethink some of my basic assumptions about my work	○	○	○	○	○
10.	…considers my personal feelings before acting	○	○	○	○	○
11.	…behaves in a manner which is thoughtful of my personal needs	○	○	○	○	○
12.	…sees that the interests of students are given due consideration	○	○	○	○	○
13.	…commends me when I do better than average work	○	○	○	○	○
14.	…acknowledges improvement in my quality of work	○	○	○	○	○
15.	…personally compliments me when I do outstanding work	○	○	○	○	○

Multifactor Leadership Questionnaire by Bruce Avolio and Bernard Bass

SECTION 3: **Like Section 2, the questions in this section are also used to describe the classroom leadership style of your teacher as you perceive it.**

Using the same instructor/lecturer from the previous sections (i.e., Sections 1 and 2), answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank. Forty-five descriptive statements are listed on the next two pages. Judge how frequently each statement fits the instructor/lecturer you are describing. Click the appropriate circle, using the following rating scale:

Not at all	**Once in a while**	**Sometimes**	**Fairly often**	**Frequently, if not always**
0	1	2	3	4

		0	1	2	3	4
1.	He/She will talk about his/her personal beliefs and value systems while teaching.	○	○	○	○	○
2.	He/She is not only concerned about his/her own interests, but is genuinely concerned about the progress made by students.	○	○	○	○	○
3.	He/She listens to different opinions for solving problems arising from the course.	○	○	○	○	○
4.	He/She is willing to provide help outside of class.	○	○	○	○	○
5.	He/She talks optimistically about the future.	○	○	○	○	○

(Five sample items allowed)

Do you have any additional comments regarding your instructor's teaching methods/styles/techniques?

(Text box)

Academic Achievement

The following questions pertain to your academic achievement for the course with the lecturer who you have evaluated in the previous three sections.

How well are you doing in the course as a whole? Please try to rate yourself objectively, based on any marks, grades, or comments you have been given.

○ Very well
○ Quite well
○ Well
○ About average
○ Not so well
○ Badly
○ Rather badly

What final grade do you expect to receive in this course?

○ 70-100
○ 60-69
○ 50-59
○ 45-49
○ 40-44
○ 30-39
○ No grade: No work will be submitted, or work will be submitted but will likely be deemed to be of no academic merit, or credit is likely to be refused or denied for submitted work.

How would you rate your expected academic performance (or how you have performed so far) in this course in comparison with fellow students?

○ Much better
○ Better
○ The same
○ Worse
○ Much worse

Do you have any additional comments regarding your academic performance in the course?

(Text box)

Incentive questionnaire (short version of The Big Five Inventory) and a question asking whether

or not students wished to receive feedback on their personality profile.

Appendix F

Summary of Intercorrelations, Means, and Standard Deviations for the Raw/Non-Transformed Scores of Transformational Instructor-Leadership as Measured by QTILQ, RG, and MLQ, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement (Study 2)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. TILQ: Consideration												
2. TILQ: Intellectual stimulation	.57**											
3. TILQ: Direction and congruence	.67**	.51**										
4. RG: Vision	.42**	.38**	.44**									
5. RG: Intellectual stimulation	.42**	.49**	.31**	.48**								
6. RG: Inspirational communication	.58**	.47**	.35**	.40**	.52**							
7. RG: Supportive leadership	.55**	.32**	.44**	.27**	.37**	.60**						
8. RG: Personal recognition	.45**	.29**	.29**	.20*	.32**	.49**	.53**					
9. MLQ: Idealized influence (A)	.67**	.44**	.60**	.39**	.43**	.59**	.60**	.43**				
10. MLQ: Idealized influence (B)	.45**	.47**	.37**	.36**	.41**	.53**	.43**	.32**	.57**			
11. MLQ: Intellectual stimulation	.64**	.55**	.52**	.37**	.58**	.58**	.52**	.50**	.69**	.61**		
12. MLQ: Inspirational motivation	.60**	.47**	.51**	.49**	.50**	.60**	.50**	.42**	.78**	.69**	.71**	
13. MLQ: Individualized consideration	.63**	.34**	.49**	.32**	.44**	.55**	.62**	.53**	.70**	.41**	.75**	.59**
14. MLQ: Contingent reward	.63**	.44**	.47**	.33**	.53**	.63**	.57**	.54**	.66**	.59**	.73**	.65**
15. MLQ: Laissez-faire	-.45**	-.27**	-.45**	-.33**	-.19*	-.34**	-.31**	-.33**	-.44**	-.13	-.37**	-.31**
16. MLQ: MBE (active)	.63**	.37**	.51**	.39**	.44**	.53**	.56**	.53**	.66**	.53**	.61**	.63**
17. MLQ: MBE (passive)	-.22**	-.26**	-.25**	-.16	-.08	-.21*	-.14	-.20*	-.18*	-.07	-.18*	-.11
18. MLQ: Effectiveness	.71**	.53**	.61**	.43**	.48**	.60**	.56**	.36**	.85**	.60**	.70**	.77**
19. MLQ: Satisfaction	.69**	.47**	.58**	.44**	.41**	.54**	.57**	.41**	.80**	.52**	.65**	.65**
20. MLQ: Extra effort	.58**	.48**	.45**	.36**	.52**	.56**	.47**	.42**	.80**	.63**	.74**	.74**
21. Student achievement	.13	.26**	.15	.06	.30**	.22**	.09	.18*	.18*	.19*	.32**	.27**

Note. MBE = management by exception; idealized influence (A) = attributed idealized influence; idealized influence (B) = behavioural idealized influence. For all of the leadership variables, with the exception of "RG: Supportive leadership (recip)", higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. Sq = Squared; cub = cubed; recip = reciprocal; sqrt = square root.

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Summary of Intercorrelations, Means, and Standard Deviations for the Raw/Non-Transformed Scores of Transformational Instructor-Leadership as Measured by QTILQ, RG, and MLQ, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement (Study 2)

Variables	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**Mean**	**SD**
1. TILQ: Consideration									3.87	.84
2. TILQ: Intellectual stimulation									3.86	.83
3. TILQ: Direction and congruence									4.26	.78
4. RG: Vision									4.19	1.01
5. RG: Intellectual stimulation									3.53	.93
6. RG: Inspirational communication									3.43	.93
7. RG: Supportive leadership									3.22	.94
8. RG: Personal recognition									3.20	1.13
9. MLQ: Idealized influence (A)									2.79	.95
10. MLQ: Idealized influence (B)									2.33	.86
11. MLQ: Intellectual stimulation									2.57	.90
12. MLQ: Inspirational motivation									2.76	.90
13. MLQ: Individualized consideration									2.34	1.05
14. MLQ: Contingent reward	.67**								2.28	.96
15. MLQ: Laissez-faire	-.39**	-.23**							0.92	.78
16. MLQ: MBE (active)	.61**	.65**	-.30**						2.17	.94
17. MLQ: MBE (passive)	-.15	-.16	.50**	-.15					1.40	.71
18. MLQ: Effectiveness	.64**	.62**	-.48**	.65**	-.23**				2.94	.98
19. MLQ: Satisfaction	.66**	.60**	-.44**	.60**	-.22**	.89**			2.90	1.09
20. MLQ: Extra effort	.65**	.70**	-.27**	.62**	-.13	.78**	.76**		2.50	1.19
21. Student achievement	.20*	.27**	-.15	.17*	-.15	.19*	.16	.28**	4.87	.74

Note. MBE = management by exception; idealized influence (A) = attributed idealized influence; idealized influence (B) = behavioural idealized influence. For all of the leadership variables, with the exception of "RG: Supportive leadership (recip)", higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. Sq = Squared; cub = cubed; recip = reciprocal; sqrt = square root.

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Appendix G

Topic Guide for Interviews (Study 3)

OBECTIVES

- To explore the full-range of instructor-leadership behaviours dimensions in detail **
- To understand students' emotional responses to being exposed to destructive instructor-leadership
- To understand students' perceptions of destructive instructor's intentions
- To examine the ways in which destructive instructor-leadership influence student engagement in class

INTRODUCTION

- General conversation (not related to research)
- Overview of information sheet, including introduction of researcher (proof of identity), recording of interview, confidentiality and anonymity, timing, procedures, termination of study, and potential for harm due to reflection on past memories.
- Ensure that the candidate is comfortable

Get participant/s talking in a conversational style about some of the topics below. These criteria have already been given via the screening stage before the interview. Therefore, confirm the data and build rapport at this stage.

1. DEMOGRAPHIC DATA

- Degree programme
- Nationality
- Age
- HEI attended
- Ethnicity
- *Record gender*

2. SUPPORTIVE TEACHING CONCEPT

An opening question focusing on the positive side to higher education teaching.

- Define leadership for participant:
  "Involves a process whereby intentional influence is exerted over other people to guide, structure, and facilitate activities and relationships in a group or organization" (Yukl 2009)
- Definition of ideal instructor-leader
  - From your undergraduate courses, explain two to three incidents in which you have experienced a lecturer using ideal instructor-leader behaviours in the classroom?

3. DESTRUCTIVE INSTRUCTOR-LEADERSHIP CONCEPT

Encourage detailed explanations of behavioural dimensions emphasizing the students' personal accounts/experiences

- Definition of destructive instructor-leader
  - How would you define destructive instructor-leadership? ** {do not give input here}
  - Give formal definition which may add to their definition: "A process in which over a longer period of time the activities, experiences and/or relationships of an individual or the members of a group are repeatedly influenced by their supervisors in a way that is perceived as hostile or destructive" (Birgit 2012).
- HEI-level destructive teaching behaviours
  - *Detailed descriptions* of behavioural dimensions *(very open and conversational style, heavy use of probes*)
    - From your undergraduate courses, describe, in detail, two to three incidents in which you have experienced lecturer/s using destructive instructor-leader behaviours in the classroom? (take notes)
  - Useful amplificatory probes:
    - "Can you give me an example of …"
    - "Can you tell me a little bit more about …"
    - "What gave you that impression?"
  - After each incident is explained and noted, link topics 4, 5, and 6 to each incident.

4. INTENTIONS OF DESTRUCTIVE TEACHERS

Explore participant's beliefs about destructive instructor-leader intentions

- Nature
  - What do you believe the intentions of the destructive instructor-leader are?
    - Bad intentions
    - Good intentions

5. EMOTIONAL REACTIONS TO DESTRUCTIVE TEACHING

Explore emotions/feelings in relation to each incident.

- Feelings
  - How did you feel in anticipation of the class?
  - How did you feel in the class itself? **
  - How did you feel after the class?
  - How did you feel about interacting with the destructive instructor …
    - … in class? **
    - … outside or after the class? For e.g. office hours.

- Consequences of feelings
  - What effect did these emotions/feelings have on you? *(may lead into next section)*
  - Useful exploratory probes:
    - "How did you respond when …?"
    - "What did you feel when …?"
- Support (link to behaviour)
  - Do you speak to others about your experiences with destructive instructor-leaders?
    - If so, with whom do you speak to? For e.g. peers, parents, authoritative figures?
  - Do you communicate with other instructors about your experience/s with destructive lecturing?
    - If so, can you describe the characteristics of these lecturers with whom you communicate?

6. BEHAVIOURAL REACTIONS TO DESTRUCTIVE TEACHING

Explore behavioural reactions in response to each incident.

- Engagement in class (*open question* followed by deeper explanation of the points raised by the candidate which may include the points below) **
- If necessary, some prompts can include the following topics:
  - Working hard
  - Student participation
  - Classroom environment
  - Attendance in class
  - Contact with lecturer
- Engagement outside of class (*open question* followed by deeper explanation of the points raised by the candidate which may include the points below)
  - Working hard
  - Class preparation
  - Contact with lecturer
- For any behavioural engagement consequences raised, probe further by asking one or more of the following:
  - "Can you give me an example of …"
  - "Can you tell me a little bit more about …"

7. COGNITIVE REACTIONS TO DESTRUCTIVE TEACHING

Explore cognitive reactions in response to each incident.

- If necessary, some prompts can include the following topics:
  - Attention

  - Thinking
- For any of cognitive engagement consequences raised, probe further by asking one or more of the following:
  - "Can you give me an example of …"
  - "Can you tell me a little bit more about …"

8. ENDING

- Are there any other issues you wish to raise with regards to destructive instructor-leadership?
- Summary
  - Summarize responses, but do not do this for more complex data
  - Final thoughts
  - Casual conversation (may trigger additional thoughts of importance)
- Reassurance of confidentiality and anonymity
- Gratitude
  - Payment
  - Thank you

PROBING STYLES & TIPS

- Assert understanding and show interest: "yes", "I see", and "uh-huh".
- Use pauses carefully: nod of the head, or look at them expectantly. But, do not pause for very long periods as the candidate may genuinely have responded as fully as they can.
- Repeat or carefully paraphrase the question when the candidate indicates that they are confused.
- Repeat the participant's response: By hearing their own response, participants can often be provoked to think about their answer and add more details to it.
- Use of neutral questions: "How do you mean?" "Why do you think that is so?" "Anything else?"
- Clarify responses when they seem inconsistent (clarificatory probing), but do so in a subtle manner.

(Cooper and Schindler 2002, p. 330)

Appendix H

Interviewing Process (Study 3)

1. Pre-arrival: Prior to the interview, design issues and ethical considerations were addressed. Some activities at this stage involved obtaining informed consent, communicating anonymity and confidentiality, debriefing participants on the potential for harm induced by reflecting on unpleasant experiences, and venue selection. Pre-arrival communications were conducted via email, social networking, and/or telephone.
2. Arrival: Before the interview began, a supportive relationship was established before presenting the candidate with introductory information. The arrival stage also included reassurance of anonymity and confidentiality; permission to audio record the interview; average time needed; compensation for participation; and that participation was voluntary allowing for the candidate to stop the interview at any time.
3. Beginning the interview: Before the interview, initial screening questions were asked to confirm the candidate's demographic information, including their degree programme, nationality, age, HEI attended, and ethnicity (gender was recorded). The confirmation of such factual information at the beginning of the interview acted as a sort of induction for the more complex questions to follow. Once the candidate confirmed the requirements, they were asked permission to begin the audio recording for the interview.
4. During the interview: The interview questions were semi-structured to allow for comparison between candidates without sacrificing flexibility in responses. Because the aim was to uncover deeper meanings in the 'conversation', various probing styles were used in order to prod past initial responses which were usually at the surface level. As a guide to the interviewer, probing styles and questions were included in the topic guide. Like the interview

questions, these probes were concealed from the participant. Some example probes include, "Can you give me an example of …", "Can you tell me a little bit more about …", and "What gave you that impression?".

5. Ending the interview: In order to allow the participant to gradually transition out of the interview, the final question was signaled to them. As a closing question, the participant was asked if they had any remaining thoughts they wished to discuss with regards to any of the questions in the interview.
6. After the interview: The audio recorder was switched off and thanks was given for the participant's responses and contributions. The participant was reassured about the anonymity and confidentiality explained earlier. The participant was informed of the study's estimated completion date and they were given the opportunity to receive an analysis of the results via email.
7. Parting ways and informal discussions: Based on the pilot interviews, it was apparent that candidates might continue to reflect on their destructive instructor-leadership experiences after the interview was over, resulting in the emergence of new information. When informal discussion sparked some final reflections that were of significance, these reflections were noted (Ritchie & Lewis, 2003).

Appendix I

Thematic Chart for Destructive Instructor-Leadership Incidents (Study 3)

Participant	Incident no.	A. Destructive instructor-leadership incident	B. Elements – in order identified in chart	C. Classes
Alice	1	Hostile, rude, and harsh exclamations towards students in the presence of other students in class. For e.g., student raised her hand to politely suggest that microphone may be off and was told that she is probably off. He's very aggressive.	Hostile, rude, and harsh. Embarrass in front of others. Aggressive.	Poor verbal communication style and tone.
	2	Expects students to do too much work on their own whilst providing insufficient explanations. Expects students to read the book in their own time, understand its content, and be prepared to discuss in class.	Expects too much of students. Provides insufficient explanations.	Unrealistic expectations. Inappropriate teaching methods.
	3	For class presentations, hostile and authoritative directions given. Used a lot of "don't" i.e., too much negatives. These directions were accompanied by threats and warnings e.g. threat of minusing marks.	Forceful and authoritative. Says what not to do. Makes threats.	Poor verbal communication style and tone. Poor teaching style and guidance.
Amanda	1	Did not answer students' questions; Either avoided students' questions by giving an answer that was not directed to the particular question or ignored students when they put their hands up or said that they had a question. Gave no feedback on exams and did not take responsibility for question errors. Overall, didn't seem to care about the students in terms of giving guidance and extra help.	Did not answer student's questions properly or avoided answering altogether. Lack of feedback on exams. Took no responsibility for exam question errors. Does not care – no guidance or extra help.	Lack of and inaccurate feedback. Lack of responsibility. Lack of interest in student.
	2	Sure marks given for weekly assignments once something is handed in. For these assignments, anything could be submitted, for e.g., a blank piece of paper with your name on it, a smiley face on your paper. Assignment questions did not coincide with the course objectives. Even if questions were answered, no feedback given on attempts. Lack of interest and care regarding students.	Anything could be submitted for assignments. No feedback. Disinterested in and did not care about students.	Lack of interest in student. Lack of feedback. Lack of interest in student.
	3	Even though the class is scheduled for two hours, instructor taught for 15 to 30 minutes and ended class early. In that short period of time, class was disorganized and unstructured, e.g. acting crazy while writing all over the board. No class objectives given or plan for the day.	Ended class too early. Disorganized and unstructured class.	Lack of responsibility. Poor teaching style and guidance.
	4	Gave students the wrong final exam and informed each student about halfway through the exam about the error and to continue answering because they will fix it.	Wrong exam given.	Lack of responsibility.
Anna	1	Teacher taught gibberish. Was weird in that he used strange labels, for e.g. calling a question the Michael Jackson.	Use of strange labels for questions.	Inappropriate teaching methods.
	2	Just read from the textbook or slides, which summarized the textbook, without facilitating interactions and incorporating	Read from textbook or slides. Did not facilitate interactions.	Poor teaching style and guidance.

Thematic Chart for Destructive Instructor-Leadership Incidents (Study 3)

Participant	Incident no.	A. Destructive instructor-leadership incident	B. Elements – in order identified in chart	C. Classes
		real-life situations.	No real-life situations given.	
	3	Reading out slides in class in a non-interesting manner.	Read slides in class.	Poor teaching style and guidance.
	4	Predictions for final exam were inaccurate. One of the questions that came in the final exam was done once for the semester; only *one* question on that topic was covered in revision.	Inaccurate final exam predictions. Insufficient practice.	Inappropriate teaching methods.
	5	For case study analyses, high expectations of students were accompanied by insufficient preparation and assistance on how to approach cases. Intimidating looks when students did not know the answer.	Expectations too high. Insufficient preparation and assistance. Intimidating looks.	Unrealistic expectations. Inappropriate teaching methods. Poor nonverbal communication.
	6	Students being locked out of class when they were late either at the beginning of class or after the break.	Latecomers being locked out of the classroom.	Poor nonverbal communication.
Arnold	1	Aggressive tone used in repeatedly asking how students could not know certain things.	Aggressive tone used. Surprise and disbelief of students' lack of knowledge.	Poor verbal communication tone. Unrealistic expectations.
	2	Did not print enough exam papers and started quarrelling and arguing when he realized that he did not have enough papers. Claims that someone in the exam room is not supposed to be there. Took 20 minutes to print exactly three more copies for three students who he moved to the front of the room. One student arrived late and he told the three not to start until he gets the next one. Unfair treatment in that the three students were denied their request for an extra 20 minutes after the exam even though it wasn't their fault. For sure, two of the students didn't finish the exam. He was wrong and didn't want to admit it.	Quarrelling and arguing. Treated three students unfairly with regards to time allotted for exam – made them pay for his mistakes. Refused to admit his mistakes.	Poor verbal communication style. Unfair treatment. Lack of responsibility.
	3	Student and friends had marks above 85 going into the exam. Instructor said at the beginning of the year that you didn't have to participate every class, but you should sometimes say something valuable. Student and friends contributed almost every class. But, because student and friends did not go up to him and talk in his face, talk at the end of class, or sit in front of class, participation grade was low. Instructor used participation grade to make the class average what he wants (low 70s).	Inaccurate or unfair marking/evaluation of participation.	Unfair treatment.
	4	Did not use/post any slides. Came to class and literally read the textbook, word for word. Writes stuff on the board that relates nothing to the textbook; it didn't come in the exam. He always strayed. He brought up random things he found interesting. For e.g., in teaching law, he would start talking about history topics that have nothing to do with the law topic. Just because he was	No slides provided. Read the textbook word for word. Always strayed from the topic.	Inappropriate teaching methods.

Thematic Chart for Destructive Instructor-Leadership Incidents (Study 3)

Participant	Incident no.	A. Destructive instructor-leadership incident	B. Elements – in order identified in chart	C. Classes
		an old and experienced lawyer doesn't mean he could teach good.		
Gary	1	Very hostile towards student's questions when the student went to his office to ask questions about a financial calculator. At the instructor's office, he seemed like a completely different person from class; his facial expressions indicated that he didn't want to see you. He was serious and you could feel the tension level.	Hostile towards questions asked in private. Facial expression indicated disinterest. Serious.	Poor verbal and nonverbal communication style and tone. Lack of interest in student.
	2	Instructor flicked through the notes on the white board quite fast. During the break, when student asked to see notes, she said no. When asked why, she said that was not her problem. Put student down in front of a group of people from the class.	Pace of lecture notes/presentation too fast. Refusal to show student notes – did not care about student's problem. Put down student in front of others.	Poor teaching style and guidance. Lack of interest in student. Poor verbal communication style and tone.
	3	Instructor hardly ever came to class, was late all the time, and ignored all our issues. Was absent for student's query regarding the grade assigned to a coursework project, which student worked hard for. Student felt that he didn't read the long projects. Student queried the final exam mark and it went from a B- to and A- which proves that he didn't really mark it properly.	Absent and late often. Ignored students' issues. Inaccurate marking.	Lack of responsibility.
Harry	1	Offensive joke towards two girls in class. Always messing with these girls telling them that they don't know because they are girls.	Gender discrimination in the form of repeated offensive jokes towards two female students.	Poor verbal communication style and tone.
	2	Gains revenge for students who were talking when he was teaching by going up behind them during final exams and clapping hands right behind them, yelling, and making noises.	Disturbed students during exams as a form of revenge.	Lack of responsibility.
	3	For a complicated topic, going faster than students were understanding and was not explaining quite well or well enough.	Pace of lecture too fast. Poor explanations. Insufficient explanations.	Poor teaching style and guidance. Inappropriate teaching methods.
	4	Unfair treatment. Two girls/colleagues had a failing grade lower than the student's own. After meeting with the instructor at this office, the two girls' grades were moved up to a pass mark. However, the instructor refused to pass the student, even though his mark was higher than the two girls and one percent below the pass mark. Student had to repeat the course.	Unfair treatment in re-marking exam.	Unfair treatment.
Jan	1	His handwriting on the blackboard is too small and not visible in some areas of the room. When not visible, you will be lost and not understand anything. Talked to the instructor about the handwriting issue and he said that if you pay attention, it doesn't matter whether you can see it. Instructor assumed that all students know it and can move quickly. If students don't understand, he will just explain once, regardless of whether	Handwriting on blackboard too small. Pace of class is too quick. Only explains once if a student does not understand. Does not care.	Poor nonverbal communication. Poor teaching style and guidance. Lack of interest in student.

Thematic Chart for Destructive Instructor-Leadership Incidents (Study 3)

Participant	Incident no.	A. Destructive instructor-leadership incident	B. Elements – in order identified in chart	C. Classes
		they understand or not. He just doesn't care about us.		
	2	The failure rate of the course is extremely high, but those who fail can pay the instructor maybe £100 or buy him cigarettes in order to pass. Instructor can do this because he is a celebrity in Math field. The bribery is a norm, it is difficult to pass unless you pay. Was also difficult to pass because instructor was misleading in that he gave important chapters that you need to know how to do the questions for exam, but then changed the questions in the exam.	Accepted bribes to pass students in exams. Misleading exam guidance.	Lack of responsibility. Poor teaching style and guidance.
	3	Inexperienced instructor who just stood up in front of the classroom and read the textbook. She didn't add anything interesting or new to the textbook material and her tone was *flat* with no facial expression and a low voice; like a robot – uninteresting. She did not interact with students. Also, she was a strict person.	Read from the textbook. Low voice with flat tone. No facial expression. No interaction with students. Strict.	Poor teaching style and guidance. Poor verbal communication tone and style. Lack of interest in students.
Jeff	1	Not lenient, completely ignored students' excuses for being late, shouts at students in class in front of everyone. He's like, if you don't want to be here, you don't have to be here, get out.	Not lenient. Shouts at students in front of others. Does not care if students are there or not.	Poor verbal communication style and tone. Shows no interest in students.
	2	For an assignment, instructor took off a mark for something small/insignificant like not writing the question before the answer. When approached about the issue, the instructor said that you are supposed to know that and does not understand the student's point of view.	Assignment penalty for trivial matter. No reason given for why mark was removed – lack of assessment transparency	Lack of feedback.
	3	Instructor was uninteresting/boring; he rambled on and on and was very monotone. He tried to throw in a joke once in a while, but it was kind of depressing. He had some kind of depression or something. Also, if asked a question, he never really used to answer your question the right way. His response raised more questions.	Uninteresting rambling. Monotone. Failed joke attempts. Did not answer questions properly.	Poor teaching style and guidance. Poor verbal communication style. Inappropriate teaching method.
	4	First time the instructor is teaching labour relations and so she had to teach herself as well. She was not versed in the subject. Very disorganized, for e.g., for a class debate, she did not specify the rules and it led to confusion with one team using real data and another using fictional data. She was unsure of what she was doing, for instance, checking on her computer/slides and then coming back to answer the question. Gave too many life stories to just get by. Overall, too unsure of herself and a little too lenient.	Not versed in subject matter and too unsure of what she was doing. Very disorganized. Too lenient.	Inappropriate teaching method.
Jennifer	1	Student needed extra help because she was struggling with some aspect of Finance. Instructor's office hours did not fit with her schedule. Asked instructor about three or four times	Instructor repeatedly avoided making contact with student, constantly making excuses.	Lack of interest in student.

Thematic Chart for Destructive Instructor-Leadership Incidents (Study 3)

Participant	Incident no.	A. Destructive instructor-leadership incident	B. Elements – in order identified in chart	C. Classes
		on different occasions to meet at another time, for e.g. before or after class, or something. Instructor never really seemed to want to make contact with her. He always had a meeting or it was not a good time for him.		
	2	Wasn't very good at *explaining things* and transferring his knowledge to the students. It used to come across like he didn't know what he was doing. Sometimes you would ask a question and he won't answer it; he would answer around the question and indirectly. Even when student tried to rephrase the question, the same result followed.	Explanations were not very good. Did not answer question properly.	Inappropriate teaching method. Inaccurate feedback.
	3	Class size of 80 to 100 students may have led to *no* opportunities for participation. With regards to classroom interaction there was *none* and it was *very* impersonal. Participation and interaction was always something big for the student, because she was not going to sit there and stare at the Professor for two hours. Professor basically read off the slides never adding anything to them and didn't make any attempt to involve the students.	No classroom interaction. Impersonal. Read off the slides, adding nothing.	Inappropriate teaching method.
Margaret	1	Bullying in the form of vague, disruptive, and negative comments with respect to project guidance, for e.g. too much graphics, nobody wants these charts, the director of the company doesn't want to see all of that, she doesn't want to see all these theoretical language, make it short. The second marker who graded the project then asked for the same things that the primary instructor said to omit and failed the project because that information was missing. When given a second opportunity, the student put the information back in and got a passing grade. Use of harsh tones, foul language, and embarrassed student.	Vague, disruptive, and negative project feedback. Feedback was contradictory to second marker's comments and led to failure. Use of harsh tones, foul language, and embarrass student.	Inaccurate feedback. Poor verbal communication style and tone.
	2	Student came up with a creative business idea with regards to other people that might benefit from Muslim wear. Instructor believed that her idea was a failure and bullied her to change it at a very late stage. Student said that she had two more days left and enough information to pass, but the instructor repeatedly bullied her to change it saying it was stupid and threatened to fail the student if no changes were made. Student continued with the project and passed. Instructor rhetorically asks if student feels she can do what she wants and still pass. Instructor bullied students to do things *exactly* her way and their own opinions would be entirely wrong.	Repeatedly bullied student to change her idea. Threatened to fail student if no changes were made. Wants to maintain control and power over student while downplaying students' ideas/opinions.	Poor teaching style and guidance.
	3	Student could be going through a notebook, turning pages to	Constantly embarrassed student.	Poor verbal communication style and

Thematic Chart for Destructive Instructor-Leadership Incidents (Study 3)

Participant	Incident no.	A. Destructive instructor-leadership incident	B. Elements – in order identified in chart	C. Classes
		continue her notes and the page noise would be too much for instructor. Instructor would say stop turning pages; if you're in a boardroom you wouldn't be able to do something like that. She was trying to embarrass me. Another e.g., student responded to question regarding the lecture coverage and instructor harshly responds saying that is not the truth, that is not what happened. Instructor used embarrassing childlike statements like "and the cow jumped over the moon". Threatened to kick student out of the class.	Use of harsh tones and childish statements. Threatened to kick student out of class.	tone. Poor teaching style and guidance.
Phil	1	Instructor was not well informed; he misdirected the student by giving incorrect information through feedback with respect to a basic piece of knowledge. His overall approach was incompetent. Unwilling to change the mark even after recognition that the marking was incorrect.	Feedback was incorrect and led to a lower than deserved mark. Unwilling to change mark.	Inaccurate feedback. Lack of responsibility.
	2	Incapable of making the topic seem interesting. Didn't change tone of voice. Tried to tell jokes, but didn't have the talking skill to execute them. He wasn't engaged with the class to be able to read the room and tell what was going on; people were asleep or doing something else. Of if he could read the room, he did not know how to change or how to act on it.	Uninteresting. Did not change tone of voice. Poor execution of jokes – lacks talking skill. Did not read room well or did not know how to react to room.	Poor verbal communication style and tone. Poor teaching style and guidance.
Sam	1	Old fashioned in her style; she is the lecturer and you must listen to what she says. She read the riot act in her first lecture, e.g. no talking, switch off mobile phones, listen to me. Hostile, aggressive, arrogant, and rude, for e.g., she raises her voice at students to stop talking and be quiet. Quality of teaching was not that great, but at times she was quite funny.	Authoritative, hostile, aggressive, arrogant, and rude. Quality of teaching not great.	Poor verbal communication style and tone. Inappropriate teaching method.
	2	Instructor was a bit arrogant and narrow-minded at times; she stuck to her opinions. Student worked in a seminar group and looked at mental health conditions from a Freudian perspective. In class, instructor told their group to get rid of that perspective because it's bullshit. The Freudian perspective seemed to clash with her neuroscientist point of view, but she should have been more objective and present all viewpoints. She was too quick to dismiss the rest of psychology because neuroscience is a hot topic. Even though she gave constructive feedback to their group in another incident, another group received really harsh, inappropriate, and rude comments, e.g., it was awful and looked like something out of the Daily Mail.	Arrogant and narrow-minded – stuck to her opinions. Harsh, inappropriate, and rude feedback on set work.	Poor teaching style and guidance. Poor verbal communication style and tone.
	3	Nice and friendly guy; a proper geek. But, his teaching style was a bit chaotic. He was all over the place, talks too quickly, and brush through slides, which did not have enough	Chaotic teaching style. Slides did not have enough information.	Poor teaching style and guidance. Inappropriate teaching method.

Thematic Chart for Destructive Instructor-Leadership Incidents (Study 3)

Participant	Incident no.	A. Destructive instructor-leadership incident	B. Elements – in order identified in chart	C. Classes
		information on them.		
Tara	1	Does not acknowledge student or gives a negative non-verbal response when she says hi, but says hi to other students. Impolite.	Does not acknowledge student. Impolite.	Lack of interest in student. Poor nonverbal communication.
	2	Student was supervised by instructor for undergraduate project. Students said instructor was not nice, she never smiles, and she doesn't like students. Instructor was cold and sad with the world perhaps because she was married and didn't have kids (societal expectation). Instructor is different from everybody, e.g. everybody starts from chapter one, she starts from chapter two. Was not secure and wanted to be in control, e.g. a student took her project to another lecturer to read and validate it before submitting it and when the primary instructor found out she was upset. Instructor was helpful once you make her feel like she's in control or if she needed a favour. Refused students offer to help carry bags because she does not have that kind of relationship with students. Impatient.	Insecure and wanted to be in control. Disliked close relationships with students. Impatient.	Poor teaching style and guidance. Lack of interest in student.
	3	Student's friend got married to the lecturer. Thinks that the friend informed instructor that students take the course because they think it's easy to pass. After that, the relationship changed. Personal incident in which student took gifts for instructor and friend who had a baby. Student jokingly said baby looks like her and instructor replies that the child can't look like her, adding some insulting remarks. The friend laughed at her husband's remarks.	Insulting remark in presence of colleague.	Poor verbal communication style and tone.

Note. Pseudonyms are used for participants.

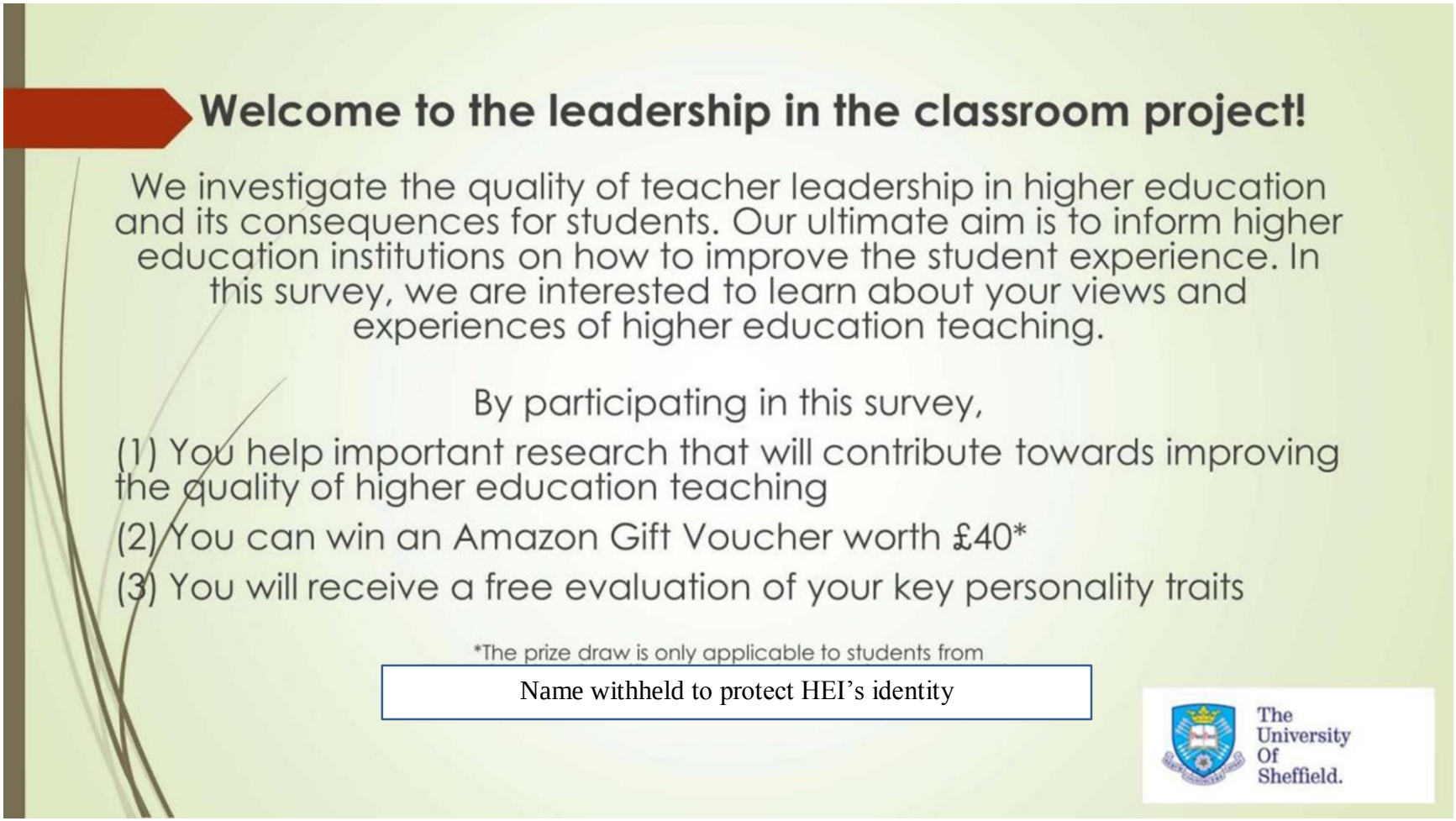
Appendix J

A Comparison Between Tepper's Abusive Supervision Items and the Destructive Instructor-Leadership Interview Data (Study 3)

Tepper's abusive supervision items	Similar examples from Study 3
Ridicules me	Offensive jokes, e.g. "…you don't know, you're a girl".
Tells me my thoughts and feelings are stupid	Downplay students' ideas/opinions, for e.g. "She said it [the project idea] was stupid" or "All of these things that you have in it, too much graphics, you have all these charts, nobody wants to see those things." Tells students what not to do, for e.g. "I don't want you to speak like this, I don't want you to say these things, I don't want you do this!"
Gives me the silent treatment	Ignored students' issues. Avoided making contact with students by using excuses to evade meetings.
Puts me down in front of others	Embarrass in front of others, e.g. "Excuse me sir, I think your microphone is off." And he's like, "What! What! Girl, you probably off."; shouts at students in front of others, "…if you don't want to be here, you don't have to be here, get out!" Offensive jokes in front of others.
Invades my privacy	N/A
Reminds me of my past mistakes and failures	N/A
Doesn't give me credit for jobs requiring a lot of effort	Inaccurate marking/assessment of exams or projects.
Blames me to save himself/herself embarrassment	Irresponsibility regarding exams, for e.g. refusal to admit to mistakes, making students pay for his errors. Unwillingness to change project mark. Took no responsibility for exam errors.
Breaks promises he/she makes	Misleading exam guidance/practice. For e.g., "Out of like let's say twenty different topics in Accounts, that one came. And the one that I couldn't do because he only did one question. In an entire semester, in our revision, one question he didn't…" or "…he give us some important chapters that you need to know how to do the questions in those sectors. But then, in the exam, he changed the questions. So, I failed."
Expresses anger at me when he/she is mad for another reason	Hostile, harsh, aggressive, serious, quarrelling, arguing.
Makes negative comments about me to others	N/A
Is rude to me	Rude, shouts, foul language, locking classroom door. For e.g., "Well, if you are not paying attention, then just leave my class" Or "…she says that it was awful and it looked like something out of the daily mail".
Does not allow me to interact with my coworkers	No classroom interaction, e.g. "It was nothing outside of the PowerPoint slides and no group activities in the class …"
Tells me I'm incompetent	Unrealistic expectations – disbelief of students' lack of knowledge. For e.g., "He would look at you as though well, you supposed to know this. I'm waiting for you answer, give it to me, you know. It was a little intimidating" or "…like if you do something wrong, he might just be like, how could you get this wrong. Or, how could you not know this or something like that."
Lies to me	Misleading exam guidance. See the second example under 'Breaks promises he/she makes' in which the broken promise appears to be intentional.

Appendix K

Online Questionnaire (Study 4)



Before we begin, which university are you attending?

- ❍ <University name withheld for anonymity>
- ❍ UK university other than <University name withheld for anonymity>

If Before we begin, which university are you attending? UK university other than <University name withheld for anonymity> Is Selected

Click on the location of your university in the UK:

Before we start, it is important that you are aware of the following:

1. I confirm that I have read and understood the information sheet explaining the research project (the information sheet can be accessed using this address: http://1drv.ms/1I1ZULw) and I have had the opportunity to ask questions about the project.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.

3. I understand that my responses will be kept strictly confidential. I give permission for members of the research team to have access to my anonymous responses. I understand that I will not be identified or identifiable in the report or reports that result from the research.

4. I agree to take part in the 'leadership in the classroom' research project. By completing this survey, you are agreeing that: (a) You have read and understood the Information Sheet. (b) Questions about your participation in this study have been answered satisfactorily. As stated in the information sheet, you can direct any questions to Paul Balwant at ecp11ptb@sheffield.ac.uk. (c) You are taking part in this research study voluntarily (without coercion).

General instructions (IMPORTANT): In the following, we will ask you to rate one specific lecturer who taught you in the previous semester (i.e., Autumn, 2014). We would like you to focus on ONE lecturer who was the primary/lead lecturer for a module that you completed. The lecturer must have taught at least half of the classes for this module. Also, ensure that you can recall the grade that you received for this module.

Note: A module refers to a series of lectures on a subject that typically lasts a semester.

What is the lecturer's name? Please provide EITHER the lecturer's first name OR his/her last name (not both names). Again, all information will be treated strictly confidential. <Name> provided here.

How many students were typically present in <Name>'s module?

The entire questionnaire is divided into eight (8) sections.

The questions in the next **THREE (3) SECTIONS** ask you to describe <Name>'s module leadership style as you perceive it. In answering the questions in the next three sections, please consider your interactions with <Name> during his/her module, e.g., classroom interactions, email communications, office meetings, etc.

SECTION 1: Click the circle to indicate how strongly you agree with each of the following statements. Try not to use the 'Unsure' category unless you really have to, or if it cannot apply to you or your module. There are no right or wrong answers; we are interested in your perception.

	Disagree	Disagree somewhat	Unsure	Agree somewhat	Agree
<Name> made it clear to me what I was supposed to learn in the module.	❍	❍	❍	❍	❍
<Name> presented the topics in an order that made sense to me.	❍	❍	❍	❍	❍
<Name> organized and ran the module smoothly.	❍	❍	❍	❍	❍
What was taught by <Name> seemed to match what I was supposed to learn.	❍	❍	❍	❍	❍
<Name> provided handouts and other materials that helped me to understand the module.	❍	❍	❍	❍	❍
<Name>'s teaching encouraged me to rethink my understanding of some aspects of the subject.	❍	❍	❍	❍	❍
<Name>'s teaching has given me a sense of what goes on 'behind the scenes' in this subject area.	❍	❍	❍	❍	❍
<Name>'s teaching in this module helped me	❍	❍	❍	❍	❍

to think about the evidence underpinning different views.					
How <Name> taught this module fitted in well with what I was supposed to learn.	❍	❍	❍	❍	❍
<Name> encouraged me to relate what I learned to issues in the wider world.	❍	❍	❍	❍	❍
<Name> tried to share his/her enthusiasm about the subject with me.	❍	❍	❍	❍	❍
<Name> was patient in explaining things which were difficult for me to grasp.	❍	❍	❍	❍	❍
<Name> valued my views in this module.	❍	❍	❍	❍	❍
<Name> helped me to see how I am supposed to think and reach conclusions in this subject.	❍	❍	❍	❍	❍
<Name>'s feedback on my work helped me to improve my ways of learning and studying.	❍	❍	❍	❍	❍
<Name>'s feedback on my set work helped to clarify things I had not fully understood.	❍	❍	❍	❍	❍
Please select Agree Somewhat for this statement.	❍	❍	❍	❍	❍

SECTION 2: The questions in this section are also about <Name>'s leadership style during the module. Again, please consider your interactions with <Name> in his/her module, e.g., classroom interactions, email communications, office meetings, etc.

If a statement is irrelevant, or if you are unsure how to answer it, then leave the answer blank. Please report how frequently each statement fits <Name>'s module leadership. Click the appropriate circle, using the following rating scale:

	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
<Name> talked about his/her personal beliefs and value systems while teaching.	❍	❍	❍	❍	❍
<Name> was not only concerned about his/her own interests, but was genuinely concerned about the progress made by students.	❍	❍	❍	❍	❍
<Name> listened to different opinions for solving problems arising from the module.	❍	❍	❍	❍	❍
<Name> was willing to provide help outside of class.	❍	❍	❍	❍	❍
<Name> talked optimistically about the future.	❍	❍	❍	❍	❍
Please select Once in a while for this statement.	❍	❍	❍	❍	❍

Note: For the MLQ, only 5 sample items can be provided.

SECTION 3: Like the two previous sections, the questions in this section describe <Name>'s module leadership style as you perceive it. Again, please consider your interactions with <Name> in his/her module, e.g., classroom interactions, email communications, office meetings, etc.

If a statement is irrelevant, or if you are unsure how to answer it, then leave the answer blank. Please report how frequently each statement fits <Name>'s module leadership. Click the circle to indicate how often <Name> intentionally used these behaviours.

	I cannot remember <Name> ever using this behavior with me	<Name> very seldom used this behavior with me	<Name> occasionally used this behavior with me	<Name> used this behavior moderately often with me	<Name> used this behavior very often with me
<Name> ridiculed me.	❍	❍	❍	❍	❍
<Name> told me my thoughts or feelings are stupid.	❍	❍	❍	❍	❍
<Name> gave me the silent treatment.	❍	❍	❍	❍	❍
<Name> put me down in front of other people/students.	❍	❍	❍	❍	❍
<Name> invaded my privacy.	❍	❍	❍	❍	❍
<Name> reminded me of my past mistakes and failures.	❍	❍	❍	❍	❍
<Name> did not give me credit for work requiring a lot of effort.	❍	❍	❍	❍	❍
<Name> blamed me to save himself/herself embarrassment.	❍	❍	❍	❍	❍
<Name> broke promises he/she made.	❍	❍	❍	❍	❍

<Name> expressed anger at me when he/she was mad for another reason.	❍	❍	❍	❍	❍
<Name> made negative comments about me to others.	❍	❍	❍	❍	❍
<Name> was rude to me.	❍	❍	❍	❍	❍
<Name> did not allow me to interact with other students.	❍	❍	❍	❍	❍
<Name> told me that I am incompetent.	❍	❍	❍	❍	❍
<Name> lied to me.	❍	❍	❍	❍	❍
<Name> displayed facial expressions that indicated disinterest in me.	❍	❍	❍	❍	❍
<Name> spoke in a monotone or flat voice during lectures.	❍	❍	❍	❍	❍
<Name> ignored me.	❍	❍	❍	❍	❍
<Name> enforced his/her own views on me.	❍	❍	❍	❍	❍
<Name> had unrealistic expectations of me.	❍	❍	❍	❍	❍
<Name> provided poor explanations to me.	❍	❍	❍	❍	❍
<Name> read from the textbook or slides as the primary way of	❍	❍	❍	❍	❍

teaching.					
<Name> threatened me.	❍	❍	❍	❍	❍
<Name> taught in a disorganized fashion.	❍	❍	❍	❍	❍
<Name> misled me.	❍	❍	❍	❍	❍
<Name> gave poor feedback to me.	❍	❍	❍	❍	❍
<Name> gave inaccurate feedback to me.	❍	❍	❍	❍	❍
<Name> took no responsibility for evaluation/marking errors.	❍	❍	❍	❍	❍
<Name> partook in unethical activities with me.	❍	❍	❍	❍	❍
<Name> treated me unfairly.	❍	❍	❍	❍	❍

SECTION 4: The following 18 statements are about how engaged you were in <Name>'s module. Please read each statement carefully and decide if you ever felt this way. If you have never had this feeling, click 'Never'. If you had this feeling, indicate how often you felt it by clicking the response that best describes how frequently you felt that way.

	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always
I worked with intensity for <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I exerted my full effort for <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I devoted a lot of energy to <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I tried my hardest to perform well in <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I strived as hard as I can to complete work for <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I exerted a lot of energy for <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I was enthusiastic in <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I felt energetic in <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I was interested in <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I was proud to be in <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I felt positive about <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I was excited about <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
My mind was focused on <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I paid a lot of attention to <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I focused a great deal of attention on <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I was absorbed by <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I concentrated on <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I devoted a lot of attention to <Name>'s module.	❍	❍	❍	❍	❍	❍	❍

SECTION 5: Please read each statement carefully and decide if you ever felt this way about <Name>'s module. If you have never had this feeling, click 'Never'. If you have had this feeling, indicate how often you felt it by clicking the response that best describes how frequently you felt that way.

	Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always
I felt emotionally drained by my studying for <Name>'s module.	❍	❍	❍	❍	❍	❍	❍
I became less interested in studying for <Name>'s module since the beginning of the module.	❍	❍	❍	❍	❍	❍	❍
I could have effectively solved the problems that arose in my studying for <Name>'s module.	❍	❍	❍	❍	❍	❍	❍

Note: For the MBI, only 3 sample items could be provided.

SECTION 6: The following questions are about how well you did in <Name>'s module.

Do you know the final grade percentage that you received for <Name>'s module?

❍ Yes
❍ No

Answer If Yes Is Selected

What was your final grade percentage for <Name>'s module?

Answer If No Is Selected

In which category was your final grade for <Name>'s module?

❍ 70 - 100
❍ 60 - 69
❍ 50 - 59
❍ 45 - 49
❍ 40 - 44
❍ 0 - 39
❍ No grade: No work was submitted, or work was submitted but was deemed to be of no academic merit, or credit was refused or denied for submitted work.

How would you rate your grade in <Name>'s module in comparison with fellow students?

- ❍ Much better
- ❍ Better
- ❍ The same
- ❍ Worse
- ❍ Much worse

Do you have any additional comments regarding your grade for <Name>'s module?

- ❍ No
- ❍ Yes, please state: _____

SECTION 7: What do you expect to get from the experience of higher education? Indicate how strongly you agree with each of the 3 following statements.

	Strongly agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I hope the things I learn will help me to develop as a person and broaden my horizons.	❍	❍	❍	❍	❍
I want to learn things which might let me help people, and/or make a difference in the world.	❍	❍	❍	❍	❍
I want to study my subject area in depth by taking interesting and stimulating modules.	❍	❍	❍	❍	❍

The following questions are about your background, your university, and information about the prize voucher.

What is your age (in years)?

You are:

- ❍ Male
- ❍ Female

What is your nationality?

What faculty are you studying in?

- ❍ Arts and Humanities
- ❍ Engineering
- ❍ Medicine, Dentistry, and Health
- ❍ Science
- ❍ Social Sciences
- ❍ Law
- ❍ Film
- ❍ International faculty - City College, Thessaloniki
- ❍ Other, please state: _____

Which year of your undergraduate progamme are you in?

- ❍ Year 1
- ❍ Year 2
- ❍ Year 3
- ❍ Year 4
- ❍ Other, please state: _____

Where did you receive your primary education?

Optional prize draw and personality questions.

Counseling statements:

Answer If Before we begin, which university are you attending? <University name withheld for anonymity> Is Selected

If responding to this questionnaire has stimulated any negative thoughts or created distress, please be advised that resources are available at your university to deal with such distress. Specifically, <Name of university's service withheld for anonymity> offers support for students who have academic problems, anxiety, depression, self-image problems, and more. <Name of university's service withheld for anonymity> is a free confidential service available to all students at <University name withheld for anonymity>. See more details at: <University website withheld for anonymity>. In addition to the <Name of university's service withheld for anonymity>, you can also visit your family doctor should you wish to do so.

If you have any further queries, do not hesitate to contact Paul Balwant at ecp11ptb@sheffield.ac.uk.

Answer If Before we begin, which university are you attending? UK university other than The <University name withheld for anonymity> Is Selected

If responding to this questionnaire has stimulated any negative thoughts or created distress, please be advised that resources are likely to be available at your university to deal with distress. See your university's website for further information. In addition to your university's counseling services, you may wish to visit your family doctor to deal with any resulting distress.

If you have any further queries, do not hesitate to contact Paul Balwant at ecp11ptb@sheffield.ac.uk.

End of online questionnaire for Study 4.

Appendix L

Summary of Intercorrelations, Means, and Standard Deviations for the Raw Scores of Transformational Instructor-Leadership as Measured by MLQ-SS, Contingent Reward, Management by Exception, Laissez-Faire, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement
(Study 4)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD
1. Idealized influence													3.97	0.83
2. Consideration	.82**												3.88	0.91
3. Intellectual stimulation	.80**	.82**											3.91	0.77
4. Direction and congruence	.72**	.65**	.65**										4.40	0.74
5. Transformational leadership	.93**	.94**	.91**	.79**									3.99	0.75
6. Contingent reward	.78**	.74**	.71**	.55**	.79**								3.62	0.88
7. MBE active	.67**	.67**	.60**	.39**	.67**	.68**							3.55	0.82
8. MBE passive	-.17*	-.18*	-.20**	-.21**	-.20**	.01	.06						2.47	0.83
9. Laissez-faire	-.23**	-.28**	-.22**	-.30**	-.28**	-.03	-.09	.47**					2.39	0.58
10. Perceived instructor effectiveness	.86**	.81**	.77**	.72**	.88**	.71**	.56**	-.25**	-.33**				4.13	0.95
11. Satisfaction	.82**	.83**	.73**	.68**	.86**	.69**	.59**	-.20**	-.29**	.88**			3.99	1.06
12. Extra effort	.81**	.77**	.71**	.65**	.82**	.66**	.56**	-.17*	-.21**	.78**	.79**		3.86	1.10
13. Achievement: Self-reported grades	.28**	.31**	.29**	.24**	.31**	.25**	.15*	-.05	-.16*	.38**	.36**	.29**	4.78	1.03

Note. For all of the leadership variables, higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes.

N = 187
*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Appendix M

Summary of Standardized Factor Loadings for Confirmatory Factor Analysis of MLQ with Supporting QTILQ Items: 23-Item Factor Structure (Study 4)

		Constructs				
Item no.	Item description[a]	IIAB	Co	IS	DC	IR
MLQ21	<Name>'s behaviour has earned my respect.	.88				.76
MLQ10	<Name> made me feel proud to be associated with him/her.	.87				.74
MLQ18	*Removed for copyright reasons*.	.83				.69
MLQ23	*Removed for copyright reasons*.	.69				.46
QTILQ11	<Name> tried to share his/her enthusiasm about the subject with me.	.69				.48
MLQ14	*Removed for copyright reasons*.	.55				.30
QTILQ12	<Name> was patient in explaining things which were difficult for me to grasp.		.73			.53
MLQ31	<Name> assisted me in actualising my strengths.		.77			.59
QTILQ14	<Name> helped me to see how I am supposed to think and reach conclusions in this subject.		.71			.50
MLQ15	*Removed for copyright reasons*.		.72			.52
QTILQ13	<Name> valued my views in this module.		.77			.61
MLQ19	*Removed for copyright reasons*.		.77			.59
QTILQ16	<Name>'s feedback on my set work helped to clarify things I had not fully understood.		.82			.67
QTILQ15	<Name>'s feedback on my work helped me to improve my ways of learning and studying.		.78			.61
MLQ30	<Name> made me see a problem from different angles.			.80		.66
MLQ32	<Name> suggested various approaches to successfully completing assignments.			.75		.58
MLQ8	*Removed for copyright reasons*.			.61		.37
QTILQ6	<Name>'s teaching encouraged me to rethink my understanding of some aspects of the subject.			.71		.52
QTILQ8	<Name>'s teaching in this module helped me to think about the evidence underpinning different views.			.53		.29
QTILQ3	<Name> organized and ran the module smoothly.				.86	.76

Summary of Standardized Factor Loadings for Confirmatory Factor Analysis of MLQ with Supporting QTILQ Items: 23-Item Factor Structure (Study 4)

		Constructs				
Item no.	Item description[a]	IIAB	Co	IS	DC	IR
QTILQ2	*Removed for copyright reasons*.				.79	.62
QTILQ4	What was taught by <Name> seemed to match what I was supposed to learn.				.64	.41
QTILQ1	<Name> made it clear to me what I was supposed to learn in the module.				.79	.62
	Average variance extracted (%)	57.43	57.83	47.16	59.93	
	Construct reliability	.89	.92	.81	.86	

Note. IIAB = Idealized influence (attributed and behaviour); Co = Consideration (individual and general); IS = Intellectual stimulation; DC = Direction and congruence; IR = Item reliabilities calculated using squared factor loadings.

[a]. Only five MLQ item descriptions were included in this dissertation when submitting to White Rose eTheses Online (WREO) because of copyright reasons.

Appendix N

Multiple Regression Analyses Using Raw (Non-Transformed) Values for Predicting Effectiveness, Satisfaction, Extra Effort, and Student Achievement With MLQ-SS Leadership Dimensions (Study 4)

Variables	Outcome Variables											
	Effectiveness			Satisfaction			Extra Effort			Student achievement		
	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Constant	-.43	.36		-1.00*	.43		-.97	.50		2.54**	.80	
Age	.00	.01	.00	.02	.01	.05	.01	.02	.02	.03	.03	.09
Gender	.01	.07	.01	.05	.09	.02	-.01	.10	-.00	-.11	.16	-.05
Idealized influence	.56**	.08	.49	.51**	.10	.40	.66**	.11	.49	.05	.18	.04
Consideration	.24**	.07	.23	.55**	.09	.47	.33**	.10	.27	.21	.16	.19
Intellectual stimulation	.10	.08	.09	-.04	.10	-.03	.04	.11	.03	.12	.18	.09
Direction and congruence	.22**	.06	.17	.12	.08	.09	.15	.09	.10	.06	.14	.04
R^2		.79			.76			.70			.11	
F		113.21**			94.09**			68.95**			3.84**	

Note.
* $p < .05$ ** $p < .01$.

Appendix O

Tepper's Abusive Supervision Scale in The Higher Educational Module Context (Study 4)

Introduction

The purpose of this analysis is to determine the factor structure of Tepper's Abusive Supervision Scale in the HEI module context (see Table N1 below for the full list of items), and then compare the resulting structure to what is used in Study 4. Like Study 4, I dichotomized all of the destructive instructor-leadership variables as 0 for 'instructor-leader did not use the behaviour' and 1 for 'instructor-leader used the behaviour' because of the severe non-normality issue (Tabachnick & Fidell, 2005).

Table N1

Tepper's Abusive Supervision Scale Total Item Set

Item No.	Item Description	Factor/Deleted
1	Ridiculed me	Callous communication
2	Told me my thoughts or feelings are stupid	Deleted after iteration 2
3	Gave me the silent treatment	Callous communication
4	Puts me down in front of other people/students	Callous communication
5	Invaded my privacy	Victimization
6	Reminded me of my past mistakes and failures	Deleted after iteration 1
7	Did not give me credit for work requiring a lot of effort	Deleted in 2-factor
8	Blamed me to save himself/herself embarrassment	Deleted after iteration 2
9	Broke promises he/she made	Deleted after iteration 1
10	Expressed anger at me when he/she was mad for another reason	Deleted in 2-factor
11	Made negative comments about me to others	Victimization
12	Was rude to me	Victimization
13	Did not allow me to interact with other students	Deleted after iteration 2
14	Told me that I am incompetent	Not used in second CFA
15	Lied to me	Not used in second CFA

Component structure of Tepper's measure

I conducted a PCA on the Tepper's 15-item measure. For the PCA I used oblique rotation (Promax) in order to allow the components to correlate as expected. Kaiser's criterion recommended 4 components, but Horn's parallel analysis recommended 3 components. I first tested a 4-component structure. This solution contained (a) a three-item factor with only two strong item loadings (i.e., the third item loaded poorly and had clear cross-loading issues), and (b) a four-item factor with only one item loading exceeding the ideal threshold of .7 (Hair et al., 2009). For these reasons, I attempted to fit a 3-component structure as recommended by the parallel analysis.

The 3-component structure provided a much clearer solution, but still contained problematic loadings. For this solution, I conducted several re-specifications and five items were deleted in an iterative process. Like Study 4, component loadings were expected to be no less than .425 and ideally above .7, and communalities should exceed .5 (Hair et al., 2009). In the *first* iteration, items 6 and 9 both had communalities that were less than .5, and each was the weakest loading item on their respective component. Therefore, both items were deleted because of their poor representation in the component structure. Next, in a *second* iteration, three items from the first iteration remained problematic. Item 13 had a loading > .5, but its communality was extremely poor (i.e., .36). Item 2 had severe cross-loading issues with all three components. Finally, item 8 cross-loaded on two components with both loadings falling below .5 (i.e., .46 and .49). For these reasons, all three items were deleted. At this stage, the 10-item 3-component structure was an improvement over the 15-item 3-component structure. However, the revised 10-item structure had (a) one problematic cross-loading for item 1, (b) minor cross-loading issues for items 5 and 7, and (c) a two-item component with only one loading exceeding .7. Given these

problems along with the deletion of five items, I re-ran the parallel analysis, and a two-component solution was recommended. Therefore, I checked to see if a 2-component structure would better represent the ten items. Note that a 2-component structure was previously found for Tepper's scale by Mitchell and Ambrose (2007).

The 2-component structure seemed to have stronger components with most communalities exceeded .5. Only two items remained problematic. Item 10 had a very problematic cross-loading, with both loadings being less than .5. Item 7 also had a communality that was poor (i.e., .43). After deleting these two items, the 8-item structure derived from PCA had no cross-loading issues, and only one item had a communality that did not exceed .5 (item 14 had a communality of .46, but its factor loading was .71). With the reduced 8-item set, I re-ran the parallel analysis and the 2-component solution was still recommended. This final 8-item solution explained 61.10% of the variance and each of the components was reliable (i.e., Cronbach's alpha exceeded .7 (see Table N2).

Confirmatory factor analysis of Tepper's measure

Following the PCA, I conducted a CFA to replicate the derived 8-item two-factor solution. Like Study 4, I used diagonally weighted least squares (DWLS) estimation because all of the observed variables were categorical. I estimated the measurement model using the Lavaan package (Yves, 2012) for R (R Core Team, 2013). The model was just identified, and thus the fit indices could not be interpreted. Still, I examined the factor loadings for the model, and details are given in Table N2 (see First CFA). Most of the factor loadings were fairly good, but item 14 had a factor loading that was less than .5 (recall that this item also had a communality less than .5 in the PCA). Also item 15 had a very poor loading of .42. I thus deleted these 2 items in the Second CFA. In the second CFA, we see that all factor loadings exceeded the minimum

Table N2

Summary of (a) Component Loadings and Communalities for Principal Component Analysis With Promax Rotation and (b) Standardized Factor Loadings for Confirmatory Factor Analysis of Tepper's Measurement Items

		PCA			First CFA		Second CFA	
		Test components			Constructs		Constructs	
Item no.	Item descriptions: <Instructor's name>…	1	2	C	VIC	CC	VIC	CC
5	… invaded my privacy	.85		.75	.78		.70	
15	… lied to me	.79		.53	.42		-	
14	… told me that I am incompetent	.71		.46	.48		-	
11	… made negative comments about me to others	.68		.53	.67		.64	
12	… was rude to me	.63		.60	.84		.82	
4	… put me down in front of other people/students		.87	.71		.68		.69
3	… gave me the silent treatment		.81	.64		.68		.67
1	… ridiculed me		.80	.67		.79		.79
Variance extracted (%)		42.73	18.37					
Cronbach's alpha		.78	.76					
Average variance extracted (%)					43.39	51.63	52.40	51.64
Construct reliability					.78	.76	.77	.76

Note. Loadings less than .3 are not shown. C = communalities; VIC = victimization; CC = callous communication.

threshold of .5, AVE was greater than 50% for each dimension, and construct reliability exceeded .7. Therefore, there appears to be good convergent validity for Tepper's 6-item 2-factor measure.

Tepper's measure comparisons

The two factors derived from Tepper's measure are nearly identical to the victimization and callous communication dimensions from Study 4 (see Table N3). The only differences for these two dimensions in Study 4 are that victimization contained two additional items from Tepper's measure, and callous communication contained one additional item from my developed items. The main difference in Study 4 is that I arrived at a third factor called irresponsibility. Irresponsibility was represented by one of Tepper's items and three items from my developed items.

In Table N3, I further showed that there were some similarities and differences between the measures developed in the educational context and Tepper's measure in the corporate context. For Tepper's measure, two of the three items that loaded on callous communication in the educational context also loaded on the same factor in the corporate context. For victimization as measured in Study 4, only two of the five items loaded on the same factor. In the corporate context, there were cross-loading issues for some of the items that loaded clearly in the educational context. These differences in item loadings between the educational and corporate context suggests that destructive leadership may be perceived differently in the unique HEI module context. Moreover, supplementing Tepper's measure with the items from my interview data not only led to stronger factors, but also led to the emergence of a new factor called irresponsibility.

Table N3

Summary of (a) Standardized Factor Loadings for Confirmatory Factor Analysis With Promax Rotation of Both Combined Items from Tepper's Measure and Tepper's Measure By Itself, and (b) Exploratory Factor Loadings from The Corporate Context

		Higher educational module context					Corporate context	
		Study 4: Tepper's measure plus interview items			Only Tepper's measure		Only Tepper's Measure[a]	
Item no. /		CFA factors			CFA factors		EFA factors	
source	Item descriptions: <Instructor's name>…	VIC	CC	IRR	VIC	CC	1	2
T11	Made negative comments about me to others	.62			.67			.68
T5	Invaded my privacy	.66			.70		.58	
T8	Blamed me to save himself/herself embarrassment	.81					.63	
T10	Expressed anger at me when he/she was mad for another reason	.72					.53	.45
T12	Was rude to me	.74			.82		.54	.55
Study 3	Displayed facial expressions that indicated disinterest in me [b]		.70					
T4	Put me down in front of other people/students		.74			.69		.79
T3	Gave me the silent treatment		.70			.67	.45	.49
T1	Ridiculed me.		.75			.79		.71
Study 3	Misled me [b]			.81				
Study 3	Threatened me [b]			.85				
Study 3	Partook in unethical activities with me [b]			.89				
T15	Lied to me			.87			.76	

Note.

a. These factor loadings are taken from Mitchell and Ambrose (2007). For Mitchell and Ambrose's findings, I displayed only dominant loadings for the items which the authors presented as such. In addition, I excluded items that were not included in Study 4.

b. Items from Study 4 that are from the interview data (Study 3), and thus not included in Tepper's measure.

Appendix P

Summary of Intercorrelations, Means, and Standard Deviations for the Raw (Non-Transformed) Scores of Destructive Instructor-Leadership as Measured by Tepper-Study 3, Transformational Instructor-Leadership as Measured by MLQ-SS, Contingent Reward, Management by Exception, Laissez-Faire, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement (Study 4)

	Variables	1	2	3	4	5	6	7	8	9
1	DIL: Irresponsibility									
2	DIL: Victimization	.33**								
3	DIL: Callous Comm.	.21**	.47**							
4	DIL (combined)	.64**	.83**	.76**						
5	TIL: IIAB	-.15	-.14	-.33**	-.28**					
6	TIL: Co	-.14	-.08	-.31**	-.23**	.80**				
7	TIL: IS	-.22**	-.15*	-.28**	-.29**	.81**	.83**			
8	TIL: DC	-.19**	-.06	-.26**	-.22**	.69**	.62**	.63**		
9	TIL (combined)	-.18*	-.12	-.33**	-.28**	.92**	.94**	.92**	.77**	
10	Cont. Reward	-.03	-.08	-.14	-.11	.73**	.71**	.71**	.49**	.75**
11	MBE active	-.10	-.06	-.19**	-.16*	.66**	.67**	.61**	.38**	.67**
12	MBE passive	.11	.22**	.20**	.24**	-.11	-.11	-.18*	-.15*	-.15
13	Laissez-faire	.17*	.15	.15	.20**	-.21**	-.25**	-.22**	-.27**	-.26**
14	Effectiveness	-.23**	-.21**	-.36**	-.36**	.84**	.77**	.77**	.69**	.86**
15	Satisfaction	-.19*	-.15*	-.36**	-.31**	.82**	.80**	.73**	.64**	.85**
16	Extra effort	-.21**	-.14	-.35**	-.30**	.80**	.74**	.73**	.64**	.82**
17	Achievement	-.14	-.20**	-.21**	-.25**	.20**	.24**	.24**	.18*	.25**

Note. For all of the leadership variables, higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. IIAB = idealized influence (attributed and behaviour); Co = consideration (individual and general); IS = intellectual stimulation; DC = direction and congruence; TIL = transformational instructor-leadership; DIL = destructive instructor-leadership.

N = 174

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Summary of Intercorrelations, Means, and Standard Deviations for the Raw (Non-Transformed) Scores of Destructive Instructor-Leadership as Measured by Tepper-Study 3, Transformational Instructor-Leadership as Measured by MLQ-SS, Contingent Reward, Management by Exception, Laissez-Faire, and Student Outcomes Including Effectiveness, Satisfaction, Extra Effort, and Achievement (Study 4)

	Variables	10	11	12	13	14	15	16	Mean	SD
1	DIL: Irresponsibility								0.00	1.00
2	DIL: Victimization								0.00	1.00
3	DIL: Callous Comm.								0.00	1.00
4	DIL (combined)								0.00	1.00
5	TIL: IIAB								4.07	0.79
6	TIL: Co								3.94	0.85
7	TIL: IS								4.00	0.75
8	TIL: DC								4.44	0.70
9	TIL (combined)								4.07	0.71
10	Cont. Reward								3.67	0.85
11	MBE active	.68**							3.57	0.82
12	MBE passive	.09	.10						2.45	0.83
13	Laissez-faire	-.01	-.07	.45**					2.38	0.59
14	Effectiveness	.66**	.55**	-.20**	-.31**				4.19	0.89
15	Satisfaction	.65**	.59**	-.14	-.27**	.86**			4.07	0.99
16	Extra effort	.63**	.55**	-.14	-.20**	.76**	.77**		3.93	1.05
17	Achievement	.19*	.12	-.01	-.11	.31**	.29**	.24**	4.84	0.97

Note. For all of the leadership variables, higher scores were indicative of more of the particular leadership style being used. For all of the outcome variables, including effectiveness, satisfaction, extra effort, and student achievement, higher scores were indicative of more positive outcomes. IIAB = idealized influence (attributed and behaviour); Co = consideration (individual and general); IS = intellectual stimulation; DC = direction and congruence; TIL = transformational instructor-leadership; DIL = destructive instructor-leadership.
N = 174
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Appendix Q

Multiple Regression Analyses Using Raw (Non-Transformed) Values for Predicting Effectiveness, Satisfaction, and Extra Effort With Destructive Instructor-Leadership Dimensions (Study 4)

	Outcome Variables								
	Effectiveness			Satisfaction			Extra Effort		
Variables	B	SEB	β	B	SEB	β	B	SEB	β
Constant	5.17**	.55		4.57**	.62		4.91**	.66	
Age	-.04	.02	-.15	-.02	.02	-.07	-.04	.03	-.11
Gender	-.05	.14	-.03	-.02	.16	-.01	-.11	.17	-.05
Irresponsibility	-.15*	.07	-.17	-.14	.08	-.15	-.18*	.08	-.18
Victimization	-.01	.07	-.02	.07	.08	.07	.08	.09	.08
Callous Comm.	-.29**	.07	-.32	-.36**	.08	-.37	-.37**	.09	-.36
R^2	.17			.15			.16		
F	6.94**			5.98**			6.15**		

Note.
* $p < .05$. ** $p < .01$.

Appendix R

The Relationships between Student Engagement and Burnout Dimensions (Study 4)

Introduction

In this Appendix, I propose and test a conceptual framework for the relationships between the dimensions underlying both student engagement and burnout. Some researchers explain that the dimensions for engagement can be interrelated. For engagement, the move to re-conceptualize engagement as comprising of cognitive, emotional, and behavioural dimensions has been accompanied by few discussions regarding the relationships between said dimensions. Harter et al. (2002) explain that an individual must make a personal decision to become engaged. From this perspective, as briefly explained in Chapter 3, cognitive engagement occurs silently and on a personal level as an individual makes the decision to become engaged (Shuck & Wollard, 2010). Shuck and Wollard (2010) argue that cognitive engagement acts as a catalyst for emotional and behavioural engagement, and is "the most powerful of the three" (Shuck & Wollard, 2010, p. 106). Following this notion, it is likely that as students immerse themselves in a HEI module, they feel more enthusiastic and positive about the module as well as exert more energy and effort.

H1a: There is a positive relationship between cognitive engagement and emotional engagement.

H1b: There is a positive relationship between cognitive engagement and behavioural engagement.

For burnout, researchers have generally considered exhaustion to be the first stage of the burnout process (Cordes & Dougherty, 1993). Therefore, exhaustion is considered key to

experiencing burnout (Cordes & Dougherty, 1993), and is typically followed by cynicism (Maslach et al., 2001). According to Maslach et al. (2001), cynicism follows exhaustion because the immediate reaction to exhaustion is to distance oneself (see Section 3.4 for a more detailed discussion on distancing). While the sequential link between exhaustion and cynicism is well-established, the link between inefficacy and other burnout dimensions remains uncertain. Maslach et al. (2001) explain that research on burnout generally supports the notion that inefficacy occurs parallel to exhaustion and cynicism, and not sequentially.

H2: There is a positive relationship between exhaustion and cynicism.

Even though Schaufeli and colleagues propose that engagement and burnout are independent concepts, they also assert that they are related. However, there is a dearth of research regarding the relationships between engagement dimensions and burnout dimensions. Maslach et al. (2001) posited that engagement and burnout are opposite poles, but they also state that burnout results from an erosion of engagement (see Chapter 3). This argument is in line with the view that, "You have to have been on fire in order to burn out" (Maslach et al., 2001, p. 405). While this is not necessarily always the case, the assertion is that highly activated or energized individuals can become overachievers, and "end up doing too much … thus leading to exhaustion and eventual cynicism" (Cordes & Dougherty, 1993; Maslach et al., 2001, p. 405). For instance, a student may work too hard, and if accompanied by unmet expectations, behavioural engagement may erode until the student becomes exhausted or loses confidence in their ability to tackle the HEI module (Cordes & Dougherty, 1993). Similarly, a student who becomes uninterested and unenthusiastic in a HEI module, may be experiencing a drain on their cognitive resources, and thus eventually become emotionally exhausted. Overall, it is likely that when engagement erodes away, an individual can spiral into a state of burnout. Given that (a)

cognitive engagement is expected to be a precursor to behavioural and emotional engagement, (b) exhaustion is expected to be a precursor to cynicism, and (c) inefficacy occurs in parallel to the other burnout dimensions, I expect that,

H3a: There is a negative relationship between behavioural engagement and inefficacy.

H3b: There is a negative relationship between behavioural engagement and exhaustion.

H4a: There is a negative relationship between emotional engagement and inefficacy.

H4b: There is a negative relationship between emotional engagement and exhaustion.

The hypothesized model is presented in Figure Q1.

Methods

For details regarding participants, materials, and procedures, see Study 4, Section 7.2.

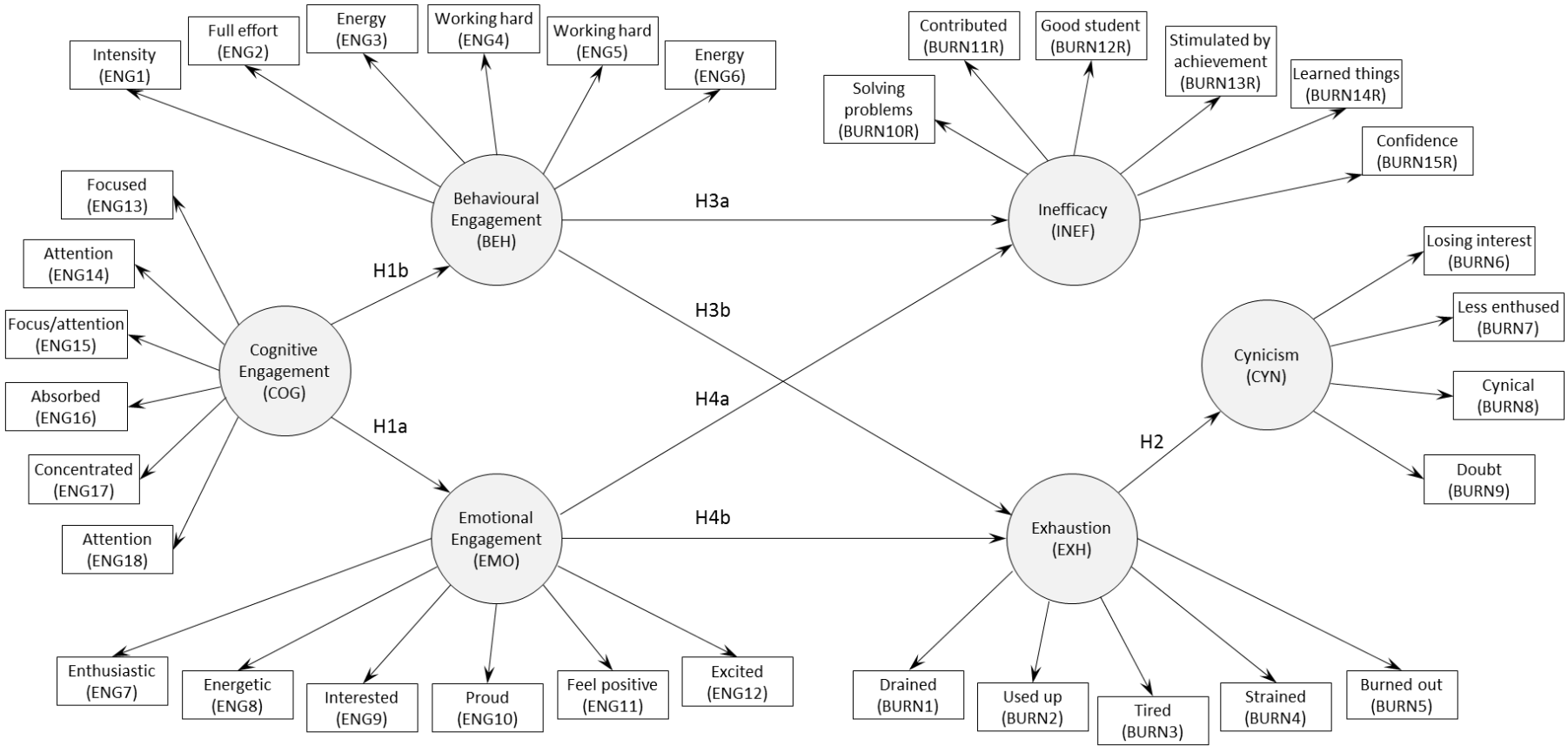


Figure Q1. Hypothesized model for the relationships between student engagement and burnout dimensions. Error terms omitted for ease in readability.

Results

To test the model that was hypothesized in Figure Q1, I used structural equation modeling. For the path model, I followed Anderson and Gerbing's two-step process (J. Anderson & Gerbing, 1988). For the first step, I estimated the measurement model as shown in Table Q1, i.e., the baseline model. For the second step, I converted this measurement model into a structural model to test H1 to H4. The structural model showed good model fit (Satorra-Bentler χ^2 (419) = 556.17, $p < .05$, Robust CFI = .97, RMSEA = .044). However, H3b was not supported because the path from behavioural engagement to exhaustion was not significant, and thus this path was deleted.

To check the mediating effects in the structural model, the first step was to establish that the necessary individual relationships were statistically significant. This analysis was conducted by checking (a) the direct unmediated relationship, (b) the relationship between the mediator and the 'input' construct, and (c) the relationship between the mediator and the outcome construct (see Table Q1) (Hair et al., 2009). The findings in Table Q1 showed that all of the relationships were statistically significant.

To assess the level of mediation through the mediated model, I added each of the direct unmediated relationships to the structural model (see Table Q2). The Satorra-Bentler $\chi^2_{difference}$ test indicated that two of the direct unmediated relationships significantly improved the model (see path numbers 3 and 4 in Table Q2). The direct path between emotional engagement and cynicism indicated that exhaustion was only a partial mediator in the relationship between emotional engagement and cynicism. When adding path 3 to the model, path 4 became non-significant. Therefore, I added only path 3 to the model, and the final model is shown in Figure Q2. This model provides partial support for the hypothesized model Satorra-Bentler χ^2 (419) =

539.17, $p < .05$, Robust CFI = .97, RMSEA = .041. Specifically, all of the hypotheses with the exception of H4b were supported.

Table Q1

Assessment of the Level of Mediation Through the Mediated Model for Student Engagement and Burnout Dimensions (Study 4)

(a) Direct unmediated relationship	Cov(X,Y)	(b) Relationship between mediator and "input"	Cov(X,Y)	(c) Relationship between mediator and outcome	Cov(X,Y)
COG ↔ INEF	-0.70***	COG ↔ BEH	0.75***	BEH ↔ INEF	-0.74***
COG ↔ EXH	-0.56***	COG ↔ EMO	0.80***	EMO ↔ EXH	-0.75***
EMO ↔ CYN	-0.83***	EMO ↔ EXH	-0.75***	EXH ↔ CYN	0.84***
COG → CYN	-0.61***	COG → EMO	0.80***	EMO ↔ CYN	-0.83***
		COG → EXH	-0.56***	EXH ↔ CYN	0.84***

Note. COG = cognitive engagement, EMO = emotional engagement, BEH = behavioural engagement, INEF = inefficacy, EXH = exhaustion, CYN = cynicism.

***$p < .001$.

Table Q2

Model Comparisons of the Effect of Adding Direct Unmediated Relationships (Study 4)

Path No.	Direct unmediated relationship	Satorra-Bentler χ^2	df	Robust CFI	RMSEA	$\Delta\chi^2/\Delta df$
-	Baseline model	559.00	420	.964	.044	-
1	COG → INEF	557.56	419	.964	.044	1.44/1
2	COG → EXH	556.83	419	.965	.044	2.17/1
3	EMO → CYN	539.17	419	.969	.041	19.83/1**
4	COG → CYN	553.43	419	.966	.043	5.57/1*

Note. COG = cognitive engagement; INEF = inefficacy, EXH = exhaustion, EMO = emotional engagement, CYN = cynicism.

**$p < .01$. *$p < .05$

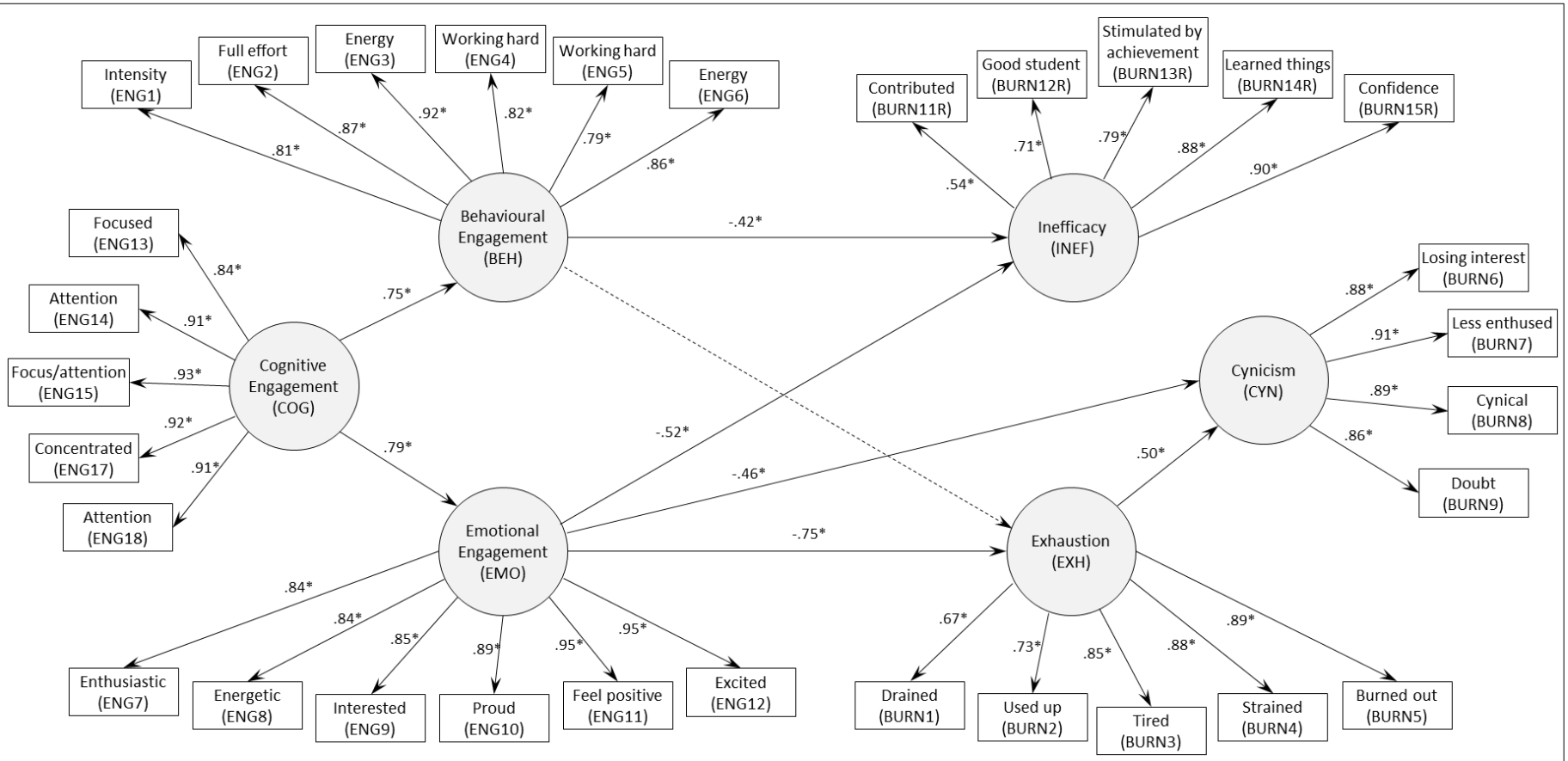


Figure Q2. Structural model of the relationships between student engagement and burnout dimensions. Standardized maximum likelihood parameter estimates. Error variance values excluded for ease in readability. All paths were significant at $p < .001$.

Based on contention in the literature, I further tested five competing structural models to determine whether the final model in Figure Q2 was better than other potential alternative models (see Table Q3). *First*, I reversed the direction of the pathways between student engagement and burnout to determine whether the proposed argument that student burnout is an erosion of student engagement was supported (Model 1). This reversed model fitted significantly worse than the Baseline model. Moreover, in this model, exhaustion was not significant predictor of emotional engagement, and the other reversed paths were markedly weaker than the paths in the Baseline model. *Second*, I tested a model with emotional engagement as the first stage of the engagement process (Model 2). Even though organizational behaviour theorists argue that cognitive engagement is a catalyst for emotional and behavioural engagement (e.g., Harter et al., 2002; Shuck & Wollard, 2010), Pekrun et al. (2002) state that emotional engagement can be a precursor for cognitive processes. This model also fitted significantly worse than the Baseline model. *Third*, I tested three models for which inefficacy was predicted by exhaustion (Model 3), cynicism (Model 4), and both exhaustion and cynicism (Model 5). While inefficacy is generally assumed to develop in parallel to exhaustion and cynicism (Maslach et al., 2001), some researchers have shown that inefficacy can be a function of either exhaustion, cynicism, or both (e.g., Byrne, 1994; R. T. Lee & Ashforth, 1996). The findings indicated that all three of these models fitted equally as well as the Baseline model, but none of the added paths were significant. Therefore, these findings suggest that inefficacy may indeed occur in parallel. Overall, the final model was a better representation of the relationships between the student engagement and burnout dimensions than the five competing models.

Table Q3

Competing structures for the Student Engagement-Burnout Empirical Model (Study 4)

Model No.	Model description	Satorra-Bentler χ^2	df	Robust CFI	RMSEA	$\Delta\chi^2/\Delta df$
	Baseline model	539.17	419	.969	.041	
1	Reverse paths	549.22	416	.966	.043	10.05/3*
2	EMO as first stage	569.31	417	.961	.046	30.14/2**
3	EXH → INEF	538.95	418	.969	.041	0.22/1
4	CYN → INEF	539.26	419	.969	.041	0.09/0
5	EXH + CYN → INEF	538.95	418	.969	.041	0.22/1

Note. COG = cognitive engagement; INEF = inefficacy, EXH = exhaustion, EMO = emotional engagement, CYN = cynicism.

***p* < .01. **p* < .05

Discussion

Overall, the analysis in this Appendix highlights the relationships between the dimensions underlying student engagement and burnout. For student engagement, the findings showed that cognitive engagement may be a catalyst for emotional and behavioural engagement. For student burnout, cynicism was predicted by exhaustion, and inefficacy occurred in parallel as expected. Finally, the idea that burnout can result from an erosion of engagement was mainly supported, with the only exception being that exhaustion was not associated with behavioural engagement (at least in the HEI module context). Taken together, the findings provided good support for the hypothesized model. Therefore, as far as I know, this study contributes the first explicit examination of the *relationships between both engagement and burnout dimensions simultaneously*.

The main limitation of this study is that cross-sectional data was used. Cross-sectional data is particularly problematic for drawing conclusions regarding the relationships between engagement and burnout dimensions. Cordes and Dougherty (1993) suggest that future research

consider measuring the antecedents and consequences of burnout (and engagement) at two or more points in time, i.e., longitudinal research designs. For instance, student engagement and burnout can be measured at the beginning, mid-semester, and end of semester time points. Such a research design would provide better evidence regarding the sequential order for the dimensions underlying student engagement and burnout.

Appendix S

Training and Development Programme for Instructor-Leadership

For the training and development of instructor-leadership I first describe some of the potential challenges of such a programme. Then, I describe the training and development programme in four phases, including assessment, design, implementation, and evaluation.

Challenges of training and development. There are three challenges that are likely to be faced in conducting human resource development efforts geared towards developing or improving instructor-leadership.

- ***Challenge 1***: It is unrealistic to expect that all instructors can adopt all of the transformational behavioural dimensions. A reality that has to be faced is that instructors are limited in the breadth of their repertoire of teaching methods (Bourner, 1997). Therefore, the only option may be to broaden that repertoire to allow an instructor to develop the behaviours that are determined to be within their boundaries.
- ***Challenge 2***: Attempts to change behaviours, particularly at the senior level, may prove challenging because these instructors may accept traditional teaching norms. In general, instructors may view these change programs as a threat to their autonomy in discovering a teaching style that suits them (Boice, 1996).
- ***Challenge 3***: Destructive instructor-leadership behaviours can go unnoticed (Boice, 1996).

These challenges are taken into account in the development of the training and development programme. The training and development programme is based on the Training and Human Resource Development Process Model by Desimone and Werner (2006). The model is

sometimes described as the instructional systems design approach and is divided into four phases, including assessment, design, implementation, and evaluation.

Needs assessment. Need "refers to a discrepancy or *gap* between what an organization expects to happen and what actually occurs" (DeSimone & Werner, 2006, p. 130 original emphasis). For instance, a discrepancy exists if an instructor is expected to give feedback on set work, but instead returns students' assessments with a mark and nothing else. A discrepancy or performance deficiency forms the basis for a training or human resource development need. Needs can exist at three levels, including strategic/organization, task, and person.

Strategic/organization analysis. An organization analysis is a "'whole system' view of the organization and what it is trying to accomplish" (DeSimone & Werner, 2006, p. 132). There are two factors of an organizational analysis that should be identified. First, an awareness of organizational resources that can be directed towards human resource development efforts is useful. Such resources include, money, materials, and facilities. Most HEIs (barring online only HEIs) have access to classroom facilities and training materials such as projectors or printing paper. Second, the organizational climate should be considered beforehand to determine potential issues that may arise in training. For instance, level of trust between the different ranks, including deans, heads of department, professors, lecturers, etc. The climate can affect whether instructors transfer training back to the classroom (Tracey, Tannenbaum, & Kavanagh, 1995).

The methods of conducting an organization analysis depends on the organization and its availability of data sources. In the HEI context, one can consider the following data sources.

1. *Organizational goals and objectives:* Link the human resource development program to the organization's strategy and mission and ensure that this link is communicated to

deans, heads of department, and lecturers. This link can make instructors aware of their connection to the organizational goals and, thus fostering support for human resource development efforts.

2. *Human resource inventories:* If a HEI maintains human resource inventories, it can provide a demographic database for the scope of training required. This is especially useful given the second challenge in attempting to change behaviours at the senior level.
3. *Student feedback surveys:* Many HEIs use some form of student feedback to gauge instructors' effectiveness in the classroom. Instructor-leadership questions can be incorporated into these feedback instruments to gauge instructors' use of transformational instructor-leadership in the classroom. Also, the use of open-ended questions may identify students' complaints that may be indicative of destructive instructor-leadership.

Task analysis. Task analysis is a "systematic collection of data about a specific job or group of jobs … to determine what an employee should be taught to perform the job at the desired level" (Moore & Dutton, 1978, p. 533). Moore and Dutton explain that one source of determining what an employee should be taught is a review of the literature via Ph.D. theses (Moore & Dutton, 1978, p. 537). In my dissertation, I identify four dimensions that can be taught to instructors. With this information, a task analysis can be conducted in two steps. First, identify teaching tasks of instructors through a job description and/or other task identification methods such as time sampling, job inventory questionnaires, etc. Second, describe teaching standards based on the MLQ-SS items.

Person analysis. Person analysis focuses on "the training needs of the individual employee" (DeSimone & Werner, 2006, p. 146). An instructor's person analysis should consist of two components: a summary person analysis and a diagnostic person analysis. Summary

person analysis entails an overall evaluation of the instructor's teaching performance, and provides output regarding whether or not they are using transformational instructor-leadership or destructive instructor-leadership behaviours. Instructors who use transformational instructor-leadership behaviours can generally be regarded as successful performers, whereas those not using transformational instructor-leadership and/or using destructive instructor-leadership behaviours can be regarded as unsuccessful performers. Diagnostic person analysis determines *why* instructors' behaviours occur. A primary source for both components of person analysis is performance appraisal.

Performance appraisal of instructor's teaching is based on students' perceptions of instructor's teaching practices. As such, student feedback surveys can provide a useful benchmarking instrument from which to evaluate transformational instructor-leadership behaviours. The use of a benchmarking instrument results in a profile of the instructor's strengths and weaknesses with regards to transformational instructor-leadership. As mentioned in the organization analysis, a subset of these surveys can be re-designed at the organizational level to incorporate the MLQ-SS. Given that the MLQ-SS is partially built from a student feedback questionnaire, it is likely that some aspects of transformational instructor-leadership may already be incorporated in existing feedback instruments.

Destructive instructor-leadership behaviours may also be uncovered in these questionnaires, but can also be sourced from heads of department or other instructors who receive students' complaints. Given that destructive instructor-leadership behaviours are likely to go unnoticed (third challenge), additional sources may need to be used to uncover such behaviours, e.g., use of trained observers. The use of trained observers is essential for external evaluation of instructors because these observers can note instructor behaviours in an unbiased

manner (Boice, 1996). To supplement these sources of data, instructors with teaching deficiencies can be interviewed in order to obtain their perspective on what needs to be learned. This strategy can motivate instructors to direct efforts towards learning (DeSimone & Werner, 2006). Such interviews also provide valuable insight into reasons for instructors' discrepancies in behaviours.

For any identified discrepancy in instructor-leader behaviours, information from organization, task, and person analysis should be integrated to determine why the discrepancy exists (Herbert & Doverspike, 1990). Discrepancies in behaviour may result from internal factors such as a motivational deficiency or a deficiency in knowledge, skills, and/or abilities or external factors such as lack of support, outdated or inadequate equipment, adverse conditions, or obstructive work rules (Herbert & Doverspike, 1990). If deficiencies are due to internal factors, especially knowledge; skills; and/or ability deficiencies, then training and development should proceed to the other stages of the process.

Design and implementation of an effective training and development programme. The design and implementation of an effective training and development program should adhere to certain key activities including setting objectives, selecting the trainer or vendor, selecting training methods and media, and scheduling the training programme.

Setting objectives. An objective is a collection of words intended to inform trainees what the trainer intends to achieve (Mager, 1997). Objectives should be outcome-based and depend on discovered deficiencies from the needs assessment phase. Instructors' deficiency in their use of transformational instructor-leadership may range from one dimension to all four dimensions. However, in recognition of the first challenge, the four transformational instructor-leadership

dimensions and three destructive instructor-leadership dimensions are split into separate modules. The use of separate modules allows for instructors to attend training where needed, rather than pushing their teaching repertoire beyond their natural limits by training or un-training a combination of dimensions simultaneously (Challenge 1). For each module, Mager's suggestions for preparing instructional objectives are taken into account in designing some sample objectives as shown below (Mager, 1997).

Idealized influence.

1. Use behaviours that can earn students' respect (further research on specific actions needed).
2. Use behaviours that make students proud to be associated with you (further research on specific actions needed).
3. Show genuine concern for students' progress.
4. Share enthusiasm about the subject with students.

Consideration.

1. Be able to show students how to think and arrive at conclusions in the subject.
2. Be patient in explaining module content that appear difficult for students to grasp.
3. Use verbal and nonverbal communication to indicate to students that their views are valued in the module.
4. Give students feedback on set work so that it clarifies things they may not fully understand.
5. Give students feedback on set work that can help to improve their ways of learning and/or studying.

Intellectual stimulation.

1. Teach in a manner that helps students to think about the evidence underpinning different views.
2. Encourage students to rethink their understanding of certain aspects of the subject for which they may have preconceived misconceptions.
3. Show students how to see a problem from different angles.

Direction and congruence.

1. Use teaching methods that are appropriate for the learning objectives.
2. Ensure that teaching content coincides with the module's learning objectives.
3. Ensure that the module is presented and delivered in an organized fashion.
4. Make it clear to students what they are supposed to learn in the module.

Callous communication.

1. Refrain from using hostile, rude, aggressive, intimidating, arrogant, or harsh words or actions towards students in all settings, e.g., in the presence of other students, when students do not know the answer to a question, private meetings, etc.
2. In giving directions to students, avoid using too many words with negative connotations, e.g., threats, words like "don't", etc.
3. Refrain from using facial expressions that indicate disinterest in students.
4. Refrain from using jokes that can be perceived by some students as being offensive.

Victimization.

1. Refrain from invading students' privacy.

2. Do not blame students to save yourself embarrassment.
3. Do not express anger at students, especially when angry for another reason.
4. Avoid rude behaviour towards students.

Irresponsibility.

1. Refrain from using irresponsible behaviours such as lies or threats.
2. Do not mislead students.
3. Avoid unethical situations.

The un-training of destructive instructor-leadership behaviours should be accompanied by replacement behaviours where necessary. Hence, for destructive instructor-leadership training, components from transformational instructor-leadership training should be included. For instance, in training instructors not to use too many negative words like “don’t”, the consideration dimension proposes the use of constructive feedback as an alternative.

Selecting the trainer or vendor. The development and delivery of the programme can be carried out using a combination of the HEI’s resources with external assistance. Universities are likely to have the knowledge, skills, and abilities required to implement the training, but may require external vendor assistance particularly during needs assessment. While assessment of transformational instructor-leadership needs can be a relatively straightforward process (use of the MLQ-SS in subset of student feedback questionnaires), the assessment of destructive instructor-leadership may require resources for conducting interviews or hiring of externally trained observers. For the evaluation of instructor-leadership, considerable time and effort may also be required. Therefore, HR departments have to consider whether (a) they have the resources to dedicate towards these efforts, (b) evaluation should be outsourced, or (c) it is

sensible to focus solely on transformational instructor-leadership given that destructive instructor-leadership did not appear to share any strong relationships with student engagement and burnout in this dissertation.

If a HEI decides to conduct the training program itself, the training staff should possess two specific competencies. First, the training staff must be competent at developing, implementing, and evaluating training programs. Second, trainers should be a subject matter expert with regards to pedagogy. To meet these requirements, a team comprising of training experts and pedagogy experts can be used.

Selecting training methods and media. The trainer/s should select the appropriate training methods. In leadership training, classroom training methods are widely used (Yukl, 2009). Two classroom type training methods that can be used are discussion and behaviour role modeling.

Discussion. The discussion method is centered on active participation. Discussion involves "feedback, clarification, and sharing points of view" (DeSimone & Werner, 2006). This method may be useful in un-training destructive instructor-leadership because instructors are able to share their views on such behaviours and receive feedback on why such behaviours can be harmful to students' success. The trainer can focus on asking direct questions related to the objectives of the programme. For instance, a discussion module on destructive instructor-leadership communication may ask trainees, "Why do instructors sometimes use hostile actions towards students?" This can then stimulate their thinking as to why they use such behaviours. Then, the trainer can explain why such behaviours are harmful and suggest alternative and more

effective substitute behaviours. Training instructors to develop the substitute behaviours is likely to be more effective through the use of experiential methods such as behaviour role modeling.

Behaviour role modeling. Behaviour role modeling is a very popular method for leadership training (Yukl, 2009). For training transformational instructor-leadership, "merely presenting and demonstrating behaviour guidelines is not sufficient to ensure people will learn and use behaviour" (Yukl, 2009, p. 390). Instead, behaviour role modeling entails active involvement and participation, and can be divided into five phases (DeSimone & Werner, 2006).

1. Modeling: Trainees are shown a video clip in which an instructor models the target behaviour. The behaviour being shown should comprise of learning points that are based on the objectives of the training module.
2. Retention: Trainees are placed into small groups to discuss components of the modeled behaviour. Trainees should also be encouraged to identify the learning points and the rationale underlying the learning points.
3. Rehearsal: Trainees are asked to role-play the desired behaviour with another trainee, perhaps with someone from their group.
4. Feedback: Each trainee receives feedback on the behaviours used in the role-playing exercise and, if necessary, suggestions for improvement are given. Also, if resources permit, trainees can also be videotaped during role-play and then asked to evaluate themselves as well.
5. Transfer of training: Trainees are encouraged to practice the learned behaviours in the classroom or in their general interactions with students.

Behaviour modeling is considered highly effective for training new behaviours (Burke & Day, 1986; Smith-Jentsch, Salas, & Baker, 1996). In using behavioural modeling, trainees can be exposed to both positive and negative models reflective of transformational instructor-leadership and destructive instructor-leadership respectively (Baldwin, 1992). The use of destructive instructor-leadership models can help trainees "unlearn prior, ineffective behaviors" (DeSimone & Werner, 2006, p. 547). Behaviour modeling activities can take considerable time to execute, but the use of separate modules for each dimension/classification alleviates this time issue.

Scheduling the training programme. Like other leadership training workshops, modules can be scheduled to take place over a period of two to three hours and the lesson plan can be prepared accordingly. Given the variation in schedules for instructors, flexible scheduling may be appropriate (e.g., the use of Doodle.com). Recall from the needs assessment phase that instructors should only be required to attend modules for which a deficiency has been identified. Furthermore, regarding Bourner's sentiment that the teaching repertoire of academic staff is limited to a few methods (Bourner, 1997), instructors may be required to attend only those modules for which their deficiency is strongest. The required modules to be attended and scheduling of such modules can be communicated through a HEI's email/intranet. One the training programme has been designed and implemented, it should then be evaluated.

Evaluating the training programme. Evaluation is "the systematic collection of descriptive and judgmental information necessary to make effective training decisions related to the selection, adoption, value, and modification of various instructional activities" (Goldstein, 1980, p. 237). Evaluation can assist in determining the extent to which a programme is meeting its objectives, the strengths and weaknesses of the programme, and the cost-benefit ratio of the programme (DeSimone & Werner, 2006). For evaluation of the training programme, I follow the

most widely used approach by Donald Kirkpatrick because most evaluation frameworks are based on his approach (DeSimone & Werner, 2006). According to Kirkpatrick, training can be evaluated according to four criteria, including reaction, learning, behaviour, and results (D. Kirkpatrick, 2004).

Reaction. Measures of trainees' reactions try to gauge their satisfaction with the programme. This is important because trainees are not likely to attend other training modules if they are dissatisfied. Trainees may also communicate dissatisfaction to their colleagues, thus discouraging others from attending. For measuring reaction, trainees can be given a brief questionnaire at the end of the programme; this instrument can be used to capture the extent to which they thought the program was useful. The questionnaire can also measure whether they liked or enjoyed the programme (for a sample reaction questionnaire see Weatherby & Gorosh, 1989, p. 76).

Learning. Evaluation of learning involves collecting data about the extent to which trainees have learned the objectives set out at the beginning of the programme. Measuring learning does not necessarily have to be at the 'end' of the programme, especially when using the behaviour modeling technique. Using this technique, learning can be measured or evaluated during the programme by giving trainees feedback during their rehearsal.

Behaviour. Behavioural evaluation measures the extent to which trainees transfer their learning from the training programme back to the classroom. Behavioural changes can be measured using the same approaches as during the assessment stage. That is, a subset of student feedback questionnaires that incorporate the MLQ-SS, interviews with students, or direct

observation of classroom practice. Using these measures, pre-training and post-training results can be compared to determine whether there are changes in behaviour as expected.

Results. Results measure tangible outcomes from the training programme. Here, the aim is to justify the extent to which the HEI is better able to serve its students in terms of teaching quality, i.e., whether the improvements in instructor-leadership affects the 'bottom line'. To measure results, a cost-benefit analysis can be used to compare the monetary costs of training, e.g., Robinson and Robinson's model of training costs (see Robinson & Robinson, 1989), to the nonmonetary benefits, e.g., improvement in student satisfaction with teaching; improved student learning outcomes; better student academic performance; etc. Alternatively, the training programme can be evaluated using a balanced scorecard approach in order to communicate the impact of the programme on an HEI's strategy (See Willyerd, 1997 for details on the development of a balanced scorecard for evaluating training programmes).

The ISD or 'A DImE' (assessment, design, implementation, and evaluation) is a holistic approach for training instructor-leadership. It ensures that (a) a HEI's resources are channeled to where it is needed, i.e., addressing deficiencies in instructor-leadership; (b) training is designed and implemented according to programme objectives and the nature of the deficiency; and (c) evaluation is conducted according to meaningful criteria.

Appendix T

Research Ethics Forms (Studies 2 to 4)

The University Of Sheffield. Management School.

Ethics Review

Research project title:	The Effect of Instructor-Leadership on Students' Engagement and Achievement in Higher Education (ref/2013/26)
Principal investigator:	Paul Balwant (Kamel Birdi)
Other investigators:	
Date received for review:	6th November 2012

Lead reviewer:	Andrew Brint
Other reviewers:	Colin Williams, Malcolm Patterson

Our judgement is that the application should			
Proceed	Proceed with the suggested amendments in "A" below	Proceed providing the requirements specified in "B" below are met	NOT be approved for the reason(s) given in "C" below
X			

A) Approved with the following suggested, optional amendments (i.e. it is left to the discretion of the applicant whether or not to accept the amendments and, if accepted, the ethics reviewers do not need to see the amendments):
B) Approved providing the following, compulsory requirements are met (i.e. the ethics reviewers need to see the required changes):
C) Not approved for the following reason(s):

Date of decision: 4/1/13	
	Andrew Brint

1 of 1

Figure T1. Research Ethics Form (Studies 2 and 3)

The University Of Sheffield.

Downloaded: 14/04/2015
Approved: 14/04/2015

Paul Balwant
Registration number: 110142579
Management School
PhD Management

Dear Paul

PROJECT TITLE: The Relationship between Instructor-Leadership and Students Engagement, Burnout, and Achievement in Higher Education
APPLICATION: Reference Number 002979

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 14/04/2015 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 002979 (dated 07/04/2015).
- Participant information sheet 007014 (07/04/2015)
- Participant information sheet 005569 (20/02/2015)
- Participant consent form 007015 (07/04/2015)
- Participant consent form 005570 (20/02/2015)

If during the course of the project you need to deviate significantly from the above-approved documentation please inform me since written approval will be required.

Yours sincerely

Mark Latham
Ethics Administrator
Management School

Figure T2. Research Ethics Form (Study 4)

Appendix U

Permission Letters for MLQ and MBI

mind garden

www.mindgarden.com

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material;

Instrument: ***Multifactor Leadership Questionnaire***

Authors: ***Bruce Avolio and Bernard Bass***

Copyright: ***1995 by Bruce Avolio and Bernard Bass***

for his/her thesis research.

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com

Figure U1. Multifactor Leadership Questionnaire Permission Letter (Study 2)

www.mindgarden.com

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material for his/her research:

Instrument: *Multifactor Leadership Questionnaire*

Authors: *Bruce Avolio and Bernard Bass*

Copyright: *1995 by Bruce Avolio and Bernard Bass*

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any published material.

Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com

Figure U2. Multifactor Leadership Questionnaire Permission Letter (Study 4)

www.mindgarden.com

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material for his/her thesis or dissertation research:

Instrument: ***Maslach Burnout Inventory, Forms: General Survey, Human Services Survey & Educators Survey***

Copyrights:

MBI-General Survey (MBI-GS): Copyright ©1996 Wilmar B. Schaufeli, Michael P. Leiter, Christina Maslach & Susan E. Jackson. All rights reserved in all media. Published by Mind Garden, Inc., www.mindgarden.com

MBI-Human Services Survey (MBI-HSS): Copyright ©1981 Christina Maslach & Susan E. Jackson. All rights reserved in all media. Published by Mind Garden, Inc., www.mindgarden.com

MBI-Educators Survey (MBI-ES): Copyright ©1986 Christina Maslach, Susan E. Jackson & Richard L. Schwab. All rights reserved in all media. Published by Mind Garden, Inc., www.mindgarden.com

Three sample items from a single form of this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any published material.

Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com

Figure U3. Maslach Burnout Inventory Permission Letter (Study 4)

Appendix V

Participant Information Sheet for Online Questionnaire (Study 2)

1. Research Project Title:

The Effect of Transformational Instructor-Leadership on Student Engagement and Achievement

2. Invitation

You are being invited to take part in a research project. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

3 What is the project's purpose?

The aim of this phase of my research project is to validate an instrument used to measure transformational instructor-leadership.

4. Why have I been chosen?

You have been chosen, along with other students, because of your exposure to teaching in higher education.

5. Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part, you can print or save this information sheet and you can still withdraw at any time without it affecting any benefits that you are entitled to in any way. You do not have to give a reason for withdrawing.

6. What will happen to me if I take part?

The questionnaire will take approximately 30 minutes to complete.

7. What are the possible benefits of taking part?

It is hoped that this study will help the researcher learn more about instructor-leader behaviours in universities and how such leadership impacts on student achievement. As reimbursement for your time, you have the option of providing an email address to (1) be entered into a prize draw for a £25 Amazon gift voucher and (2) receive a free personality evaluation using a well-established measure of personality. In addition, if you want to receive a copy of the results, you can contact the researcher using the contact details given at the end of this page.

8. What if something goes wrong?

If for any reason, you feel the need to make a complaint about the way in which you are treated by the researcher, please inform either of the supervisors of this study:

- Dr. Kamal Birdi, Institute of Work Psychology, K.Birdi@sheffield.ac.uk, +44(0)114 222 3288
- Dr. Ute Stephan, Institute of Work Psychology, u.stephan@aston.ac.uk, +44(0)121 204 3183

If you believe that your complaint has not been dealt with to your satisfaction, please contact the University Registrar or Secretary.

11. Will my taking part in this project be kept confidential?

Each completed survey is anonymous and will be labeled by a randomly generated number. You will be asked to provide the name of an instructor/lecturer, but this name will not be stored after the questionnaire has been completed. If you provide your email address to receive feedback on your personality, this email address will be used solely for this purpose and will NOT be stored on any database.

12. What will happen to the results of the research project?

This study will be completed by approximately September 2015. Two years later, it will be made available on the University's library website in the e-Theses collection. Furthermore, the results of the study may be publically disseminated via publication as well as submission to Learning and Teaching Services (LETS) before or after September 2014. You will not be identified in any report or publication. The results will be used to validate a questionnaire which may then be used in subsequent research.

13. Who has ethically reviewed the project?

This study has been approved by the University Research Ethics Committee (UREC).

14. Contact for further information?

If you wish to obtain further information about the project you can contact any of the following persons:

- Paul Balwant, Institute of Work Psychology, ecp11ptb@sheffield.ac.uk, +44 (0) 751 947 2033
- Dr. Kamal Birdi, Institute of Work Psychology, K.Birdi@sheffield.ac.uk, +44 (0) 114 222 3288
- Dr. Ute Stephan, Institute of Work Psychology, U.Stephan@sheffield.ac.uk, +44 (0) 114 222 3286

Appendix W

Participant Information Sheet for Interviews (Study 3)

1. Research Project Title:
The Effect of Destructive Instructor-Leadership on Student Engagement and Achievement

2. Invitation
You are being invited to take part in a research project. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

3 What is the project's purpose?
The aim of this phase of my research project is to conceptualize destructive instructor-leadership. This phase is expected to last six months.

4. Why have I been chosen?
You have been chosen, along with twenty three other students (or former students) and four instructors, because of your background in higher education.

5. Do I have to take part?
It is up to you to decide whether or not to take part. If you decide to take part, you will be given this information sheet to keep (and be asked to initial a consent form) and you can still withdraw at any time without it affecting any benefits that you are entitled to in any way. You do not have to give a reason for withdrawing.

6. Will I be recorded, and how will the recorded media be used?
The audio recordings of your activities made during this study will be used only for analysis. Transcribed audio may be used for illustration in conference presentations and publications. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings

7. What will happen to me if I take part?
The interview will take approximately 35 minutes. This will be a face-to-face interview and it will be audio-recorded. You will be asked to confirm your age as asked in the screening stage. After this confirmation, open-ended questions will be asked on instructor-leadership in universities and its impact on your engagement. Reading or preparing of any material before the interview is not required and is actually preferable.

8. What are the possible disadvantages and risks of taking part?
There is a possibility that, during the interview, you may suffer from harm induced by reflecting on unpleasant experiences that you may have had with certain instructors. If, at any time, you feel discomfort in describing your experiences, alert the interviewer immediately

9. What are the possible benefits of taking part?
Whilst there are no immediate benefits for participating in the project, it is hoped that this study will help the researcher learn more about instructor-leader behaviours in universities and how such leadership impacts on student engagement. If you wish to receive a copy of the results, you can contact the researcher using the contact details given at the end of this document.

10. What if something goes wrong?

If for any reason, you feel the need to make a complaint about the way in which you are treated by the researcher, please inform either of the supervisors of this study:

- Dr. Kamal Birdi, Institute of Work Psychology, K.Birdi@sheffield.ac.uk, +44 (0) 114 222 3288
- Dr. Ute Stephan, Institute of Work Psychology, U.Stephan@sheffield.ac.uk, +44 (0) 114 222 3286

If you believe that your complaint has not been dealt with to your satisfaction, please contact the University Registrar or Secretary.

11. Will my taking part in this project be kept confidential?

Your identity will be treated as confidential as it will remain unknown to anyone else but the interviewer. Also, any indirect attributions that may compromise your identity will be omitted from the study or changed in order to ensure that you remain disguised. Audio recorded files, typed transcripts, and data set entries will be electronically stored and used by the principal investigator. For all of these files, each case will be identified by a random number. The transcripts and data sets will be analyzed by the principal investigator and one other PhD student. Transcripts and data sets will be archived, but audio recordings will be deleted within six months after the project completion date. The results of the study may be published for scientific purposes but will not give your any identifiable references to you.

12. What will happen to the results of the research project?

This study will be completed by approximately September 2014. A few months later, it will be made available on the University's library website in the e-Theses collection. Furthermore, the results of the study may be published before or after September 2014. You will not be identified in any report or publication. The results will be used to develop a questionnaire which may then be used in subsequent research.

13. Who has ethically reviewed the project?

This study has been approved by the University Research Ethics Committee (UREC).

14. Contact for further information?

If you wish to obtain further information about the project you can contact any of the following persons:

- Paul Balwant, Institute of Work Psychology, ecp11ptb@sheffield.ac.uk, +44 (0) 751 947 2033
- Dr. Kamal Birdi, Institute of Work Psychology, K.Birdi@sheffield.ac.uk, +44 (0) 114 222 3288
- Dr. Ute Stephan, Institute of Work Psychology, U.Stephan@sheffield.ac.uk, +44 (0) 114 222 3286

You will be given a copy of this information sheet and, should you wish to participate in the interview, a signed copy of your consent form.

Appendix X

Participant Information Sheet for Online Questionnaire (Study 4)

1. Research Project Title:

The Association between Both Transformational and Destructive Instructor-Leadership and Student Engagement, Burnout, and Achievement

2. Invitation

You are being invited to take part in a research project. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

3 What is the project's purpose?

The aim of this phase of my research project is to (1) validate an instrument used to measure transformational instructor-leadership and (2) test engagement and burnout as mechanisms in the relationship between both transformational and destructive instructor-leadership and student achievement.

4. Why have I been chosen?

You have been chosen because of your exposure to teaching in higher education.

5. Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part, you will be given this information sheet to keep and you can still withdraw at any time. You do not have to give a reason for withdrawing.

6. What will happen to me if I take part?

The questionnaire will take approximately 20-25 minutes to complete.

7. What are the possible disadvantages and risks of taking part?

You may experience some discomfort or psychological distress if reflecting on harmful teaching experiences.

8. What are the possible benefits of taking part?

It is hoped that this study will help the researcher learn more about instructor-leader behaviours in universities and how such leadership impacts on student engagement and burnout. As reimbursement for your time, <Name of university withheld for anonymity> students have an option of providing an email address to (1) be entered into a prize draw for a £25 Amazon gift voucher and (2) receive a free personality evaluation using a well-established measure of personality. Students participating via Qualtrics, may receive monetary compensation from Qualtrics. If you wish to receive a copy of the results, you can contact the researcher using the contact details given at the end of this document.

9. What if something goes wrong?

If for any reason, you feel the need to make a complaint about the way in which you are treated by the researcher, please inform any of the supervisors of this study (their contact

information is given at the end of this document). If you believe that your complaint has not been dealt with to your satisfaction, please contact the University Registrar or Secretary.

10. Will my taking part in this project be kept confidential?

Each completed survey is anonymous and will be labeled by a randomly generated number.

11. What will happen to the results of the research project?

This study will be completed by approximately October 2015. Two years later, the study's findings will be made available on The University of Sheffield's library website in the e-Theses collection. Furthermore, the results of the study may be publically disseminated via publication or report. You will not be identified in any report or publication. The results will be used to validate a questionnaire which may then be used in subsequent research.

12. Who has ethically reviewed the project?

This study has been approved by the University Research Ethics Committee (UREC) at The University of Sheffield.

13. Contact for further information?

If you wish to obtain further information about the project you can contact any of the following persons:

- Paul Balwant (student), Sheffield University Management School, ecp11ptb@sheffield.ac.uk, +1 (868) 633 3985
- Dr. Kamal Birdi (supervisor), Sheffield University Management School, K.Birdi@sheffield.ac.uk, +44 (0) 114 222 3288
- Prof. Ute Stephan (supervisor), Aston Business School, U.Stephan@aston.ac.uk, +44 (0) 121 204 3183
- Dr. Anna Topakas (supervisor), Sheffield University Management School, A.Topakas@sheffield.ac.uk, +44 (0) 114 222 3240

Appendix Y

Participant Consent Form for Interviews (Study 3)

Title of Research Project: The Effect of Destructive Instructor-Leadership on Student Engagement and Achievement

Name of Researcher: Paul Balwant

Please initial boxes indicating that you have read and understood the following statements:

1. I confirm that I have read and understood the information sheet explaining the above research project and I have had the opportunity to ask questions about the project. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any destructive consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. ☐
3. I understand that my responses will be kept strictly confidential. I give permission for members of the research team to have access to my anonymous responses. I understand that my initials will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research. ☐
4. I agree to participate in an interview as part of this study and for the purposes of data analysis. I understand that my identity will be kept strictly confidential. I acknowledge that the researcher will use my recording(s) only for the purposes of this research project. I agree for my recording to be heard by other members of the research team. Any data derived from my recording may be used for future publication. No other use of my recording may be made without my written consent. ☐
5. I agree to take part in the above research project. ☐

By signing below, you are agreeing that:
(1) You have read and understood the Participant Information Sheet.
(2) Questions about your participation in this study have been answered satisfactorily.
(3) You are aware of the potential risks (if any).
(4) You are taking part in this research study voluntarily (without coercion).

Initials of Participant (or Legal Representative)	Date
Lead Researcher/Person Taking Consent	Date

Thank you for participating in this interview!

Appendix Z

Papers Based on this Dissertation

Balwant, P. T., Stephan, U., & Birdi, K. (2014). Practice what you preach: Instructors as transformational leaders in higher education classrooms. *Academy of Management Proceedings*, 2014. Retrieved from http://proceedings.aom.org/content/2014/1/17327

Balwant, P.T. (in press). The dark side of teaching: Destructive instructor-leadership and its association with students' affect, behavior, and cognition. *International Journal of Leadership in Education.* http://dx.doi.org/10.1080/13603124.2015.1112432.

Balwant, P.T. (2015). The meaning of student engagement and burnout in the classroom context: Lessons from organizational behavior. Manuscript submitted for publication.

Balwant, P.T. (2015). Transformational leadership in higher education teaching: A meta-analytic review and research agenda. Manuscript submitted for publication.

Balwant, P.T., Birdi, K., & Stephan, U. (2016). Developing a context-sensitive measure of destructive instructor-leadership. Manuscript in preparation (additional validation data to be collected).

Balwant, P.T., Birdi, K., & Stephan, U. (2016). Engagement and burnout as independent concepts. Manuscript in preparation (additional data on employee engagement and burnout to be collected).

Balwant, P.T., Birdi, K., & Stephan, U. (2016). Transformational and destructive instructor-leadership and their association with student engagement, burnout, and achievement in higher education. Manuscript in preparation.