Reasons to practise: understanding the motivation of adolescent

instrumental learners through the lens of achievement goal theory.

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Abstract

This research explored the achievement goal theory of motivation with adolescent instrumental learners from schools in England, through four related studies. A mixed-methods approach was adopted, combining quantitative survey methods with rich qualitative analysis of teacher observations and pupil interviews to develop an in-depth understanding of the goals adopted by adolescent musicians. Achievement goal theory was situated within a wider framework of motivation, with consideration of the reasons for different goal orientations as well as the impact of each achievement goal on musical outcomes. This research provides new insights into the application of the 3 x 2 achievement goal model to the context of music education and contributes to the broader understanding of musical motivation by examining links between achievement goal and self-determination theories. Qualitative research methods alongside longitudinal study designs added new insights to the understanding of achievement goals, by considering the perspectives and lived experiences of adolescent musicians. Key outcomes of the research included a model of influences on the achievement goals of adolescent instrumental learners, in the form of self-determined motivation, musical identity, competence beliefs and autonomy perceptions. Links were found between the self-determined motivation of instrumental learners and their achievement goal orientations. Intrinsic and extrinsic motivation were associated with mastery and performance goals respectively. Data indicated that mastery goals might lead to more deliberate practice behaviours, and other-approach and other-avoidance goal orientations might predict instrumental learners' longer-term commitment to musical learning. Implications for music educators drawn from this research include the importance of promoting learner autonomy, de-emphasising peer comparison, providing process-oriented feedback, supporting the development of musical identity, and emphasising the benefits of mastery goals for adolescent instrumental learners' wellbeing.

Author Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for a degree or other qualification at the University of York or elsewhere. All sources are acknowledged as references.

The third study presented in this thesis is currently under review:

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1 Introduction

1.1 Rationale

Learning to a play a musical instrument can be a transformative experience for young people. Whether or not children choose to pursue careers in music in their adult lives, the opportunities provided through learning an instrument and the musical and extra-musical skills developed during this experience can be numerous. Children can benefit from the inherent enjoyment of performing music, both individually and as part of a group, and extra-musical outcomes include neurological and cognitive benefits as well as physical health (Hallam & Himonides, 2022). The psychological and social outcomes of musical participation are also abundant. For example, Hallam and Himonides' (2022) review of literature on the impact of music-making highlights the gains in children's self-esteem and academic self-concept acquired through learning an instrument, and an increase in children's competence beliefs in other school subjects as a result of learning music has also been reported (McPherson & O'Neill, 2010). Children who learn a musical instrument develop an increased sense of connection and belonging and acquire a greater sense of social cohesion through a broadening of cultural experiences (Hallam & Himonides, 2022). Based on this evidence, it is difficult to refute the argument that most children should be encouraged to participate in music-making.

Despite these benefits, there has been a concerning decline in the number of children in England reported to be learning an instrument and studying music in school in recent years. Data have shown that the national average of children receiving instrumental and vocal tuition through music education hubs in England declined from 8.4% in 2018-19 to 5.4% in 2021-22 (Arts Council England, 2023). The number of pupils studying music as a curriculum subject beyond the age of 14 has also decreased considerably; in 2022 GCSE Music entries had fallen by 36% since 2010, and A-Level Music entries fell by 45% in the same period (Underhill, 2022). The decline in the number of young people learning an instrument seems to be particularly prevalent during the teenage years, with a number of studies reporting increased dropout in secondary school (Driscoll, 2009; Hallam & Burns, 2017; Ruth & Müllensiefen, 2021). Whilst this data does not necessarily represent the full experiences of all children in England, only representing those receiving tuition from Music Education Hubs and those studying music academically, it suggests there is a declining trend in the number of adolescents engaging with musical learning. The picture certainly looks bleak.

A wide array of reasons has been proposed for this decline in the number of young people engaging with music tuition. School-based music education is subject to numerous structural pressures, with curriculum time, staffing, and funding reported as key reasons why less pupils are

studying music (Underhill, 2022). The Covid-19 pandemic is also likely to have contributed

significantly to the recent decline, as many young people were unable to receive face-to-face musical

tuition or take part in musical ensembles for over a year (Underhill, 2022). Socio-economic reasons

are also important factors preventing young people engaging with music lessons due to the cost and

availability of instrumental tuition (ABRSM, 2021; Broad, Hunter, et al., 2019; Driscoll, 2009; Hallam

& Burns, 2017). This is reflected in a significant disadvantage gap between groups of young people

studying music, with most A-level music entries in England coming from pupils in independent sector

education (Whittaker & Fautley, 2021).

Despite these statistics, many young people still make the decision to learn, and continue

learning, an instrument throughout and beyond their teenage years. Whilst music educators are

unlikely to be able to directly impact school, local authority, and government funding decisions and

curriculum reforms, they can influence children's motivation to engage in music. Understanding the

motivations of adolescent instrumental learners more fully might give music educators the tools they

need to reduce the decline in the number of young people engaging with instrumental tuition.

Motivation is crucial to supporting long-term engagement with instrumental learning, particularly

during adolescence when there are many competing choices for children's attention, both inside and

outside of school. Initial enthusiasm for learning an instrument may wane during the secondary

school years (Kokotsaki, 2016; McPherson, Osborne, et al., 2015). Additionally, learning and

practising an instrument is inherently difficult, requiring persistence and resilience from learners to

progress, and so motivation is a key factor in children's continued engagement in musical learning.

Motivation in children has been defined as "the energy they bring to…tasks, the beliefs,

values and goals that determine which tasks they pursue and their persistence in achieving them,

and the standards they set to determine when a task has been accomplished" (Wentzel & Wigfield,

2009, p. 1). Motivation has already received a lot of attention in the field of music education

research, and a wide range of theories have been explored to determine the factors that motivate

pupils to engage with instrumental learning (see Oliveira et al., 2021). Prevailing theories of

motivation explored in the field of music education include self-determination theory (e.g. Evans,

2015), expectancy-value theory (e.g. Sin et al., 2022), attribution theory (e.g. Legette, 1998), self-

efficacy theory (e.g. McCormick & McPherson, 2003) and achievement goal theory (e.g. Tan & Sin,

2020). Achievement goal theory differs conceptually from other theories of motivation; while other

models centre on the sources of motivation and learners' expectancies for success, achievement

goals relate to how learners define success. Achievement goal theorists primarily distinguish

between mastery goals, where learners seek to improve their competence, and performance goals,

where learners seek to appear competent in comparison to others (Elliott & Dweck, 1988). Music

educators might be able to exert a unique influence on these definitions of success through their teaching approach.

This thesis uses achievement goal theory as a lens through which to explore the motivation of adolescent instrumental learners. There are several reasons for this focus on achievement goals. As yet, achievement goal theory has been underexplored in comparison to other motivational theories in music domains, and studies have predominantly been conducted in the USA (Lacaille et al., 2005; Matthews & Kitsantas, 2013; Miksza, 2009b, 2011; Miksza et al., 2016; Schmidt, 2005; Smith, 2005; Tan & Miksza, 2018) as well as Australia (Ng, 2017) and Norway (Nielsen, 2008). There is not yet a clear understanding of what might influence instrumental learners to adopt specific achievement goals. Furthering understanding of achievement goal theory will contribute towards a fuller picture of the motivations of adolescent musicians, particularly within the UK music education context. Understanding the place of achievement goals within music learning contexts may also give music educators the tools with which to influence the motivation of their pupils, encouraging more young people to engage with instrumental learning in light of the statistics presented above.

1.2   A Personal Perspective

My objectives in conducting this research are heavily influenced by my own experiences as a musician and music educator. Music was an integral part of my childhood, and I began learning piano at the age of seven and flute at the age of nine. I was fortunate in that music was a fundamental part of my family life. I had parents, an older sibling and extended family members who were all heavily involved in music and supportive of my own musical interests. Alongside this positive family influence, the schools I attended throughout my childhood had thriving music departments, and I participated in multiple vocal and instrumental ensembles both inside and outside school. I recognise my own privilege in being afforded these experiences throughout my childhood. Recently I have looked back on my experiences as a young musician, recalled my own abundant intrinsic motivation, and wondered why this might have been the case, whilst many of my peers who also played instruments stopped during adolescence. I cannot recall ever having to be reminded to practise by my teachers or parents, and music formed an integral part of my self-identity.

This journey as a young musician led me to my present career as a secondary school music teacher. I have taught music to pupils aged 11-18 in a large state-funded secondary school in the North-East of England for over 12 years and was in the role of Head of Music for 9 of those years.   I have therefore had the privilege of working with over 3000 young musicians as children have progressed through the school. Though this music department offers a wide range of opportunities

to pupils in terms of extra-curricular activities and instrumental teaching, many pupils who start the school in Year 7 learning an instrument choose not to continue, often giving up during Key Stage 3 or before they start GCSE studies in Year 10. The school has a unique approach to instrumental tuition in Year 7 in which all pupils learn an instrument in a whole class ensemble tuition setting, though not many of these children choose to continue learning their instrument after this point. The decline in the number of pupils learning instruments in this school is reflective of the wider music education context in the UK, where many pupils drop out of instrumental tuition by the age of 17 (Ruth & Müllensiefen, 2021). Similar patterns of low uptake and interest in music as a school subject have also been noted in other secondary schools in the North-East of England (Whitford & Kokotsaki, 2024), indicating this is a trend not unique to my own school context.

Like many other music educators, my goal is to instil a love of music in my pupils and encourage them to pursue this passion throughout and beyond their school years. Reflecting on my own musical experiences and those of the children I have taught, has led me to consider questions such as, 'Why do some young people continue learning an instrument and some give up?', 'How can I encourage more young people to engage with music within and beyond school?' and 'How can I help young people foster effective practice behaviours to increase their skill level and to prepare them effectively for future musical study?'.

1.3   Research Aims and Context

There were three main aims to this research project. Firstly, to examine the prevalence and nature of achievement goal beliefs amongst adolescent instrumental learners. Secondly, to understand what might influence the achievement goals of adolescent instrumental learners. Thirdly, to clarify the impact of achievement goals on motivational outcomes, specifically commitment to musical learning through continuation rates and practice behaviours.

The context of this study is very important in relation to its aims. As already highlighted, to my knowledge no studies on achievement goals with instrumental learners have yet taken place in a UK context. Exploring achievement goal theory with adolescent learners in the UK will therefore contribute to the already existing literature in this field from overseas, as well as enhance understanding of how achievement goal theory can be harnessed to improve instrumental learners' motivation in UK schools. Though some of these overseas studies have taken place in school contexts, much of the achievement goal research on instrumental learning has been conducted with university students (Lacaille et al., 2005; Matthews & Kitsantas, 2013; Miksza, 2011; Nielsen, 2008; Smith, 2005; Tan & Miksza, 2018). The achievement goal beliefs of music students at this level are likely to be very different to those of adolescent instrumental learners, and although some links have

been found between achievement goals and motivational outcomes in higher education, the same patterns may not exist for younger musicians. The secondary school years have been highlighted as a crucial turning point for instrumental learning drop out in England (Driscoll, 2009; Hallam & Burns, 2017; Ruth & Müllensiefen, 2021; Symonds et al., 2017). Understanding the motivational beliefs of learners at this age may therefore provide music educators with the knowledge they need to encourage these pupils to persist with instrumental learning throughout and beyond secondary school. Consequently, the initial studies presented in this thesis focus on the role of music teachers and how they might influence the achievement goal beliefs of instrumental learners.

It is important to note the reasons why this thesis focuses on the motivation and commitment of adolescent instrumental learners, rather than singers. The majority of research on achievement goals in musical settings to date has taken place with instrumental learners (see Tan & Sin, 2020). The aim was to first extend this work to the UK music education context with adolescent learners, with the possibility of broadening the scope of the research in the future to other music learning contexts. Research which also included young singers would not be directly comparable to the existing research on the achievement goals of music learners. Some researchers have also found differences between instrumentalists and singers in their initial years of beginning musical instruction. Sandgren (2019) found that singers started formal lessons much later than instrumentalists, at an average age of 16 years compared to 10.4 years for instrumentalists, therefore bypassing most of the secondary school years. Hallam, Creech & Varvarigou (2018) also found that there were some differences in practice between singers and instrumentalists, with school-aged singers undertaking considerably less practice overall. As my research aims were closely related to my own school context, in which all Year 7 and 8 pupils learnt an instrument in a whole class ensemble tuition setting, it was most suitable to focus the research on instrumental learners, with the potential for broadening the scope of the research questions at a later date in follow-up studies.

1.4   Outline of Thesis

Following this introduction the next two chapters review the literature on motivation in musical learning and the achievement goal domain, and outline the methodological approach taken in the research. The findings of four separate studies are then presented before the ensuing discussion and conclusions. The research unfolded organically over time; whilst the research initially focused on the role of the music teacher and pupils' classroom experiences, the findings of each study informed the next and the focus shifted from the role of the teacher to other motivational influences. The ultimate aim was to achieve a fuller understanding of the place of achievement goals in the musical experiences and motivations of adolescent instrumental learners.

The first short study was an intervention study with two groups of beginner violinists early in their instrumental learning journeys receiving whole class ensemble tuition. This study focused primarily on the role of the teacher in influencing the achievement goal beliefs of adolescent instrumental learners.   The second study expanded in scope to consider the relationship between achievement goals and self-efficacy beliefs, also exploring wider influences on achievement goals beyond the role of the teacher.   The third study was comprised of interviews with a small sample of adolescent musicians, aiming to clarify the influences on pupils' achievement goals by exploring their personal experiences. Study 3 functioned as an exploratory study to inform the final model which was proposed and tested in Study 4. In this fourth and final study, the research context was broadened to include instrumental learners from across England, as well as considering achievement goals within a larger motivational model linking to self-determination theory. This final study was also longitudinal with the aim of determining whether there might be a link between learners' achievement goal beliefs and continuation of instrumental lessons. That the research comprised four short studies was highly beneficial, as it allowed myself as the researcher to continually refine my understanding of achievement goals within this as yet underexplored context, thus developing a deeper understanding of the place of achievement goals in instrumental learning from a range of different perspectives.

2 Literature Review

2.1 Theories of Motivation

The music education community has long sought to understand why people decide to begin and persist in instrumental learning. By employing different theoretical perspectives, researchers have emphasised various factors which influence the nature of musicians' motivation. This literature review will firstly outline each of the predominant theories of motivation and their application to musical contexts. Findings from research on the continuation rates and practice habits of instrumental learners will be summarised to provide context for the present research. Following this general overview of research on motivation in music learning, the literature review will then focus more closely on the role of achievement goals in the motivation of instrumental learners. The developments in achievement goal theory will be outlined, along with an overview of the predominant research methods used by achievement goal researchers. Current findings from music education settings relating to achievement goal theory will also be reviewed. Gaps in the existing research and associated areas requiring further exploration will be identified and the principal research objectives of the thesis outlined at the end of this chapter.

Cognitive theories of motivation are concerned with learners' perceptions of their past experiences, social influences and environment, and their resulting actions which can improve or undermine their engagement and achievement. The predominant theories of motivation explored in education and specifically music education literature are expectancy-value theory (Eccles et al., 1983), attribution theory (Weiner, 1985), self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000a), achievement goal theory (Dweck, 1986) and self-efficacy theory (Bandura, 1997). Motivation might arise from specific personality dispositions such as need for achievement, but can also be directed towards certain goals (Elliot & Sommet, 2023; Urhahne & Wijnia, 2023). Additionally, motivation can either be global, contextual or situational (Vallerand, 1997).   For example, motivation to achieve success in one examination (situational) is different to learners' longer-term motivation to achieve a career goal (contextual). Motivation might also be oriented toward immediate success, longer-term future success or the desire to retain feelings of past accomplishments (Schatt, 2011). Researchers in music education have attempted to synthesise these theories of motivation into more cohesive models (Cogdill, 2015; Hallam, 2002; MacIntyre et al., 2012; Martin et al., 2016; Oliveira et al., 2021). These researchers agree that motivation is complex and can result from an interaction between environmental factors, social influences, and learners' intrinsic beliefs and attitudes. In musical learning, understanding motivation is important because it has been found to influence

outcomes such as performance achievement, continuation rates, musical aspirations, and practice time (Hallam et al., 2021; McPherson & McCormick, 2000; Oliveira et al., 2021).

To provide context for the ensuing discussion of the role of achievement goals in musical motivation, each of the predominant theories of motivation relating to instrumental learning will now be presented in turn, with a description of the main aspects of each theory followed by a brief overview of its application to the music education context. More specific links between these theories of motivation and instrumental learning will subsequently be outlined with relevance to the present research.

2.1.1   *Expectancy-Value Theory*

One dominant theory of motivation in music education literature is expectancy-value theory. Expectancy-value theorists argue that a person's expectancies for success and value beliefs determine their level of motivation regarding a specific task (Eccles et al., 1983; Wigfield, 1994; Wigfield & Eccles, 2000). Overall, task value perceptions are comprised of four key elements: attainment value, intrinsic motivation, utility value and cost. Attainment value relates to the personal importance of doing well on the task, intrinsic motivation relates to the personal enjoyment one gets from completing task, utility value is the perceived usefulness of the task in relation to future plans, and cost refers to the implications that engaging in the task may have on other areas of one's life. According to expectancy-value theorists, learners' expectancies for success are influenced by their past achievement outcomes, perceptions of previous performance experiences, and consideration of task difficulty, whereas task values might be influenced by cultural and social factors as well as learners' own aspirations (Eccles et al., 1983). This combination of influences determines learners' decisions to expend more or less effort on a particular task. Researchers have found that competence beliefs, expectancies for success and task values often decline through childhood and into adolescence (Wigfield, 1994; Wigfield & Eccles, 2000), therefore expectancy-value theory is particularly pertinent to research on the motivation of children learning an instrument.

Expectancy-value beliefs in relation to musical learning have been found to determine several music-related outcomes, in particular long-term commitment to learning an instrument (Holster, 2023; Sin et al., 2022). Instrumental learners' expectancies for success are also strongly linked to their achievement outcomes in performance examinations (McCormick & McPherson, 2007; McPherson, 2000), predicting both longer-term and immediate performance outcomes. One study showed instrumental learners' initial expectations for how long they would continue learning an instrument were strongly associated with their achievement levels nine months later (McPherson, 2000). Findings from other educational settings have shown that expectancy-value beliefs decline

with age (Wigfield, 1994; Wigfield & Eccles, 2000), and similarly, music education researchers have found that children's musical competence beliefs and opinions about the value of musical learning decline during the school years (McPherson, Davidson, et al., 2015). Notably this trend was also found in more local contexts in the North-East of England where children's value beliefs relating to music declined during secondary school (Kokotsaki, 2017; Kokotsaki & Whitford, 2023).

2.1.2   Attribution Theory

Another theory of motivation which has received some attention in music education research is attribution theory. Attribution theorists examine learners' interpretations of the reasons for success or failure in a specific task, which in turn influence motivation (Weiner, 1985, 2005). Learners might attribute success or failure to reasons of ability, effort, task difficulty or luck. These causal factors can be categorised according to whether the locus of control is internal or external, and whether they are stable or controllable. Different causal attributions can lead to different emotions, resulting in motivated behaviour. For example, a low test score attributed to stable internal ability might result in shame, whereas a high test score attributed to effort can lead to a sense of pride (Austin & Vispoel, 1998; Weiner, 1985). In turn, these attributions result in decreased or increased motivation towards a particular task. Links can be drawn between attribution and expectancy-value theories; learners who attribute a previous failure to stable and uncontrollable factors such as innate ability might be less likely to expect future success and will reduce their effort accordingly.

Several studies have explored attribution theory in relation to musical learning. Researchers have found that adolescent musicians can attribute musical success to both ability and effort, though ability attributions have been reported more frequently than effort attributions in music contexts (Austin & Vispoel, 1998; Legette, 1998; Martin, 2012). Additionally, whilst ability is often used to explain both success and failure, effort attributions tend to be much lower for adolescent musicians experiencing failure, meaning pupils might be more likely to attribute failure in musical performance to a natural lack of ability rather than a lack of effort (Austin & Vispoel, 1998). Instrumental learners may therefore be less motivated to engage in musical activities if they feel a lesser sense of control over the outcome. Strategy use is also considered to be a key attributional factor leading to musical success, highlighting the importance of deliberate practice behaviours in instrumental learning (Vispoel & Austin, 1993). It seems clear that the reasons instrumental learners give for success and failure will influence their subsequent motivation to engage in musical activities.

2.1.3   Implicit Theories of Intelligence

Attribution theory can be closely linked to implicit theories of intelligence. Dweck (2000) proposed that individuals either perceive intelligence to be fixed (entity beliefs), or changeable through effort (incremental beliefs). Entity and incremental beliefs about intelligence are also commonly referred to as fixed and growth mindsets. Implicit theories of intelligence have been associated with a range of outcomes in various learning domains, including self-worth, resilience, adaptability, engagement, persistence, academic achievement, and achievement goals (Martin et al., 2017). Learners who hold incremental beliefs about intelligence or ability (growth mindset) are more likely to engage and persist for longer in more difficult tasks, as well as being more likely to attribute success or failure to effort rather than ability, thus resulting in increased motivation towards a particular task (Martin et al., 2017).

Interestingly, in music domains, O'Neill (2011) found that incremental theories of ability might be more common in children who have experienced learning to play an instrument, though incremental views of musical ability are still less common than incremental views of sporting ability, reflecting the commonly held notion of natural musical talent. Initial research into the impact of musical self-theories showed that beliefs about implicit musical ability might be linked to conscientious, and in turn academic achievement (Müllensiefen et al., 2015). It is therefore likely that theories of musical ability, linked to theories of intelligence, also have important implications for the motivation of children learning to play an instrument.

2.1.4   Self-Determination Theory

One area which has received particular attention in the music education research community in recent years has been self-determination theory. Broadly, self-determination theorists consider motivation to be either intrinsic or extrinsic, proposing that increased intrinsic motivation leads to enhanced performance and commitment to a task (Ryan & Deci, 2000a). Intrinsically motivated learners are motivated towards a particular task because they find it interesting or enjoyable, whereas extrinsically motivated learners are motivated towards something because of external pressures or outcomes (Ryan & Deci, 2000a). Ryan and Deci (2000a) argue that it is rare for learners to be truly intrinsically motivated, as there will always be some level of external influence over one's behaviour. They therefore categorised extrinsic motivation on a continuum, representing the degree to which these external influences are internalised. The self-determined motivation continuum can be seen in Figure 2.1. Beyond amotivation, learners exhibit external regulation when their behaviour is determined by external rewards, introjection when they seek approval from others, identification when activities align with their own goals, and integration when their behaviours are congruent with their personal identity (Ryan & Deci, 2000b, 2020). Researchers have generally assessed self-

Figure 2.1

Taxonomy of Self-Determined Motivation (reproduced from Ryan & Deci, 2000a)
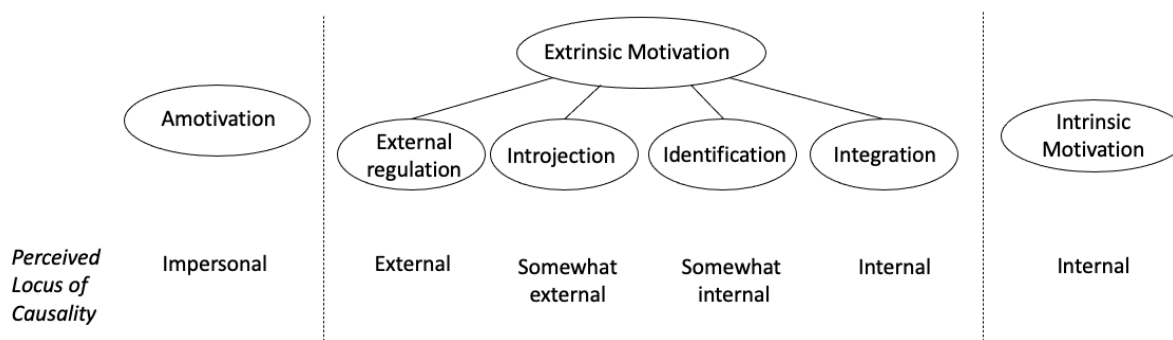
determined motivation using quantitative measures, using scale items such as "because I enjoy X" to represent intrinsic motivation, and "because I'll get in trouble if I don't do X" to represent extrinsic motivation (Sheldon et al., 2017).   Increased intrinsic motivation has been associated with a range of beneficial outcomes including academic achievement, persistence, and wellbeing (Howard et al., 2021). Self-determination theorists have found learners are more likely to be intrinsically motivated when their basic psychological needs of autonomy, competence and relatedness are fulfilled (Ryan & Deci, 2000b). There is a distinction between psychological need satisfaction and frustration, as need frustration occurs when these needs are actively thwarted in the learning environment (Van der Kaap-Deeder et al., 2020). For example, a lack of choice over which repertoire to learn in an instrumental lesson would not necessarily imply need frustration, unless the learner was actively opposed to learning a particular piece of music.

In music education contexts, the satisfaction of basic psychological needs has been found to lead to several desirable outcomes, including increased practice time (Evans & Bonneville-Roussy, 2016; Evans & Liu, 2019) and intentions to continue learning an instrument (Evans et al., 2013; Evans & Liu, 2019; Freer & Evans, 2019; Holster, 2023; MacIntyre et al., 2018). Additionally, when pupils are more intrinsically motivated, they spend more time practising (Schatt, 2018) and are less likely to stop musical learning than their extrinsically motivated peers (Gerelus et al., 2020; Yoo, 2021). As psychological need satisfaction has been found to positively influence a range of musical outcomes, researchers have emphasised the role of music teachers in supporting each of the psychological needs (Evans, 2015; Evans & Bonneville-Roussy, 2016; Evans & Liu, 2019). Teachers can encourage feelings of competence through praise and emphasis on effort, facilitate relatedness through the provision of ensemble music making opportunities, and foster autonomy by providing choice in music lessons (Evans, 2015). Freer and Evans (2019) found that learners who experienced

psychological needs-supportive teaching environments were more likely to opt to study music in the future.   The consideration of self-determination theory is therefore crucial in research relating to the musical engagement of adolescents.

2.1.5   Self-Efficacy Theory

The importance of self-efficacy has also been highlighted in research investigating the motivation of young musicians. Self-efficacy is the belief that one has the capability and skills needed to succeed in a particular task (Bandura, 1994, 1997). Conceptually, self-efficacy is different from outcome expectancies as defined in expectancy-value theory, which might be influenced by more external factors such as the examination environment. Bandura (2006) has clarified this distinction, writing, "perceived self-efficacy is a judgment of capability to execute given types of performances; outcome expectations are judgements about the outcomes that are likely to flow from such performances" (p. 309). Self-efficacy theorists argue that if a learner believes they have the skills needed to succeed in a particular task, they are more likely to expend effort in that domain. Four main factors influence self-efficacy: mastery experiences, vicarious experiences, social persuasion, and physiological and affective states (Bandura, 1997). Mastery experiences refer to past successes, vicarious experiences result from witnessing the success of others, social persuasion can come from a range of people, and physiological and affective states might be represented by emotional responses to past experiences as well as symptoms such as anxiety.

Self-efficacy has been widely explored in relation to musical learning, with researchers exploring the influences on as well as the outcomes of self-efficacy beliefs. Higher self-efficacy is reported to lead to higher performance achievement (Hewitt, 2015; McCormick & McPherson, 2003) and more advanced practice techniques (Clark, 2010). Lower self-efficacy has also been reported to lead to a higher chance of performance anxiety (Bersh, 2022; González et al., 2018). Considering the impact of self-efficacy beliefs on these musical outcomes, researchers have shown an interest in what might enhance the self-efficacy of musical learners. Past mastery experiences and social persuasion are generally considered to have the strongest influence on musical self-efficacy (Gill et al., 2022; Hendricks, 2014; Lewis et al., 2022; Zarza-Alzugaray et al., 2020; Zelenak, 2019). Music teachers therefore have an important role to play in enhancing instrumental learners' self-efficacy, particularly through social persuasion and providing learners with opportunities to experience success. In turn, increased self-efficacy for music performance might lead to a greater degree of motivation towards learning an instrument.

2.1.6   Achievement Goal Theory

Finally, the different types of goals that learners adopt can affect their quality of motivation. Achievement goal theorists have historically distinguished between two main types of goals; mastery (or learning) goals where individuals strive to "increase competence" and performance goals aiming to "gain positive judgements of competence" (Dweck, 1986, p. 1041). Achievement goal theory has undergone numerous revisions, including the distinction between approach and avoidance goals. Learners with approach goals are oriented towards success, and those with avoidance goals are oriented towards the avoidance of failure (Elliot & Harackiewicz, 1996). Researchers in achievement goal theory have generally agreed that mastery goals lead to more desirable learning outcomes than performance goals. For example, in general educational contexts, mastery goals can result in more challenge-seeking behaviour (Ames & Archer, 1988; Dweck, 1986), persistence (Dweck, 1986), and deep processing (Elliot & McGregor, 2001). Though the promotion of mastery goals dominates literature on recommendations for the classroom (e.g. Ames, 1992), performance goals have also been found to lead to positive outcomes such as academic achievement (Elliot & Church, 1997; Harackiewicz et al., 2002; Senko & Tropiano, 2016). Achievement goals are also closely related to implicit theories of intelligence. Dweck (2000) found that entity theories about intelligence are associated with performance goals, whereas incremental beliefs about intelligence are associated with mastery goals.

Achievement goals have been linked to musical learning in several studies with differing outcomes. Mastery goals have linked to musical outcomes such as deliberate practice strategies (Bonneville-Roussy & Vallerand, 2011; Miksza, 2009b; Nielsen, 2008; Smith, 2005), practice time (Ng, 2017; Schmidt, 2005) and commitment to musical learning (Miksza et al., 2016; Ng, 2017; Tan & Miksza, 2018), as well as performance achievement in some studies (Miksza, 2009b; Schmidt, 2005). Some researchers however have found no effects of achievement goals on musical achievement (Austin, 1991; Miksza, 2011; Nielsen, 2008). Taking the findings from both general and music education research into account, it is likely that the adoption of specific achievement goal orientations might have a number of positive motivational outcomes in relation to instrumental learning, particularly in relation to practice strategies and engagement in musical activities, though further research is necessary to determine specific links between achievement goals and performance achievement with younger musicians.

2.1.7   Linking Theories of Motivation

Before focusing more closely on achievement goal theory, it is helpful to consider the conceptual links between theories which together might be used to explain the overall motivational

traits of learners. Several researchers in the field of music education (e.g. Hallam, 2002; MacIntyre et al., 2012) have attempted to synthesise and model the overall relationships between various influences on motivation, acknowledging the interaction between learners' individual characteristics, influences from the learning environment, and cognitive processes in influencing musical motivation. Similar models are also proposed by theorists outside of music education contexts, who argue that a full understanding of motivation takes account of both energising and directional aspects (Elliot & Sommet, 2023; Urhahne & Wijnia, 2023). These models are necessarily complex due to the multifaceted nature of motivation, and my own outline of the relationships between theories is shown in Figure 2.2.

In this model, cognitive theories of motivation are grouped into five overarching themes: attributions, influence from others, competence beliefs, goals, and values. Whilst goals encompass just one theoretical perspective (achievement goal theory), other themes incorporate perspectives from multiple theories of motivation. For example, competence beliefs include beliefs about self-efficacy, expectancies for success, and the basic psychological need of competence. Influences from others include autonomy and relatedness, as well as extrinsic motivation. The theme of values represents learners' beliefs around attainment value, utility value, cost and intrinsic motivation.

The model presented in Figure 2.2 also proposes a temporal order of influences on motivation, showing that one aspect of motivation might influence another. Attributions and influence from others are both proposed to impact one's competence beliefs, which in turn might influence one's future goals and expectancy value beliefs. These links have been borne out in research from Elliot and Church (1997) who found high competence expectancies led to mastery and performance-approach goals, whereas low competence expectancies led to performance-avoidance goals. Other researchers have proposed that achievement goals might impact the self-efficacy of learners (Bandura, 1994; Phillips & Gully, 1997). There also appears to be a close relationship

Figure 2.2

Overview of Links Between Motivation Theories
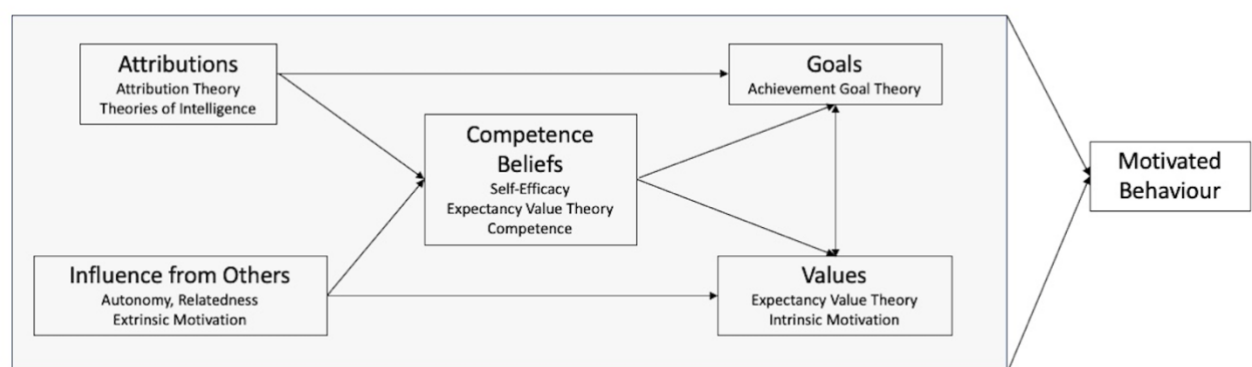
between self-determined motivation and achievement goals; Ryan and Deci (2000a) describe introjected motivation as being "ego-involved" (p. 61), whereas intrinsic motivation is derived from the inherent enjoyment one gains from a task, closely aligning with the respective definitions of performance and mastery goals (Dweck, 1986). Research with undergraduate education students found that self-determined motivation predicted participants' mastery-approach and avoidance goals (Ciani et al., 2011). Other researchers explored more specific strands of self-determined motivation, finding that intrinsic motivation and identified regulation were associated with mastery-approach goals, whereas introjected motivation was associated with performance-approach and avoidance goals (Howard et al., 2021). A clear understanding of the motivation of instrumental learners must therefore be based on multiple theoretical perspectives. The following section will consider this broader picture of motivation in relation to instrumental learning.

2.2   A Review of the Existing Research on Motivation and Instrumental Learning

There is a wealth of research which explores relationships between motivation and musical outcomes such as performance achievement (e.g. McCormick & McPherson, 2007; McPherson, 2000; Miksza, 2009; Schmidt, 2005), practice habits (e.g. Evans & Bonneville-Roussy, 2016; Evans & Liu, 2019; Miksza, 2011) and performance anxiety (Bersh, 2022; González et al., 2018). A full review of motivational outcomes in music contexts is beyond the scope of this literature review, therefore the remainder of this chapter will focus on the most pertinent issues relevant to this thesis: adolescents' intentions to persist in instrumental learning and their practice habits. Though the primary focus of this thesis is on adolescent musicians, studies with younger children and musicians beyond school age will also be evaluated to gain a full understanding of learners' musical motivation.

2.2.1   Different Music Education Contexts

A brief overview of the nature of music education in England, the USA and Australia will presently be outlined before undertaking a detailed review of the research evidence on motivation and instrumental learning, as these are the main contexts for majority of the studies presented in this literature review.

In England, most instrumental learners receive music tuition through their school. In 2020, 70% of instrumental learners reported they received tuition at school, though the number of young people undertaking lessons outside school and online had increased in this study compared to previous years (ABRSM, 2021). In many cases, instrumental tuition is offered by the local government authority, with specialist tutors visiting schools on a weekly basis. There is no unified system for the charging of lessons, and costs often differ by local authority and teacher. Whilst some

schools might supplement the cost of instrumental tuition for some learners, this is not universal practice across England (Daubney et al., 2019; Underhill, 2022)

The National Curriculum for Music in England states that up to the age of 14, music education is compulsory for all children in state-funded schools (Department for Education, 2021). The National Curriculum states that in primary school, up to the age of 11, all children should be given the opportunity to sing, play tuned and untuned musical instruments, play in solo and ensemble contexts, read notation, and undertake a range of listening and composition activities. This provision often takes the form of whole class ensemble tuition (Hallam, 2016). In secondary school, pupils aged 11-14 should be taught to play instruments musically both in solo and ensemble contexts (Department for Education, 2021). Whilst this National Curriculum is statutory, there is a disparity between the quality of provision across schools, meaning that not all learners in England receive the same high-quality music education (Ofsted, 2023; Underhill, 2022). At the age of 14 (and sometimes earlier), all pupils in England are able to choose whether to study music further and can opt for a range of qualifications including GCSE music, BTEC music, and A Levels in Music and Music Technology. Many young instrumentalists progress through graded performance exams as a marker of progress and are commonly entered for performance exams through organisations such as the Associated Board of the Royal Schools of Music (ABRSM), Trinity Guildhall or Rockschool (RSL), with exams from Grade 1 to Grade 8 level.

Most of the existing published research on motivation and instrumental learning has been carried out in the USA and Australia. Music provision in USA schools is very different to UK contexts. Schools in the USA generally offer instrumental music programmes after Grade 5 (age 11), where pupils choose to study either band or orchestral instruments (Johnson & Fautley, 2017). Performance is therefore the main focus of the music curriculum in middle and high schools in the USA, compared to UK schools where the compulsory music curriculum tends to consist of more general music instruction, whilst ensemble performance is generally an optional extra-curricular activity (Johnson & Fautley, 2017). Although the format of the music curriculum is different, music educators in the USA appear to also struggle to recruit and retain music learners during the high school years, as evidenced by the number of studies examining music uptake in USA schools (e.g. Elpus, 2022; Kinney, 2019). In Australia, at the time of much of the research cited in this thesis, instrumental tuition was delivered in a similar format to UK schools, provided by visiting instrumental teachers as an optional addition to the school curriculum (Lowe, 2012). A proportion of music students in Australia were the beneficiaries of funded instrumental tuition (Lowe, 2012), though it is not clear whether this funding is still provided. Whilst the learning contexts differ between

countries, there are many similarities, with music educators in all contexts seeking to engage more young people in musical learning and motivate them to continue learning instruments for longer.

2.2.2   Why do children decide to start learning an instrument?

It is pertinent to the aims of this thesis to reflect on the factors that influence children to begin learning an instrument, before considering what motivates them to continue learning. Much of the evidence base for research on the early stages of learning an instrument comes from a large-scale longitudinal study which took place in Australia in the late 1990s, where the progress of a group of over 150 beginner instrumentalists was monitored over a three-year period (McPherson, 2000; McPherson et al., 2012; Pitts et al., 2000). Children in this research project had begun learning instruments at the age of seven in band programmes offered by their primary schools. These researchers reported that children often wanted to start learning an instrument because they thought it would be exciting. Many were also motivated by social incentives to start learning an instrument, wanting to join in with friends who already played or were starting to learn an instrument (McPherson et al., 2012). The children often tended to choose the same instruments as others in their friendship group (McPherson et al., 2012; Pitts et al., 2000). Parents also played a key role in these children's initial participation in instrumental lessons. Key considerations for these parents included the cost of tuition as well as practical reasons such as the availability and accessibility of teachers (McPherson, Davidson, et al., 2015).

Researchers in other countries have also sought to determine the main reasons for children's decisions to start instrumental tuition. In Spain, Cantero and Jauset-Berrocal (2017) gathered evidence from children aged 8-12 about their reasons for learning an instrument, and intrinsic motivation was the most popular reported reason, followed by family and peer group influences. Similarly, a small-scale qualitative study in the USA investigated string players' reasons for beginning and discontinuing instrumental tuition, and the most prominent influences for beginner instrumentalists were from their family members, teachers, and friends (Hurley, 2010). In Sweden, Mateos-Moreno and Hoglert (2023) examined retrospective accounts from trainee music teachers on their reasons for their choice of instrument, and these participants reported that the timbre of the instrument was the main influencing factor. The second most important factor for these participants was parental encouragement. The authors of this study highlighted that the provision of "testing sessions", where children were encouraged to try out different instruments, was very important in children's motivation to choose specific instruments, more so than musical family members or the influence of peers (Mateos-Moreno & Hoglert, 2023, p. 9). The differences between the findings of this and other studies might be due to their slightly different research focus, as Mateos-Moreno and

Hoglert's (2023) study focused on reasons for instrument choice, and others focused on children's decisions to begin learning (Cantero & Jauset-Berrocal, 2017; McPherson et al., 2012).

Studies investigating the experiences of beginner instrumental learners in the UK have been less common. However, MacKenzie (1991) explored the motivation of UK-based primary school children beginning an instrument and found the most popular reason for these young learners was their personal musical interest, followed by influences from their teacher and musical friends. More recent research with children aged 5-17 in the UK highlighted that the three most common reasons for children beginning to play an instrument were related to their intrinsic interest in music, followed by persuasion from parents (ABRSM, 2021). Beginner instrumental learners in the UK are also motivated by the desire to make music with other people (ABRSM, 2021). In summary, social factors appear to be key to children's decisions to engage in instrumental learning, alongside their intrinsic interest in music.

Consideration of the reasons for instrumental tuition uptake in the UK must take into account the context of primary school music education in England. Since 2007, the UK government has aimed to ensure that all primary school pupils in England learn a musical instrument for at least one school term through the Whole Class Ensemble Teaching programme (Hallam, 2016). In Scotland, children in primary schools receive similar opportunities; the Youth Music Initiative launched in Scotland in 2003 aimed to ensure that every primary school pupil had the opportunity to learn a musical instrument for at least one year (Broad, Moscardini, et al., 2019). In the UK, 66% of children having instrumental lessons report participating in group music making, reflecting this large-scale provision of whole class ensemble tuition (ABRSM, 2021). Whilst the provision of these opportunities is undoubtedly positive, particularly for those who might otherwise not access instrumental lessons, the compulsory nature of these programmes as part of the primary school curriculum might have implications for children's longer-term engagement with instrumental learning.

Reports indicate that the whole class ensemble teaching model in England may not have been successful in leading to long term engagement with instrumental tuition for many learners, with continuation rates one year after receiving whole class ensemble tuition as low as 15% in some areas (Hallam, 2016). It is therefore important to examine why so many children do not continue learning their instruments beyond primary school. One reason might be the lack of choice in instrument selection. The types of instruments learnt in whole class tuition contexts might differ from children's own preferences, thus impacting children's motivation to continue learning after the compulsory tuition period has ended (ABRSM, 2021). Financial reasons are also likely to be

important for families in choosing whether to continue with instrumental tuition after lessons are no longer funded by the school (ABRSM, 2021).

Though most instrumental learners begin their musical journeys in primary school, some children make the decision to start learning after starting secondary school. Exploring the reasons for this is particularly pertinent to the present research on adolescent instrumental learners' motivation. Researchers in Australia gathered data from 2727 school pupils, comparing children's interest in learning an instrument across the primary school, lower secondary school, and upper secondary school years (McPherson, Osborne, et al., 2015). In this study, the children in lower secondary school were significantly more likely to express an interest in learning an instrument compared to the primary and older secondary school children (McPherson, Osborne, et al., 2015). Research in English schools has also shown that the peak age for beginning instrumental tuition is 11, the first year of secondary school (Driscoll, 2009).   This may be explained by the often greater choice of instruments being available to pupils in secondary school settings. At this age, children are also more likely to begin learning more contemporary instruments such as guitar and drums, partially because there might be a wider range of instruments offered to pupils, but also possibly due to the social benefits of being able to play these instruments in groups with friends (Driscoll, 2009; McPherson, Davidson, et al., 2015). At this age, the social benefits of playing an instrument may become more important to children.

The early years of secondary school were the focus of a review by Symonds et al. (2017), who collated the results of three studies focused on the period of transition from primary to secondary school, and highlighted several important factors that might influence children's decisions to begin learning an instrument in early adolescence. One factor which may be particularly important at this age is social identity. At this age children might feel more peer pressure to show an interest in certain types of music, impacting their choice of more 'popular' instruments such as guitar and drum kit (Symonds et al., 2017). On a more practical note, Symonds et al. (2017) also note that more specialist instrumental teachers and equipment might be available in secondary school contexts, inspiring pupils to begin learning at this age. It is important to emphasise that alongside motivation, the cost of instrumental tuition remains a key factor impacting children's decisions to begin instrumental tuition where funding is not available from other sources. Research with UK adolescents aged 13-14 showed that the cost of lessons can be a key barrier for parents in signing their children up for instrumental tuition (Driscoll, 2009), and children from more affluent households are reported to be 1.4 times more likely to play an instrument than those from less affluent backgrounds (ABRSM, 2021). Whilst socio-economic factors are likely to remain a longstanding influence on the number of children learning an instrument, other factors do influence

children and families' decisions to continue engaging with instrumental tuition. Understanding this wider range of influences is especially important in the secondary school years, when most whole class ensemble tuition programmes will have ended, and children have more personal choice over whether to continue learning an instrument. The dropout rate of learners following primary school whole class ensemble tuition programmes (Hallam, 2016) indicates that further work is necessary to fully understand and influence the motivation of adolescent instrumental learners.

2.2.3   What influences children's decisions to continue or discontinue learning an instrument?

One of the primary aims of this thesis is to examine what motivates adolescent instrumental learners to want to continue learning an instrument after they have already started. Though the first year of secondary school has previously been identified as a peak age for pupils beginning instrumental lessons in the UK (Driscoll, 2009), more recent research has highlighted a significant decline in the number of pupils engaging in instrumental learning beyond this point. Ruth & Müllensiefen (2021) employed longitudinal methods to trace the engagement of young musicians from age 10 to 17 in the UK and Germany, finding that 50% of participants had ceased musical activity by the age of 17, and most stopped engaging in music between the ages of 15 to 17. In this study, the variable musical engagement was represented by participation in musical activities and not specifically instrumental lessons, however this data does signify a decline in musical engagement during adolescence, which is likely reflective of the amount of young people taking instrumental lessons. These findings are supported by other research studies in the UK which show a decline in the number of children playing instruments as they get older, with 47% of 16-17 year olds learning an instrument compared to 64% of 8-10 year olds (ABRSM, 2021). There is a noticeable difference in the figures from these two studies, with the fall in musical engagement much steeper in Ruth & Müllensiefen's (2021) study compared to the findings of the ABRSM (2021) report. The ABRSM results might not be fully reflective of wider school populations in the UK; online survey methods were employed for this study, so the sample may have been weighted more towards instrumental learners who are presumably more likely to complete online surveys about music making. On the other hand, Ruth & Müllensiefen's (2021) data were gathered within school settings and are likely more reflective of diverse school populations. Nevertheless, it seems clear that less children take part in instrumental lessons as they progress through secondary school. The possible reasons for this dropout and the factors that might influence adolescents to continue learning an instrument will now be considered.

2.2.3.1   Expectancy-Value Beliefs

Children's value beliefs relating to music are often related to their long-term engagement with instrumental learning and might be reflected in their predictions of how long they will continue learning an instrument. In Australia, Evans and McPherson (2014) measured beginner musicians' initial expectancies for the length of time they would continue learning an instrument, and data gathered ten years later indicated that learners who initially expressed a long-term commitment to music-making did continue playing their instrument for much longer than those who initially expressed a short-term commitment (Evans & McPherson, 2014). Children's value beliefs relating to music therefore predict their long-term commitment to instrumental lessons.

Instrumental teachers have also reported that children's lack of personal interest in music is often the main reason for their decision to stop instrumental tuition (Ng & Hartwig, 2011). For these instrumental teachers, children's musical value beliefs appeared to predict their future musical aspirations, making it more likely that they would continue learning an instrument for longer. Researchers in the UK carried out a large-scale study with 3325 musicians aged 6-19 from beginner to conservatoire level, and found that participants' value beliefs towards learning an instrument were significant predictors of their future musical aspirations, more so than self-belief, social support and enjoyment of musical activities (Hallam et al., 2016).

Other researchers have focused on children's reasons for choosing music as an optional school subject, and though not specific to instrumental learning, the data from these studies also indicate that children's value beliefs relating to music are a key factor in determining whether they choose to continue studying music. Freer and Evans (2018) employed structural equation modelling to determine the relative importance of basic psychological need satisfaction and valuing of music on the elective intentions of children aged 12-14 in an Australian high school. They found that children's beliefs about the importance of music determined their intentions to opt for future music lessons. Value beliefs were more important for the children in this study than the satisfaction of basic psychological needs and prior instrumental experience. The authors of this study do note that these findings are not necessarily generalisable to other school contexts, as data were gathered from only one school which catered for all boys with a relatively high socio-economic status (Freer & Evans, 2018). However, similar trends have also been reported in other contexts. In the USA, Holster (2023) measured the influence of different factors including socio-economic status, parents, peers, psychological need satisfaction and task values on students' intentions to continue ensemble participation, finding that learners' task values relating to music were the strongest predictor of their intention to continue musical participation, supporting the earlier findings of Freer and Evans (2018).

Value beliefs relating to music can therefore considered a key motivator for adolescents' continued engagement in instrumental learning.

2.2.3.1.1   Influences on Value Beliefs

Consequently, consideration of the influences on these musical value beliefs is important for music educators seeking to increase the motivation and engagement of adolescent musicians. Concerningly, studies have shown that children value music less as they progress through school. One large-scale study measured the expectancy-value beliefs of music students aged 9-21 from eight different countries, and in seven of those countries (China, Finland, Hong Kong, Israel, Korea, Mexico, Australia and the USA) age was associated with declining value beliefs relating to music (McPherson & O'Neill, 2010). In this study, as music students got older, they were less likely to value music as a subject. Though this research did not include musicians from the UK, it is likely that similar patterns might exist in this country, indicated by the lower number of children learning instruments in later adolescence (ABRSM, 2021; Ruth & Müllensiefen, 2021), and the link found between value beliefs and musical aspirations (Hallam et al., 2016).

One important influence on children's musical value beliefs is their perception of the usefulness of music as a school subject. Recent research carried out in secondary schools in the North-East of England has found that adolescents' declining value beliefs regarding musical learning might be an important reason behind their decision not to study music beyond the age of 14, possibly influenced by their perception of the utility-value of music compared to other school subjects (Kokotsaki & Whitford, 2023; Whitford & Kokotsaki, 2024). Whilst the participants in this study often still valued music for enjoyment purposes, they did not consider it to be as worthwhile as other subjects (Kokotsaki & Whitford, 2023). These research findings are particularly relevant to the context of this thesis, as the setting for the first three studies, reported in Chapters 4, 5 and 6, was a school in the North-East of England. They are also reflective of the current wider educational context in England. Adolescents' beliefs regarding the usefulness of music as a school subject are likely to be strongly influenced by current UK government initiatives that promote English Baccalaureate (EBacc) subjects above the arts[1]. The introduction and promotion of the EBacc, and consequent devaluing of arts subjects, is widely considered in the UK music education community to be a key reason for the declining number of pupils studying music beyond the age of 14 (Bath et al., 2020; Burland, 2020). Diminishing value beliefs relating to music as a school subject are likely closely associated with adolescents' motivation to continue or discontinue instrumental lessons.

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[1] The English Baccalaureate was introduced by the UK government in 2010 and comprises GCSEs in English, Mathematics, Science, Humanities and Languages.

On a more positive note, some of the Australian young musicians in Evans and McPherson's (2014) research who experienced high-profile school instrumental programmes were more likely than others to convey longer-term musical commitment at the outset of their instrumental learning journeys. Musical value beliefs can therefore be perpetuated or undermined by both school and national contexts, and schools who provide an enriching programme of musical activities for instrumental learners can influence children's value beliefs relating to music and thus their desire to continue learning an instrument.

2.2.3.1.2 *Musical Identity*

The concept of musical identity links closely with value beliefs relating to music, and adolescents with a strong sense of musical identity are more likely to engage in music-making for a sustained period of time. Hargreaves et al. (2003) highlight the importance of music in the construction of self-identity; "we use [music] not only to regulate our own everyday moods and behaviours, but also to present ourselves to others in the way we prefer" (p. 1). Musical identity can be defined as "identities in music", for example within roles such as a performer or composer, or as "music in identities", where music forms a part of one's broader sense of self, for example in the types of music people listen to which may aid identification with a certain social group (Hargreaves & Marshall, 2003; p. 264). The first concept, identities in music, is most relevant to the present research, as children's notions of musical selves might reflect their value beliefs relating to music, having important implications for their long-term engagement in musical activities. Whilst children can and do engage in music in various forms, by learning instruments, singing in choirs, listening to music, and discussing different bands and singers with friends, one study found that children mostly defined musical identity according to whether or not they played a musical instrument (Lamont, 2002). Out of the children interviewed in this UK-based study, 48% identified as "non-musicians" because they did not have instrumental lessons, despite still receiving musical instruction in classroom music lessons (Lamont, 2002, p. 47). Children who do not perceive themselves as musicians are less likely to engage in music-making activities throughout adolescence. Evans and McPherson (2014) argued that children's initial predictions of how long they would participate in instrumental learning were reflective of "a contextualized and well-developed sense of personal identity", rather than simply a premonition of the future (Evans & McPherson, 2014, p. 10). As already noted, in this study, the authors found that children who had stronger musical identities, and thus longer-term musical aspirations, were more likely to continue learning their instrument for a longer period of time (Evans & McPherson, 2014).

Alongside instrumental lessons, other factors have been acknowledged as important in the construction of musical identity, including family, friendships, educational opportunities, self-belief,

and musical preferences (Hallam, 2017; Hargreaves et al., 2002; Symonds et al., 2017). Family support might be particularly important; in their review of research on instrumental learners at the start of secondary school, Symonds and colleagues (2017) noted that children with stronger musical identities had experienced "the embeddedness of musical pursuit within other areas of life" (p. 525). The strong presence of music within family and home life can enhance young musicians' value beliefs relating to music, reinforcing the importance of musical activities including learning an instrument. In summary, instrumental learners who value music highly are more likely to continue playing their instrument for longer, and these value beliefs are influenced by social and school contexts, which contribute to the development of musical identity.

2.2.3.2 Basic Psychological Needs

Basic psychological need satisfaction also plays an important role in determining the continuation rates of young musicians. Most of the research in this area has been conducted by Evans and colleagues, primarily in Australia, with some research also in USA high schools. These researchers have found when the needs of competence, relatedness and autonomy are met, instrumental learners are more likely to value music and engage in instrumental learning for a longer period of time (Evans et al., 2013; Evans & Liu, 2019; Freer & Evans, 2019; Kingsford-Smith & Evans, 2021). Conversely, the frustration of these basic psychological needs can lead to learners' decisions to stop playing an instrument. Whilst most research on the role of basic psychological needs in music learner motivation has used quantitative methods to test path models, in one study Evans and colleagues (2013) employed interview methods to investigate the relationship between children's psychological need satisfaction and their continuation with instrumental lessons. The children in this study commonly attributed their decision to stop learning an instrument to their psychological need frustration, for example because ensemble participation isolated them from other friendship groups (Evans et al., 2013).

Interestingly, another study found task values might be more important than basic psychological needs in predicting learner's intentions to continue, and in fact an inverse relationship was discovered between basic psychological need satisfaction and intentions to continue learning (Holster, 2023). However, this was a small-scale study and it is likely that the findings of Evans and colleagues (Evans et al., 2013; Evans & Liu, 2019; Freer & Evans, 2019; Kingsford-Smith & Evans, 2021) are more reflective of the overall influence of basic psychological need satisfaction on long-term musical engagement, as they employed a wider range of methods including interviews and longitudinal data, as well as engaging larger samples of participants. Evans and Liu (2019) gathered data from 704 learners, whereas Holster's (2023) findings were based on a small group of only 42

participants. It does appear that the satisfaction of instrumental learners' basic psychological needs is an important factor influencing their decision to continue learning an instrument.

Most studies so far linking basic psychological need satisfaction to instrumental learners' decisions to continue have not measured basic psychological needs as separate factors, instead considering them as one construct. However, each of the psychological needs might contribute distinctly to instrumental learners' value beliefs and desire to continue learning. Yoo (2021) measured each of the basic psychological needs separately in research with high school ensemble students in the USA, and found that whilst competence and relatedness both predicted their musical motivation, autonomy was not linked to either intrinsic or extrinsic motivation. It may be that autonomy satisfaction is less important in the earlier stages of learning an instrument whilst learners are still quite reliant on their teachers.

The perception of competence is also likely to increase instrumental learners' overall motivation towards music, distinct from the other psychological needs. In Hallam et al.'s (2016) large-scale study with school-aged instrumental learners in the UK, higher expertise was associated with stronger musical aspirations, increased overall enjoyment of music, and stronger value beliefs relating to music, as well as overall motivation. It is likely that higher expertise is linked to overall perceptions of musical competence, and as instrumental learners become more skilled, they are more likely to sustain their musical engagement. Using focus group methods to interview Australian instrumental learners aged 12-13, Lowe (2012) found that the competence beliefs of young musicians are particularly important in their decisions to continue or cease musical instruction. Competence beliefs are also linked to value beliefs, supported by Hargreaves et al. (2002), who argue self-identity, and in particular musical identity, is constructed partially as a result of the self-esteem of adolescents.

2.2.3.2.1 Psychological Need Support from Peers

Relationships with others are key to the satisfaction of basic psychological needs, and therefore in the context of the present research, support adolescents' motivation to engage in instrumental learning. Mirroring Lowe's (2012) findings, other researchers in Australia found that young musicians' competence perceptions often arise from comparisons with others, particularly peers and siblings (Evans et al., 2013). One participant in this study stated comparison with a peer made them "feel ashamed of [their] ability" (Evans et al., 2013, p. 608). Peer comparison might be exacerbated in musical learning environments where competition might play a key role. In England, Bull (2019) explored the experiences of young classical musicians using in-depth qualitative interview methods, and participants in this study reported that competition was a key element of their ensemble experiences, for example in determining ranked orchestral seating arrangements. Whilst

the participants in Bull's (2019) study appeared to thrive on this competition, these competitive structures, though perhaps reflective of many professional music-making contexts, are highly likely to affect instrumental learners' competence beliefs. Learners who compare their own musical ability unfavourably with that of others may be less likely to see the value in persisting with instrumental learning.

The sense of social belonging and relatedness often gained by participating in musical ensembles might be a key deciding factor for adolescents choosing whether to continue engaging in instrumental learning. Patrick and colleagues (1999) explored 41 adolescents' reasons for continuing to engage in extra-curricular activities in the USA. Qualitative interview responses in this study indicated that peer relationships were the most prominent factor in participants' continued commitment to their area of interest. For many participants, extra-curricular ensembles such as choir and orchestra fostered a sense of social belonging, influencing their decision to continue with these activities. Other participants who did not have friends with the same interests considered there to be a social cost to participating in these activities, ultimately undermining their commitment to their area of interest (Patrick et al., 1999). The importance of peer perceptions may be amplified following school transition when children often have to foster new friendships in larger school settings, potentially explaining the declining importance and value of music to adolescents as they progress through their secondary school years (McPherson & O'Neill, 2010). As previously discussed, adolescence is a key period for the construction and consolidation of musical identities, and peer relationships play a key role this process (Evans & McPherson, 2017a). If adolescents have positive musical experiences alongside their peers, they may be more likely to engage in instrumental learning for a longer period of time.

2.2.3.2.2   *Psychological Need Support from Teachers*

Music teachers also have a vitally important role to play in fostering the motivation of instrumental learners by nurturing each of the basic psychological needs. Howe and Sloboda's (1991) research with young musicians highlighted the role of teachers in supporting learner motivation, and in some cases instrumental teachers functioned as aspirational role models for the participants, supporting their sense of relatedness. The sample of young musicians in this study was limited to students attending a specialist music school, though other studies with more diverse samples of young musicians also found teachers are crucial in fostering learner motivation. For example, Freer and Evans (2019) examined the role of teachers in supporting the basic psychological needs of instrumental learners at the start of secondary school in Australia, and the impact of this support on participants' commitment to learning music. The results of this study indicated that learners' perceptions of basic psychological need support from their teachers exerted a significant

influence on their own psychological need satisfaction. Teacher needs support in this study was measured by items such as "I feel accepted by my teacher", and "My teacher provides me with choices and options" (Freer & Evans, 2019, p. 787). Though this research was conducted in the context of classroom music, it is likely that similar patterns may be found in small group and individual instrumental learning contexts and might even be amplified in these more personalised instructional settings.

Researchers have also found that relationships with teachers often play a key role in teenager's decisions to cease instrumental learning. Some participants in Lowe's (2012) study in Australia reported they did not feel a sense of relatedness to their teacher, and this was often cited as the main reason for giving up instrumental lessons. In other research with UK teenagers, negative relationships with instrumental teachers were one of the most frequent reasons given by participants for stopping instrumental lessons (Driscoll, 2009). The role of the teacher in fostering musical engagement may explain the dropout rate after pupils move from primary to secondary school in the UK, as children are often required to change instrumental teachers due to moving schools, potentially affecting their sense of teacher-relatedness.

Relatedness between teachers and parents can also enhance or undermine children's motivation for instrumental learning. Research exploring relationships between pupils, parents and teachers has indicated that more harmonious teacher-parent relationships might increase pupils' persistence with instrumental learning (Creech, 2010, 2014). When pupils experience positive interactions with their teacher, they are more likely to engage in instrumental lessons for longer. Instrumental teachers should therefore facilitate positive and encouraging learning environments, in which their pupils' psychological needs of competence, relatedness and autonomy are supported. When this is the case, young musicians might be more likely to persist with instrumental lessons for longer.

2.2.3.2.3   *Parental Support and Autonomy*

As discussed previously, parents often play a key role in children's initial decisions to start learning an instrument (ABRSM, 2021; Cantero & Jauset-Berrocal, 2017; Hurley, 2010; Mateos-Moreno & Hoglert, 2023). Parents also influence adolescents' longer-term continuation with instrumental learning. The importance of musical home environments in young musicians' consolidation of musical identities has already been highlighted (Symonds et al., 2017), and parents can strongly influence children's value beliefs relating to musical learning. Other research has emphasised the importance of family support in influencing children's musical aspirations (Hallam, 2013) and musical home environments in predicting long-term continuation with musical activities

(Ruth & Müllensiefen, 2021). Conversely, a lack of parental support for practice has been identified as one reason why children might cease instrumental lessons (Ng & Hartwig, 2011; Pitts et al., 2000).

Whilst a high level of parental support plays a key role in the early stages of learning an instrument, the nature of parental support that is needed for adolescents to persist with musical learning changes over time. Instrumental learners value support from parents, but if parents become too involved in instrumental lessons and practice routines, children are likely to lose their motivation for playing an instrument. Creech (2010) examined the relationships between instrumental learners and their parents and was able to distinguish between different levels of parental support for instrumental learning. She found that children's overall motivation for instrumental learning was enhanced when their parents showed a keen interest in their progress, supported their instrumental practice, and developed productive relationships with their instrumental teachers without becoming interfering (Creech, 2010). Creech highlights that too much parental direction can reduce instrumental learners' sense of autonomy, and this type of overbearing parental involvement can be particularly detrimental to learners' motivation during adolescence (Creech, 2010, 2014).

Parents who perceive that their children may be losing motivation relating to instrumental learning might be inclined to employ extrinsic rewards and exert more pressure on learners to persist with practice. However, studies have found that this type of behaviour may have a negative effect on learner motivation. Gerelus et al. (2020) explored differences between piano students who continued lessons and those who stopped learning. In this study, some parental behaviours, such as sitting in on instrumental lessons, were linked to piano learners' reduced autonomous motivation, potentially resulting in their decision to stop learning. Similarly, when parents provide extrinsic rewards for practising this can undermine learners' sense of intrinsic motivation and has been linked to shorter-term musical engagement (McPherson et al., 2012). Instead, adolescents should be encouraged to develop more autonomy in relation to their instrumental practice, as this has been found to lead to longer-term persistence with instrumental learning (Davidson et al., 1995). The literature reviewed so far has underscored the complex web of influences on adolescent instrumental learners' motivation, with a range of influences in learners' school and home lives impacting their psychological need satisfaction, musical identity, and value beliefs relating to music, and their resultant desire to continue learning an instrument.

2.2.3.3   Achievement Goals and Commitment to Musical Learning

Whilst expectancy-value beliefs and basic psychological need satisfaction provide the stimulus for instrumental learners' motivation, the specific achievement goals that instrumental learners adopt have also been associated with different outcomes in relation to their long-term

musical engagement. Elliot and Sommet's (2023) model of hierarchical achievement motivation is based on the theory that "energization and direction serve different functional roles in motivation" (Elliot & Sommet, 2023, p. 76). In this model, whilst expectancy-value beliefs and basic psychological needs serve as energising sources, achievement goals are considered to be directional aims for motivation. Commitment to musical learning might therefore be uniquely influenced by the types of goals pupils adopt when learning an instrument, alongside their expectancy-value beliefs and psychological need satisfaction.

Most studies linking achievement goals to the commitment of musicians have found that the mastery-approach goal tends to predict learners' intentions to persist with musical learning. Ng (2017) investigated the achievement goal beliefs of young musicians aged 11-13 in Australia and found that those who intended to continue participating in extra-curricular musical programmes held stronger mastery goal beliefs than those who intended to stop participating. In another study, Tan and Miksza (2018) investigated the flow, grit, and commitment levels of university-aged musicians in Singapore and the USA, and for these participants a mastery-approach goal orientation predicted their overall commitment to band participation. Commitment to band was indicated by items such as "I want to be involved in band activities more than other activities" (p. 425). Though in both studies mastery-approach goals were a predictor of commitment levels, no significant relationships were found by these researchers between performance-approach goals and musical commitment (Ng, 2017; Tan & Miksza, 2018), implying that mastery goals focused on the development of musical skill may therefore be more closely associated with musical commitment than performance goals which are focused on comparison with others.

These studies focused on commitment to extra-curricular activities rather persistence with instrumental learning specifically, however the findings suggest that the promotion of mastery goals may also be a worthwhile aim for instrumental teachers (Ng, 2017; Tan & Miksza, 2018). Although they did not measure achievement goals specifically, Gerelus et al.'s (2020) study with piano students found that learners who sought more teacher approval were more likely to drop out than those who valued this less. The desire for teacher approval is more reflective of a performance goal, thus performance goals may lead to reduced long-term motivation for instrumental learning and should be avoided. Research so far linking achievement goal beliefs to continuation rates has taken the form of cross-sectional designs, and there is a need for research which measures actual continuation rates rather than learners' intentions, which may ultimately change. There have also been some revisions to the achievement goal model which have not yet been explored in relation to continuation rates (see Section 2.4.1), for example the introduction of self-based goals, therefore

further research is necessary to fully examine the potential link between achievement goals and the commitment of adolescent instrumental learners.

In summary, children's decisions to continue or give up instrumental learning can be attributed to a wide range of factors. Children's value beliefs relating to musical participation are particularly important and are associated with the development of musical identities. These value beliefs are heavily influenced by the learning context as well as the home environment. Children's musical competence beliefs are also an important factor influencing their decisions to continue or discontinue learning, and these can often be enhanced or diminished by comparisons with peers. Young musicians' sense of relatedness to their instrumental teacher can also impact their decision of whether to continue, as well as the type of support they receive from parents and other family members. Achievement goal orientations might also be an important predictor of long-term motivation, though the impact of achievement goals on continuation rates has been explored less than other aspects of motivation.

Alongside these motivational influences, it is also important to recognise that logistical factors do influence children's continued participation in instrumental lessons. The cost of instrumental lessons can be a key barrier for many families (ABRSM, 2021), and learners' intentions to continue participating in music making have been associated with their socio-economic background in some studies (Driscoll, 2009; Holster, 2023). Additionally, the availability of teachers and resources might also impact learners' ability to continue participating in music-making, even if they are motivated to continue (ABRSM, 2021; Lowe, 2012; Symonds et al., 2017). Competing demands from other extra-curricular activities can also lead to dropout from instrumental lessons (ABRSM, 2021). Despite these barriers, the evidence presented in this literature review suggests that music educators can still have a positive impact on young musicians' desire to continue instrumental lessons, and further research to illuminate the influences on adolescents' motivation to continue learning an instrument is a worthwhile endeavour for the music education community.

2.3   Instrumental Practice

This thesis also aims to investigate the link between adolescent's achievement goals and their instrumental practice habits. There has been a wealth of research focusing on the importance of the quantity and quality of instrumental practice in developing expertise, and researchers have consistently found that time spent practising is related to levels of performance expertise. Ericsson et al.'s (1993) widely reported study found differences in the amount of practice reported by adult musicians with higher and lower levels of expertise, recommending that at least ten years of deliberate practice is required for success in a particular domain. Sloboda and colleagues (1996)

studied the practice behaviours of younger musicians, aged 8-18, and found that more successful instrumentalists engaged in significantly more formal practice than less successful learners.   Other more recent studies in the UK with instrumental learners aged 6-19 from a wide range of musical settings have also found that ability level and music examination outcomes are associated with the amount of practice undertaken (Hallam et al., 2012, 2021). These findings have been replicated in studies with beginner young musicians in Australia, where practice time, combined with long-term musical commitment, significantly predicted learners' performance achievement (Evans & McPherson, 2014; McPherson, 2000). Motivating young musicians to undertake more practice on their instruments is therefore a worthwhile aim for music educators.

The quality of the practice undertaken is often considered to be more important for developing expertise than the amount of time spent practising. Researchers investigating music practice make a distinction between informal and formal, or deliberate, practice. Ericsson et al. (1993) recommend that deliberate practice should be goal oriented, take pre-existing skill level into account, use different strategies appropriate to the task, and be accompanied by immediate feedback. Sloboda et al. (1996) compared levels of formal and informal practice in groups of high and low achieving young musicians and found that the quantity of formal practice (playing prescribed repertoire and technical exercises) distinguished the high-achieving young musicians from the other groups. The amount of informal practice undertaken (playing just for fun) was the same for high and low achieving groups. Hallam and colleagues (2012) carried out a large-scale study with 3325 young musicians aged 6-19 years, and categorised practice into different types, including both systematic and ineffective practice strategies. Ineffective practice strategies included playing pieces through without stopping and going back to the beginning of a piece when making a mistake rather than focusing on the specific area of difficulty (Hallam et al., 2012). When the participants in Hallam et al.'s (2012) study avoided ineffective practising strategies, they were more likely to achieve higher grades in performance examinations, and this was more important in determining achievement than other factors including average weekly practice time (Hallam et al., 2012). In another study on the relationship between practice behaviours and performance examination outcomes, Hallam and colleagues found that ineffective practising strategies had the greatest impact on examination outcomes compared to other factors such as enjoyment of performing and self-belief in musical ability (Hallam et al., 2021). However, despite the positive benefits of deliberate practice, it "requires effort and is not inherently enjoyable" (Ericsson et al., 1993, p. 368). It is therefore reasonable to conclude that high levels of motivation are required for adolescents to sustain quality deliberate practice over a long period of time.

As well as being vital to high levels of performance achievement, deliberate practice behaviours can be a conduit for longer-term commitment to instrumental learning. Evans and McPherson's (2014) longitudinal data showed an association between the amount of practice undertaken by participants and the length of time they continued with instrumental tuition. Both these variables are indicative of learners' overall motivation levels, therefore practice time might not have a direct influence on commitment levels, however low levels of practice are likely to limit skill development, eventually affecting learners' perceptions of competence which, as already discussed, can influence the desire to carry on learning (Evans et al., 2013). Encouraging regular and deliberate practice is therefore not only important for increasing skill and ability on an instrument, but also in sustaining adolescents' competence beliefs and longer-term commitment to musical learning. One study with middle school band students in the USA found that the older participants in the study often undertook less practice (Schatt, 2018). This might reflect adolescents' declining levels of musical motivation as they progress through school (Ruth & Müllensiefen, 2021). There is consequently a need to investigate further what motivates young learners to engage with instrumental practice, as this can not only impact musical achievement, but might indirectly influence young musicians' long-term commitment to instrumental learning.

2.3.1   *What influences children to undertake regular and deliberate instrumental practice?*

2.3.1.1   Basic Psychological Needs and Instrumental Practice

The satisfaction of competence, relatedness and autonomy can predict how long instrumentalists spend practising, both during the school years and beyond. Several studies have used self-determination theory as a lens to examine the connection between basic psychological need satisfaction and instrumental practice. With university music students in Australia, Evans and Bonneville-Roussy (2016), employed structural equation modelling to examine relationships between psychological need satisfaction and practice time. They found that when learners' basic psychological needs were satisfied, they were likely to undertake more frequent instrumental practice over the course of a week. Applying a similar model to younger instrumental learners, Evans and Liu (2019) examined basic psychological need satisfaction and frustration with high school band students in the USA, finding that psychological need satisfaction, as well as need frustration, led to increased practice time. The distinction between need satisfaction and need frustration should be taken into account here. The positive relationship between need frustration and practice time in this study was unexpected, as self-determination theorists would generally expect need frustration, represented by items such as, "I feel pressured in orchestra" (Evans & Liu, 2019, p. 90), to lead to less motivated behaviour. Although the impact of need frustration on practice time was less pronounced

that than of need satisfaction, the association between need frustration and practice might reflect the lack of autonomy some instrumental learners experience in relation to their practice schedules, being told to practise by figures of authority such as parents and teachers.

Parents and music teachers often employ a range of methods including extrinsic rewards and practice schedules to encourage young musicians to engage in regular practice, as Evans (2015) reports, "external motivators abound in music teaching and learning" (p. 73). However, while external motivators may increase practice in the short-term, they have been linked to reduced practice time overall (Pitts et al., 2000). The relationship between autonomy satisfaction and instrumental practice might differ depending on the age of music learners, as some researchers have reported children might be less receptive to parental reminders to practise as they progress through adolescence (Creech, 2014; Gerelus et al., 2020). Parents and teachers should avoid exerting too much control over instrumental learners' practice routines, as this might have a detrimental impact on their overall motivation. Additionally, researchers have suggested that whilst extrinsic motivators might be important in influencing practice quantity, they are likely to negatively impact practice quality (Evans & Liu, 2019). An exploration of what might motivate instrumental learners to undertake more intrinsically motivated practice is therefore necessary.

When instrumental learners experience more autonomy in relation to their music-making, they are likely to practise more often. Renwick and McPherson (2002) carried out an in-depth case study to examine the impact of autonomy on the practice of a young clarinettist over three years of her instrumental learning journey. The researchers observed a marked increase in practice time when the participant was playing her own choice of piece compared to music chosen by her teacher (Renwick & McPherson, 2002). Learner autonomy is therefore an important aspect for music educators to consider when they are seeking to promote higher amounts of instrumental practice.

In the self-determination theory model, autonomy satisfaction is closely linked to intrinsic motivation for music learning (Evans, 2015). Studies have shown that more intrinsically motivated music learners sustain higher levels of practice than those who are motivated by external factors. Schatt (2018) investigated the practice time of middle school band students in the USA and found that those who reported higher levels of intrinsic motivation carried out more instrumental practice over the course of a week than participants who reported more extrinsic motivation. Another USA-based study with high school-aged instrumental learners similarly found that intrinsic motivation was positively associated with practice time (Schmidt, 2005). Though these studies were conducted in the USA, it is reasonable to suggest that intrinsic motivation for musical learning is likely to lead to increased practice time for learners in other contexts.

The satisfaction of basic psychological needs and autonomous motivation also influences the quality of practice as well as the quantity of practice undertaken. In their research with university music students, Evans and Bonneville-Roussy (2016) found that university music students who experienced overall greater psychological need satisfaction undertook practice that was more productive, and they generally chose more challenging repertoire. Other research with instrumentalists aged 16-30 in Canada found that learners' perceptions of musical competence predicted both the quantity and quality of their formal instrumental practice (Bonneville-Roussy & Bouffard, 2015). Although these studies both examined the practice behaviours of musicians beyond secondary school age, it would be worth exploring the association between the satisfaction of basic psychological needs and the quality of practice with younger instrumental learners, particularly as deliberate practice is more important in predicting musical achievement than the amount of time spent practising (Bonneville-Roussy & Bouffard, 2015; Hallam et al., 2012; Sloboda et al., 1996).

2.3.1.2 Musical Expertise and Instrumental Practice

Deliberate instrumental practice leads to musical expertise, which in turn can affect the quality and quantity of practice, representing a cyclical causal relationship. A large-scale investigation into the relationship between musical expertise and practice was conducted by Hallam and colleagues (2012), studying the habits and attitudes of instrumental learners aged 6-19. These researchers found that increasing levels of expertise, indicated by performance grade level, led to increased overall practice time, but importantly were also linked to the quality of practice undertaken. More expert instrumental learners employed more systematic practice strategies and were less likely to adopt ineffective practice strategies (Hallam et al., 2012). In this study, participants' attitudes towards practice also changed with increasing expertise; surprisingly more expert instrumental learners were more reluctant to practise and enjoyed practising less than their less skilled counterparts. However, these expert learners still engaged in more practice overall, indicating that more expert musicians might exhibit higher overall motivation to practise, and persistence in the face of challenging tasks (Hallam et al., 2012). It is therefore important for music educators to encourage more able instrumental learners to persist with their instrumental practice, though the nature of deliberate practice might be less intrinsically enjoyable (Ericsson et al., 1993). Music educators working with adolescent pupils should be particularly aware of this relationship, particularly if they work with young musicians performing at higher levels of expertise.

2.3.1.3 Achievement Goals and Instrumental Practice

The type of goals instrumental learners adopt in relation to their practice might also impact the quantity and quality of practice that they undertake, with some studies suggesting mastery goals

lead to more beneficial practice habits. Miksza (2009b) investigated the practice of high school band students in the USA, by recording the practice sessions of individual students and analysing each session for different strategies and the total duration of time spent playing the instrument. Participants in the study who were oriented more towards mastery goals practised for longer than those who were oriented more towards performance goals (Miksza, 2009b). Whilst the method employed in this study only allowed one practice session to be examined, rather than a more holistic overview of learners' practice habits, the results do suggest that learners who adopt a mastery goal might exhibit more persistence in relation to their instrumental practice. Schmidt (2005) employed a different method to investigate practice, gathering self-report data from high school students on the average time spent practising per week. In this study learners' mastery goal orientations had a moderate correlation with practice time. Music educators seeking to encourage instrumental learners to undertake more practice should therefore aim to promote mastery goal orientations in lessons.

As well as practice time, some studies have also found links between achievement goal orientations and some specific practice strategies used by instrumental learners. Miksza (2011) investigated links between practice behaviours and the achievement goal orientations of university aged musicians. Participants' practice sessions were recorded and analysed for behaviours such as repetition and variations in tempo, pitch, rhythm and articulation, and compared to participants' self-reported achievement goals. In this study, instrumentalists who adopted performance goals were significantly less likely to use chaining (chunking sections of gradually increasing length) in their practice routines compared to those who adopted mastery goals (Miksza, 2011). Smith (2005) also found a link between the mastery goals and the metacognitive practice strategies used by university music students such as repetition and drill and prioritisation and monitoring. Though these studies do suggest that mastery goals might lead to more deliberate practice strategies, at this stage the findings are tentative, and one might have expected to find more substantial links between deliberate practice behaviours and achievement goals, on the basis of previous evidence linking mastery goals to deep processing strategies in other educational contexts (Elliot & McGregor, 2001). More conclusive links between achievement goals and practice behaviours might be found by evaluating the quality of practice as a whole, rather than examining the impact of goals on very specific behaviours. So far, research on practice behaviours and achievement goals has predominantly taken place with more advanced musicians beyond secondary school age, and in settings other than the UK. However, as achievement goals have been found to influence some practice habits it would be worthwhile exploring if this link is also apparent with younger instrumental learners in UK schools. Different methods might also be used to examine overall

relationships between achievement goals and practice, other than isolated measures of specific practice behaviours.

2.3.1.4   Deliberate Practice Instruction

Music teachers have a key role to play in influencing the practice strategies used by young musicians, asides from encouraging motivation. If instrumental learners are not guided towards the most appropriate strategies, they might not have the knowledge required to undertake effective deliberate practice, particularly those at lower levels of expertise. Researchers have found that school-aged instrumental learners generally employ similar practice strategies, mostly playing pieces through from start to finish (McPherson et al., 2012). Whilst music teachers often guide instrumental learners on the amount of practice they should undertake, they may provide less instruction on which strategies might be most effective during these practice sessions (McPherson et al., 2012).

Some researchers have sought to address this problem, by providing structured practice instruction as part of intervention study designs, measuring the impact of these interventions on instrumental learners' subsequent practice behaviours. Mieder and Bugos (2017) designed a self-regulated practice strategy curriculum and delivered this to a group of 30 high school band students in the USA. After the intervention, these instrumental learners reported an increase in the number of practice strategies they used, though this trend was not as apparent when participants were actually observed practising. Prichard (2021) delivered a similar intervention to a group of middle school band students, using a quasi-experimental design to measure the impact of practice instruction on one group of learners compared to another group who did not receive the same instruction. In this study, the learners who received the practice instruction used a greater variety of practice strategies when observed later in the study, as well as reporting more varied practice strategies in their own self-evaluation. Although Prichard's (2021) study had a more observable impact on the practice behaviours of learners compared to the intervention by Mieder and Bugos (2017), it is notable that in both studies, participants reported a greater variety of strategies after receiving the instruction. This suggests these learners had more awareness of a range of practice strategies following the intervention, although they may not have been fully embedded into their practice routines after only 2-3 weeks of instruction (Mieder & Bugos, 2017; Prichard, 2021). These findings have important implications for music educators seeking to foster more deliberate practice in young instrumental learners. Whilst developing motivation might have an impact on learners' practice routines, particularly in the amount of practice that they undertake, this might be ineffective unless learners are also given guidance on which methods are most useful when practising.

Nevertheless, the research outlined here does suggest that music educators who support the motivation of instrumental learners through basic psychological need satisfaction and the promotion of mastery goal orientations may have an impact on the likelihood of instrumental learners undertaking more deliberate practice, if they also support learners' development with practice strategy instruction.

2.4   An Achievement Goal Theory Perspective

The influences on young musicians' engagement with instrumental learning are clearly varied and interlinked. A diverse range of factors can impact children's long-term motivation to continue learning an instrument, as well as their shorter-term motivation to engage in regular and u practice. Thus far, researchers in this field have mostly prioritised theoretical stances relating to self-determination theory, basic psychological needs, and expectancy-value beliefs. There are also indications that the specific achievement goals learners adopt may play a key role in their motivation for instrumental learning, although this perspective has been explored less than other theories. There is clear justification for exploring the impact of achievement goals on instrumental learners' motivation further.

Studies focused specifically on achievement goals have found that specific goal orientations can impact instrumental learners' overall commitment to and intentions to persist in music (Ng, 2017; Tan & Miksza, 2018), as well as impacting their practice habits (Miksza, 2009b, 2011; Schmidt, 2005; Smith, 2005). Additionally, many of the factors associated with uptake and long-term engagement with instrumental playing can also be linked to performance goals. Social incentives are often a key motivator for pupils in engaging with instrumental learning (Patrick et al., 1999), and the desire to emulate one's friends may lead to the adoption of performance goals as pupils seek to impress their peers. Pupils consider performance goals and the desire to impress others as a key motivator might be discouraged from continuing if their friends stop engaging with music lessons or de-value music. Research also shows that extrinsic motivation from parents is a key factor particularly in sustaining motivation for practice, particularly during the early stages of learning an instrument (Creech, 2014). However, performance-approach goals linked to the desire to please parents may be less stable than more intrinsic mastery goals, possibly signifying weaker long-term commitment to playing an instrument. Intrinsic motivation, considered to be key to long-term musical commitment (Evans, 2015), can be linked to mastery goals which are pursued for reasons of self-accomplishment rather than the desire to please others (Howard et al., 2021). Additionally, competence beliefs have been associated with dropout in instrumental learning (Lowe, 2012), and

perceptions of competence are fundamental to achievement goal theory, impacting learners'
tendencies towards approach or avoidance goal orientations (Elliot & Church, 1997).

The remainder of this thesis will use achievement goal theory as a lens through which to
explore the motivation of adolescent instrumental learners, whilst also acknowledging insights from
other theories as appropriate to the research questions. Achievement goal theory differs
conceptually from the other theories of motivation. Whilst attribution theory, expectancy-value
theory, self-efficacy theory and self-determination theory can be considered as energising facets of
motivation, achievement goals serve as directional factors, providing a forward-looking focus for
learners' behaviour (Elliot & Sommet, 2023). A more detailed overview of the developments in
achievement goal theory both in musical and non-musical contexts will now be presented to fully
contextualise the present research.

2.4.1 Developments in Achievement Goal Theory

Achievement goal theory has undergone numerous revisions since its introduction in the
1980s, with theorists seeking to explore more nuanced conceptions of different achievement goals
and their application to different learning contexts. The original model of achievement goals
consisted of two goals, learning (or mastery) and performance goals (Dweck, 1986; Elliott & Dweck,
1988). As previously outlined, learners with mastery goals strive to increase competence and skills,
whilst those with performance goals primarily aim to appear competent in relation to others. A
further distinction has also been made between approach and avoidance goal orientations (Elliot,
1999; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Harackiewicz et al., 2002). Approach and
avoidance orientations are likely to be mainly influenced by competency beliefs, as learners with
lower competency perceptions are more likely to adopt performance-avoidance goals, perhaps due
to a fear of failure (Elliot & Church, 1997). The approach and avoidance distinction was originally
applied to performance goals, but has since also been applied to the concept of the mastery goal
(Elliot & McGregor, 2001). Whilst those with a mastery-approach goal strive to achieve skills and
competence in a certain domain, a mastery-avoidance goal might be adopted by perfectionists who
seek to avoid making mistakes, and individuals in later life who wish to avoid a decline in skill level or
knowledge. Results from three different studies conducted by Elliot and McGregor (2001) validated
this new 2 x 2 model, consisting of mastery-approach, mastery-avoidance, performance-approach
and performance-avoidance goals.

Further expansion of the achievement goal model has since taken place. Theorists
recognised that learners might orient towards a mastery goal either for task-specific reasons or for
the purpose of self-improvement (Elliot et al., 2011; Madjar et al., 2011). A 3 x 2 model was

therefore proposed, shown in Table 2.1. In this model, performance goals retain the focus on competence in relation to others, however are renamed other-approach and other-avoidance goals to distinguish from the intrapersonal self-approach and self-avoidance goals. According to Elliot and colleagues (2011), task goals are focused on the achievement or avoidance of failure in specific tasks, whereas those with self goals aim to perform better, or avoid performing worse than in previous similar achievement situations.

A further revision of the achievement goal model by Elliot and colleagues (2015) identified separate aspects of self goals. They proposed that when adopting a self goal, a learner might be either focused on their future potential, or more concerned with improving on past performance experiences. This distinction might lead to different motivational outcomes and behaviours, for example in musical learning, someone adopting a potential-based self-approach goal might focus on practising new and more challenging pieces, whilst those adopting a past-based self-approach goal might seek to improve on mistakes from previous performances. Potential-based achievement goals have also been termed 'personal-best' goals by other researchers (Collie et al., 2016). Importantly, despite these expansions of achievement goal theory, theorists still recommend striving for parsimony in the achievement goal model and advise researchers to stick to the 3 x 2 model or focus on a smaller subset of achievement goals as appropriate to the research questions and context (Elliot et al., 2015). This thesis will therefore use the 3 x 2 achievement goal model. This model has not yet been tested in musical contexts, with research on achievement goals in music education thus far limited to aspects of the 2 x 2 achievement goal model.

2.4.1.1   A Note on Terminology

As numerous definitions for achievement goals have been used in the literature, it is important to clarify the terminology and definitions that will be used for achievement goals in the remainder of this thesis. Early literature on achievement goals often used different terminology to describe what are essentially the same goals, for example performance goals have been termed ego-involved goals (Nicholls, 1984) and ability focused goals (Middleton & Midgley, 1997). Mastery goals, originally conceived as learning goals (Dweck, 1986) have also been called task-involved (Nicholls, 1984) and task-focused goals (Middleton & Midgley, 1997). Importantly, performance goals refer to attainment in a broader sense rather than being specific to music performance. The development of achievement goal theory into the 3 x 2 model provides clarification on terminology as well as a more precise definition of performance goals as normative goals. The definitions from this model, presented in Table 2.1, will be used for the remainder of this thesis. When referring to self and task goals together, the term mastery will be used. The terms performance and other-based goals will be

Table 2.1

Definitions of Achievement Goals (adapted from Elliot et al. (2011, p. 634))

	Mastery		Performance
	Task-based (Absolute)	**Self-based** (Intrapersonal)	**Other-based** (Interpersonal)
Approach **Success**	**Task-approach** Focused on the attainment of task-based competence.	**Self-approach** Focused on the attainment of self-based competence.	**Other-approach** Focused on the attainment of other-based competence.
	Do the task correctly	*Do better than before*	*Do better than others*
Avoid **Failure**	**Task-avoidance** Focused on the avoidance of task-based incompetence.	**Self-avoidance** Focused on the avoidance of self-based incompetence.	**Other-avoidance** Focused on the avoidance of other-based incompetence.
	Avoid doing the task incorrectly	*Avoid doing worse than before*	*Avoid doing worse than others*

used interchangeably, as the term performance goal is much more common in broader achievement goal research, therefore this term will be used when reporting the results of other studies.

2.4.2   Measuring Achievement Goals

The predominant method used by researchers to measure the achievement goals of learners has been Likert-scale self-report questionnaires. An original measure developed by Elliot and Church (1997) was subsequently revised in line with developments in the achievement goal model, addressing a number of issues identified in the original questionnaire, such as different types of question prefixes indicating either goals or values, a collapsing together of the goal and the motivation underlying the goal, questions applying to more than one goal simultaneously, and the placing of goals in opposition with one another through item wording (Elliot & McGregor, 2001; Elliot & Murayama, 2008). These versions of the achievement goal questionnaire (AGQ and AGQ-R) have been used and validated in different music education settings (Miksza, 2009a, 2011; Miksza et al., 2016). As well as the AGQ, the Patterns of Adaptive Learning Scales (PALS) (Midgley et al., 2000) have commonly been used by researchers in achievement goal theory across various educational domains (Anderman & Anderman, 1999; Diseth et al., 2012; Madjar et al., 2011) including music settings (Nielsen, 2008; Smith, 2005). The PALS contain multiple different scales relating to

achievement goal theory, enabling researchers to measure learners' individual achievement goal orientations as well as their perceptions of teacher goals and classroom goal structures (Midgley et al., 2000). Whilst commonly used, particularly in school-based educational research, Hulleman and colleagues (2010) have criticised the PALS as being biased towards mastery goals, whereas the AGQ takes a more objective approach to measuring achievement goals, recognising the benefits that might also occur from performance goal orientations.

Some theorists have raised queries over specific aspects of achievement goal theory, seeking clarification on the definition of performance goals, the wording of questionnaire items and the implications associated with this. Hulleman et al.'s (2010) meta-analysis of achievement goal research published prior to 2006 highlighted a number of these theoretical concerns. One of these concerns relates to the precise definition of performance goals, with researchers disagreeing on the specific nature of these goals. Dweck (1986) originally conceived performance goals as aiming to "gain positive judgments/avoid negative judgments of competence" (p. 1041). The definition of success here was therefore the appearance of competence, and this definition was used for most of the first decade of achievement goal theory research (Dweck, 1986; Dweck & Leggett, 1988; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliott & Dweck, 1988). After this point, the definition of performance goal was altered to represent normative competence, a "focus on the demonstration of competence relative to others" (Elliot, 1999, p. 169), and has been used thereafter by achievement goal researchers (Elliot & McGregor, 2001; Elliot et al., 2011). This change is important in the conceptualisation and consequences of achievement goals, as how goals are defined impacts their motivational outcomes (Hulleman et al., 2010; Senko & Tropiano, 2016). The definition used in this thesis (presented in Table 2.1) is the normative demonstration of competence, how successful learners are relative to their peers.

Learners' reasons for adopting certain achievement goals are important determinants of their motivational outcomes. Reasons for goal pursuit can be categorised as either autonomous or controlled, aligning closely with self-determination theory and the taxonomy of extrinsic to intrinsic motivation (Elliot & Sommet, 2023; Senko & Tropiano, 2016; Sommet & Elliot, 2017; Vansteenkiste et al., 2014). A goal model which considers both the reasons for the goal as well as the goal itself can provide the most accurate measure of the type of motivation adopted by a learner, and the overlap between reasons and aims in some studies might account for the different outcomes of achievement goals found between studies (Elliot & Sommet, 2023; Senko & Tropiano, 2016). In the present research, self-efficacy and self-determination theories are explored alongside achievement goals, to contribute towards an enhanced holistic understanding of instrumental learners' motivation by also considering instrumental learners' reasons for adopting achievement goals.

It is also important to consider the state or trait like nature of achievement goals as well as whether they are mutually exclusive or can be adopted simultaneously. Researchers generally agree that achievement goals are context-dependent and can change according to circumstance (Ciani et al., 2011; Pintrich, 2000a). Harackiewicz et al. (2002) endorse the idea of selective goal patterns, where learners may pursue different goals for different tasks. Original studies in achievement goal theory often presented goals as distinct from one another; learners either adopted a mastery goal or a performance goal. Some studies imposed experimental conditions where participants were forced to choose one goal over another (Elliot & Harackiewicz, 1996; Elliott & Dweck, 1988), though this is unlikely to represent the everyday motivation of learners. It is now commonly acknowledged that learners may hold multiple goals simultaneously and these multiple goal complexes can often lead to more desirable outcomes (Harackiewicz et al., 2002; Pintrich, 2000b; Senko & Tropiano, 2016). Researchers frequently report correlations between achievement goals, signifying that it is possible to hold more than one goal at the same time. For example, self and task goals were strongly correlated in research with psychology undergraduate students (Elliot et al., 2011). In the present research, it is acknowledged that whilst instrumental learners might orient more strongly towards a certain achievement goal, it is likely that other goals might form part of their overall motivational outlook and goals are also likely to change over time in response to different circumstances.

Although the majority of achievement goal research considers the personal achievement goals of learners, some studies have applied achievement goal theory to group contexts, measuring learners' collective achievement goals. In research with small groups of undergraduate students, individual and collective goal orientations were measured against motivational outcomes such as effort and strategy effectiveness. With all outcomes, collective achievement goals explained additional variance in results beyond individual achievement goal orientations (Van Mierlo & Van Hooft, 2015). This result is important when considering achievement goals in educational settings; cognitive theories of motivation acknowledge that motivational dispositions are influenced by learners' perceptions of their environment, therefore the goal orientations of others are highly likely to influence instrumental learners' own achievement goals. Indeed, Mierlo and Van Hooft's (2015) findings have been replicated in a study on the collective goals of musicians, investigating the shared achievement goals of college band students (Tan & Miksza, 2019). Measuring the individual achievement goals of instrumental learners is more relevant to the context of the present study researching the motivation of instrumental learners in the UK, who do not follow the same band curriculum model as USA music learners. The following section of this literature review will discuss influences on achievement goals and their impact in general educational settings, before focusing on studies specifically from music education contexts.

2.4.3   *What impact do achievement goals have on learning behaviours?*

Researchers investigating the importance of achievement goals have predominantly focused on achievement outcomes and the association between different goals and learning strategies. Firstly, in relation to achievement outcomes, a meta-analysis conducted by Hulleman et al. (2010) found that performance-approach and mastery-approach goals overall tend to lead to higher achievement, whereas performance-avoidance-and mastery-avoidance goals have a negative impact on achievement. Using the 3 x 2 achievement goal model, Elliot et al. (2011) further distinguished between the effects of self- and task-based goals on the academic achievement of undergraduate psychology students. In this study, the strongest predictor of academic achievement were other-based goals, with other-approach goals leading to higher achievement, and other-avoidance goals negatively impacting achievement. There was a difference between the effects of task- and self-based goals, where task-approach and avoidance goals were positively associated with achievement, and self-based goals were generally negatively associated with achievement, though the effects of these goal types were weaker than other-based goals (Elliot et al., 2011). The differing outcomes of task- and self-based goals suggest that applying the 3 x 2 model to contexts such as music education would be beneficial in understanding achievement goals further, as most research has considered task and self goals as one overarching construct. Whilst Elliot et al.'s (2011) findings mostly indicated other-approach goals might be more beneficial than task- and self-based goals, other researchers found different relationships between goal orientations and achievement outcomes. One such study was conducted by Diseth et al. (2012), who examined the effects of different goal orientations on the achievement level of secondary school students across a range of subjects. They found that mastery goals were associated with increases in achievement level, whereas no significant links were found between performance goals and achievement level. This different pattern for secondary school students compared to older populations of learners might be important in relation to the present research, as the goals of adolescent instrumental learners are likely to be different to those of more experienced musicians, potentially leading to alternative achievement outcomes.

Researchers have also been interested in the impact of different achievement goals on learning strategies. Similar results have been found across a range of studies, indicating that mastery goals tend to have more positive effects on learning behaviours than performance goals; being linked to a preference for challenging tasks (Dweck & Leggett, 1988), deep processing strategies (Elliot & McGregor, 2001; Elliot et al., 1999), and absorption and energy in class (Elliot et al., 2011). In contrast, performance approach and avoidance goals can lead to surface processing strategies and increased disorganisation and worry (Elliot & McGregor, 2001; Elliot et al., 1999). Mastery-avoidance

goals have also been found to lead to disorganisation and worry (Elliot & McGregor, 2001) as well as reduced energy in class (Elliot et al., 2011). These findings imply that the distinction between approach and avoidance goals may be even more significant in terms of learning outcomes than whether learners are motivated by mastery or performance goals.

To summarise, mastery goals appear to have more adaptive outcomes in relation to learning strategies than performance goals, with mastery-approach goals generally being preferable to mastery-avoidance goals. However, performance-approach goals can still lead to positive achievement outcomes, despite their association with less adaptive learning strategies. Surface learning strategies such as learning by rote may serve learners well in preparing for an exam but may not lead to consolidation of learning material or prepare learners well for further studies in a particular subject. Considering these findings, it is likely that mastery goals might be more beneficial for instrumental learners' motivation to persist in learning and practice, as mastery goals appear to have more positive longer-term effects.

2.4.4   What are the influences on achievement goals?

As different achievement goal orientations can influence learners' academic achievement and learning strategies, it is important to consider what might influence these goals. Consistent with other theories of motivation, goals are influenced by learners' interpretations of past events, their social and learning environments, and their own self-perceptions and personal characteristics (Urhahne & Wijnia, 2023).

Dweck (1986) initially proposed that mastery and performance goals were strongly linked to learners' theories of intelligence. When learners believe that intelligence is fixed, they are more likely to adopt performance goals, and when they believe intelligence can be increased with effort, they are more likely to adopt mastery goals (Dweck & Leggett, 1988). Learner's competence perceptions are also linked to achievement goal orientations. Early research on achievement goals found that high competence beliefs prompted learners to adopt mastery and performance-approach goals, whereas low competence expectancies and associated fear of failure led to the adoption of performance-avoidance goals (Elliot & Church, 1997). Elliot and McGregor (2001) investigated the effects of a wider range of influences on the different dimensions of the 2 x 2 achievement goal model. One notable influence on the mastery-approach goal was self-determination, whereas performance and mastery-avoidance goals stemmed from fear of failure (Elliot & McGregor, 2001). In this study competitiveness was also associated with performance-approach goals (Elliot & McGregor, 2001). Research investigating the influences on the separate self- and task-based goals was less conclusive, with no clear distinction between the influences on self and task goals (Elliot et

al., 2011). The authors of this study acknowledged that self and task goals are likely to be influenced by more situational factors such as teaching style rather than more enduring personality dispositions (Elliot et al., 2011). It would be beneficial to investigate self and task goals in different learning environments to clarify the distinction between these goal types and their respective influences.

Learners' relationships with others are also important in influencing achievement goal orientations. For example, one study found that positive relationships with teachers, peers and parents increased the likelihood that secondary school pupils would adopt personal-best goals (Collie et al., 2016). Personal-best goals are closely associated with self-approach goals. Investigating the impact of social influences on achievement goals is important in relation to the present research, which seeks to understand how music educators can influence the achievement goals of instrumental learners within their own teaching contexts. Educators might be able to influence achievement goals by adopting different teaching approaches, but it is also likely that learners' achievement goals are impacted by their relationships with peers and family members. The role of different social influences on learners' achievement goals will be discussed in the following sections.

2.4.4.1   Role of the Teacher

The role of the teacher has received much attention in the literature on achievement goals. Early researchers in achievement goal theory outlined the classroom strategies which are likely to foster mastery and performance goal climates (Ames, 1992; Ames & Archer, 1988). Important factors include teachers' different definitions of success, value emphases, their views of errors and mistakes, effort attributions, and evaluation criteria (Ames & Archer, 1988). These researchers have predominantly promoted strategies that foster a mastery classroom goal structure, likely due to the positive effects of mastery goals on deep processing and other learning strategies (Elliot & McGregor, 2001).

To promote a mastery classroom goal climate, Ames (1992) recommends that tasks are varied, meaningful and challenging, and that teachers should avoid normative comparisons, give pupils an opportunity to improve after feedback, and reward pupils for effort rather than grades. Pupils should also be given some choice over tasks, with opportunities for collaborative work. To guide educators in applying these strategies to classroom settings, Ames (1992) developed the TARGET framework, consisting of the following aspects: Task, Authority, Recognition, Grouping, Evaluation and Time. Observation studies have shown that in classrooms where pupils perceive higher mastery goal climates, teaching strategies are often consistent with the recommendations of the TARGET framework (Anderman et al., 2002; O'Keefe et al., 2013). In comparison, low mastery-focused classrooms feature low pupil autonomy, a focus on mistakes and lack of pupil interaction.

High performance-focused classrooms emphasise normative grading and relative ability comparisons (Anderman et al., 2002).

Longitudinal studies have found that classroom interventions utilising the TARGET framework to promote mastery goals do have an impact on learners' subsequent achievement goal orientations (Lüftenegger et al., 2014; O'Keefe et al., 2013). As well as increasing mastery goals, the use of the TARGET framework to design teaching approaches can result in learners' decreased performance goal orientations (O'Keefe et al., 2013). Some researchers have focused specifically on the impact of anticipated feedback type on learners' goal orientations, finding that pupils who expected to be compared to their peers were more likely to adopt performance goals (Butler, 2006; Pekrun et al., 2014). These findings support observations by other researchers who found teachers' emphases on formal evaluation and grading were the most important discriminator between high and low performance goal-oriented classrooms (Anderman et al., 2002).

Learners' achievement goals are also influenced by their level of basic psychological need satisfaction. Ciani et al. (2011) measured the psychological need satisfaction, self-determination, and achievement goals of university students, finding that relatedness and autonomy predicted self-determination in class, which in turn led to increased mastery-approach and mastery-avoidance goals. In this study, perceived teacher autonomy support also predicted changes in participant's mastery-approach goals; when learners were given more autonomy in class, they were more likely to adopt mastery-approach goals, and vice versa (Ciani et al., 2011). Similar trends have been reported with younger samples of participants. Diseth et al. (2012) examined secondary school students' experiences of psychological need support from their teachers and found that higher teacher support for competence and relatedness led to mastery goal adoption. The period of transition from primary to secondary school has also been investigated in relation to achievement goals, and children's autonomy and competence beliefs at the end of primary school can lead to increased mastery goals at the start of secondary school (Diseth et al., 2012). Fostering basic psychological needs might be particularly important at the time of school transition to encourage the adoption of mastery goals and their associated positive learning behaviours. The results of these studies all emphasise the role of the teacher in shaping the goal climate of the learning environment, thus influencing learners' own achievement goals. It seems reasonable to assume that similar results would be found in music teaching environments.

2.4.4.2   Role of Peers and Parents

Achievement goals are also influenced by learners' relationships with their peers and parents. For example, Duchesne et al. (2017) found that the more connected early adolescents felt to their peers, the less likely they were to orient towards competitive performance goals. These

findings were similar to the results found by Collie et al. (2016) cited above, who found that teacher, peer and parent relationships all impacted adolescents' personal-best (self-approach) goals.

One study examined the impact of parents' own goal orientations on those of their children. Friedel et al. (2007) measured the achievement goals of 12-year-old children in the USA, as well as asking pupils what they considered their parents' goals to be. When children thought their parents had mastery goals, they were more likely to adopt mastery goals in relation to their own learning, and when they thought their parents had performance goals, they were more likely to orient towards performance goals themselves (Friedel et al., 2007). The relative impact of teachers, peers and parents is worth further investigation, as these different social influences may exert different effects on the long- and short-term achievement goals of learners. Parents may have a more enduring influence over the achievement goals of children than teachers or peers, whilst teachers can impact the immediate achievement goals of learners in classroom settings. This relates to Vallerand's (1997) hierarchical model of achievement motivation, which differentiates between short, medium, and long-term motivational dispositions. In summary, as teachers, peers, and parents all influence instrumental learners' overall engagement and commitment to instrumental learning, it is likely that each of these social influences might also impact instrumental learners' specific achievement goal orientations.

2.4.5   A Summary of Research on Achievement Goals in Musical Learning

Alongside the research on achievement goals in broader educational contexts, there is clear evidence to show that achievement goals might have a key role to play in young musicians' overall engagement in instrumental learning. Current research on the impact of achievement goals on instrumental learners' commitment and practice has already been reviewed in Sections 2.2.3.3 and 2.3.1.3. In this final section of the literature review, a summary of extant achievement goal research in musical contexts will be presented, including evidence of the impact of achievement goals on a wider range of musical outcomes, and an overview of the predominant methodologies used by researchers investigating achievement goals in instrumental learning contexts. The main gaps to be addressed in the research will also be outlined.

Researchers in music education have mainly used self-report measures to assess the achievement goals of young musicians and their relation to learning outcomes. Some studies have taken place with university aged musicians and others in school contexts. Only two studies to my knowledge have taken place under experimental conditions, where the climate of different rehearsal settings was manipulated to emphasise certain achievement goals (Matthews & Kitsantas, 2007, 2013). Most studies on achievement goals in musical learning have been conducted in USA settings

(Lacaille et al., 2005; Miksza, 2009b, 2009a, 2011; Schmidt, 2005; Smith, 2005), as well as some comparing the achievement goals and outcomes of musical learners in the USA and Singapore (Miksza et al., 2016; Tan & Miksza, 2018, 2019). Other studies have also been carried out in Australia (Ng, 2017), and Norway (Nielsen, 2008). One more recent study carried out with UK conservatoire students focused on musician's goals and their role in practice behaviours, though this research explored the broader concept of goals using goal theory, rather than achievement goals specifically (Taylor, 2020). There is therefore a lack of achievement goal research in UK music education settings, and specifically school contexts.

Mastery-approach goals are consistently reported as the most common amongst music learner populations, followed by performance-approach then performance-avoidance goals (Miksza, 2009a, 2011; Miksza et al., 2016; Ng, 2017; Nielsen, 2008; Smith, 2005). In one study, performance-avoidance goals were slightly more prominent in the sample than performance-approach goals, though mastery goals were still the most common (Miksza et al., 2016). Most music learners appear to care more about their own musical development than the appearance of being a good performer, which is encouraging for music educators.

Achievement goal research in music education has predominantly focused on how achievement goals influence instrumental practice behaviours and performance achievement. With regards to performance outcomes, mastery goals have been linked to the musical achievement of high school musicians in the USA (Schmidt, 2005; Tan & Miksza, 2019). This is corroborated by research with more experienced musicians; when comparing recollections of achievement goals prior to 'peak' and 'catastrophic' performances, musicians reported higher levels of mastery than performance goals before their more successful performances. In contrast, unsuccessful performances were associated with performance-approach and performance-avoidance goals (Lacaille et al., 2005). These findings contrast with Elliot et al.'s (2011) application of the 3 x 2 achievement goal model to the achievement outcomes of psychology undergraduates, where other-based goals were found to be the strongest predictor of achievement. The application of the 3 x 2 model to musical settings might therefore yield different results to those found previously in other educational contexts.

Aside from performance achievement, music education researchers have taken an interest in the links between achievement goals and instrumental learners' practice strategies as well as other motivational outcomes, perhaps in light of findings in other educational contexts that mastery goal adoption can lead to more adaptive learning outcomes. As already discussed, mastery goals have been associated with some deliberate practice strategies, both with high school students and university-level musicians (Miksza, 2009b; Nielsen, 2008; Smith, 2005), though links have only been

found with very specific practice behaviours rather than the measurement of deliberate practice as a whole. There is also an apparent link between mastery goal orientations and practice time, with musicians reporting increased practice time when they adopt a mastery goal (Ng, 2017; Schmidt, 2005). Beyond practice behaviours, other positive motivational outcomes have been linked to the mastery goals of music learners including flow, grit (Miksza et al., 2016), commitment to instrumental playing (Miksza et al., 2016; Ng, 2017), and creativity (Mawang et al., 2018). Mastery goals have therefore been linked to a range of positive learning outcomes, and the promotion of mastery goals appears to be a worthwhile goal for music educators working with adolescent instrumental learners in the UK.

It is difficult to make comparisons between studies on achievement goals in instrumental learning due to their different contexts as well as researchers' varying definitions of achievement goals and measurement instruments. Researchers have used differing terminology to represent what essentially may be the same concept, for example Smith (2005) and Schmidt (2005) used the terms task and ego goals, long after the 2 x 2 model of achievement goals had been established in wider achievement goal literature (Elliot & McGregor, 2001). Different measurement instruments have been used to assess achievement goals, for example one study used the PALS measure (Smith, 2005) whilst Miksza's research has predominantly adapted the AGQ (e.g. Miksza, 2009a). As already noted with regard to wider educational research, these varying measures have led to discrepancies between the reported outcomes of performance goals in particular (Hulleman et al., 2010). Additionally, whilst the findings linking mastery goals to practice behaviours are encouraging, measurement of practice behaviours varies from self-report measures (Miksza, 2009b; Nielsen, 2008; Smith, 2005) to observation of practice sessions focusing on specific practice strategies (Miksza, 2011), making it different to compare the results of these studies and draw more robust conclusions on the nature of achievement goals and instrumental practice.

2.5   Conclusions and Research Questions

Achievement goal theory researchers have so far made important contributions to the understanding of learners' motivation and its associated outcomes. Different achievement goal orientations can influence learners' achievement outcomes and study strategies. In music education research, the adoption of mastery goals has led to increased deliberate practice behaviours as well as higher performance achievement in some studies (Lacaille et al., 2005; Miksza, 2009a; Schmidt, 2005). Of particular interest is the possible link between achievement goals and musicians' intentions to persist with instrumental learning, as these studies were also carried out in school settings (Miksza et al., 2016; Ng, 2017). These findings have important implications for music

educators seeking to improve the motivation, practice behaviours and continuation rates of instrumental learners.

Research so far on achievement goal theory has been limited mostly to the USA and has often been with undergraduate university musicians. No studies on the achievement goals of adolescent musicians have yet taken place in the UK, and there is a need to explore whether the findings reported above are also relevant to UK contexts. Whilst some studies have taken place with adolescent musicians in the USA, the music education system is different in American schools and therefore results are not generalisable to UK contexts. Given the decline in adolescents choosing to learn a musical instrument in the UK (Arts Council England, 2023), applying achievement goal theory to this population might yield useful insights for music educators seeking to increase the motivation of young musicians.

Thus far achievement goal research in music education has not kept up to date with developments in achievement theory. Researchers have used the dichotomous, trichotomous and 2 x 2 models of achievement goals, but so far there have been no published studies applying the 3 x 2 model to musical contexts. The distinction between task and self goals might be important for instrumental learners, as striving to be able to play a certain piece of music is different to the aim of attaining a higher mark in the next performance examination. Adolescent instrumental learners in the UK commonly progress through the graded performance examination system with organisations such as the Associated Board of the Royal Schools of Music (ABRSM), and self goals may be particularly relevant to pupils undertaking these examinations. Whilst mastery goals have been linked to positive outcomes in relation to instrumental practice, it is unclear whether these outcomes may still be present when measuring task and self goals as distinct goal orientations. It will be useful therefore to adapt and test the validity of the 3 x 2 model for use in music contexts.

Achievement goals can be influenced by several factors, including theories of intelligence, competence expectancies, and relationships with others. The role of the teacher has taken prominence in research on achievement goals in general education, with various researchers recommending specific teaching strategies which can encourage mastery goal adoption. There has been less of a focus on what might influence the achievement goals of musical learners. Two studies tested the effects of different rehearsal climates on outcomes such as self-efficacy (Matthews & Kitsantas, 2007, 2013), but there have been no studies specifically assessing the influence of music teachers on achievement goal adoption, though some recommendations for music teachers have been suggested (Hruska, 2011). This is a substantial gap in the research and considering the reported positive learning outcomes of mastery and performance-approach goals, a greater understanding of how music teachers might encourage the adoption of these goals could have important implications

for the motivation of instrumental learners. There is some evidence to suggest parent influence might also be an important factor in the achievement goal orientations of musical learners (Ng, 2017), and further research on the role of parents, as well as other social influences, would also be valuable.

Some researchers have also sought to clarify relationships between achievement goals and other aspects of motivation. In experimental research, achievement goal rehearsal climates impacted the self-efficacy of musicians playing in an ensemble (Matthews & Kitsantas, 2013), and mastery and performance-approach goals have also been linked to self-concepts of musical ability (Ng, 2017). In addition, studies of achievement goals in wider educational contexts have explored connections with aspects of self-determination theory, including the satisfaction of basic psychological needs and the continuum of intrinsic to extrinsic motivation (Ciani et al., 2011; Diseth et al., 2012; Duchesne et al., 2017). It would therefore be appropriate to extend this research by exploring whether these links are also relevant in the context of musical learning. A lot of music education research has examined specific theories of motivation in isolation, and there is value in combining theoretical models to develop a more holistic understanding of instrumental learners' motivation.

In summary, the present research has two overarching aims. Firstly, to develop understanding of achievement goal theory in relation to instrumental learning, by applying the 3 x 2 achievement goal model to instrumental learning contexts, and increasing awareness of the influences on instrumental learners' achievement goals. Secondly, to apply achievement goal theory to UK music education contexts, specifically to the experiences of adolescent musicians. The three principal research questions this thesis seeks to address are as follows:

1. What are the achievement goals of adolescent instrumental learners?
2. What influences adolescent instrumental learners to adopt different achievement goals?
3. What impact do achievement goals have on the engagement of adolescent instrumental learners?

The following chapter will outline the research methodology used to address these research questions, followed by separate chapters presenting four studies which each seek to address specific aspects of the research questions.

3   Methodology

This chapter will outline the epistemological beliefs underpinning the research and the methodological approaches taken in each of the studies. The implications of my dual role as a teacher-researcher will also be considered in relation to the methods of data collection and analysis. Finally, ethical considerations in relation to each of the studies will be outlined with a description of the steps undertaken to address each issue.

3.1   Epistemology and Methodological Approaches

Research on motivation in musical learning has often taken a post-positivist epistemological approach. Post-positivist philosophy assumes "an objective reality and the possibility of generating objective knowledge about this through the appropriate application of scientific methods" (Braun & Clarke, 2022). Positivism often aims to determine causal relationships, commonly using quantitative methods to deductively test hypotheses (Reimer, 2006; Williamon et al., 2021). It has been rare for music education researchers to explicitly state their epistemological stance (Burnard, 2006) however researchers investigating musical motivation have commonly employed positivist philosophical approaches in their data collection and analysis. These researchers have often prioritised quantitative over qualitative data to look for trends and relationships which might be generalised to wider musical populations. Data collection methods have therefore often taken the form of quantitative surveys, with data used to test causal relationships using techniques such as path analysis. For example, Yoo (2021) measured young musicians' basic psychological needs, self-determined motivation, and intentions to persist in musical learning, testing overall causal relationships between the variables using structural equation modelling. A recent literature review by Oliveira and colleagues (2021) only considered findings from quantitative studies, discounting qualitative research in the field of musical motivation. This epistemological approach takes the view that it is more beneficial for researchers and policy makers to gain broader perspectives of behavioural patterns through observed causal relationships than by studying more individualised case study examples (Reimer, 2006).

Whilst quantitative studies in this field have offered much in the way of understanding overall patterns of motivation, solely relying on quantitative data might be classed as reductionist in the sense that complex motivational patterns are condensed into overall trends without consideration of the nuanced perspectives and experiences of individual learners. Over the last few decades, the music education community has acknowledged a lack of debate about the philosophical basis of research in our field, with some researchers highlighting the tendency towards positivist

approaches without due consideration of the benefits of alternative epistemologies such as interpretivist and critical theorist standpoints (Howe & Sloboda, 1991; Reimer, 2006).

The social constructionist epistemology offers an alternative to post-positivism. Social constructionists "challenge the view that conventional knowledge is based on objective, unbiased observation of the world" (Burr, 2015, p. 2). Instead of emphasising objective knowledge and deductive causal relationships, social constructionism prioritises the perspectives of individuals as shaped by their social interactions, including those between researcher and participant. Research underpinned by the social constructionist epistemology often takes the form of qualitative methodologies, allowing researchers to develop theory through more inductive analysis, centring on the individual perspectives of participants.

Various researchers have employed social constructionist epistemologies to explore aspects of motivation in musical learning. Most studies of this type have employed interview methodologies to understand the personal perspectives of participants on their relationships with others, attitudes to learning music and reasons for continuing or discontinuing instrumental tuition (Adderley et al., 2003; Evans et al., 2013; Howe & Sloboda, 1991; Lowe, 2012; Patrick et al., 1999; Pitts et al., 2000; Renwick & McPherson, 2002). Focus groups have also been used in some interview studies to encourage participants to discuss their attitudes towards learning music with others, resulting in rich qualitative data (Ivaldi & O'Neill, 2004; Kokotsaki, 2017; Kuntz, 2011; Lowe, 2012). Campbell et al. (2007) employed a different approach, gathering perspectives from participants by asking them to write essays and reflections on their perceptions of the value of the music. These researchers highlight the value of employing more social constructionist methodologies to gather data on adolescents' "expressed meanings of music" (Campbell et al., 2007, p. 223). According to the researchers, this study "engage[d] the messier side of adolescent thought processes in an attempt to understand the complex reality of their musical experiences" (Campbell et al., 2007, p. 223). More biographical accounts have also been endorsed by researchers exploring the motivations of musical learners, utilising longitudinal methodologies to detail the changing attitudes of participants towards music (Lamont, 2011; McPherson et al., 2012). Whilst detailed insights can be drawn from social constructionist approaches, this might be less helpful for music educators seeking to influence the motivation of larger groups of learners. Researchers often seek to draw conclusions that might be applied to a range of contexts.

Some studies have employed quantitative and qualitative methodologies alongside one another in their approaches to data collection and analysis (e.g. Evans & McPherson, 2014; Hendricks, 2014; Martin, 2012; McPherson, 2000). However, these researchers often prioritise quantitative data rather than the more individual perspectives of participants in their overall

analyses. Qualitative methodologies such as video observation can be analysed through quantitative means, as exemplified by some studies on instrumental practice where practice behaviours are quantified for analysis purposes (Pike, 2017; Renwick & McPherson, 2002). In another study, Evans and McPherson (2014) collected both quantitative survey data and qualitative open-ended responses in their research on children's musical identities but stated that they prioritised the quantitative findings in their overall analysis of the data. Whilst in this study the quantitative analysis categorised musical identity into a dichotomous variable of short-term and long-term commitment, the ensuing interpretation of qualitative participant responses yielded much more detailed insights into participants' own conceptualisations of musical identity (Evans & McPherson, 2014).   Exploring more personal perspectives such as value beliefs and musical identity arguably cannot be captured using solely quantitative methods, and therefore studies employing social constructionist epistemologies make a crucial contribution to this research field.

3.1.1   Contextualism

Other stances occupy a middle ground in relation to the construction of knowledge. A critical realist ontological standpoint "retains a concept of truth and reality but recognises that human practices always shape how we experience and know this" (Braun & Clarke, 2022, p. 169). The contextualist epistemology acknowledges that whilst universal truths might exist, all knowledge is context dependent, and "humans cannot be separated out from…the contexts they live in and that give meaning to their lives" (Braun & Clarke, 2022, p. 178). These stances underpin my own research in this thesis for a range of reasons.

Social contexts play an important role in determining the motivational traits of young learners. Reimer (2006) argues, "there are no causal, direct connections between teacher behavior and student learning" (p. 21). Motivation may be influenced by a myriad of internal and external influences, meaning learners' personal perspectives and experiences must be acknowledged by the researcher. Johnson and Gray (2015) advocate for an "ontological pluralism" (p. 72), rejecting opposing conceptions of knowledge and accepting that there may be both objective and subjective realities. With regards to motivation in musical learning, this means that whilst there might be broader trends observed across populations, the personal perspectives of musical learners are paramount in understanding motivation at a nuanced level.

A contextualist epistemology emphasises the role of the researcher in co-constructing meaning with the participant (Braun & Clarke, 2022). This is important aspect of my research; as I undertake the dual role of teacher and researcher in this research, my own experiences shape the resultant analysis. Whilst measures were taken to ensure an appropriate level of objectivity in the

data analysis, it is important to also acknowledge my own perspectives in influencing both the direction of each study and the subsequent data analysis. The implications of this dual teacher-researcher role will be considered in Section 3.2.3 of this chapter.

3.1.2   Methodological Approach

A pragmatic methodological approach was undertaken throughout the research, driven by the research questions (Bieta, 2015). This pragmatic approach most closely aligns with the contextualist epistemology, seeking to understand broad patterns in relation to the motivation of adolescent instrumental learners, whilst also being cognisant of the lived experiences of participants in my research context. Pragmatism offers advantages in comparison to singular quantitative or qualitative methodologies in that it allows for triangulation of data sources, complementary datasets, and the development and expansion of themes as studies progress over time (Johnson & Onwuegbuzie, 2004). Specifically, pragmatism allows the researcher to approach data collection in an evolving way, allowing different sources of data to inform one another and provide fuller insights. The nature of my own research as a six-year project was particularly useful in this respect, as I was able to be flexible and responsive in my approach to the research design, allowing the results of each study to inform the next, and I have had the time to gather both quantitative and qualitative data to explore each of my research questions in more depth.

Each of my research questions demanded a slightly different methodological approach, and so to adequately address each objective, it was necessary to utilise different methods of data collection and analysis at different points in the research process. Quantitative approaches were more suitable for research questions 1 and 3 which aimed to identify the achievement goals of adolescent instrumental learners as well as any causal relationships between achievement goals, practice habits, and long-term commitment to instrumental lessons. For research question 2, a qualitative approach was more suitable to explore the full range of influences on achievement goals.

3.2   Study Design
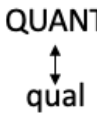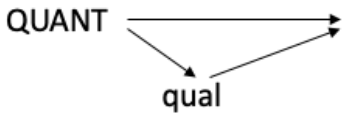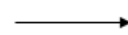
Overall, an exploratory sequential mixed methods design was used across the four studies (Williamon et al., 2021). The final quantitative study was informed by the analysis of the data from the first three studies. Studies 1 to 3 were small to medium scale studies taking place in a single school, each containing elements of qualitative data collection to offer potential for more inductive analysis and insights into the personal perspectives and lived experiences of participants. The final study employed a much larger and more diverse sample of participants from schools across England and quantitative methods were more suitable for this sample size. The exploratory sequential design

was useful in allowing for the development of theory in the earlier stages before extending findings to a larger population in the final more deductive study (Williamon et al., 2021).

As well as the overall sequential study design, Studies 1 and 2 in isolation also took the form of mixed methods study designs. Study 1 used a concurrent triangulation design, collecting quantitative questionnaire data as well as qualitative video observation and analysis. Video observation and thematic analysis were essential in this study to evaluate the fidelity of the intervention as well as to illuminate the questionnaire data. Study 2 used an explanatory sequential design, with quantitative questionnaire data collected and analysed before semi-structured interviews were undertaken with a smaller sub-sample to explore their questionnaire responses. Explanatory sequential designs can allow for a balance between objectivity in the analysis of quantitative data and a more informed contextual understanding of the results (Williamon et al., 2021). The overall sequential design of the research is outlined in Table 3.1.

Table 3.1

Outline of Methodological Approaches

	Study 1	Study 2	Study 3	Study 4
Methodological Design	QUANT → qual	QUANT → qual →	QUAL →	QUANT
	Longitudinal classroom-based intervention study.	Questionnaire followed by semi-structured interviews.	Semi-structured interviews.	Longitudinal two-phase questionnaire design.
Analysis Methods	Deductive quantitative questionnaire analysis. Deductive and inductive qualitative observation analysis.	Deductive quantitative questionnaire analysis. Inductive qualitative interview analysis.	Inductive thematic analysis.	Deductive quantitative questionnaire analysis. Path analysis.
Sample Size	Medium sample size (n = 44)	Medium sample size (n = 90) Smaller sub-sample (n = 10)	Small sample size (n = 9)	Large sample size (n = 195)

Note. In the first row, capitalisation indicates the dominant status given to either qualitative or quantitative methods in each study.

In summary, a pragmatic approach was taken in the design of this research, combining both quantitative and qualitative methods to best address the research questions and gather as rich a dataset as possible, to fully understand the place of achievement goals in the motivation of adolescent instrumental learners. Taking a contextualist epistemological standpoint, the research aimed to discover patterns within the data, whilst also acknowledging the crucial role of participants in constructing meaning for themselves, as well as the role of the researcher in interpreting the data.

3.2.1   Methods

In this section the research methods undertaken will be outlined with a description of questionnaire, interview, and intervention designs. Whilst a general overview of methods used is outlined here, more detail is given on the specific methods used in the relevant chapter for each study. There were three primary methods used for the collection of data throughout the research. These will be discussed in order of the frequency of use throughout the research.

3.2.1.1   Questionnaires

Questionnaire study designs are the most common method in research on achievement goals, with the majority of studies in music education using surveys to collect participant self-report data on their achievement goal beliefs (Lacaille et al., 2005; Miksza, 2009a, 2011; Miksza et al., 2016; Ng, 2017; Nielsen, 2008; Schmidt, 2005; Smith, 2005; Tan & Miksza, 2018). Self-report questionnaires are advantageous in enabling data to be collected from large samples, as well as allowing for analysis of patterns and trends within the data (Williamon et al., 2021). One of the principal motivations for the research was to test the validity of the 3 x 2 achievement goal model in relation to adolescent instrumental learners, therefore survey methods were crucial in meeting this research objective by adapting the 3 x 2 questionnaire (Elliot et al., 2011) for the context of musical learning.

Questionnaires were used for Studies 1, 2 and 4. In Study 1 which took a longitudinal quasi-experimental design, the impact of the teaching intervention was measured using comparison of quantitative data, alongside inductive analysis of the observation data. Whilst a more objective method than qualitative data, self-report questionnaires still prioritise participant perspectives. This was particularly important in this first study, as the questionnaire data triangulated the video observations with scales measuring pupil perceptions of the teacher's goal and the classroom goal climate. Instead of seeking total objectivity within a qualitative judgement of the teaching style and classroom goal structure, in this study it was vital that pupil perspectives were given priority in the analysis. Aligning with the constructivist epistemology, each participant has a slightly different perception of their classroom experience, thus creating their own individual meanings and

consequent motivational beliefs (Burr, 2015). Self-report questionnaires are an appropriate tool to gather data on participant perspectives whilst also allowing for group comparisons.

In Studies 2 and 4, questionnaire designs were also used. Study 2 used a questionnaire to capture data on participants' achievement goal and self-efficacy beliefs, which was then used to select a sub-sample of participants for the follow-up interviews. In Study 4, questionnaires were used to gather data from a much larger sample, for the purpose of testing a path model representing the links between self-determination theory, achievement goals, practice habits and continuation rates.

3.2.1.2   Interviews

Interview designs have been used widely by researchers to understand the perspectives and lived experiences of children and adolescents learning an instrument (e.g. Howe & Sloboda, 1991; Ivaldi & O'Neill, 2004; Patrick et al., 1999; Pitts et al., 2000). Interview methods can be advantageous as they allow the researcher to probe participant perspectives more fully, as well as clarifying findings from associated quantitative studies. Several music education researchers have used interviews to supplement quantitative data, enhancing their research findings (Evans & McPherson, 2014; Hendricks, 2014; Martin, 2012).

Semi-structured interviews were used in both Studies 2 and 3. Study 2 used interviews in the second stage of the sequential explanatory design, and Study 3 used semi-structured interviews for exploratory inductive purposes to inform Study 4. In both studies, interview question prompts were derived from theory and previous research, designed to encourage participants to discuss various influences on their self-efficacy and achievement goals, without asking specifically about achievement goals in order not to lead participants to certain answers. This allowed for a more inductive exploration of achievement goals from participants' perspectives, prioritising participants' own voices and allowing them to articulate their own goals in relation to instrumental learning. As the researcher I was open to alternative conceptions of achievement goals in the context of instrumental learning, which previous theorists might not have considered. This approach is recommended by Williamon and colleagues (2021), who highlight that one advantage of qualitative research methods is in recognising the "different meaning-making processes" (p. 32) of participants.

3.2.1.3   Quasi-Experimental Study

Study 1 used a quasi-experimental design, comparing teaching approaches between two groups, where one group was chosen to participate in a mastery focused teaching intervention and the other group continued with their usual method of instruction. This study aimed to understand the role of the teacher in influencing achievement goals, and therefore an intervention study in a

real-life classroom setting was considered to be valid for this research question. Experimental designs have previously been used in a study on achievement goals in an educational setting (O'Keefe et al., 2013) as well as in a musical context (Matthews & Kitsantas, 2013). Matthews and Kitsantas (2013) examined the effect of different types of conductor talk on self-efficacy, with the conductor given statements to use during the rehearsal process which communicated either a mastery or performance goal. In this study there was however no measurement of the impact of different rehearsal goal climates on the actual achievement goals of participants. Other researchers have explored the impact of specific teaching strategies on the achievement goals of children by asking them to visualise different achievement scenarios (Vispoel & Austin, 1993) or anticipate different types of feedback (Butler, 2006; Pekrun et al., 2014). Whilst these studies add value to the field by examining the potential impact of different teaching strategies, it is vitally important to examine whether these strategies work in a real-life classroom context. No empirical studies on achievement goals have so far applied the suggested mastery teaching approaches to real-life music teaching settings, in either individual or group contexts.

A quasi-experimental design was therefore designed to evaluate the impact of recommended mastery teaching approaches in a secondary school music classroom. A longitudinal design was used in this study to evaluate the impact of the teaching approach over an extended period, rather than in just one session, recognising that learners' motivational beliefs are likely to be developed over a longer period of time.

3.2.2   Data Analysis

The quantitative data in Studies 1, 2 and 4 were analysed using inferential and descriptive statistics. Statistical analysis was predominantly carried out using JASP software. R studio was also used to calculate factor scores for the path analysis in Study 4.

The interview data from Studies 2 and 3 were analysed using qualitative thematic analysis (Braun & Clarke, 2022). Thematic analysis uses an iterative and reflexive process to develop themes after prior coding of interview transcripts, employing an inductive approach to explore participant perspectives. Instead of allowing prior theory to lead the analysis, participant perspectives were prioritised before being considered in relation to achievement goal theory. In thematic analysis, the theoretical assumptions of the researcher will always form part of the analysis, as the researcher is an active participant in producing meaning from the data (Braun & Clarke, 2022). Consideration of my own role as teacher-researcher was therefore of paramount importance in this analysis, and issues surrounding this will be presented in the following section of this chapter.

Qualitative methods were also employed in the analysis of the intervention study. As well as gathering participant perspectives using self-report questionnaires, the classroom climate of both intervention and control groups was evaluated using video observation data. One lesson with each group was filmed and transcripts made for analysis purposes. Following coding, the video observations were analysed in two stages. Firstly, a more deductive approach was taken, analysing the lessons with reference to the Observing Patterns of Adaptive Learning (OPAL) framework (Patrick et al., 1997) to assess the validity of the intervention and its fidelity to the mastery goal. However, following this analysis it was perceived that there were implicit messages in the classroom not captured in the deductive analysis that might represent important social influences on participants' achievement goals. Inductive thematic analysis (Braun & Clarke, 2022) was therefore also employed to explore the overall learning climate of each classroom more fully. Thematic analysis is more likely to acknowledge the specific context of the research as well as account for the co-construction of meaning between researcher and participant, consistent with a contextualist epistemology (Braun & Clarke, 2022). Bieta (2015) argues that "observation is itself a transaction" (p. 25) and can never be truly objective, and this was particularly the case in this study as I was observing and analysing my own teaching. All interview and observation transcripts throughout the research were coded using NVivo software.

3.2.3   Dual Role of Teacher and Researcher

Researcher reflexivity was incredibly important throughout this research. It is vital for the researcher to consider their own position in relation to the research, as one's personal beliefs, values and experiences all have an impact on the study design, analysis, and overall interpretation of the data (Braun & Clarke, 2022). Denzin and Lincoln (2017) argue that "research is an interactive process shaped by one's personal history, biography, gender, social class, race, and ethnicity" (p. 45).

In all four studies I occupied a dual role as both teacher and researcher. As already outlined in Section 1.2, I am a music teacher in a large secondary school in the North-East of England, and for the entirety of the data collection period I led the music department in this school, where most of the data collection was undertaken, particularly for Studies 1 to 3. My role as a music teacher undoubtedly influenced my decision to study the motivation of adolescent instrumental learners. My own childhood experiences as well as the many positive experiences I have gained as a teacher have led to my strong desire to encourage adolescents to engage in and persist with instrumental learning. However, as highlighted in the first chapter of this thesis, music education has been in somewhat of a crisis in the UK, with the number of pupils learning instruments and choosing to study music beyond the age of 14 rapidly declining in recent years (Arts Council England, 2023; Underhill,

2022). From the outset, one of the main purposes of this research was to address this problem by informing my own practice as a music teacher. This influenced the direction of my research questions, in seeking to understand the impact of different achievement goal orientations as well as the primary influences on these achievement goals.

3.2.3.1   Implications of being a Teacher-Researcher

Occupying the role of both teacher and researcher had many positive implications for the design and analysis of the research as well as multiple issues which required more thoughtful consideration. One major benefit was that I was granted easy access to participants for all studies. Studies 1, 2, and 3 were all conducted in the school where I work, and through my involvement in the wider music education community I was also able to approach colleagues from different schools to request their schools' participation in Study 4.

The validity of the research was enhanced because it was conducted in a real-life educational setting. For Study 1, the intervention took place with pupils in their normal curriculum music lessons, and so findings were directly applicable to my own practice as a music teacher in the same school. One key element of a lot of research in the mixed-methods research paradigm is its close link to practice and application to real-life contexts (Johnson & Onwuegbuzie, 2004). Other research using intervention methods to explore the impact of achievement goals on self-efficacy took place in a simulated rehearsal environment and therefore might be less valid for real rehearsal contexts (Matthews & Kitsantas, 2013). With a positivist outlook one may argue that the context-specific nature of the present research is problematic as it cannot be generalised to other contexts, however employing a more contextualist perspective was an advantage for me as a music teacher in this school context as the results of this study had direct implications for my own classroom practice.

There were also several advantages of my teacher-researcher role in relation to the process and analysis of the interviews for Studies 2 and 3. I carried out all the interviews myself, meaning there was already a good rapport between the participants and myself as the interviewer. The teacher-researcher role also enhanced the analysis of both interviews and observations, because the musical experiences of participants were familiar to me. Reflexive thematic analysis acknowledges the importance of the researcher in co-constructing meaning from interviews and observations rather than analysing data from an objective standpoint (Braun & Clarke, 2022). An additional layer of reflexivity was required in the analysis of these interviews and observations, not only considering my own personal experiences and assumptions as a researcher, but my own experiences as a teacher in the pupils' school. This was of significant benefit in interpreting participant responses in the interviews, as I had a deeper understanding of the social context in which participants formed their

musical identities and motivations, knowledge which an external researcher would not have had access to (Hammersley, 1993).

Whilst these factors were beneficial to the research process, it was important to ensure a balanced perspective was achieved in the overall conclusions drawn from the data. Researchers who have a close relationship to the research context may prefer certain interpretations of data over another (Hammersley, 1993). As qualitative research places high importance on the subjective interpretation of the researcher (Braun & Clarke, 2022; Williamon et al., 2021), the issue of bias is not necessarily a concern, however it was still important in the process of the data analysis to consider alternative viewpoints that may not have been immediately apparent to me in my position as the teacher. Bresler and Stake (2006) highlight the need for qualitative researchers to show efforts to "disconfirm one's own interpretations" (p. 279), and this was important to me throughout the research process.

It was vital to be reflective in the analysis of the classroom interventions in Study 1, in which I observed and analysed my own teaching. I therefore undertook the main thematic analysis of the video observations five years after the lessons took place, meaning I was able to adopt a more objective analytical approach in interpreting the lesson transcripts, as many of the pupils had left the school and I was not as professionally invested in the learning outcomes of each lesson. The interviews in Study 3 were also coded independently by myself and a colleague, before agreeing on the final thematic analysis together. This was important as Study 3 used solely qualitative methods whereas Studies 1 and 2 had both incorporated triangulation into the research design by using a mixture of quantitative and qualitative data collection and analysis methods.

3.3   Ethical Considerations

This research was approved by the University of York Arts and Humanities Ethics Committee. There was consideration of the potential risks and benefits to participants, issues of consent, and issues of data protection and anonymity at all stages of the research design.

3.3.1   *Benefits and Risks to Participants*

Research with children poses extra issues for the researcher to consider in ensuring undue harm is not experienced by the participants as a consequence of the research activities. This was particularly important in relation to the design of the teaching intervention in Study 1. The design of the intervention was as such that there two classes of pupils involved, an intervention group who experienced the mastery teaching style, and a control group. A mastery teaching approach has been reported to have many benefits for learners, including more positive relationships between teachers

and pupils and increased enthusiasm for learning (Anderman et al., 2002). Successful delivery of the intervention approach would likely have positive benefits for pupils in this group. Pupils in the control group would not immediately benefit from this teaching approach, however they would not experience any detrimental effects in comparison to their usual classroom experience. As the intervention period was only for ten weeks in the context of the school year, this was considered acceptable, and pupils in the control group would also experience future benefits as I would be able to implement any successful teaching strategies with the control group once the period of intervention was complete. Pupils in both classes were filmed as part of the research and the presence of the camera may have made them feel temporarily uncomfortable, however pupils in this school are regularly filmed as part of staff professional development activities, and the purpose of the filming was explained to pupils before the lesson.

It was also important to consider any potential risks to interview participants. In Studies 2 and 3 participants were asked to discuss their experiences of music in family life as well as with peers in school. Students may have discussed adverse and upsetting experiences because of this line of questioning. In these cases, as their teacher I was well placed to be able to provide encouragement to participants to counter any disappointing past experiences. In any pupil-teacher interaction there is always the possibility that disclosures of a safeguarding nature will be made by the pupil. In these instances, the safeguarding policy of the school would have been followed with any disclosures reported to the designated safeguarding lead member of staff in the school. Any disclosures of this nature would not have been reported in the interview transcripts.

3.3.2 Participant Consent

Consent to take part in the research was achieved by various means at different stages of the research. For Study 1, questionnaires and video observations are a standard practice in this school for the purpose of staff professional development. Consent was given by the headteacher of the school, in loco parentis, for the classroom video observations to take place. Pupils were informed that the questionnaires were optional, and they did not have to take part. For the interviews in Studies 2 and 3, informed consent was provided by participants' parents/carers before the interviews took place. Interview participants were also sent a transcript of their interview and informed that they could withdraw or change their responses at any point up to two months after the interviews took place. As questionnaires were distributed to a wider range of schools in Study 4, informed consent was also provided by the parents/carers of all these participants, and each school's headteacher also provided consent for the questionnaires to be distributed to participants.

As I was a teacher in the main research setting, there was potential for the participants to feel obligated to participate in the studies. I counteracted this by having conversations with pupils when inviting them to take part in the interviews, emphasising that it was optional to take part. Conducting the interviews outside of lesson time also communicated that it was not compulsory for participants, and they could choose whether they wanted to attend the interview as well as when it would take place.

3.3.3   Participant Anonymity and Data Protection

Several measures were taken to preserve participant anonymity and confidentiality during the research. Participants and consent-givers were assured that all responses would remain confidential at all stages of the research. Participants and other individuals were given pseudonyms in all transcripts of video observations and interviews, and data reporting. As Studies 1 and 4 were both longitudinal, extra measures had to be taken to ensure participant responses could be matched between phases of the study. In Study 1, each pupil was given a numerical identifier to write on their questionnaire so they could be identified without pupil names. In Study 4, this was more difficult as participants came from different schools and there was a much larger sample (n = 195). Participants were asked to provide their first name and first letter of their surname as well as their year group and first instrument. This allowed me to match up the responses of both questionnaires for the purposes of data analysis. The questionnaire data were not shared with the participants' teachers other than indicating the names of pupils who had completed the questionnaires. All names were removed from the dataset as soon as responses had been collated. For data protection purposes, all data files once collated were saved to the University of York's approved cloud storage service, Google Drive. After transcription and analysis all video and audio recordings of observations and interviews were destroyed.

3.3.4   Debriefing Process

All participants and consent-givers were informed when consenting to take part in the study that the main research findings would be made available to them following the completion of the research. The results of each study are more likely to be of interest to the music education community, and so I prepared a one-page summary of all research findings from Studies 1 to 4 which has been shared with music teachers in each of the schools that participated. It is more difficult to share research findings with children and parents, as their contact details were not collected as part of the research and many of the pupils have now left the school. Participant information sheets made it clear that participants and parents could contact me if they wanted to find out more about

the research, and my email address was shared with participants for this purpose. Following the data collection period, I have had multiple conversations with colleagues and parents in my school community who have shown as interest in the progress of my research and its key findings.

3.4 Summary of Chapter

This chapter began by outlining the epistemological stance taken during the course of this research. Advantages and criticisms of positivist and social constructionist epistemologies were discussed, and my own contextualist epistemological stance was explained in relation to the research questions. Following this, my methodological approach was summarised, with a brief overview of how the methods employed at each stage of research were appropriate to the aims of each study. The main methods employed for data analysis were also summarised. Finally, considerations relating to researcher reflexivity and ethics were presented. The next four chapters will present findings from each of the studies.

4   Study 1

4.1   Introduction and Rationale

Achievement goals can impact various learning outcomes. Studies in musical settings have found that mastery goals are associated with higher performance achievement (Miksza, 2009b; Schmidt, 2005). Also important are the apparent links between achievement goals and practice time (Ng, 2017; Schmidt, 2005), and musicians' commitment to learning an instrument (Miksza et al., 2016; Ng, 2017). Some researchers have also found links between mastery achievement goals and deliberate practice strategies (Miksza, 2009b; Nielsen, 2008; Smith, 2005). Since there is a range of reported positive benefits from adopting certain achievement goals, it is worthwhile investigating how music educators might influence the achievement goals of instrumental learners.

Music education researchers have thus far primarily been interested in the outcomes of musicians' achievement goals rather than what might influence them. In different educational settings, achievement goals have been found to be influenced by learners' competence expectancies (Elliot & Church, 1997), need for achievement (Elliot & McGregor, 2001) and their relationships with others (Collie et al., 2016). Previous studies in other educational contexts have found that a mastery-focused teaching style can influence the achievement goal orientations of pupils (Lüftenegger et al., 2014; O'Keefe et al., 2013). Previous studies have found that music teachers do influence other aspects of instrumental learners' motivation, for example through contributing to basic psychological need satisfaction (Freer & Evans, 2019; Yoo, 2021), affecting learners' perceptions of control (Creech & Hallam, 2011), and their self-efficacy (Lewis et al., 2022; Zarza-Alzugaray et al., 2020). It follows then that music teachers might also impact the achievement goals of instrumental learners.

This first study aimed to examine the impact of the teacher on the achievement goals of adolescent instrumental learners. There were several reasons for the decision to focus initially on the role of the music teacher. Firstly, teachers can influence the attitudes and learning intentions of young musicians in the classroom, whereas they have less control over external factors that can influence achievement goals such as relationships with parents and peers (Collie et al., 2016). As a music teacher myself, I am most interested in where I can make a tangible difference to pupils' motivation. Research in this area might benefit the wider music education community by determining which teaching strategies are most impactful in influencing learners' motivation. There is a wealth of research in more general educational settings on teaching strategies and achievement goals, however as yet, fewer studies have taken place investigating mastery-oriented instructional practices in musical settings. Exploring the recommended mastery-oriented teaching approaches in the music classroom will therefore make a unique contribution to research on achievement goals in

musical settings, as well as having important practical implications for the music education community.

Whilst some potential benefits of performance goals have been found in music education research (Ng, 2017; Tan & Miksza, 2018a) it is generally agreed by researchers that mastery-goals have the most adaptive outcomes, impacting on practice behaviours, longer-term commitment, and flow (Miksza, 2009; Miksza et al., 2016; Ng, 2017; Nielsen, 2008; Tan & Miksza, 2018b). This study therefore focused on promoting the mastery goal orientation rather than the performance goal orientation, with the aim of influencing more positive motivational outcomes.

4.1.1   Research on Mastery Teaching Approaches

Whilst there have been few studies investigating mastery teaching approaches in secondary school music settings, findings from wider education contexts can be applied to music education contexts. Recommendations for mastery teaching approaches are often based on the TARGET framework (Ames, 1992; Ames & Archer, 1988; Anderman et al., 2002; Patrick et al., 1997). This framework outlines typical behaviours and teaching strategies that might distinguish between mastery and performance-oriented classroom environments, using the themes of Task, Authority, Recognition, Grouping, Evaluation, Time, Social, Help-seeking and Messages (Patrick et al., 1997). A summary of differences in classroom climate categorised into mastery and performance goal emphases is presented in Table 4.1.

Some researchers have applied aspects of these recommended teaching strategies to music settings, finding that music educators can influence the goal preferences and other motivational outcomes of musicians. Austin (1991) investigated the effect of competitive and non-competitive rehearsal environments on the subsequent achievement goal preferences of 10-11 year-old band students in the USA. In this experimental study, participants were informed that they would either be rewarded for their performance against specific standards or just for taking part in a competition. After the competition, participants who participated in the competitive rehearsal environment were more likely to prefer a performance goal, whilst those who were in the non-competitive environment preferred mastery goals. In this study, there was a clear impact of the learning environment's goal structure on learners' personal goal orientations, though the authors acknowledge this may have been due to familiarity with that specific goal environment rather than a more considered personal preference. The context of this study was quite specific to this population of students in the USA for whom music contests were frequent. The music curriculum in UK secondary schools is different to this approach (Johnson & Fautley, 2017), and therefore these results may not be directly applicable to the present research context.

Table 4.1

Achievement Goal Analysis of Classroom Climate (from Ames & Archer, 1988)

Climate dimensions	Mastery goal	Performance goal
Success defined as…	Improvement, progress	High grades, high normative performance
Value placed on…	Effort/learning	Normatively high ability
Reasons for satisfaction…	Working hard, challenge	Doing better than others
Teacher oriented toward…	How students are learning	How students are performing
View of errors/mistakes…	Part of learning	Anxiety eliciting
Focus of attention…	Process of learning	Own performance relative to others'
Reasons for effort…	Learning something new	High grades, performing better than others
Evaluation criteria…	Absolute, progress	Normative

The goal orientations of conductors can also affect the motivational outcomes of musicians in rehearsal contexts. Matthews and Kitsantas (2013) also conducted an experimental study, in which conductors were given scripts to emphasise different goal orientations, including statements such as "excellent improvement – you are working extremely hard, and I appreciate the effort" to emphasise mastery goals, and "to win this challenge today we must have an error free performance" to emphasise performance goals (p. 637). Whilst these different goal climates were found to influence the self-efficacy of participants, the impact of participating in different rehearsal climates on participants' personal achievement goals was not measured. Also, the experiment was conducted in a single 30-minute rehearsal, and it would be useful to measure the longer-term effects of taking part in each rehearsal climate over an extended period. This research took place with high-performing collegiate musicians but could be easily adapted for use with younger instrumental learners.

Effort and ability attributions, closely related to mastery and performance goals, were also examined in an experimental study which evaluated the impact of different attributional emphases on children's music-related achievement goals (Droe, 2013). After taking part in a rhythm performance task, participants who had received effort-focused praise were more likely to adopt a mastery goal, whilst those who received ability-focused praise were more likely to adopt a performance goal. In this study, goal orientations were measured using a single statement for each goal, and a more robust approach might have used a more comprehensive measure of achievement

goal orientations, though the single measure was perhaps more appropriate for this study's sample of younger learners.

There is therefore a precedent for examining the impact of different teaching approaches on the goal orientations and motivational outcomes of musicians (Austin, 1991; Matthews & Kitsantas, 2013), though research in this area has yet to explore the impact of these approaches with adolescent instrumental learners, particularly in the UK. The research cited above focused on specific teaching strategies in isolation, and there are no current published studies which explore a fuller range of teaching approaches in classroom contexts. Indeed, Ames (1992) acknowledges that establishing mastery goals may be more challenging in music education contexts as there is so much emphasis on achieving "public-ready" performance (p. 264). Some researchers recommend various mastery teaching approaches for the music classroom, drawing on evidence from research in music and other educational contexts (Hruska, 2011; Tan & Sin, 2020). The impact of these approaches has yet to be examined empirically, and in particular, the recommendations of Hruska (2011) drew largely on anecdotal evidence. The present study therefore aimed to address the following research questions, relating to the role of the teacher and the achievement goal preferences of pupils:

1) What are the achievement goals of pupils receiving whole class instrumental tuition?
2) Which teaching strategies are effective in promoting mastery goals in the music classroom?
3) Does a mastery teaching style have a measurable impact on the achievement goals of instrumental learners?
4) What else might influence the achievement goals of instrumental learners in the music classroom?

4.2   Method

4.2.1   Study Design

To answer the research questions, it was necessary to implement mastery teaching approaches over a longer period than in a one-off intervention lesson. A longitudinal quasi-experimental design was used, with one intervention group and one control group to compare the impact of different teaching strategies. A mixed methods research design was used for this study, with a mixture of video observation and survey data collection methods with the intention of providing a comprehensive overview of classroom goal structures. Data on pupil achievement goals were gathered before and after the intervention to measure the impact of the teaching intervention and answer the second and third research questions. Experimental research in a classroom setting is

a challenge as the researcher cannot have true control over every factor in the classroom (Lüftenegger et al., 2014). Whilst this methodological approach increased the validity of the intervention as it took place in a natural classroom setting, it was crucial to evaluate whether the intended mastery teaching approaches were delivered consistently with the intervention group and differed to the approaches used with the control group, therefore video observations were used alongside the survey data for the purpose of triangulation.

To fully examine the impact of the teaching intervention in relation to other contextual influences, other factors were also measured which may have contributed to the achievement goal orientations of instrumental learners. Follow-up questionnaires were used to measure these other factors of competence perceptions, attitudes to music, parent support and peer influence.

4.2.2   Participants

Participants were from a state-funded secondary school in the North-East of England and were aged 12-13 (n = 44). I am a teacher in the school and had already been teaching all pupils in the study for a year prior to the intervention taking place. This group of participants were chosen as they were already split into two classes, had the same teacher, and both played the violin to a broadly equivalent standard. This school delivered a somewhat unique approach to the Key Stage 3 Music curriculum compared to most other secondary schools in England. All pupils were given an instrument to learn from the start of Year 7 and received whole class tuition on the instrument for a period of two years. This tuition model is similar to the whole class ensemble teaching model used in many primary schools in the UK (Hallam, 2016).

Demographic data for each class is presented in Table 4.2. Classes were similar across each demographic indicator, other than pupil premium eligibility for which the intervention group had a slightly higher proportion of disadvantaged pupils. School data for each class indicated that no pupils in the sample spoke English as an additional language, and there was no data available for ethnicity, therefore these were not included as control variables in this study.

4.2.3   Procedure

The intervention took place over a ten-week period in the Autumn Term of Year 8, from September to November. Both classes received ten music lessons within this period. Pre- and post-testing of pupils' achievement goal orientations was carried out using a Likert-scale questionnaire completed during lesson time. The initial questionnaire was completed by pupils at the start of their first lesson of the academic year, and the follow-up questionnaire was completed by pupils after

Table 4.2

Demographic Information by Class

	Control Group	Intervention Group
Total pupils in class	26	28
Male[a]	14	16
Female	12	12
% of pupils in receipt of Pupil Premium Funding[b]	34.61%	42.85%
% of pupils with SEN (Special Educational Needs) Status	19.23%	17.85%

Notes. [1]Gender is represented as a binary variable as this was reflective of this cohort in which no pupils identified as non-binary in this cohort. [b]Pupil premium funding in England is awarded to pupils in receipt of free school meals, children in care or previously in care. It is therefore used in this study as indicator of socio-economic status.

their assessments at the end of the ten-week intervention period. Measurement of pupils' perceptions of the teacher's goal orientation as well as their perception of the overall classroom goal structure was taken using questionnaires completed outside of lessons, after the final week of the intervention. Pupils were asked to complete these questionnaires in their own time to avoid using valuable teaching time within the classroom. For this questionnaire Google Forms was used as it was familiar to pupils and allowed for easy collation of responses.

For the observation, one lesson with each class was filmed using an iPad. These lesson observations took place halfway through the ten-week period with each class. The iPad was positioned in the back corner of each classroom to capture as much teacher dialogue as possible as well as to be able to see the full classroom.

Informed consent for the study was provided by the headteacher of the school, in loco parentis. This was appropriate as pupils were not providing personally identifiable information in the questionnaires, and video observation and pupil questionnaires are a regular occurrence in the school for the purposes of improving teaching practice. Pupils were given the option to opt out of completing any of the questionnaires.

4.2.4   Intervention Design and Pilot Study

A pilot study was carried out to establish which teaching approaches were most effective in communicating a mastery goal to pupils in a whole class ensemble teaching setting. A range of teaching strategies were piloted with a class similar in profile to the intervention and control groups. Teaching strategies were designed with reference to the recommendations of researchers on mastery teaching styles (Ames, 1992; Anderman & Anderman, 1999; Hruska, 2011), and focused on

pupil autonomy within the classroom, and assessment and evaluation processes. Over a ten-week period, a variety of teaching approaches, different to pupils' usual experiences within their music lessons, were trialled with the pilot group.

In relation to pupil autonomy, pupils were given a choice over which performance repertoire to study. The class were asked to vote on which piece of music to learn, and pupils were also given a choice of differentiated music sheets scaffolded for different prior ability levels. Also relating to pupil autonomy, the seating arrangement and layout of the classroom was changed to allow for more small ensemble work. Pupils sat in small mixed ability groupings, working together to learn short excerpts of music before performing them to the rest of the class. Evaluation and target setting were also given more prominence within and outside of lesson time. Pupils completed regular evaluation questions to reflect on their skill development, as well as completing an online homework practice diary, where they were asked to reflect on what they had practised that week, what had been successful, and where they could improve further. The assessment process was also markedly different to pupils' prior experiences, with pupils asked to do an audio recording of themselves playing the violin for their assessment in their own time, rather than performing in front of their peers and only having one chance to get the performance correct.

To evaluate the effectiveness of these teaching methods in relation to the recommended mastery teaching approaches (e.g. Ames, 1992; Anderman & Anderman, 1999), quantitative techniques were employed to analyse three video observations of the pilot intervention lessons, based on the work of other researchers in instrumental teaching settings (Rostvall & West, 2003; Rostvall, 2005). Following transcription of the lessons using NVivo software, various aspects of the lessons were quantified according to different elements of the TARGET framework (Patrick et al., 1997). This included timing sections of each lesson and categorising them according to whether teacher or pupil authority was more dominant within each task, classifying pupil contributions as teacher-directed or voluntary, categorising teacher and pupil talk into different themes, and assessing the quality of evaluative dialogue as effort or ability focused, amongst other factors. A comparison was then made across the three observed lessons to assess the impact of the pilot intervention approaches over time.

In summary, the pilot intervention was deemed to be largely successful. Introducing more evaluative tasks, changing the seating arrangement of the classroom, and allowing more time for pupils to work in small groups aligned with suggested mastery teaching approaches, and worked practically within the context of instrumental teaching. More subtle messages in the dialogue between teacher and pupils were however more challenging to modify in this short time frame, therefore the use of a mastery-oriented script for the teacher to follow was deemed to be a useful

addition for the actual intervention study. On reflection, the use of quantitative methods to categorise teacher/pupil talk and different lesson tasks did not capture some of the subtle nuances of the classroom climate and did not allow for a more contextual consideration of the lesson design, therefore thematic analysis was employed to evaluate the real intervention study. The timing of the intervention was also re-considered as the pilot study was carried out towards the end of the academic year, when different teaching styles had already been established with the class, therefore it was decided that the real intervention should take place at the beginning of the academic year, to minimise the impact of pre-established routines on the classroom climate.

A summary of the final intervention design outlining the differences in teaching approach between intervention and control groups is shown in Table 4.3. The control group continued to follow the same teaching format that both groups had experienced in the year prior to the intervention. For example, pupils had experienced much less small group work in lessons, with less pupil autonomy, choice over tasks, and an assessment process where pupils performed in front of their peers and the teacher. This teaching approach continued with the control group, while for the intervention group, pupils were given more choice over tasks, worked in small groups throughout the intervention, and had more control over their assessment, recording their performance in private rather than performing in front of the rest of the class. Mastery goals are centred around skill development rather than performing successfully in relation to others and are linked to perceptions of the value of effort over ability (Dweck & Leggett, 1988). With the intervention group, shorter problem-solving tasks were therefore used in lessons for the purpose of skill development. A selection of mastery prompt phrases in the form of a teacher script were designed to reinforce the value of pupil effort and improvement over normative ability (see Appendix A). Finally, as pupils in the intervention group recorded their performances for their assessment, this reduced the potential for peer comparison compared to the control group, with whom assessments were completed in public.

4.2.5   Measurement Instruments

To measure pupil achievement goals, scale items were based on the 3 x 2 achievement goal questionnaire (AGQ) (Elliot et al., 2011) and were adapted for use in the context of whole class instrumental tuition. For example, for task-approach the item, "To get a lot of questions right on the exams in this class" was changed to, "To play the pieces of music right in my lessons." The AGQ had previously been adapted for use in the sport domain so there was precedent for its adaptation in other educational contexts (Elliot et al., 2015). In the pilot study, a two-step response system was used where participants first indicated whether they agreed or disagreed with a statement before

indicating how strongly they agreed or disagreed. However, it was found in the pilot study that there was not much variance in responses with most participants selecting 'agree' for every statement. For the actual study, it was therefore decided to use a more traditional Likert-scale response system with answers ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Pupil perceptions of teacher goal orientation and the classroom goal structure were measured using items from the Patterns of Adaptive Learning Scales (PALS) (Midgley et al., 2000), also using a 5-point Likert-scale response system, as these had previously been validated in educational settings.

For the other variables of competence perceptions, attitude to music, parent support and peer influence, scales were kept to a limited number of items, so the pupil questionnaires did not take too long to complete. Four items relating to competence perceptions were adapted from the Measure of Self-Regulated Practice Behaviour for Beginning and Intermediate Instrumental Music Students (Miksza, 2012). For the variables attitude to music and parent support, items from the Socio-Educational Model of Music Motivation (MacIntyre et al., 2012) were used. Six items were used for attitude to music with five items for parent support. The full scales were unavailable in the original published research however these were sent on request by the researcher with permission to be used in this research. Finally, four items measuring peer influence were devised by myself, based partially on Vispoel and Austin's (1993) peer influence items. All these items were measured using a 5-point Likert scale. Full versions of the final scales can be seen in Appendix B.

4.2.6   Analysis of Video Observations

Video observation data were analysed using qualitative methods. Whilst other music education researchers have used a range of approaches to quantify data from lesson observations, such as classification of speech types (Daniel, 2006; Rostvall, 2005; Rostvall & West, 2003) and frequencies of different types of teacher feedback (Karlsson & Juslin, 2008; Koopman et al., 2007), achievement goal researchers recommend a more holistic approach to inform judgements of the overall goal environment of a classroom (Anderman et al., 2002).

Videos of the lessons were analysed in two stages. First, the OPAL framework (Observing Patterns of Adaptive Learning) (Patrick et al., 1997), designed to assess the prevalence of different achievement goal climates in the classroom, was used to analyse the lessons deductively in relation to the themes of Task, Authority, Recognition, Grouping, Evaluation, Time, Social, Help-Seeking and Messages. This process was used primarily to check the validity of the intervention, in terms of the fidelity to the planned mastery goal teaching approaches. Firstly, a running record was made of the lesson observations, with particular reference to the TARGET categories (Patrick et al., 1997). Patrick et al. (1997) recommend that the focus of this record should be primarily on the teacher, though

Table 4.3

Intervention and Control Group Teaching Approaches

Classroom dimensions	Intervention Group	Control Group
Task design	Musical problem-solving activities in groups.	Whole class rehearsal led by teacher.
Autonomy	Class vote on which piece to study out of a choice of two pieces. Choice given of short performance tasks. Pupils given differentiated worksheets to choose from.	No choice given.
Grouping structure	Mixed ability groups of 5-6 pupils.	Pupils work individually.
Assessment design	Pupils record their performances at home and submit audio recording to teacher for assessment.	Pupils perform in front of the class whilst teacher marks assessment.
Classroom layout	Groups sat in small semi-circles.	Rows facing front of room.
Participation structure	Random selection of pupils using lollipop sticks.[a]	Voluntary participation from pupils.
Messages	Teacher uses prompt sheet of scripted phrases to communicate 'mastery' goal.[b]	No specific language use required.

Notes. [a] Lollipop sticks with pupils' names on are put into a pot and the teacher selects a random lollipop stick every time pupils are chosen to answer questions or perform. [b] See Appendix A for Mastery Teaching Prompt Phrases.

relevant student responses and comments were also recorded as an indication of the overall classroom goal climate. Notes were also recorded about the classroom layout and any classroom displays which may have contributed to the classroom goal climate.   Secondly, transcripts were made of each lesson using NVivo software, coded according to each of the themes of the OPAL framework. Notes from the running records and transcripts were then categorised according to each of the TARGET themes. Rather than analysing the data using more quantitative methods, a more holistic approach was taken in relation to each theme as categorising dialogue according to frequency would not fully capture the overall goal climate of each classroom. For example, grouping

structure cannot be captured using frequency coding but was an important aspect of the goal dimension of each classroom.

Subsequently, inductive thematic analysis (Braun & Clarke, 2022) was used to identify key themes from the observations. In thematic analysis, it is recommended that the researcher reviews transcripts several times to continually refine themes. The running descriptions and coded transcripts were analysed alongside one another, and a visual thematic map was created which illuminated the main themes of both lessons. This thematic map was refined until the final four themes were confirmed. These themes were then evaluated in terms of their relationship to achievement goals, with reference to literature on mastery and performance goal classroom climates (Ames, 1992; Anderman et al., 2002).

Braun and Clarke (2022) advise that having a single coder is usual practice during thematic analysis, as subjective interpretation of the data is a strength of reflexive thematic analysis. Throughout this process, my role as teacher-researcher was therefore crucial to the interpretation of the data, as this allowed more insight into why certain decisions may have been made in each classroom. However, it was also important to recognise my bias as I had designed the interventions and was the teacher of each class. Initially when analysing the lessons, the expectation was that the intervention lesson would more strongly endorse a mastery goal, and I was conscious of my desire for the intervention lesson to fully portray this goal climate. Whilst the initial observation analysis allowed me to identify initial themes that would inform Study 2, I revised the full thematic analysis five years later. This allowed me to distance myself more from the observations and consider them from a more neutral standpoint to evaluate each of the lessons' achievement goal climates, rather than approaching the analysis with the expectation of a particular outcome. This second phase of data analysis ended up being crucial to the final interpretation of the data, as I drew different conclusions about the goal climate of each classroom when observing each lesson from a more objective standpoint. This temporal distancing of the thematic analysis from the time of the intervention itself is supported by the recommendations of Braun and Clarke (2022). They argue that rigorous thematic analysis should be a lengthy process, where later codes result in richer analytic insights than if the process of coding is terminated prematurely, which could demonstrate bias towards a researcher's preconceived ideas about the outcomes of a particular study (Braun & Clarke, 2022). Bresler and Stake (2006) note that "we seldom have an accurate impression the first time we look" at qualitative data, therefore seeking to disconfirm any original misinterpretation of the observation data was good practice.

4.3   Results

4.3.1   Inductive Thematic Analysis of Video Observations

The process of thematic analysis resulted in four main themes, listed below. Each theme will be discussed in turn with reference to both the intervention and control group lessons, summarising the differences in teacher approach and classroom goal structure.

1. Lesson Structures
2. Teacher Messages: the "why"
3. Teacher Feedback
4. Pupil Attitudes

4.3.1.1   Lesson Structures

The theme of lesson structures encompassed aspects of task design, content, grouping and participation structures, and time. Whilst the essential content of each lesson was the same, with both classes learning the same Grade 1 violin piece, 'Mattachins' (Arbeau, 2016), the design of each lesson was quite different in relation to achievement goal structures. The control group lesson was structured in two main parts, the first an introduction of different playing techniques with an accompanying listening task, and the second half consisting of independent practice of 'Mattachins' and formative teacher assessment. The intervention group lesson also consisted of two parts, the first a group challenge where small groups had to learn a pop song riff on the violin and work out which song the riff was from, followed by small group rehearsals of 'Mattachins'. The intervention group lesson had been closely designed to reflect a mastery goal climate, meeting the criteria of variety, diversity and personal relevance recommended by Ames (1992). Considerations of pupil autonomy were explicit within the intervention group lesson design, with pupils given a choice over which pop song they learnt, and small group rehearsal and peer to peer support central to the overall lesson structure. The teacher indicated that this task was designed to be challenging for pupils, give them an element of choice, and be completed as a group:

So your first challenge in your groups today I would like you to choose one of these,

ok you just need to choose one, both of them are from pop songs. Ok so your

challenge as a group is together to learn how to play it, one or the other, decide

which one you're going to have a go at, learn how to play it and you need to be able

to play it together as a group, and you also need to tell me what song it comes from.

(Intervention Group, Teacher)

In contrast, there was no explicit planning for autonomy over repertoire with the control group lesson, with all pupils expected to continue practising 'Mattachins', a piece which the pupils had started learning in a previous lesson. The control group lesson did not contain any variety in the music that pupils were learning, and arguably was not as personally relevant to pupils as learning pop songs. With the intervention group, the personal relevance of the task was a feature the teacher was keen to emphasise, and pupils found this appealing. For example, the teacher stated, "I know that you're keen to do more of these pop songs and we will be able to play more pop songs together as a class." Pupil responses were enthusiastic: "Yeah I know that one, Galway Girl, that's Galway Girl."

Classroom layout and pupil grouping were also important within the theme of lesson structure. The organisation of each classroom was very different, with the control group sat in rows with pupils working individually and facing the teacher, whereas the intervention group were arranged in groups of 5-6 pupils, sat in semicircles so they could work collaboratively together. The teacher communicated the reasons for this grouping structure to pupils, saying, "this group is in a line, ok we need to be working in a group where we can hear each other play, so get yourselves more into a semicircle…we need to be able to hear and see each other."

The participation structure of the intervention lesson was not limited to small group work. There were specific instructions given to pupils to work in their groups to rehearse, however it seemed that pupils still preferred to work individually. The camera positioning meant only one pupil group was visible, however these pupils undertook more individual practice than group discussion and rehearsal as a group. The teacher gave instructions for pupils to carry out peer assessment, however for the pupils observed this peer coaching was brief. There was also a large amount of whole class participation, with the teacher leading call and response work and whole class rehearsal of different parts of all pieces. Despite the planned small group lesson structure, the reality of this intervention lesson was different, and pupil progress was more evident during individual rehearsal and teacher-led whole class playing.

Finally, the time component of the lesson structure was important in the communication of different goals. The intervention lesson included a greater variety of tasks, however this appeared to be at the expense of depth of pupil understanding. There were frequent references from the teacher to time limits and the desire to get through lesson content quickly, for example, "Well surely you've decided by now (looks at watch)," and "Year 8 I wasn't intending on spending the whole lesson on this. Ok, this is just to get started, ok so can we focus please?"

In contrast, there was a sense with the control group that there was less time pressure, and the teacher was more concerned about pupil progress than achieving tasks within a pre-determined time limit:

> I've got time to listen to 2 more people, I thought I was going to get round quicker but I'm actually finding it's probably worth spending more time listening and having a chat to give you more detailed feedback, ok so those of you that I haven't got round today...I'll go to you next lesson, ok? (Control Group, Teacher)

Being flexible with task timing, but also communicating the reasons for this clearly to pupils, appeared to emphasise more of a mastery goal with the control group. There was a sense with this class that giving detailed and helpful feedback to pupils on their violin playing was more important to the teacher than completing tasks within a pre-planned time limit.

4.3.1.2   Teacher Messages: the "why"

The theme of Teacher Messages mostly comprised the implicit, rather than explicit, messages communicated to each class by the teacher. Separate from aspects of lesson structure and design, teacher dialogue and body language can be powerful communicators of specific goal messages within the classroom environment (Dix, 2017).

One clear distinction between classes was the implicit messaging by the teacher about the overarching goals and objectives of the lesson. With each class, there were different emphases on the importance of achieving a correct performance compared to the development of skills. With the control group, the emphasis appeared to be on the process of learning rather than a complete performance. In this lesson, specific instructions were given to pupils on the purpose of feedback, and it was clear that the teacher was not expecting a perfect performance by the end of the lesson:

> I'm going to give you some feedback, I'm going to note down some comments for myself, just so I know what I can help people with...then as soon as I've given you some feedback on your music can you make a note of that just somewhere on the sheet...you're going to spend the rest of the lesson responding to that and practising that bit. (Control Group, Teacher)

With the intervention group, the teacher verbalised a similar message: "Don't worry I'm not expecting it to be perfect." However, other implicit messages were conveyed throughout the intervention group lesson. Despite stating that perfection was not expected, when giving feedback

on pupil performances the emphasis appeared to be more on getting the notes correct than focusing on skill development. These pupils were asked to repeat sections of music several times until it sounded perfect, but there was less teacher explanation.

Messages concerning long term goals also differed between classes. With the control group, assessments were not referred to, and the emphasis was more on formative feedback. With the intervention group, whilst the lesson itself did not contain any formal assessment, future assessments were referred to by the teacher: "this is not an end of module assessment, it's not a final performance where I'm going to give you a grade." With this class, grading appeared to still be at the forefront of pupils' minds.

With the intervention group the teacher also implied that one long term goal was to be able to play pop songs to increase the enjoyment of pupils. The message with this class seemed to be that pupils would only enjoy their lessons when they were learning pop songs, whereas with the control group, the teacher expected pupils to enjoy the process of skill development, no matter which piece they played. Pupils in the control group were encouraged to "have a go" at the techniques of glissando and tremolo, and there was some laughter from both teacher and pupils about the technique of double stopping, when pupils realised they often did this when playing by accident. One pupil exclaimed at this point, "That's what I do all the time!" The positive mutual atmosphere in this classroom was exemplified when the teacher joked with pupils about playing glissandos, "I know a lot of you do it on purpose to annoy me." Pupils were encouraged to try new techniques and praised for doing so; one pupil tried a different way of playing a tremolo and the teacher responded, "yeah you can try going up and down the scale and keep your bow going." The enjoyment of the intervention group felt somewhat forced by the teacher; though the task of learning a pop song and the use of a drum backing track were designed to enthuse and engage pupils, there was less emphasis on the intrinsic fun of learning an instrument, and overall pupils in this class appeared to be less intrinsically motivated.

Finally in terms of teacher messages, though the task design of the intervention group lesson included more choice, implicit messages of autonomy were much stronger with the control group. The way the teacher communicated with pupils conveyed a sense of trust that pupils would make helpful choices in relation to their learning. This promotion of pupil autonomy was evident when the teacher used phrases such as, "you might want to," "I'll let you decide," "I don't mind how you [define] it, and "you don't have to, you might have missed something so this is your opportunity to add that in."

There were no such examples of dialogue with the intervention group, and messages of autonomy were limited to task design rather than through teacher dialogue. The element of choice

was also undermined with some pupils in the intervention group; when the teacher noticed the group were taking some time to decide on which piece to play, the decision was made for them: "let's just do the top one, ok, do that one and then it's probably easier." As well as removing the element of choice, this statement also communicated a message that challenge was not important for this group of pupils. It is important to note that in this school all pupils in Years 7 and 8 learnt an instrument as part of the whole class ensemble teaching model, and in most cases these pupils did not have a choice over which instrument they learnt. In this sense, their sense of autonomy with regards to learning an instrument would have been low, however the observation data does indicate that teachers can still promote messages of autonomy within the whole class ensemble teaching environment through their lesson design and communication style.

4.3.1.3 Teacher Feedback

Both lessons contained a large amount of teacher feedback, and whist this feedback was mostly informal, the type of feedback given differed between classes and conveyed different messages to the pupils. In particular, the purpose and specificity of feedback differed between the control and intervention group, particularly in relation to pupils' violin playing. With the control group, feedback was mostly given in private to individual pupils whilst the teacher moved around the classroom. As highlighted above, the teacher took the time to have a conversation with each pupil about their progress, giving specific targets for improvement and focusing on the learning process. At one point in the video observation, the teacher was observed sitting down next to a pupil to engage in a more prolonged conversation and demonstration of a technique on the instrument.

Whilst the intervention group lesson also featured examples of private feedback given to pupils, there were more examples of public teacher feedback given for group performances in front of the whole class. In these instances, teacher feedback was a lot less specific, exemplified by statements such as, "kind of, the first bar was alright, any ideas?" and "let's all just try it, good yeah you just need to get it in time."

With the intervention group the teacher did give specific instructions on how pupils could improve, however instead of guiding pupils to understand how to improve, often the correct solution was given to pupils straight away. The teacher often responded to pupil queries by naming notes and finger positions, somewhat contradicting the instruction that pupils should not write all the numbers for finger positions on the page: "it's just D all the way on the top line, then that's F then it's D." It is clear the teacher wanted to help pupils make progress, however when the teacher provided the correct answer straight away this potentially undermined the mastery goal of developing understanding.

Social comparison is highlighted as a feedback type which can often undermine mastery goal structures. Anderman et al. (2002) distinguish between relative ability comparisons and informational social comparison, where relative ability comparison promotes a performance goal, and informational comparison emphasises a mastery goal. There were few examples of relative ability comparisons with either class, with only general judgements about groups of pupils playing well, rather than individual pupils being named. With both classes, the teacher praised groups of pupils for good performances to establish a positive atmosphere in the classroom, stating for example, "I'm hearing some fantastic scales" (Intervention Group), and "I'm really impressed with a lot of people I've heard today, there's some fantastic playing, there really is" (Control Group).

In the control group lesson, there were instances when specific pupils were named for performing well, however this public recognition fell into the category of informational social comparison. The learning strategies of these pupils were highlighted to other pupils as examples, rather than praising pupils for their ability level:

> I'm actually going to use this piece of music here as an example…I'm looking at Adam's music and this is what I want, so Adam hasn't written every single note on for a start, he doesn't need to, because he's worked out that the pattern just follows the pattern of your fingers and it just goes up and down, but what he has done is he's obviously just needed a little reminder of a couple of notes in the second bar, so he's just written the numbers on for 3 notes in the piece, he hasn't needed them all written on, he's just recognised these are the notes that I struggle with, I'm just going to put the numbers next to them. I'm not happy when I'm looking round and there's people writing every single note on the music. That's not necessary and it's not helping you in the long run, ok so can we try not to do that as much as possible, I'm giving out blank pieces of music to people who I've seen that happening on, so thank you for that Adam. (Control Group, Teacher)

This type of teacher message is consistent with recommendations to emphasise learning strategies to help foster a mastery classroom goal structure (Anderman et al., 2002).

With the intervention group, towards the beginning of the lesson concrete praise was given to a group of pupils for their effort in the previous lesson, with these pupils rewarded with a small chocolate bar. Whilst this praise was awarded for pupil effort rather than their ability level, caution is recommended around the use of extrinsic rewards in the classroom, with suggestions that this type of reward can undermine the mastery goal structure when it is perceived as a bribe for good

behaviour (Ames, 1992). Later in the lesson, some names of pupils were written on the board to highlight good teamwork. This public recognition of pupils did not appear to increase the effort of other pupils in the classroom and indeed went unnoticed by the pupils in front of the camera.

4.3.1.4   Pupil Attitudes

Whilst the OPAL framework recommends that the principal focus of lesson observations should be on the behaviour of the teacher, pupil attitudes were a strong indicator of each classroom's achievement goal climate. The camera placement for each video recording meant not all pupils were visible in each class, and therefore it is acknowledged that examples of the pupil behaviour observed in each lesson do not necessarily represent attitudes of all pupils in each class, however they are used here as one indicator of the goal climate of each classroom.

As described above, the layout and grouping structure of each classroom was very different, with the pupils in the control group sat in rows whilst the intervention class was arranged with pupils sitting in small groups. In both classes, there were a few pupils who appeared to impact the behaviour of others. Some latecomers in the control group distracted other pupils from learning, and independent practice time quickly descended into off-task pupil talk. The camera in the intervention group was placed behind one key group, who despite being aware of the video recording, spent much of the time discussing other topics. One key example of this was the discussion of whether pupils wished to continue learning the violin in the future. Some of these pupils expressed a desire to stop learning music altogether, whilst others wanted to change their instrument from violin. Whilst pupil commitment to learning music was not the focus of these video observations, this discussion revealed that these pupils' value beliefs relating to music were perhaps not aligned with the intended mastery goal of the teacher.

It was clear with both classes that despite the best efforts of the teacher, pupils can have a significant impact on the short-term goals of their peers in the lesson, often preferring to talk to their friends rather than undertake instrumental practice as instructed. Despite the intended aim of group-work to promote pupil autonomy and peer-to-peer support, these benefits seem to be largely undermined by many pupils' limited capacity to focus for long periods of time in small groups. This off-task behaviour was countered by other pupils in each class who were clearly focused on their work; in both classes during the first portion of the lesson which was largely devoted to setting up instruments and music stands, individual pupils began practising scales on the violin without being specifically directed to by the teacher. It is therefore acknowledged that pupil attitudes are mixed, despite the strong indications that peer influence can be detrimental to the adoption of a mastery achievement goal.

4.3.1.5 Lesson Observation Summary

Across all four themes, there was a conflict between the explicit and implicit goal messages communicated in each classroom. The intervention lesson had clearly been designed to promote a mastery goal; aspects of the lesson structure met the recommendations of variety, personal relevance, group collaboration and autonomy (Ames, 1992; Anderman et al., 2002). However, these explicit mastery goal messages seemed to be largely undermined by the implicit messaging present in the classroom. Teacher feedback and evaluation with the intervention class often emphasised performance outcomes over the learning process, and messages of autonomy and learning strategies were contradicted in the teacher feedback given to individual pupils and groups. There was a perception with this class that time pressures often undermined the teacher's desire to promote deeper understanding, a common occurrence in many classrooms (Thom, 2018). In contrast, whilst the control group lesson had less variety in terms of lesson content, with the emphasis on playing techniques and individual practice, the implicit goal messages communicated by the teacher often conveyed a mastery goal. This was most evident in the subtle indicators of pupil autonomy in teacher instructions, the emphasis on learning strategies, and in the considerable time given in the lesson for detailed individual formative feedback.

Each of these observations took place halfway through the ten-week intervention period and were intended as a snapshot of teaching style with each class throughout the intervention process. It appeared that the achievement goal climate in the control group classroom was much more representative of the mastery goal than the intervention group. Whilst only a glimpse of the teaching taking place over a longer period, the fact that the implicit messaging in the classroom appeared more important in establishing the goal climate indicates that the mastery goal may have been established with the control group for a longer period. The short-term mastery lesson structures employed with the intervention group may not have done enough to change a longer-term goal climate that may have been established prior to the commencement of the intervention, particularly as these classes were both taught by the same teacher for the 12 months preceding the intervention.

4.3.2   Quantitative Analysis of Survey Data

Pupil responses from the pre-intervention and post-intervention questionnaires were collated and analysis of pupil survey responses was undertaken using JASP software. Negatively scored items were reversed prior to analysis.

4.3.2.1 Achievement Goals

Cronbach's Alpha was calculated for each of the achievement goal scales (from pre-intervention data) as a measure of internal consistency. The Cronbach's Alpha score was above the common recommendation of $\alpha > .70$ (Taber, 2018) for self-approach ($\alpha = .803$), self-avoidance ($\alpha = .809$) and other-approach ($\alpha = .939$) goals. The internal consistency was below the recommended level for task-approach ($\alpha = .645$), task-avoidance ($\alpha = .541$) and other-avoidance ($\alpha = .672$). The score was improved for task-approach ($\alpha = .713$) with the removal of one item ("My main goal is to play the pieces of music right in my lessons"). For task-avoidance and other-avoidance, the removal of scale items did not improve their internal consistency. Low alpha scores may be due to the low number of items in each scale (Taber, 2018). Nevertheless, mean scores for task-avoidance and other-avoidance should be interpreted with caution.

Alternative statistical measures are recommended when determining internal consistency of psychometric instruments, as Cronbach's Alpha levels may be influenced by several factors (Taber, 2018). Exploratory factor analysis was therefore conducted to determine whether there was a more appropriate factor structure for achievement goals. Parallel analysis was used with oblique rotation to determine the best factor structure, and a 3-factor model was identified. The 3-factor model achieved a statistically significant Chi-squared result ($\chi^2 = 127.9$, $p = 0.04$), indicating a poor model fit. Additional fit measures were also examined as the chi-square can be sensitive to small sample sizes and non-normal distributions (Whittaker & Schumacker, 2022). The Root Mean Square Error Approximation (RMSEA) was 0.066 demonstrating adequate fit, and the Tucker Lewis Index and Comparative Fit Index were both above the recommended levels of .90 for good model fit (Whittaker & Schumacker, 2022). The factors identified were a combined performance goal, mastery-approach and mastery-avoidance.

Factor loadings are presented in Table **4.4**. One item (TAP1: "My main goal is to play the pieces of music right in my lessons") was removed from the analysis due to its low loading on each of the factors. Two items loaded onto two factors: OAV1 ("My main goal is to avoid being worse at my instrument than other people in my class") loaded onto both Performance and Mastery Avoidance Goals, and TAP2 ("My main goal is to perform well for my music assessments") loaded onto mastery-approach and mastery-avoidance Goals. OAV1 was kept in the Performance factor and TAP2 was kept in the Mastery-Approach factor as they theoretically aligned more closely with each of these factors. Cronbach's Alpha was then re-calculated as a measure of internal consistency for each of these revised scales. All Cronbach's Alpha scores were $\alpha > .80$ indicating good reliability.

Mean scores were then calculated for the revised achievement goal model for both pre- and post-test data, presented in Table 4.5. The Shapiro-Wilk test was used to assess the data for normality, and three of the achievement goal means had non-normal distributions.

An independent samples *t* test was run to test for group differences for each of the achievement goals. The Mann-Whitney U test was used as the data for some of the achievement goals were not normally distributed. Results are presented in Table 4.6. There were no significant group differences found between each of the groups for any of the achievement goals either before or after the intervention. Effect sizes were small.

Table 4.4

Factor Loadings for Achievement Goals

	Factor 1 Performance Goal	Factor 2 Mastery Approach	Factor 3 Mastery Avoidance	Uniqueness
OAP1	0.889			0.123
OAP2	0.887			0.132
OAP3	0.855			0.279
OAV1	0.614		0.426	0.405
OAV2	0.580			0.542
OAV3	0.539			0.705
SAP3		0.890		0.235
SAP2		0.776		0.431
SAP1		0.669		0.564
TAP3		0.666		0.519
TAP2		0.519	0.438	0.306
TAV3		0.434		0.775
SAV3			0.871	0.295
SAV2			0.868	0.310
TAV2			0.770	0.340
SAV1			0.601	0.563
TAV1			0.501	0.638
TAP1[a]				0.799

Note. Applied rotation method is promax. [a]TAP1 item subsequently removed due to low factor loading.

Table 4.5

Mean Scores for Revised Achievement Goal Model Pre- and Post-Intervention by Group

			Valid	Missing	Mean	Std. Deviation	Min.	Max.
Pre	Performance	Control	21	5	3.071	1.142	1.000	5.000
		Int.	27	1	3.451	0.704	1.833	4.833
	Mastery Approach	Control	21	5	4.413	0.390	3.333	5.000
		Int.	27	1	4.135	0.686	2.500	5.000
	Mastery Avoidance	Control	21	5	4.067	0.987	1.200	5.000
		Int.	27	1	3.880	0.815	2.200	5.000
Post	Performance	Control	23	3	2.913	1.055	1.333	5.000
		Int.	26	2	3.295	0.858	1.000	4.500
	Mastery Approach	Control	23	3	4.254	0.745	1.667	5.000
		Int.	26	2	4.173	0.703	2.500	5.000
	Mastery Avoidance	Control	19	7	3.836	0.469	3.161	4.765
		Int.	26	2	3.831	0.645	2.261	4.780

Note. Int = Intervention

Figures 4.1 to 4.3 show comparisons of means for each of the achievement goals for pre- and post- testing between each group. For the control group, the mean score reduced for each of the achievement goals between pre- and post-testing. In the intervention group, both Performance and Mastery-Avoidance goals reduced, and the Mastery-Approach goal mean increased by a marginal amount, though this increase was non-significant.

A repeated measures ANOVA was run to test for significant time differences for achievement goal orientations between each group. There were no significant changes over time found for any of the achievement goals, across the whole sample as well as between groups. Tables 4.7 to 4.11 show the repeated measures ANOVA results.

Scales for perceptions of teacher achievement goals and classroom goal structure were tested for internal consistency using Cronbach's Alpha. Each of the scales other than the classroom mastery goal structure had acceptable Cronbach's Alpha levels of > .70. The classroom mastery goal structure alpha was lower (α = .659), but theoretically these scale items were judged to accurately reflect a different classroom goal structure to the performance-approach and performance-avoidance goals, and therefore it was decided to keep this factor structure but treat results relating to the classroom mastery goal structure with caution.

Table 4.6

Independent Samples T test for Achievement Goal Means between Groups

	W	*p*	Rank-Biserial Correlation	SE Rank-Biserial Correlation
Performance Goal Pre-Int.	236.500	0.332	-0.166	0.168
Mastery Approach Goal Pre-Int.	338.000	0.258	0.192	0.168
Mastery Avoidance Goal Pre-Int.	339.000	0.251	0.196	0.168
Performance Goal Post-Int.	224.500	0.138	-0.249	0.165
Mastery Approach Goal Post-Int.	321.000	0.665	0.074	0.165
Mastery Avoidance Goal Post-Int.	236.500	0.818	-0.043	0.174

Notes. Mann-Whitney U test. For the Mann-Whitney test, effect size is given by the rank biserial correlation.

Table 4.7

Within Subjects Effects for Performance Goal

Cases	Sum of Squares	df	Mean Square	*F*	*p*	η²	ω²
Time	1.094	1	1.094	2.631	0.112	0.014	0.009
Time ✻ Class	0.226	1	0.226	0.543	0.465	0.003	0.000
Residuals	17.872	43	0.416				

Note. Type III Sum of Squares

Table 4.8

Between Subjects Effects for Performance Goal

Cases	Sum of Squares	df	Mean Square	*F*	*p*	η²	ω²
Class	4.404	1	4.404	3.647	0.063	0.058	0.029
Residuals	51.928	43	1.208				

Note. Type III Sum of Squares

Table 4.9

Within Subjects Effects for Mastery-Approach Goal

Cases	Sum of Squares	df	Mean Square	F	p	η^2	ω^2
Time	0.137	1	0.137	0.625	0.433	0.003	0.000
Time ✳ Class	0.380	1	0.380	1.734	0.195	0.010	0.004
Residuals	9.421	43	0.219				

Note. Type III Sum of Squares

Table 4.10

Between Subjects Effects for Mastery-Approach Goal

Cases	Sum of Squares	df	Mean Square	F	p	η^2	ω^2
Time	0.438	1	0.438	1.708	0.198	0.009	0.004
Time ✳Class	0.357	1	0.357	1.392	0.245	0.007	0.002
Residuals	11.036	43	0.257				

Note. Type III Sum of Squares

Table 4.11

Within Subjects Effects for Mastery-Avoidance Goal

Cases	Sum of Squares	df	Mean Square	F	p	η^2	ω^2
Class	0.391	1	0.391	0.433	0.514	0.008	0.000
Residuals	38.873	43	0.904				

Note. Type III Sum of Squares

Figure 4.1

Performance Goal Means for Pre- and Post-testing by Group
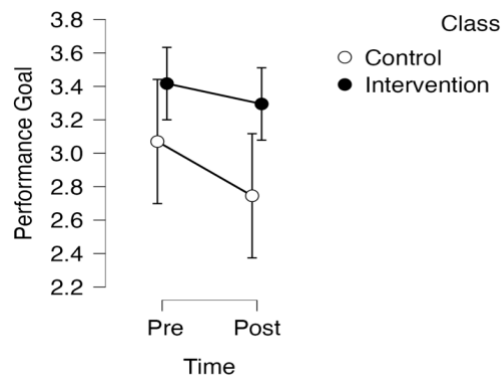
Note. The error bars represent the 95% confidence interval in this and all subsequent figures.

Figure 4.2

Mastery-Approach Goal Means for Pre- and Post-testing by Group
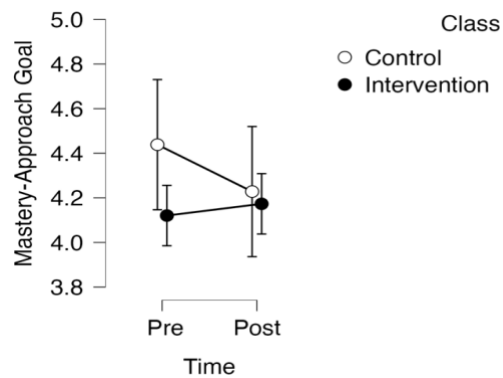
Figure 4.3

Mastery-Avoidance Means for Pre- and Post-testing by Group
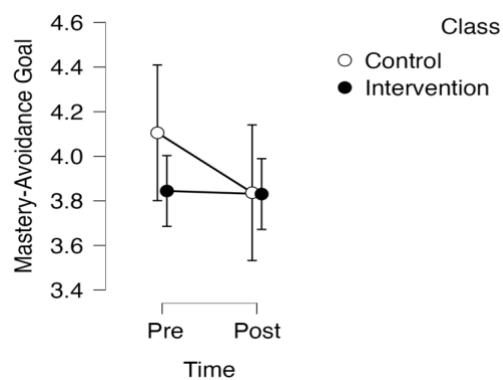
Mean scores for each of the teacher achievement goals and classroom goal structure were calculated and are presented by group in Table 4.12. As these questionnaires were conducted at a separate time point to the achievement goal questionnaires there were quite a lot of missing data for these items. Results of the Shapiro-Wilk test showed that data were normally distributed for each of these variables.

An independent samples *t* test was run to find out whether the teacher achievement goals and classroom goal structure were significantly different between groups. Results are reported in Table 4.13. There was a significant difference between the control and intervention group for the mastery classroom goal structure, with a moderate effect size. The mean score for the mastery classroom goal structure was significantly lower for the intervention group than the control group as shown in Figure 4.4, although as already indicated the internal consistency of this scale was lower than generally accepted levels, therefore this result is not conclusive. Although non-significant, effect sizes for the means comparison for the teacher mastery goal and performance-approach classroom goal structure indicate there may be notable group differences between classes for these measures, with the control group reporting a higher teacher mastery goal and performance approach classroom goal structure than the intervention group.

Table 4.12

Mean Scores for Teacher Achievement Goals and Classroom Goal Structure by Group

		Valid	Missing	Mean	Std. Dev.	Min.	Max.
Teacher Mastery Goal	Control	14	12	4.029	0.807	2.600	5.000
	Int.	18	10	3.719	0.783	1.600	5.000
Teacher Performance Approach Goal	Control	14	12	2.714	1.116	1.000	4.333
	Int.	17	11	2.824	1.061	1.000	5.000
Teacher Performance Avoidance Goal	Control	14	12	2.750	1.056	1.000	5.000
	Int.	18	10	2.542	1.116	1.000	5.000
Mastery Classroom Goal	Control	14	12	4.150	0.625	3.000	5.000
	Int.	18	10	3.565	0.915	1.000	4.667
Performance Approach Classroom Goal	Control	14	12	3.429	1.049	1.000	4.667
	Int.	18	10	2.852	1.030	1.000	5.000
Performance Avoidance Classroom Goal	Control	14	12	2.505	0.853	1.400	4.200
	Int.	18	10	2.539	0.938	1.000	4.000

Note. C = Control, I = Intervention

4.3.2.2 Other Motivational Variables

Scales for competence perceptions, attitude toward music, parent support, and peer influence were tested for internal consistency using Cronbach's Alpha. Each of the scales had acceptable Cronbach's Alpha levels of > .70, other than peer influence. With the removal of one item ("My friends tend to not put any effort into their music lessons") the Cronbach's Alpha score improved to α = .694, which was still below the commonly accepted level of .70, though it was decided to keep this scale whilst interpreting results with caution, as they were primarily for exploratory purposes.

Table 4.13

Independent Samples T *Test Between Groups for Teacher Achievement Goals and Classroom Goal Structure*

	T	*df*	*p*	Cohen's *d*	SE Cohen's *d*	95% CI for Cohen's *d* Lower	Upper
Teacher Mastery Goal	1.093	30	0.283	0.389	0.364	-0.319	1.092
Teacher Performance Approach Goal	-0.279	29	0.782	-0.101	0.361	-0.808	0.608
Teacher Performance Avoidance Goal	0.536	30	0.596	0.191	0.358	-0.511	0.890
Mastery Classroom Goal	2.047	30	0.049	0.730	0.382	0.002	1.446
Performance Approach Classroom Goal	1.558	30	0.130	0.555	0.371	-0.162	1.263
Performance Avoidance Classroom Goal	-0.106	30	0.916	-0.038	0.356	-0.736	0.661

Figure 4.4

Difference in Mean Scores for Mastery Classroom Goal Structure by Group
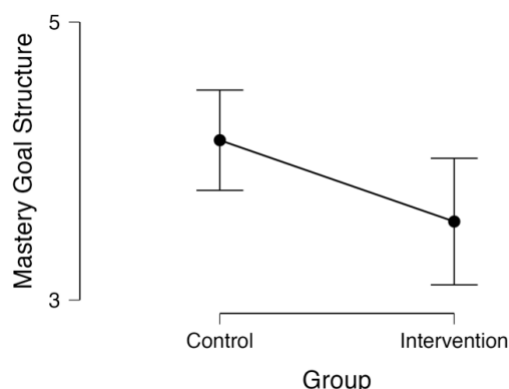
Mean scores for each of these scales were calculated and are presented in Table 4.14, by group. For the same reason as perceptions of teacher goals and classroom goal structure, there were quite a lot of missing data for these items. The Shapiro-Wilk test indicated that the data for each of these variables were normally distributed.

An Independent Samples *t* test was run for each variable to test for any significant differences between groups for each of the variables of competence perceptions, attitude toward music, parent support, and peer influence. Whilst the mean scores for competence perceptions and attitude to music appeared to be noticeably lower for the intervention group than the control group, the independent samples *t* test found no significant differences between groups. There were moderate effect sizes for competence perceptions and attitude to music, with pupils in the control group reporting higher means for both factors. Results are presented in Table 4.15.

Spearman's Rank correlations were carried out between each of the variables. For achievement goals, the post-intervention results were used as these were collected at a similar time point to the rest of the data. Correlations are shown in Table 4.16.

Independent Samples T tests were also run for each variable to test for group differences for gender, special educational need status (SEN) or pupil premium eligibility. As some of the variables had non-normal distributions, the non-parametric Mann-Whitney U test was used. There were no significant group differences for SEN Status or Pupil Premium Eligibility for any of the variables. There were significant group differences for gender for the Performance Goal (pre-test), Mastery-Approach Goal (pre- and post-test), and Mastery-Avoidance Goal (post-test). Mean scores were higher for female pupils for all these variables. Results from the Mann-Whitney U test are presented in Table 4.17 and mean scores by gender for the four significant variables in Table 4.18.

Table 4.14

Means for Other Motivational Variables by Group

		Valid	Missing	Mean	Std. Dev.	Min.	Max.
Competence Perceptions	Control	14	12	3.518	1.063	1.000	4.750
	Int.	18	10	2.792	1.258	1.000	5.000
Attitude to Music	Control	14	12	3.060	0.937	1.833	4.500
	Int.	17	11	2.575	1.030	1.000	4.000
Parental Encouragement	Control	14	12	2.886	1.001	1.000	4.600
	Int.	17	11	2.847	1.254	1.000	5.000
Musical Peers	Control	14	12	2.810	0.922	1.333	4.000
	Int.	17	11	3.078	1.103	1.000	5.000

Table 4.15

Independent Samples T *Test Between Group for Other Motivational Variables*

	t	df	p	Cohen's d	SE Cohen's d	95% CI for Cohen's d Lower	Upper
Competence Perceptions	1.731	30	0.094	0.617	0.375	-0.104	1.327
Attitude to Music	1.358	29	0.185	0.490	0.373	-0.232	1.204
Parent Support	0.093	29	0.926	0.034	0.361	-0.674	0.741
Peer Influence	-0.727	29	0.473	-0.262	0.364	-0.971	0.451

Table 4.16

Spearman's Correlations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Performance Goal	—												
2. Mastery Approach Goal	0.448**	—											
3. Mastery Avoidance Goal	0.583***	0.816***	—										
4. Teacher Mastery Goal	0.181	0.222	0.126	—									
5. Teacher Perf. Approach Goal	0.305	0.126	0.175	-0.063	—								
6. Teacher Perf. Avoidance Goal	0.418*	-0.011	0.061	0.111	0.462**	—							
7. Mastery Goal Structure	0.166	0.185	0.077	0.810***	-0.053	0.277	—						
8. Perf. Approach Goal Structure	0.361*	0.022	-0.015	0.244	0.212	0.732***	0.476**	—					
9. Perf. Avoidance Goal Structure	0.460**	0.061	0.227	-0.145	0.546**	0.800***	0.005	0.588***	—				
10. Competence Perceptions	0.445*	0.438*	0.296	0.631***	0.085	0.351	0.685***	0.331	0.147	—			
11. Attitude to Music	0.347	0.411*	0.232	0.401*	0.179	0.115	0.366*	0.125	-0.011	0.708***	—		

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
12. Parent Support	0.339	0.301	0.090	0.511**	0.065	0.336	0.628***	0.379	0.223	0.727***	0.481**	—	
13. Musical Peers	0.441*	0.549**	0.300	0.347	0.235	0.267	0.370*	0.332	0.211	0.576***	0.489**	0.638***	—

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4.17

Independent Samples T test between Gender for all Motivation Variables

	W	*p*	Rank-Biserial Correlation	SE Rank-Biserial Correlation	95% CI for Rank-Biserial Correlation Lower	Upper
Performance Goal Pre-int.	398.5	0.017	0.406	0.168	0.097	0.643
Mastery Approach Goal Pre-int.	399.0	0.016	0.407	0.168	0.100	0.644
Mastery Avoidance Goal Pre-int.	359.5	0.115	0.268	0.168	-0.058	0.542
Performance Goal Post-int.	362.0	0.194	0.219	0.166	-0.105	0.501
Mastery Approach Goal Post-int.	492.5	< .001	0.658	0.166	0.431	0.807
Mastery Avoidance Goal Post-int.	393.0	0.001	0.572	0.173	0.298	0.759
Teacher Mastery	124.0	0.909	-0.027	0.205	-0.409	0.362
Teacher Performance Approach	89.5	0.233	-0.254	0.208	-0.587	0.152
Teacher Performance Avoidance	106.0	0.426	-0.169	0.205	-0.521	0.232
Mastery Structure	117.5	0.719	-0.078	0.205	-0.451	0.317
Performance Approach Structure	110.5	0.531	-0.133	0.205	-0.494	0.266
Performance Avoidance Structure	136.500	0.747	0.071	0.205	-0.324	0.444
Competence Perceptions	131.000	0.909	0.027	0.205	-0.362	0.409
Attitude to Music	115.500	0.874	-0.037	0.208	-0.422	0.359
Parent Support	126.000	0.827	0.050	0.208	-0.348	0.433
Peer Influence	167.000	0.064	0.392	0.208	5.705×10^{-4}	0.679

Notes. Mann-Whitney U test. For the Mann-Whitney test, effect size is given by the rank biserial correlation.

Table 4.18

Mean Scores by Gender for Achievement Goals

	Group	*N*	Mean	*SD*	*SE*	Coefficient of variation
Performance Goal Pre-Test	Female	21	3.603	0.938	0.205	0.260
	Male	27	3.037	0.861	0.166	0.284
Mastery Approach Pre-Test	Female	21	4.506	0.354	0.077	0.079
	Male	27	4.062	0.660	0.127	0.163
Mastery Approach Post Test	Female	22	4.614	0.461	0.098	0.100
	Male	27	3.883	0.726	0.140	0.187
Mastery Avoidance Post Test	Female	20	4.128	0.552	0.123	0.134
	Male	25	3.597	0.476	0.095	0.132

Note. Only variables with significant group differences are shown.

4.4   Discussion

4.4.1   *What are the achievement goals of pupils receiving whole class instrumental tuition?*

Overall, in both the intervention and control group, pupils had more of a tendency towards mastery goals than performance goals. Mastery-approach goals were also higher than mastery-avoidance goals with both groups of pupils. This is encouraging as it indicates pupils in these classes were more motivated to strive towards success rather than avoid failure. It is possible that the school's approach to teaching instruments in whole class ensemble settings might have influenced pupils' achievement goals on a more subconscious level. Teaching the music curriculum in this way by emphasising instrumental learning promotes the view within this school context that skill development and practice is important, and learning is a gradual process, which overall is more congruent with mastery rather than performance goals. This is supported by research from O'Neill (2011) who found incremental views of ability, closely associated with mastery goals (Dweck, 2000), were more common for children who had experienced learning to play an instrument. The value placed on instrumental learning for all learners in the school through the whole class ensemble teaching programme, rather than instrumental lessons being optional, may have impacted the overall goal tendencies of pupils in this school who see musical learning and skill development as important. Similar patterns of achievement goals have been found in other research in which mastery goals were also the most prevalent amongst school-aged instrumental learners (Miksza, 2009b; Miksza et al., 2016; Ng, 2017).

One of the main aims of this thesis was to apply the more recent 3 x 2 achievement goal model (Elliot et al., 2011) to the context of musical learning, as previous research had either used the trichotomous or 2 x 2 models. Scales were adapted from Elliot et al.'s (2011) original research so they were relevant for the context of instrumental learning. Unfortunately, tests of internal consistency and exploratory factor analysis indicated there was a low level of internal consistency for task-approach, task-avoidance, and other-avoidance goals, and therefore it was not possible to reliably gather any data regarding overall levels for each goal in the 3 x 2 model. Factor analysis indicated a trichotomous goal model was the most appropriate, comprising performance, mastery-approach, and mastery-avoidance goals. This was different to previous achievement research employing trichotomous models, as traditionally researchers categorised achievement goals into mastery, performance-approach and performance-avoidance (Lacaille et al., 2005; Nielsen, 2008; Smith, 2005). The three-goal model implied by the data in the present research was unexpected, and more scale development is required to fully test the 3 x 2 model in music learning contexts.

4.4.2   *Which teaching strategies are effective in promoting mastery goals in the music classroom?*

The second research question in this study aimed to evaluate the effectiveness of different teaching strategies in promoting a mastery goal. Analysis of the pupil survey data indicated that the intended effect of the teaching intervention was not achieved. Pupil perceptions of the classroom goal structure as well as perceptions of the teacher's achievement goals showed that pupils in the control group perceived higher mastery goals than the intervention group; this was opposite to the expected result. Perceptions of the mastery goal structure in the control group were significantly higher than that of the intervention group after the intervention took place.

This finding was supported by analysis of the video observations. Despite the planning and delivery of teaching approaches designed to foster a mastery goal, in the different classroom layout, grouping structure, task design and incorporation of pupil choice, the overall perception of the goal structure of the intervention classroom was that of a performance goal. The performance goal was communicated implicitly by the teacher with the intervention group, with an emphasis on correct violin playing and time pressures, rather than the learning process. This has important implications for teachers designing classroom approaches to foster a mastery goal. Goal messages are likely to be more embedded in the classroom experience, rather than changeable using 'quick fixes'. Anderman et al. (2002) support this conclusion, noting "it is the nuances of practice, rather than more simply whether or not practices are present, that contribute to students' perceptions" (p. 273). Additionally, it seemed as if the higher mastery goal structure of the control group classroom had

been established over a longer timeframe than the ten-week intervention period. Indeed, results showed little change over time for any of the achievement goals with each group, suggesting the classroom goal structures may have been established long before the intervention took place. This is possibly a result of the school's approach to whole class ensemble teaching which may have subconsciously affected participants' perception of goal emphases in the wider school environment, due to the emphasis placed by the school on skill development in music through instrumental learning.

Whilst the intervention design did not have the intended impact on the achievement goals of participants, pupils in the control group perceived a stronger mastery goal structure, and a range of teaching strategies with this class appeared to be more effective in promoting this goal structure. With the control group, more emphasis was given to the process of improvement, rather than performing pieces correctly in the lesson. Pupils were praised for using specific learning strategies, and mistakes were considered as normal, with pupils given ample opportunity to improve, as there seemed to be less time pressures in the lesson. Feedback given by the teacher to pupils in this class was personalised, specific, and focused on improvement. Pupils predominantly worked individually in this class, progressing at their own rate. These implicit messages communicated throughout the lesson fit with classroom climate dimensions proposed by Ames and Archer (1988a). Hruska's (2011) recommendations for mastery goal promotion in music classrooms might not be suitable for use with beginner instrumentalists. For example, small group work and pupil choice was detrimental to pupil progress in the present study. This view is supported by Anderman et al. (2002), who argue that not all aspects of the TARGET instructional framework are necessary to establish mastery goal climates, and some teaching practices may be more or less relevant in different contexts.

4.4.3   Does a mastery teaching style have a measurable impact on the achievement goals of instrumental learners?

There were no significant changes in the achievement goals of pupils over time in either the control or intervention group. This was expected considering the teaching intervention did not have the desired impact on pupil perceptions of the classroom goal structure or teacher goals. Since the control group classroom had a more perceptible mastery goal structure according to participants, it was worth considering whether this might be linked to the reported achievement goals of pupils in this class. Whilst no significant group differences were found in the data analysis, there did appear to be a pattern in the differences between both groups. The intervention group reported a higher performance goal, whereas the control group reported higher mastery-approach and mastery-avoidance goals. Although the effect size was only small, this pattern between groups indicates there

may be some link between the classroom goal structure and the achievement goals adopted by individual instrumental learners.

This pattern was also evident when looking at the correlations between different variables. For the sample as a whole, the pupil performance goal had significant and moderate correlations with perceptions of the teacher performance-avoidance goal and performance approach and avoidance classroom goal structures. Whilst correlations only indicate a possible association between variables, it is reasonable to suggest there may be a link between performance goal-related teacher messages in the classroom and instrumental learners' adoption of performance goals. There were no links between self-reported mastery goals and perceptions of the teacher or classroom goal orientations.

Although there are some indications that there may be a relationship between teaching style and achievement goals, it is clear there are other factors impacting the achievement goals of instrumental learners. Instead of being influenced by short-term teaching interventions, achievement goals are likely to be influenced by longer-term, more sustained influences. Linking to Vallerand's (1997) hierarchy of motivation, achievement goals may function at the higher contextual level, whilst short-term teaching strategies function as situational influences. Vallerand suggests that situational influences may only impact contextual motivation if experienced over a longer period. This may explain why in the video observations, the implicit messages in the style of teacher communication appeared to be more powerful in impacting goal perceptions than temporary task design. In other research, a change in both mastery and performance goals was reported as a result of teaching intervention, but this intervention took place over a much longer period of nine months (O'Keefe et al., 2013). In addition, in this study following the intervention performance goals reverted to their previous levels, indicating that performance goal orientations may be influenced by other factors outside the teaching environment, whereas teaching style might only result in temporary changes to motivation (O'Keefe et al., 2013). Achievement goal theorists have suggested that goal orientations may be influenced by more permanent beliefs such as theories of intelligence (Dweck, 1986), competence expectancies (Elliot & Church, 1997), need for achievement and fear of failure (Elliot & McGregor, 2001). Longer-term more stable influences may therefore be more powerful in influencing achievement goals than the role of the teacher.

4.4.4   *What else might influence the achievement goals of instrumental learners in the music classroom?*

Four other potential influences on achievement goals were explored aside from the role of the teacher. Links with competence perceptions, attitudes to music, parent support, and peer

influence were explored. There were no significant differences between the control and intervention groups for any of these variables, though there were moderate effect sizes for both competence perceptions and attitudes to music. For both these variables, the control group reported higher mean scores than the intervention group. Effect sizes may indicate that a relationship between factors might be worth exploring even with a non-significant result, as a small sample size might mean the study is underpowered (Miksza & Elpus, 2018; Visentin et al., 2020). These moderate effect sizes may indicate that competence perceptions and attitudes to music are worth exploring further in relation to achievement goals.

Correlation results for the full sample also highlighted links between competence perceptions, attitude to music and achievement goals. Competence perceptions were moderately and positively correlated with performance and mastery-approach goals, and attitude to music was moderately and positively correlated with mastery-approach goals. Any potential causal relationship between these factors is not clear, however researchers in wider educational contexts have found that competence expectancies and perceived class engagement led to the adoption of specific achievement goals (Elliot & McGregor, 2001; Elliot & Church, 1997). On the other hand, research in a rehearsal setting found that manipulating conductor messages in a rehearsal to reflect a mastery goal orientation increased both individual and collective self-efficacy beliefs (Matthews & Kitsantas, 2013), and so there may be a bi-directional relationship between achievement goals and competence perceptions. In the present study there were correlations between competence perceptions and attitudes to music, and perceptions of the classroom goal structure and teacher goals, perhaps indicating a mastery teaching approach could influence the competence perceptions and attitudes to music of instrumental learners.

Another factor which may influence the adoption of certain achievement goals is gender; in this study female pupils reported higher mastery-approach, mastery-avoidance and performance goals than male pupils in pre- and post-intervention testing. The reasoning for this is unclear, and previous achievement goal research has not found any significant interactions between gender and achievement goal adoption (e.g. Miksza, 2009; Schmidt, 2005). In wider music motivation research gender has not been commonly highlighted as a significant factor in tendencies to different motivational patterns (e.g. Hallam et al., 2020; Yoo, 2021). One study did find that female students considered music to be more important and useful than male students (McPherson et al., 2015). The higher scores for all three achievement goal orientations may indicate that female pupils have stronger overall motivational tendencies, rather than specific tendencies towards achievement goals.

Pupil attitudes appeared to have a strong influence on the overall classroom achievement goal climate, observed with both intervention and control groups. Both observations highlighted

particular individuals or groups of pupils who impacted the engagement and short-term goal adoption of their peers. In the quantitative data, peer influence had moderate significant correlations with both performance and mastery-approach goals; the more pupils perceived that they had hard-working musical peers, the more likely they were to adopt both performance and mastery-approach goals. There was no clear difference in this pattern between performance or mastery goals, therefore the perception of musical peers might influence instrumental learners to adopt both performance and mastery goals. The influence of musical peers may impact the strength of goal adoption, or indeed the tendency to strive towards a goal in the first place, rather than any specific achievement goal orientation. Positive peer relationships have been found to influence the adoption of 'personal-best' goals in another educational context, however this study did not examine possible differences between personal-best goals (self goals) and other goal orientations (Collie et al., 2016). Nevertheless, it is apparent from both the pupil self-report data and the observation analyses in the present research that peer relationships and perceptions of peers may have a role to play in the music classroom goal climate and instrumental learners' pursuit of achievement goals.

4.5   Conclusions

Overall, though the teaching intervention designed in this study did not have the intended impact of increasing the mastery goal orientations of the young musicians in the intervention class, the results do indicate that certain teaching styles were more effective than others in influencing the goal climate of each music classroom in this study. Changes to lesson task design and in-class grouping structures were not effective in altering the goal orientations of the beginner violinists in this study but there was some indication that teacher messaging within the classroom might have influenced these learners' goals over a longer period of time. Implicit teacher messages regarding autonomy, improvement, and learning strategies were more noticeable in the control group classroom and may have influenced the classroom achievement goal climate. Whilst the teaching style with this group of learners may have influenced their perceptions of the teacher goal and classroom goal structure, these learners' own achievement goal orientations remained stable over time, suggesting other factors might have more of an influence on the achievement goals of beginner instrumentalists. There was some indication that the achievement goals of the beginner violinists in this study might be linked to their competence perceptions and attitudes to musical learning, though more research is needed to test whether these relationships might be causal in nature. Further research is recommended with a larger sample of pupils of differing abilities, including those in different teaching settings beyond the whole class ensemble teaching setting, to determine significance and inference to other groups of young musicians.

4.5.1   Implications for Music Teachers

Whilst the intervention itself was unsuccessful, there are some implications that might be drawn from this study for music educators teaching in similar contexts who want to influence the classroom goal climate. Music teachers working in whole class ensemble settings with beginner instrumental learners should carefully consider how their communication style might emphasise goal messages in implicit ways. Learners in the control group appeared to make more progress when they were given specific individualised feedback rather than general comments about performance quality. Music teachers in whole class ensemble settings might therefore consider giving sufficient time in lessons for individual practice to support skill development. Beginner instrumental learners might find it more difficult to work independently in small groups, suggesting planned group work might not be suitable until instrumental learners have reached a higher standard on their instrument. The results of this study suggested music teachers might have some impact on beginner instrumentalists' competence perceptions and attitudes towards learning music, so music teachers in similar settings should aim to praise pupils' progress and establish a positive learning environment where learning an instrument is seen as important and valuable.

4.5.2   Limitations

There were some limitations to the design of this study. Multiple video observations might have provided a clearer picture of the consistency of goal messages over time with each class, allowing for any changes in teaching style from lesson to lesson to be evaluated. Different approaches to camera placement and recording might have also allowed for more teacher-pupil dialogue to be captured throughout the lesson, as only certain areas of both classrooms were clear in the videos, limiting the capacity for analysis of the attitudes of a greater number of pupils. Extending the study across a longer time period might also have revealed any longer-term effects of teaching style on the achievement goals of learners. Data on pupil perceptions of teacher goals and classroom goal structures could also have been collected prior to the intervention to test for changes over time. Although efforts were made to reduce bias as much as possible in the analysis of the video observation data, there is always an element of researcher subjectivity which should be considered when drawing conclusions about the qualitative data from this study.

Additionally, though there were practical advantages in carrying out this study in my own school context, this does have implications for the external validity of the research. The recommendations for music educators are limited to teachers in whole class ensemble teaching settings due to the specific context of this study, and as whole class ensemble teaching approaches

are quite rare in secondary schools in the UK, this limits the transferability of the findings. The whole class ensemble teaching model may have had an influence on learners' subconscious beliefs about the value of music learning and their goal orientations, meaning these learners' perceptions of goal orientations within the teaching environment might be different to other learning contexts in the UK.

There were significant practical challenges in carrying out the teaching interventions; naturally when conducting research in real-life educational settings, varying factors can affect the fidelity of the intervention in relation to the original research design. For example, with the intervention group, some behavioural challenges with pupils in this class may have reduced the emphasis that the teacher could place on pupil effort and might have been one reason why the intervention was unsuccessful in meeting its intended objectives. Carrying out the teaching interventions in a real-life classroom setting was an important aspect of this research which sought to measure the effectiveness of mastery teaching approaches in a whole class ensemble teaching setting with beginner instrumentalists. Therefore, these challenges were integral to the final analysis, though very specific to the research context, and so they cannot be generalised to other school settings with different groups of learners at different ability levels, or to instrumental learners receiving small group or individual instruction.

In relation to the pupil questionnaires, a further pilot of the revised achievement goal questionnaire to assess the factor structure would have allowed for further adaptations so the full 3 x 2 achievement goal model was represented in the results, rather than the more limited 3-factor model of performance, mastery-approach and mastery-avoidance goals. There were also some issues with the content validity of the achievement goal scales, where the inclusion of the stem "my main goal is to" was not in accordance with the achievement goal measures used by Elliot et al. (2011). This issue was addressed in the subsequent studies.

4.5.3   Next Steps

This study was valuable in exploring the impact of the music teacher on the achievement goal orientations of beginner instrumental learners in whole class ensemble teaching settings. Other factors beyond teaching strategies may play a more important role in the achievement goal orientations of instrumental learners, and the findings from this study indicate that competence perceptions, attitudes to music and the influence of peers might be important in influencing beginner musicians' achievement goal orientations. The application of the 3 x 2 achievement goal model to music learning contexts should be tested further due to the unexpected factor structure of the model in the present study. The following study will therefore probe the implied relationship between competence perceptions and achievement goals further, to determine the nature of the link

between these motivational dimensions, as well as explore what else might influence the competence perceptions and achievement goals of adolescent instrumental learners. Additionally, further revisions will be made to the achievement goal scales to improve their reliability.

5   Study 2

5.1   Introduction and Rationale

The results from Study 1 indicated there may have been other influences on the achievement goals of these instrumental learners in the whole class ensemble teaching setting, beyond the strategies employed by the music teacher. Whilst there was a connection between learners' perceptions of the goal climate in the music classroom and their personal goal orientations, this did not appear to be influenced directly by the teaching intervention. Significant relationships were found between personal achievement goal orientations and competence perceptions, attitudes to music, and peer influence. These three factors may be interrelated, contributing both to the goal climate of the music classroom, as well as instrumental learners' own goal orientations. Competence perceptions are closely related to self-efficacy beliefs, which represent learner expectations for success in a particular task. The four sources of self-efficacy proposed by Bandura (1997) are aligned with some of the classroom-based influences observed in Study 1, particularly social persuasion, where the teacher might have exerted an influence on learners' competence perceptions. It is possible that competence perceptions and self-efficacy might be a key influence on the achievement goal orientations of instrumental learners. It might also therefore be useful to broaden the scope of the present research to examine influences on self-efficacy in this research context. This study focused on self-efficacy rather than broader musical competence beliefs, as there have been previous studies linking self-efficacy to achievement goals in music contexts which can be built upon in the present research (e.g. Matthews & Kitsantas, 2013).

5.1.1   *Research on Self-Efficacy in Instrumental Learning*

Self-efficacy has been defined as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Relating to instrumental learning, examples of self-efficacy could include knowing that one has the correct technique to perform a piece of music, being able to play it at the correct tempo, or to be able to perform from memory. Self-efficacy is important in relation to instrumental learning because self-efficacy beliefs can influence the amount of effort, persistence and resilience learners exert on a particular task (Bandura, 1997). Researchers have found that self-efficacy can predict instrumental learners' performance achievement (Clark, 2010; Hewitt, 2015; McCormick & McPherson, 2003; McPherson & McCormick, 2006), practice behaviours (Clark, 2010), and performance anxiety (Bersh, 2022; González et al., 2018). Self-efficacy beliefs have also been linked to achievement goals in a number of studies, both in wider educational contexts and music learning settings.

Achievement goal orientations may be an important determinant of self-efficacy beliefs. Bandura (1994) argues that classroom goal structures can impact the self-efficacy beliefs of learners; classrooms that emphasise social comparison might lead to a higher likelihood of negative peer comparison. A causal link between achievement goals and self-efficacy was confirmed in research by Phillips and Gully (1997) who found the achievement goal orientations of undergraduate psychology students influenced their self-efficacy beliefs. The mastery goal orientation led to higher self-efficacy beliefs whereas the performance goal orientation led to lower self-efficacy beliefs. Adopting a mastery goal may make people more likely to interpret past experiences in a positive light and de-emphasise peer comparison, thus leading to higher self-efficacy for future similar tasks (Phillips & Gully, 1997).

Other researchers have examined the opposite causal relationship, that self-efficacy and competence beliefs may influence the achievement goals that learners adopt. Self-efficacy beliefs may be particularly important in influencing learners to choose between approach and avoidance goals. One key premise of achievement goal theorists is that higher competence expectancies lead to mastery and performance-approach goals and reduce the likelihood of adopting a performance-avoidance goal (Elliot & Church, 1997). Lower competence expectancies can lead to a desire to avoid future failure because learners with lower competence beliefs might perceive failure to be more likely. In comparison, learners with higher competence expectancies might have a more positive mindset, thus orienting them towards approach goals. This pattern was confirmed in research with secondary school students in Norway, where higher self-efficacy was found to influence the adoption of mastery and performance-approach goals (Diseth et al., 2012).

5.1.1.1 Studies on Self-Efficacy and Achievement Goals in Music Contexts

Links between self-efficacy and achievement goal orientations have also been found in the music education domain. Researchers exploring the self-efficacy beliefs of instrumental learners aged 11-14 found that learners with higher self-efficacy were more likely to attribute success to effort than ability (Martin, 2012). Though this study did not measure achievement goals, effort and ability attributions have been closely linked to mastery and performance achievement goal orientations (Dweck & Leggett, 1988). Martin's (2012) research therefore suggests that instrumental learners who have higher self-efficacy beliefs might be more likely to adopt mastery goals, valuing effort over ability perceptions.

Other researchers have explored the link between achievement goals and self-efficacy in more experimental studies. Matthews and Kitsantas (2013) manipulated the goal structure of a rehearsal environment, finding that university-aged instrumentalists in a mastery goal rehearsal climate subsequently reported higher individual and collective self-efficacy beliefs. This finding

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confirms Bandura's (1997) theory that goal structures in learning environments are an important influence on achievement goals, though there was no pre-testing of self-efficacy beliefs, and so any conclusions relating to causal relationships between achievement goal rehearsal structures and self-efficacy are not definite. Rehearsal settings can also influence the self-efficacy beliefs of younger musicians. Hendricks (2014) measured the self-efficacy beliefs of high school instrumentalists in the USA, while they were partaking in a series of orchestral rehearsals. Participants were allocated to either a high-performing competitive ensemble, or a lower-performing but more socially cohesive ensemble. Girls in the socially cohesive ensemble reported a more marked increase in self-efficacy than those in the more competitive environment, as shown through quantitative survey data. Interviews with these participants confirmed that the less-competitive environment may have positively impacted their self-efficacy beliefs (Hendricks, 2014). There certainly appears to be a link between achievement goal climates in the ensemble setting and self-efficacy, therefore it is worth exploring whether this link is also apparent in other instrumental learning contexts.

5.1.1.2   Sources of Self-Efficacy

As well as achievement goal structures, various other influences on self-efficacy have been evaluated in music learning contexts. Primarily, the four sources of self-efficacy identified by Bandura (1997) have been explored: mastery experience, vicarious experience, social persuasion, and physiological and affective states. Researchers have consistently found that mastery experiences have the greatest influence on self-efficacy, both from quantitative self-report data (Zelenak, 2015) as well as from qualitative interview studies (Hendricks, 2014; Martin, 2012). Experiencing success is an important factor in determining learners' self-efficacy for future performances. Social persuasion is also important, and this might come from parents, teachers, or peers (Martin, 2012; Zelenak, 2015). Martin (2012) found that peer influence was more influential than parent and teacher support for instrumental learners aged 11-14, and that discouragement from peers was particularly prevalent for those with low self-efficacy. This might be particularly pertinent for learners with a performance goal orientation, who are more likely to compare their musical ability to their peers'. In Study 1 of this thesis, peer influence also might have been influential in impacting the goal climate of the music classroom, and so the link between achievement goal orientation and self-efficacy might have important implications for instrumental learners' overall motivation.

5.1.2   Research Questions

This study aimed to evaluate the possible link between achievement goals and self-efficacy by using quantitative survey methods. Though there were suggestions in Study 1 that learners' achievement goal orientations and competence beliefs might be related, this link was only tentative

and was yet to be fully examined empirically. Also, achievement goals and self-efficacy may share several influences, as the factors which may have influenced the achievement goals of learners in Study 1 have also been shown to influence young musicians' self-efficacy beliefs, such as peer comparison and teacher encouragement (Hendricks, 2014; Martin, 2012). Neither achievement goals nor self-efficacy have been examined fully in UK music education settings, and so research linking these aspects of motivation will also be beneficial for the expansion of the UK music education community's understanding of adolescent instrumental learners' motivation.

In summary, Study 2 sought to more clearly define the relationship between self-efficacy and achievement goals as well as examining the influences on both these aspects of musical motivation. This study built on the preliminary findings of Study 1 by using a more precise measure of self-efficacy rather than broader musical competence beliefs. In line with the broader research aims of this thesis, the main objective of this study was to gather further evidence to answer the second research question, "What influences adolescent instrumental learners to adopt different achievement goals?". In this context, self-efficacy is explored as a possible influence on achievement goals, alongside factors which might influence both self-efficacy and achievement goals. There were two principal research questions for this study:

1. What is the relationship between the self-efficacy and achievement goals of adolescent instrumental learners?
2. What are the influences on self-efficacy and achievement goals of adolescent instrumental learners?

One additional important intention of this study was to broaden the sample of instrumental learners to include those not just receiving whole class ensemble tuition, like in Study 1. As whole class ensemble teaching approaches are particularly rare in UK secondary schools, it was important to include the experiences of learners receiving optional individual and small group instrumental tuition, so the research context and findings was more reflective of the experiences of adolescent instrumental learners across the UK. Broadening the sample in this respect would also result in an increased age and ability range of participants, compared to Study 1, in which all participants were aged 12-13 and most were beginners on their instruments. This would allow for the comparison of instrumental learners' motivational beliefs across different ability levels, ages, and tuition settings.

It was hypothesised that self-efficacy would be positively associated with approach goals, namely self-approach, task-approach and other-approach goals, and that self-efficacy would be negatively associated with other-avoidance goals, in line with findings from achievement goal theory

research in other educational settings (Elliot & Church, 1997). The relationship between self- and task-avoidance goals and self-efficacy was more difficult to predict as these goal dimensions of the 3 x 2 have yet to be tested in relation to self-efficacy, though the avoidance dimensions of these goals would suggest that they are likely to be negatively associated with self-efficacy. With regard to the influences on self-efficacy and achievement goals, following the findings of Study 1, it was hypothesised that both indicators of motivation would be influenced by peer relationships and attitudes to music. The four sources of self-efficacy proposed by Bandura (1997), mastery experience, vicarious experience, social persuasion, and physiological and affective states were also likely to influence the self-efficacy of adolescent instrumental learners, in line with previous music education research.

5.2   Method

5.2.1   *Study Design*

A mixed methods research design was employed for this study. Survey methods allowed for the collection of data from a larger and broader sample of participants than Study 1 by distributing surveys to pupils in all year groups in the school. Collecting survey data alone would not allow for nuanced consideration of the relationship between achievement goals and self-efficacy, therefore interviews were also used to enrich the survey findings by understanding participants' lived experiences, similar to the work of previous researchers on self-efficacy in musical learning who also employed mixed methods designs (Hendricks, 2014; Martin, 2012).

5.2.2   *Participants*

Participants were recruited from the same school as Study 1, a state-funded secondary school in the North-East of England. A total of 90 pupils responded to the questionnaire, aged 11-17, with a mean age of 12. Participants were recruited through their instrumental teachers, and received a mixture of individual, small group and whole class tuition. The majority of participants were from Year 7 and 8, and received instrumental tuition as part of the school's whole class ensemble teaching model. This is reflected in the data which shows that most participants had been learning their instrument for two years or less. Whilst the aim of the study was to recruit a broader sample of adolescent instrumental learners not just receiving whole class ensemble tuition, the make-up of the sample represented the overall population of instrumental learners in the school, as most children learning an instrument in the school were part of the whole class ensemble tuition programme, and the number of instrumental learners decreased in Years 9-13. Demographic data are shown in Table 5.1.

For the follow up interview study, a smaller sub-sample of participants were selected, based on their self-efficacy scores. This sub-sample consisted of 10 participants, and demographic data is shown in Table 5.2.

5.2.3   Procedure

The survey was completed by participants using Google Forms, with an online link shared with pupils by their instrumental or classroom music teacher. Pupils were given an information sheet about the study and told that their participation in the research was optional. Participants then completed the survey online. The first section of the online survey contained information about the study, followed by a series of four short questions to obtain ethical consent. This was followed by two further sections, the first relating to achievement goal orientations, and the second relating to self-efficacy. Finally, the survey included an item for pupils to indicate whether they may be willing to participate in a follow-up interview in the second phase of the study. The survey was anticipated to take no longer than 10 minutes for participants to complete. Consent was provided by the headteacher of the school for the questionnaires to be administered, and by parents/carers for the interview participants.

Initial analysis of the responses was undertaken to identify a smaller sub-sample of participants for the follow-up interview study, representing those with the highest and lowest self-efficacy beliefs. Martin (2012) used the same sampling procedure in her research on the self-efficacy beliefs of middle school band students. This maximum variation sampling method was advantageous for this research as it was more likely that the two more extreme groups would differ in terms of their experiences of the different influences on self-efficacy and any links between their self-efficacy beliefs and achievement goals might be more apparent. Whilst this may have led to some bias in responses as instrumental learners with self-efficacy beliefs closer to the average were not represented, this method aimed to provide data which would illuminate any links between self-efficacy and achievement goals, which could later be tested with larger and broader samples. Patton (2015) recommends the use of maximum variation sampling procedures when one of the aims of a study is to document diversity between two populations, in this case two groups of learners with different self-efficacy beliefs.

Participants with the 15 highest and 15 lowest self-efficacy scores were identified, who were then selected or eliminated based whether they indicated they would be willing to participate in a follow up interview. Twenty-two possible interview participants were identified. These pupils were provided with information and a consent sheet to take home for parental consent. Consent was received for ten pupils. The interviews took place before the school day in order not to disrupt other

activities in the school day.   Audio recordings were made during the interviews using an iPad.

Participants were given an opportunity to ask any further questions about the study before the

recording took place, and the interview length ranged from 6-10 minutes. Interviews were

transcribed using NVivo software for analysis. All participant and other names were pseudonymised

in the transcription process.

5.2.4   Measurement Instruments

5.2.4.1   Questionnaires

Data on achievement goals and self-efficacy were collected using a self-report questionnaire

consisting of two sections. The achievement goal items used in Study 1 were refined due to the poor

internal consistency of the scales used in Study 1, with reference to Elliot et al.'s (2011) original 3 x 2

achievement goal model, as well as other achievement goal scales used in the music domain (Smith,

2005).   Firstly, the stem "My main goal is to" was removed from each of the scale items as on

reflection this contradicted the accepted theory that learners can adopt multiple achievement goals

simultaneously (Harackiewicz et al., 2002; Senko & Tropiano, 2016). Additionally, the sample

represented a different population of instrumental learners, as it included pupils who had individual

and small group lessons, as well as those receiving whole class ensemble teaching. The wording of

some of the items was therefore changed to reflect the broader range of learning contexts of

participants in this study. Finally on reflection some of the items in the achievement goal scales for

Study 1 were considerably different to the original scales developed by Elliot and colleagues (2011),

perhaps contributing to the poor internal consistency of the scales, and so the scales in this study

were refined to reflect the original achievement goal definitions more closely. Comparisons between

the scale items used for each study, as well as with Elliot et al.'s (2011) original achievement goal

scale items, can be seen in Appendix C. Overall, this section of the questionnaire consisted of 18

items, each representing one of the six dimensions of achievement goals: task-approach, task-

avoidance, self-approach, self-avoidance, other-approach and other-avoidance. Items were rated on

a 5-point Likert scale.

Self-efficacy was measured using a 6-item scale adapted from Hendricks' (2014) measure of

self-efficacy. Participants were asked to identify an upcoming performance as a reference point

when responding to each of the scale items, as it is recommended that self-efficacy measures relate

to a specific performance situation (Bandura, 2006; Ritchie & Williamon, 2011). Items measured self-

efficacy beliefs in relation to various aspects of a performance, including technical accuracy,

expressive control, and impressing the audience. Items were rated on a 10-point Likert scale, in line

Table 5.1

Table of Participants

		Frequency (*n*)	Percent (%)
Gender[a]	Male	25	27.77
	Female	63	70.00
	Missing	2	2.22
	Total	*90*	*100*
Year Group	7	27	30.00
	8	53	58.88
	9	1	1.11
	10	3	3.33
	12	6	6.66
	Missing	0	0.00
	Total	*90*	*100*
Ethnicity	Asian	1	1.11
	Black	1	1.11
	British Asian	2	2.22
	Other Mixed	1	1.11
	White British	77	85.55
	White Eastern European	2	2.22
	Missing	6	6.66
	Total	*90*	*100*
EAL	EAL	3	3.33
	English first language	81	90.00
	Missing	6	6.66
	Total	*90*	*100*
Instrument Family	Woodwind	10	11.11
	Brass	19	20.00
	Strings	55	61.11
	Percussion	2	2.22
	Guitar	3	3.33
	Missing	2	2.22
	Total	*90*	*100*
Years learning instrument	1	23	25.55
	2	44	44.88
	3	5	5.55

		Frequency (*n*)	Percent (%)
	4	7	7.77
	5	2	2.22
	6	4	4.44
	7	0	0.00
	8	1	1.11
	9	3	3.33
	Missing	1	1.11
	Total	*90*	*100.0*
Lesson	Group	73	81.11
Type	Individual	17	18.88
	Missing	0	0.00
	Total	*90*	*100.0*

Note. [a]Gender is represented as a binary variable as this was reflective of this cohort in which no pupils identified as non-binary.

Table 5.2

Table of Participants for Sub-Sample

		Gender	Year Group	Instrument Family	Years Learning Instrument	Lesson Type
Low Self-Efficacy	Madison	Female	8	String	2	WCET
	Chris	Male	8	String	2	WCET
	Emma	Female	7	String	1	WCET
	Olivia	Female	8	String	2	WCET
	Hannah	Female	8	String	2	WCET
High Self-Efficacy	Emily	Female	8	String	2	WCET
	Jacob	Male	10	String	9	Small Group
	Michael	Male	7	Wind	1	WCET
	Joshua	Male	8	String	2	Individual
	Daniel	Male	7	String	1	WCET

with recommendations from Bandura (2006). Full measurement scales for achievement goals and self-efficacy in this study can be seen in Appendix D.

Demographic information including gender, year group (age), instrument, lesson type, number of years learning an instrument, and estimated amount of practice per week was also gathered.

5.2.4.2   Interviews

For the interviews, questions were adapted from Martin's (2012) measure of the four sources of self-efficacy with middle school band students, including items such as, "Can you think of someone who might have encouraged you as a musician?" (p. 51). Additional items were added to the interview schedule to gather information about participants' achievement goals, for example, "what would you say your primary goal is when playing your instrument?", as well as possible influences on these goals (e.g. "Do you think this goal has changed? Why?"). The interviews were semi-structured; participants were asked follow-up questions relating to the initial planned question prompts. A pilot interview was first conducted to check that the questions were accessible for secondary school pupils. One pupil who had returned the questionnaire during Phase 1 of the study and who had indicated they would be willing to take part in an interview was selected for the pilot study. This pupil was in Year 8 and therefore represented the average age of the participants in the study. The pilot interview participant was able to give answers to each of the questions indicating they were easy to understand. One question was removed from the interview schedule following the pilot study: "How important is music to you?". It was likely that participants' answers to this question might be influenced by the fact they were being interviewed by a music teacher from their own school and might not reliably reflect their value beliefs. All other questions were kept in the interview schedule. The full final interview schedule can be seen in Appendix E.

5.3   Results

5.3.1   Analysis of Survey Data

All survey responses were collated, and analysis was undertaken using JASP. Firstly, scales for achievement goals and self-efficacy were tested for internal consistency using Cronbach's Alpha. All scales were found to have acceptable levels of internal consistency with Cronbach's Alpha scores of α >.71 for each scale.

Mean scores for each scale were then calculated. The data were explored for outliers and one case was removed from the dataset as the participant had responded with the same scale score for every item. Descriptive statistics were then computed for each motivation variable and are presented in Table 5.3. Tests of normality were also carried out using the Shapiro-Wilk test. All

mean scores had non-normal distributions and were weighted towards higher scores. For achievement goals, the highest reported goal was the self-approach goal, followed by task-approach, self-avoidance, task-avoidance, other-avoidance and other-approach. Self-efficacy was measured on a 10-point Likert scale, explaining the higher mean score for self-efficacy.

Mean scores for the individual items of the self-efficacy scale were also calculated as they represented different aspects of performance self-efficacy. Table 5.4 shows mean scores for each item. The highest mean score related to pupils' confidence that they could play to the best of their ability, whereas the lowest concerned comparison with peers.

Descriptive statistics for self-reported practice behaviours were also calculated. Participants were asked to report on average how many hours of practice they completed per week. 56% of participants reported that they practised for 1 hour or less each week. 27% practised for between 1 and 2 hours per week, and 13% reported that they completed no independent practice. Self-reports of practice time may not always be reliable (Hallam et al., 2020), and as many participants in this sample were required to complete instrumental practice for homework, these figures indicate only possible trends that should be investigated further in subsequent studies.

Correlations were calculated to investigate associations between each of the variables. Spearman's Rank correlations were used as the data for achievement goals and self-efficacy were not normally distributed. Correlations are presented in Table 5.5. Significant moderate positive correlations were found between each of the achievement goals and self-efficacy, other than for task-avoidance and self-efficacy. The strongest correlation was between self-approach and self-efficacy (r = .445, p = <.001).

Independent samples t tests were also conducted to determine whether there were group differences in achievement goals and self-efficacy beliefs for gender and lesson type. The Mann-Whitney U test was used due to the non-normal distribution of data for achievement goals and self-efficacy. There were no significant group differences for gender.

There were significant differences between individual and group lesson types for the self-approach goal (p = <.01) and self-efficacy beliefs (p = 0.01). Pupils who had individual instrumental tuition reported a significantly higher self-approach goal as well as significantly higher self-efficacy beliefs than those who received group tuition. The effect sizes for each of the group differences, calculated using the rank-biserial correlation, were small. Statistics for lesson type are shown in Table 5.6.

The Kruskal Wallis-H test was used to determine whether there were group differences in achievement goals and self-efficacy beliefs by instrument type. There was a significant difference in the self-approach goal when comparing pupils by family of instrument played (X^2 = 13.637, p =

0.009). String players reported a much lower self-approach goal (*M* = 3.66) than pupils playing other instruments (*M* = 4.69). Group differences for instrument family were not significant for any of the other achievement goals or self-efficacy beliefs.

The Kruskal Wallis-H test was also used to check for group differences in achievement goals and self-efficacy for the number of years' experience on the instrument. There were no statistically significant differences in achievement goals by group. There was a statistically difference in self-efficacy based on the number of years played (X^2(7) = 15.168, *p* = .034), with a mean rank self-efficacy score of 34.71 for participants with two years' experience compared to the highest rank score of 67.00 for participants with both five and eight years' experience. The Kruskal Wallis-H test was also used to check for group differences in achievement goals and self-efficacy for EAL and non-EAL pupils. There were no statistically significant differences for any of these variables by EAL grouping.

Table 5.3

Descriptive Statistics for Achievement Goal and Self-Efficacy Scales

	Valid	Mean	Std. Deviation	Shapiro-Wilk	*P*-value of Shapiro-Wilk	Minimum	Maximum
Task-Approach	89	3.843	1.053	0.871	< .001	1.000	5.000
Task-Avoidance	89	3.483	1.056	0.933	< .001	1.000	5.000
Self-Approach	89	3.993	1.180	0.810	< .001	1.000	5.000
Self-Avoidance	89	3.547	1.046	0.942	< .001	1.000	5.000
Other-Approach	89	2.929	0.970	0.971	0.042	1.000	5.000
Other-Avoidance	89	3.049	0.922	0.968	0.028	1.000	5.000
Self-Efficacy	89	6.699	1.675	0.965	0.017	2.500	9.667

Table 5.4

Mean Scores for Self-Efficacy Items

	Valid	Mean	Std. Deviation	Min.	Max.
I am confident that I can perform my pieces with the correct fingerings, rhythms and tuning.	89	6.888	1.910	1.000	10.000
I am confident that I can perform with good interpretation of the dynamics, phrasing and style of the music.	89	6.303	1.939	1.000	10.000
I am confident that I can play to the very best of my ability.	89	7.528	2.034	1.000	10.000
I am confident that I can generally handle the challenges of the performance/exam.	89	6.955	2.078	2.000	10.000
I am confident that I can play in a way that will impress the examiner/teacher/audience.	89	6.551	1.815	1.000	10.000
I am confident that I can play at a level that is equal to the best student musicians in my year group.	89	5.966	2.600	1.000	10.000

Table 5.5

Spearman's Rank Correlations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Task-Approach	—									
2. Task-Avoidance	0.385***	—								
3. Self-Approach	0.195	0.511***	—							
4. Self-Avoidance	0.445***	0.825***	0.649***	—						
5. Other-Approach	0.302**	0.442***	0.413***	0.469***	—					
6. Other-Avoidance	0.303**	0.680***	0.434***	0.607***	0.765***	—				
7. Self-Efficacy	0.385***	0.195	0.445***	0.302**	0.303**	0.270*	—			
8. Year Group	0.158	0.077	0.211*	0.108	0.127	0.109	-0.032	—		
9. Years Played	0.184	0.081	0.287**	0.082	0.166	0.104	0.079	0.745***	—	
10. Practice Time	0.346***	0.182	0.466***	0.333**	0.190	0.115	0.423***	0.202	0.285**	—

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5.6

Mean Scores for Achievement Goals and Self-Efficacy by Lesson Type

	Group	*N*	Mean	*SD*	*SE*	Coefficient of variation
Task-Approach	Group	72	3.755	1.117	0.132	0.298
	Individual	17	4.216	0.612	0.148	0.145
Task-Avoidance	Group	72	3.468	1.062	0.125	0.306
	Individual	17	3.549	1.060	0.257	0.299
Self-Approach	Group	72	3.815	1.237	0.146	0.324
	Individual	17	4.745	0.344	0.083	0.073
Self-Avoidance	Group	72	3.449	1.076	0.127	0.312
	Individual	17	3.961	0.807	0.196	0.204
Other-Approach	Group	72	2.884	0.951	0.112	0.330
	Individual	17	3.118	1.054	0.256	0.338
Other-Avoidance	Group	72	3.000	0.912	0.108	0.304
	Individual	17	3.255	0.961	0.233	0.295
Self-Efficacy	Group	72	6.479	1.679	0.198	0.259
	Individual	17	7.627	1.334	0.324	0.175

5.3.2   Interview Analysis

Thematic analysis (Braun & Clarke, 2022) was employed to analyse the interview data. It was important for the second research question to remain open to the possibilities of other influences on self-efficacy, in addition to social persuasion, past experiences, vicarious modelling, and physiological and affective states (Bandura, 1997), therefore more inductive analysis methods were appropriate for this purpose. One limitation of analysing interviews using quantitative methods such as frequency coding is that the structure of interview questions may unduly influence the strength of certain themes. This problem was acknowledged in Martin's (2012) study, where the influence of somatic experience on self-efficacy may have been inflated due to the order of questions. In the present study, thematic analysis allowed for more thorough consideration of the influences on both achievement goals and self-efficacy, rather than considering these as isolated concepts.

Firstly, transcripts were coded using NVivo software, with some codes pre-defined in line with achievement goals and the sources of self-efficacy, and other codes applied more inductively in response to the data. The list of codes used can be seen in Appendix F, with a sample of a coded transcript in Appendix G. After initial coding took place, the interview transcripts were divided into two categories for high and low self-efficacy pupils (already identified from the quantitative data) so comparisons could be made

between the two groups. After initial coding and familiarisation with transcripts, inductive thematic analysis was used to identify overarching themes from the transcripts. Responses from the high and low self-efficacy groups were compared against one another to identify distinctive trends and patterns between groups. Similar to the approach used in Study 1, only one coder was used for this thematic analysis. Braun and Clarke (2022) recommend having a single coder is usual practice in reflexive thematic analysis, as subjectivity is a strength in the interpretation of the data as long as the researcher's personal perspectives are acknowledged. In the analysis of these interviews, my perspective as the teacher-researcher was an important element in my interpretation of the data, as I was able to understand these participants' experiences more fully. For example, I had direct experience of the whole class ensemble teaching approach and was therefore able to interpret participants' responses in light of my knowledge of their in-class experiences. I also was aware during the coding and thematic development process that my role as teacher had the potential to affect my interpretations of participants' attitudes towards practice and importance of learning music, so I was careful to analyse the data from as neutral standpoint as possible.

The interview analysis confirmed the findings from the self-report questionnaires, with the high self-efficacy group portraying higher feelings of competence than the low self-efficacy group. The interview participants discussed more general perceptions of musical competence, rather than self-efficacy in relation to specific performances. Five themes relating to achievement goals and self-efficacy, and the influences on motivation, were identified:

1. Attributional Beliefs
2. Peer Comparison
3. Social Influences
4. Positive Musical Experiences
5. Musical Aspirations

5.3.2.1   Attributional Beliefs

Attributional beliefs relating to effort and ability were identified as an important theme in the interviews. When recounting past performances, many participants attributed previous successes or failures to the amount of preparation or practice they had undertaken. Past experiences have previously been identified as the strongest influence on musical self-efficacy (Martin, 2012; Zelenak, 2015). However, the interview data suggested that instrumental learners' interpretations and attributions relating to these experiences might be more important than the experience itself.   Pupils with both high and low self-efficacy generally recognised the importance of practice and effort in influencing musical achievement, rather than attributing their ability level to more fixed characteristics. When discussing a hypothetical performance situation, one participant with high self-efficacy attributed their likely success or failure to the amount of practice undertaken:

I do feel a bit like I haven't done enough practice, and I'll try and improve on that next time, but if I perform really well, I'll be really glad with it because I think I've practised quite a bit and I've managed to fit in the time to practise so that it would just make me feel really glad that I'd managed to do it well. (Daniel, High SE)

Participants with lower self-efficacy also recognised the importance of practice and effort in contributing to successful performances, attributing failure experiences to not enough practice. One participant reflected, "I hadn't practised it enough" (Madison, Low SE), and another commented on the performance of a peer, "she could have tried harder and she is good at it so there's no reason why she couldn't be higher than what she is" (Hannah, Low SE).

Whilst high and low self-efficacy learners both attributed successes and failures to effort and the amount of practice undertaken, conversations with two individuals with differing self-efficacy beliefs showed there may be some links between self-efficacy beliefs and attributions, with self-efficacy appearing to influence instrumental learners' attributional beliefs. There was some indication that adolescent instrumental learners with high self-efficacy might be more inclined to attribute success and failure to ability traits, as one participant indicated his difficulty in mastering certain skills may show a lack of musical ability:

Well sometimes when I'm playing piano and I haven't done scales for a while, and I can't really remember them for a few minutes I get quite annoyed at that, because I know I should know them, and should remember them, but I can't and so it does just annoy me a bit and sometimes I know it's silly but it does make me feel a bit like I can't play. (Daniel, High SE)

This participant held high expectations for himself, as indicated by phrases such as "I should know them," reflecting his self-identity as a musician. Though this pattern was only in the case of this one learner, for adolescent instrumental learners who have strong musical identity beliefs, and high expectations of themselves, experiences of failure might be interpreted as indicative of a more innate lack of musical ability.

In contrast, one participant with lower self-efficacy attributed their weaker performance skills to a lack of effort. For this participant, there was a strong link between effort attributions and the other-avoidance goal; the participant employed a range of strategies to avoid the perception that he was not a good musician. He mentioned that the pieces studied in lessons were easy and he had no desire to challenge himself. He was also very keen to communicate his low value perceptions of music as a subject, stating that music was not important to him:

In other lessons if I'm bad at something then I will care about it more because that subject is more important but then I don't wanna be worst, but for music I just don't feel like it's important so I don't…I never really minded if I was bad at it so I didn't do anything about it so, it didn't make a difference…if it was criticising something else, then I would have like cared a bit more, but because music isn't important for me, I don't really mind. (Chris, Low SE)

The other-avoidance goal might lead to different motivational outcomes, depending on the value beliefs learners hold in relation to a task. This participant was likely to engage more motivated behaviours to avoid being the "worst" in subjects he deemed to be more important, and in his explanation of a lack of effort in music lessons, this participant appeared to convey an other-avoidance goal to preserve his self-esteem. This highlights two possible outcomes of an other-avoidance goal. For learners who value the subject, they are more likely to engage in motivated behaviour in the pursuit of an other-avoidance goal, whereas for those who have lower value beliefs for music, the other-avoidance goal might lead to learners blaming a lack of effort to preserve their self-esteem. In both cases, the other-avoidance goal is linked with effort attributions, as learners wish to attribute failure experiences to lack of effort rather than the more personal lack of ability. For the participant above, the interviewer-participant dynamic undoubtedly influenced their interview responses, as throughout the interview there was a sense that the participant was using the interview as an opportunity to communicate his strongly held opinions about music lessons without being reprimanded. It was encouraging that this participant felt able to give an honest account of his musical experiences in this interview, as it indicated his interview responses were honest , even though the interview was conducted by his own music teacher.

In summary, whilst participants in both the high and low self-efficacy groups emphasised the importance of instrumental practice in developing musical skill, there was an indication that those with higher self-efficacy might sometimes hold stronger ability attributions in relation to their musical skill level, whilst those with lower self-efficacy might sometimes hold effort attributions to preserve their sense of self-worth, in the pursuit of an other-avoidance goal.

5.3.2.2 Peer Comparison

Peer comparison was a frequent theme throughout the interviews, having important implications for both participants' musical self-efficacy beliefs and achievement goals. The importance of peer comparison for the participants interviewed might have been reflective of the nature of the sample as nine out of the ten pupils interviewed received group tuition on their instrument. The nature of group tuition means that learners naturally have more opportunities to compare their ability to their peers', meaning peer comparison is more likely to play a role in their overall competence beliefs and motivational tendencies. Firstly, in relation to self-efficacy, participants often commented that observing others' musical

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failure experiences would boost their own competence perceptions. When asked the question, "If you saw this person perform not as well, how would it make you feel in terms of your own musical ability?", some participants responded, "it would make me feel good, but I'd be a bit upset about them not doing as well" (Emily, High SE), and "it would make me feel like I can do better than him" (Chris, Low SE). Interestingly this trend was more obvious for the high self-efficacy group of participants. One boy held such high competence beliefs that he saw himself as a mentor to one of his less musically talented peers:

> I would probably feel like maybe a little bit happy that I'm like succeeding and stuff but also I would probably go and encourage him and like help them, help him become better and stuff like that. (Jacob, High SE)

Participants in both groups were often keenly aware of their peers' ability levels, as in the case of one participant who spoke about his competitive friend:

> I don't know, I think he quite wants to go for the grades 'cause I think I heard that he wanted, he could have waited to do his Grade 4 but I think he just wanted to do it when I did my Grade 3 cello. (Joshua, High SE)

For those participants with high self-efficacy, this peer comparison resulted in a tendency towards other-approach goals, as participants expressed a desire to match their peers' ability levels, or even outperform them. As one participant indicated, "to be honest I'm quite competitive in my music so I would probably think to myself, like he's done really well, let's try and beat that in my next performance" (Jacob – High SE). Those with high self-efficacy generally appeared to be more competitive; as one participant stated when considering a hypothetical successful performance by a peer, "it would annoy me a bit" (Daniel, High SE).

There were some indications that the instrumental learners with lower self-efficacy might be more inclined to pursue other-avoidance goals, to keep up with their peers rather than outperform them. These pupils were anxious about performing poorly compared to their peers, and one girl reported she would feel "scared that [she] wasn't going to do as well" (Emma, Low SE). Another participant when discussing peer comparison stated, "since we always play the same pieces I would feel like I have to match their standards" (Olivia, Low SE).

For some of the instrumental learners with lower self-efficacy, peer comparison may have also resulted in a tendency towards self and task goals rather than competing with others. One participant felt that pursuing an other-approach goal would be futile, and instead focused on improving her own skill level: "getting better because I know I won't be better than anybody else" (Hannah, Low SE). Another participant with lower self-efficacy preferred to enjoy making music without any external pressures (a task-approach goal), recalling, "it was fun to just play together and do the pieces and not to have to worry about my

target" (Emma, Low SE). The value that instrumental learners place on peer comparison, and their musical self-efficacy in relation to others, might influence their specific achievement goal orientations. It appears that peer comparison has an important role to play in influencing the competence perceptions and self-efficacy of adolescent instrumental learners, although this trend may be more specific to this particular sample of adolescent instrumental learners, the majority of whom received group tuition on their instrument rather than individual lessons.

5.3.2.3   Social Influences

Social influences were present from peers, teachers and family members, influencing the self-efficacy of learners in both high and low self-efficacy groups. Influence from others was apparent in specific instances of persuasion and encouragement particularly from peers and teachers, as well as longer-term influences from other sources such as family members.

Participants with lower self-efficacy appeared to value and rely on social persuasion a lot more than others who had higher musical competence beliefs. These participants recalled times when their peers had been instrumental in boosting their self-confidence leading up to a performance assessment, and one participant recounted the following memory: "they encouraged me and stuff. Like when I didn't want to do my assessment in front of everybody, but then they encouraged me to do that and they did theirs first and then that helped me" (Emma, Low SE). Another participant with lower self-efficacy seemed to really value the encouragement of her friends: "just all of my friends because they're all like come on Olivia!" (Olivia, Low SE). These participants also valued encouragement from family members and their teachers, recalling times when both teachers and family members had completed extra practice with them, for example "my parents when I practise for them they always just encourage me" (Olivia, Low SE). Whilst the group of participants with higher self-efficacy did recall times when they were encouraged by others, this seemed to be less crucial to their sense of self-efficacy. Importantly, whilst social persuasion appeared to have temporary effects on learners' self-efficacy prior to a performance, this did not appear to contribute to these individuals' longer term overall feelings of competence as a musician, as the participants in the lower self-efficacy group continued to convey lower musical competence beliefs despite benefitting from social persuasion.

Family influence was a particularly strong theme for the group of participants with higher self-efficacy, and might help sustain instrumental learners' longer-term interest and competence beliefs relating to music. Some participants had strong recollections of playing music with family members and the support they received from home. One participant stated, "my whole family does like music" (Daniel, High SE), and another recalled:

Well probably when I got, my Grandad gave me my Great Grandad's violin and it probably
just kind of made me realise how important the violin is to me and how much I want to
succeed in it and stuff. (Jacob, High SE)

For this participant, there was a sense that he felt he was continuing a family musical legacy by being given his great grandfather's violin. It seems likely that the self-efficacy and musical identity beliefs of high self-efficacy instrumental learners might be strongly influenced by their experiences of making music as part of family life.

5.3.2.4   Musical Experiences

Various participants recounted examples of playing music for enjoyment outside of their instrumental lessons. These experiences were more common for participants in the higher self-efficacy group, indicating that regular involvement in extra-curricular musical activities may be key to increasing perceptions of musical competence and self-efficacy.   Most participants with high self-efficacy were members of various musical ensembles and valued these experiences highly, with one participant attributing his overall musical motivation to the provision of these wider musical opportunities:

When I first started playing the violin I kind of had to admit I didn't really do much practice
or anything and I wasn't very motivated but as I've came to secondary school and there's
been a lot more opportunities and stuff, I've been a lot more motivated to practise. (Jacob,
High SE)

Positive experiences of making music in different ensemble contexts might contribute to increased feelings of overall competence and self-efficacy for future performances. There is however a possibility that higher competence beliefs might have been the reason why the participants with high self-efficacy chose to engage in extra-curricular musical activities, therefore any causal directional links are unclear at this stage.

Participants in both high and low self-efficacy groups also described the positive emotions they experienced when practising their instruments. These descriptions were similar to depictions of a flow state, with music acting as a source of escape for some pupils, who stated, "it's like it distracts me like I don't think about anything else" (Emma, Low SE), and "when I'm playing the drums in a band or something I'm just letting it go and I'm just happy doing it" (Jacob, High SE). These positive emotional states resulting from music-making appeared to be equally as prevalent for those with high and low self-efficacy, as they were not related to a certain level of musical expertise or achievement and were focused on the intrinsic value of making music. Whilst there was not a clear link between these experiences and self-efficacy or achievement goals, emotional responses to music making may have important implications for adolescent instrumental learners' overall motivation and engagement in musical learning.

5.3.2.5 Musical Aspirations

Finally, participants with higher self-efficacy beliefs appeared to hold clearer musical aspirations for the future than those with lower competence perceptions. Higher self-efficacy beliefs might influence instrumental learners to adopt self-approach goals, as learners who believe in their own ability level are more likely to strive towards future success. High self-efficacy pupils showed a clear desire to reach certain musical goals, for example: "I'm coming up to my silver music medal on cello and Grade 2 on piano…my goal would be to get a distinction" (Daniel, High SE), and "just to try and push my limits" (Michael, High SE).

One pupil in the high self-efficacy group held a clear vision for his longer-term future as a musician, and in describing this goal he conveyed a strong sense of his musical identity in relation to others:

> To be honest I think I kind of have the same goals as people but on this other side of things like say I kind of also have the goal in my drums for example…after my GCSEs in Year 11 I'm hoping to become a session musician and earn some money from that so that's another goal that I have which some people might not. (Jacob, High SE)

In contrast to these examples of high self-efficacy participants who had clear musical aspirations, those with lower self-efficacy often struggled to convey any specific musical aspirations in their interviews. Those that were able to identify musical goals had notably lower expectations in comparison to those with higher self-efficacy, for example to achieve Grade 4 by the end of school. This implies lower self-efficacy participants' interest in music might be more short-term than that of those with higher competence beliefs. One possible reason for this might have been the compulsory whole class instrumental tuition during the first two years of secondary school for pupils in this context. This might naturally have led the participants in the low self-efficacy group who were part of this programme to view their instrumental learning as a temporary activity, and they may not have considered the possibility that they might continue after Year 8.

5.4   Discussion

5.4.1   *What are the achievement goals of adolescent instrumental learners?*

This mixed methods study provided useful data to help answer the first principal research question of the thesis. Whilst Study 1 provided somewhat inconclusive data in relation to the achievement goal beliefs of instrumental learners, the revised achievement goal scales used for this study allowed the full 3 x 2 achievement goal model to be examined in a musical setting. The revised scales had acceptable internal consistency, and therefore comparisons could be drawn between the prevalence of each of the achievement goals in the model. The correlations between each of the achievement goals were largely as expected, with stronger associations between self and task goals (representing the mastery goal dimension), and weaker associations between self/task goals and other-based goals.

Overall, self and task goals were the highest reported amongst this sample of participants, with approach goals slightly more prominent than avoidance goals. Other-avoidance and other-approach goals were the least prevalent. These findings were consistent with the data from Study 1, as well as other research findings from achievement goal studies in musical contexts, where mastery goals are consistently the most prevalent (Miksza, 2009b; Miksza et al., 2016; Ng, 2017). This study contributes new evidence demonstrating the prevalence of self-avoidance and task-avoidance goals for adolescent instrumental learners. The data showed these goals were empirically distinct from the approach dimensions of the self and task goals, though there was a strong and significant correlation between self-avoidance and task-avoidance ($r = 0.825$, $p = < .001$), indicating these goals may represent the same concept for instrumental learners, and the composite mastery-avoidance goal might be most appropriate in this context.

5.4.2   *What is the relationship between the self-efficacy and achievement goals of adolescent instrumental learners?*

The main aim of this study was to examine the relationship between self-efficacy and achievement goals in adolescent instrumental learners' motivation, on the basis of previous studies which suggested these aspects of motivation were linked (Study 1; Hendricks, 2014; Matthews & Kitsantas, 2013). Participants in the present study generally held positive self-efficacy beliefs in relation to their performance ability ($M = 6.69$), consistent with findings in previous research investigating the beliefs of school-aged instrumental learners (Martin, 2012). Analysis of the self-report questionnaires showed that self-efficacy had positive correlations with all achievement goals, all of which were significant apart from the correlation between self-efficacy and task-avoidance. Self-efficacy was mostly strongly correlated with the self-approach goal, followed by the task-approach goal. Approach goals were more strongly correlated with self-efficacy than avoidance goals. The positive correlations with all goal types were unexpected, as self-efficacy was hypothesised to be negatively associated with other-avoidance goals. This might be explained by the high overall self-efficacy score for the whole sample.

Whilst there was a correlation between self-efficacy and the other-approach goal ($r = .303$, $p = <.01$), this was weaker than the association with task- and self-approach goals. This positive association between self-efficacy and other-approach goals contrasts with previous research on achievement goals which found a negative relationship between competence expectancies and performance goals (Elliot & Church, 1997; Phillips & Gully, 1997). The participants in these studies were undergraduate psychology students, likely explaining their different patterns of motivation compared to adolescent instrumental learners. The importance of performance goals in many musical learning environments has previously been highlighted (Ames, 1992), and it is unsurprising that learners with high self-efficacy might adopt other-approach goals in musical contexts, as the nature of musical performance is such that public performances are common. Instrumental learners might be more frequently exposed to the performance ability of others than in other learning domains where ability is more commonly demonstrated through written

examinations.   This is particularly the case in the context for the present study in which 81% of participants learnt in group environments. Another study carried out in a musical setting with learners aged 11-13 found a link between self-concept of musical ability and performance-approach goals, closely resembling the links in the present study (Ng, 2017). In fact, in Study 1 of this thesis, the correlation between self-efficacy and the performance goal was stronger than that with the mastery-approach goal, and so self-efficacy might be more closely associated with other-approach goals in musical contexts than in other domains.

5.4.3   What are the influences on self-efficacy and achievement goals of adolescent instrumental learners?

The second research question aimed to identify common influences on the self-efficacy and achievement goals of adolescent instrumental learners. Thematic analysis of the interview data highlighted several influences on both aspects of motivation, as well as providing evidence that might explain some aspects of the relationship between self-efficacy and achievement goals, through the comparison of responses between high and low self-efficacy groups.

5.4.3.1   Influences on Self-Efficacy

Influences on self-efficacy will first be considered in relation to the four proposed sources of self-efficacy (Bandura, 1997). Music education researchers have previously explored the importance of mastery experience, vicarious experience, social persuasion, and physiological and affective states in relation to the self-efficacy beliefs of young musicians, finding that mastery experiences and social persuasion were the most important for instrumental learners (Martin, 2012; Zelenak, 2015, 2019).

In the present research, social persuasion appeared to be more important for participants with low self-efficacy. These learners relied on verbal persuasion leading up to a performance to boost their confidence levels, particularly from their peers. Although teachers and family members were referred to in the interviews, verbal persuasion from peers was more important for low-self efficacy participants, as these were spoken about in relation to specific performances. All of the interview participants in the low self-efficacy group were part of the whole class ensemble tuition programme, and may have had more readily available peer support, through learning in a group context. In other research, parent support was found to be more important than support from teachers and peers, though this research was conducted in a different context, with musicians in later adolescence who were intending to study music at university (Zarza-Alzugaray et al., 2020). In later adolescence peer support might become less important for musicians than those just beginning secondary school. Additionally, the sample of musicians from Zarza-Alzugaray et al.'s (2020) study was much more musically advanced than the participants in the present research, consisting of pre-university level musicians who likely had stronger musical identities and were therefore less reliant on peer support.

In the present study, the participants with higher self-efficacy considered support from family members to be particularly important. These participants recounted examples where family members had helped them practise or listened to them perform. Aside from verbal persuasion, the general influence of family musical background has previously been linked to self-efficacy and is important in relation to instrumental learners' general competence beliefs (Martin, 2012). Instrumental learners for whom music is a strong component of their home lives may hold a stronger sense of musical identity, impacting on their general musical competence beliefs and self-efficacy for specific musical tasks. Also, the involvement of family members in these instrumental learners' practice likely enhanced their musical skill and preparation in advance of performance situations, thus increasing their self-efficacy beliefs.

Past performance experiences were much less important in influencing the self-efficacy beliefs of participants than social persuasion, contrasting with findings in previous music research in which enactive mastery experiences have been cited as the strongest influence on self-efficacy (Hendricks, 2014; Zelenak, 2015, 2019). In the present study, whilst performance experiences might have temporarily affected self-efficacy for some participants, there appeared to be few long-term effects following on from these experiences. This was likely due to the importance participants placed on practice and effort in improving musical ability. This supports previous research which found self-efficacy is associated with effort attributions (Martin, 2012).

As well as past performance assessments, involvement in musical ensembles can signify enactive mastery experiences (Hendricks, 2014). Extra-curricular musical involvement was very important for some of the high self-efficacy participants in this study, and in fact was not mentioned at all learners in the low self-efficacy group. Participants in the lower self-efficacy group already played in a large ensemble as part of their instrumental lessons, perhaps making it less likely they would want to take part in additional extra-curricular ensemble opportunities. Ongoing involvement in musical ensembles can build learners' sense of musical identity, in turn impacting their self-efficacy beliefs. One pupil's experience of performing in a world-class concert venue undoubtedly impacted their perception of competence as a musician:

> I've been doing orchestra since last year and we went to The Sage and I was so happy cause
> I just never thought that I would like get that far at the beginning of the year when I started
> playing in music. (Emily, High SE)

Enactive mastery experiences from playing in ensembles may therefore be more important in determining adolescent instrumental learners' musical identity and self-efficacy beliefs than performance experiences in examination contexts. The provision of these experiences is therefore particularly important for music educators seeking to increase the self-efficacy of their pupils.

Comparison with others was also important in influencing the self-efficacy beliefs of participants in this study. As Bandura (1997) states, "efficacy beliefs are heightened by alleged performance superiority in

relation to group norms but diminished by alleged low normative standing" (p. 87). This trend was notable when analysing the questionnaire data, as the mean score for the scale item "I am confident that I can play at a level that is equal to the best student musicians in my year group" was much lower than the other more task-specific and self-referential scale items. This may have been reflective of the nature of the sample, in which the majority of participants in Year 7 and 8 received whole class ensemble tuition, and may have compared themselves to peers who had been learning their instrument for longer and had opted for individual or small group peripatetic tuition. Another study also showed that peer comparison in the competitive rehearsal environment had a notable negative impact on learners' self-efficacy (Hendricks, 2014). Martin (2012) also found that middle school band students with low self-efficacy were much more likely to compare themselves to their peers. In the present research, the opposite trend was found, whereby participants' self-efficacy was temporarily enhanced by imagining musical failures of their peers. Comparison with peers seems to be central to the self-efficacy beliefs of music learners, supporting the work of earlier researchers who propose that learning environments which de-emphasise competition and comparison are likely to increase learners' self-efficacy beliefs (Bandura, 1994; Matthews & Kitsantas, 2013).

Finally in relation to the sources of self-efficacy, emotional responses to music were less dominant in the overall interview analysis and did not appear to be important in enhancing or undermining adolescent instrumental learners' self-efficacy. Pupils with higher self-efficacy generally reported stronger and more positive emotions than those in the lower self-efficacy group, though positive flow-like experiences were reported by both high and low self-efficacy participants, supporting previous research (Martin, 2012).

5.4.3.2   Influences of self-efficacy on achievement goals

This study sought to examine whether the self-efficacy beliefs of adolescent instrumental learners might exert a causal influence on their achievement goal orientations. The data showed that self-efficacy beliefs might have influenced the adoption of specific achievement goals for the instrumental learners in this study, with peer comparison playing a key role in this relationship. Whilst self-efficacy was positively related to all six achievement goal dimensions in the quantitative data, the interview analysis indicated that the instrumental learners with higher and lower self-efficacy beliefs might have pursued specific achievement goals for differing reasons.

The learners with lower self-efficacy beliefs seemed less inclined to adopt other-approach goals, instead striving toward self- and task-approach goals because they did not feel they could attain the same musical standard as their peers. In contrast, whilst self and task goals were equally as prevalent for those with higher self-efficacy, these participants pursued self-approach goals for different reasons to low self-efficacy participants, because they had a strong desire to reach certain standards on their instrument. The participants with high self-efficacy identified specific musical aspirations, such as graded exams or career goals, and were often more concerned with achieving these milestones than outperforming their peers.

Previous researchers also found links between adolescents' self-efficacy and both mastery and performance goals, though this was in relation to more general academic beliefs than music specifically (Diseth et al., 2012).

In the short term, other-approach goals were also evident for some learners with high self-efficacy who thrived on competition. For these participants, watching their peers do well would motivate them to practise, with the aim of achieving a similar performance standard or even to "beat" their peers. It may be that instrumental learners' perceptions of ability in relation to their peers might moderate the relationship between their self-efficacy and achievement goal orientations. High perceptions of self in relation to peers might result in the adoption of other-approach goals, whereas low perceptions of self might result in the adoption of task or self goals because competing with peers is less attainable.

The strength of the relationship between self-efficacy and other-approach and avoidance goals may also be moderated by the importance of peer comparison to each individual learner. Participants with high self-efficacy who place importance on peer comparison may be more likely to adopt other-approach goals, whereas those who are less concerned with the performance of their peers may strive more towards self or task-based goals than other-approach goals. Previous research has indicated that the opinion of peers might be less important for older adolescent musicians (Zarza-Alzugaray et al., 2020), therefore other-approach goals might be less important for musicians with high self-efficacy in later adolescence.

Finally, lower self-efficacy may lead to other-avoidance goals for some learners. Whilst there was still a positive association between self-efficacy and other-avoidance goals in the quantitative data, this was the weakest correlation and one interview participant with low self-efficacy indicated a strong tendency towards avoidance motivation. Avoidance tactics were exhibited by this participant who emphasised his lack of interest in instrumental learning, mirroring findings from Lowe's (2012) research with secondary school instrumental learners in Australia, whose participants reported that failure was often "self-imposed" (p. 238) for learners with low interest in musical learning. Self-handicapping strategies have also been associated with performance-avoidance goals in other research with school-aged learners (Midgley & Urdan, 2001), supporting the insights from this study.

Although the present study only employed a small sample of participants, the interviews illuminated some of the potential relationships between self-efficacy and achievement goals, because the maximum variation sub-sampling method allowed for comparison of responses between groups of learners with the highest and lowest self-efficacy scores. Whilst all achievement goals were positively associated with self-efficacy, instrumental learners might adopt these goals for different reasons relating to their self-efficacy. Taking these findings into account, a model of self-efficacy and achievement goals is proposed. Although the suggested causal relationships are still speculative at this stage, being based on a small-scale interview study, the model summarises the findings from this study with specific sub-samples of participants, outlining potential areas for further exploration with broader samples of instrumental learners. The proposed model is shown in Figure 5.1**.**

Figure 5.1

Proposed Model of Relationships between Self-Efficacy and Achievement Goals and Other Factors
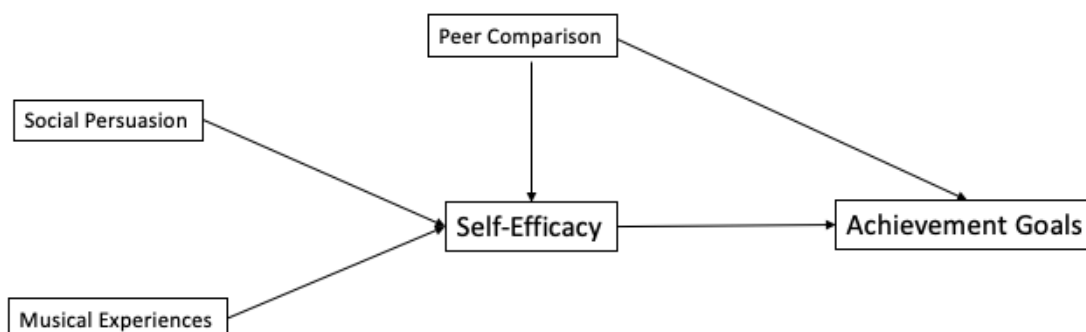
5.5 Conclusions

The findings of this study have provided further evidence to indicate that self-efficacy and achievement goals might be related in the overall motivational profiles of adolescent instrumental learners. The four sources of self-efficacy (Bandura, 1997) were explored in the pupil interviews, and peer comparison appeared to have the most influence on these learners' self-efficacy and achievement goals. Past musical experiences and social persuasion were also important in influencing the self-efficacy of participants in this study. Self-efficacy was positively associated with most achievement goals, and the strongest link was with self-approach goals. However, the specific relationships between self-efficacy and achievement goals and underlying reasons behind these links might be explained by learners' relative emphases on peer comparison.

5.5.1 Implications for Music Teachers

A number of recommendations can be made for music educators teaching in similar contexts on the basis of the data collected in this study. Firstly, as peer comparison appeared to be important in influencing the self-efficacy and achievement goals of the adolescent instrumental learners in this study, it is recommended that music educators de-emphasise peer comparison in learning contexts as much as is possible. The context of this study is particularly important in this regard, as 81% of the participants in the overall sample for this study received group instrumental tuition. This recommendation is therefore most relevant to educators teaching instruments to learners in small groups or whole class ensemble settings, as well as those leading ensembles. This might be difficult in certain music learning contexts where competition can be a key structural element, for example in ranked orchestral seating and the selection of soloists. The normative grading structures of performance exams also make it easier for pupils to compare themselves directly with one another, either by grade level, or their Pass/Merit/Distinction examination

outcome. Interestingly, participants in this study who had individual rather than group instrumental lessons reported higher self-efficacy beliefs. More individualised one to one tuition may therefore allow music teachers to build more encouraging relationships with their students, where they are able to more positively influence their self-efficacy and competence perceptions. Where this is not possible, music educators in group settings should focus on learning strategies, so the emphasis is on the learning process rather than the ability level of the pupil, consistent with recommendations for mastery teaching approaches (Anderman et al., 2002), as well as the findings from Study 1.

Teachers of adolescent instrumental learners, particularly those in state-funded secondary schools similar to the present study, should also aim to provide varying music performance experiences that will appeal to a diverse range of young musicians, with the intention of fostering mastery experiences, and increasing their self-efficacy beliefs. Social persuasion was an important factor in increasing the self-efficacy of the pupils with low competence beliefs in this study, so teachers should also emphasise peer encouragement within the teaching environment, particularly in whole class ensemble and group instrumental tuition settings, so all pupils feel supported. This may contribute to more enduring competence perceptions and longer-term musical engagement for instrumental learners in these contexts.

5.5.2   Limitations

This study had several limitations. Firstly, demographic data showed there was a skewed balance of responses across the sample for several categories, particularly age, instrument type, lesson type and gender. This was largely due to the setting in which the research was carried out and the demographic of pupils in the school. The majority of participants were aged 11-13 and were learning string instruments as part of the schools' whole class ensemble instrumental tuition model (see Study 1). These pupils therefore had a very different experience of musical learning to the older participants in the sample, and the data were likely influenced by these participants' very specific learning experiences. Some of the trends in the data indicated this was the case, as the mean self-approach score was significantly lower for string players, and the mean self-efficacy score was much lower for participants with two years of instrumental experience compared to other groups. There was also a much larger proportion of female to male participants, though no significant relationship was found between gender and self-efficacy beliefs. Future research in this field should aim to gather data from a much broader sample of pupils from more than one school and of a more balanced age range.

The timing of the questionnaire completion was also less than ideal, as many of the younger participants had already decided not to continue with their current instrument in the following academic year and had recently completed their final performance assessment. The questionnaires and interviews may have been more relevant if completed prior to a performance assessment, so participant responses were more relevant to a specific performance situation.

The structure of the interview questions might have led participants to discuss certain self-efficacy influences more than others. Although the interview was based on similar questions from previous research (Martin, 2012), a more open-ended questioning format may have elicited more balanced insights from pupils. There was also the potential for significant bias in the analysis of interview responses as I was a teacher in the school; however, researcher subjectivity has been noted as key to the process of reflexive thematic analysis, as it allows for more personal insights into the data (Braun & Clarke, 2022). I aimed to reduce the amount of teacher bias in the interview analysis by revisiting the thematic analysis of the interviews four years after the interviews had taken place, to develop a more objective interpretation of participants' responses. Whilst the maximum variation sub-sampling procedure for the interviews had advantages in allowing for the identification of diverse trends between high and low self-efficacy participants, there is potential that some themes identified might not be relevant to learners with more moderate self-efficacy beliefs. Further research might therefore use a more homogenous sampling procedure to clarify whether relationships between self-efficacy and achievement goals also exist for those with less extreme competence beliefs.

5.5.3 Next Steps

The findings of this study highlight several areas for further exploration in relation to adolescent instrumental learners' achievement goals. It is clear from both Studies 1 and 2 that peer influence may be powerful in the adoption of specific achievement goals, and the data from this study indicated that social persuasion and learners' musical experiences might influence their achievement goals through their self-efficacy beliefs. Family support, musical identity, and attitudes to musical learning might also represent important influences on adolescent musicians' achievement goals. There were some correlations between achievement goals and practice time in this study, though the connection between music practice, self-efficacy and achievement goals should be explored further as these findings are only tentative at this stage. Finally, most pupils in Studies 1 and 2 were involved in whole class ensemble teaching and were below the age of 13, and so there is a need to gather information about the experiences of older pupils as well as adolescents in more typical musical learning contexts for UK secondary schools, such as individual and small group tuition settings.

This study provides evidence to indicate that the self-efficacy beliefs and achievement goals of instrumental learners in a UK secondary school might be linked. This relationship had not previously been examined empirically in UK-based music education research. The following study will seek to explore factors beyond self-efficacy and teaching strategies in relation to achievement goals, aiming to provide a fuller picture of the main influences on achievement goals, before these relationships are tested in larger-scale quantitative research.

6   Study 3

6.1   Introduction and Rationale

Studies 1 and 2 examined specific influences on adolescent instrumental learners' achievement goals in the form of music teaching strategies and self-efficacy beliefs. Study 1 focused on teaching strategies largely due to my own role as a music teacher in a secondary school, with the aim of identifying specific techniques that could be used in whole class ensemble teaching contexts to influence learners' achievement goal motivation. This study showed there is likely to be a more complex web of influences present in music teaching environments, and young musicians' achievement goals are not solely influenced by teaching strategies. Study 2 explored some of these other potential influences, with a particular focus on self-efficacy. Analysis of both quantitative and qualitative data in this study indicated that learners' self-efficacy beliefs might influence their achievement goal orientations, though this link may be moderated by learners' perceptions of peers and the importance they place on peer comparison, particularly in whole class ensemble teaching contexts. At this stage of the research there is a need to clarify the full range of influences on achievement goals and understand how these might be related to one another in influencing adolescent instrumental learners' motivation. It is also important at this stage to carry out a study with a sample more representative of the experiences of adolescent instrumental learners in the UK, not including learners in whole class ensemble teaching contexts which are quite rare in UK secondary schools. Broadening the sample in this respect will make it more likely that the findings might be relevant to different school settings.

6.1.1   Achievement Goals and Contextual Motivation

Study 1 measured the achievement goals of learners in the whole class ensemble tuition setting and Study 2 examined self-efficacy, which by nature relates to specific performance situations. There is evidence to suggest the achievement goal orientations of adolescent instrumental learners might be more enduring, rather than specific to a certain task or learning environment. Study 1 found that achievement goals were relatively stable over time, even after the provision of a mastery-focused teaching intervention. There is a difference between task-specific and more enduring achievement goal orientations. For example, instrumental learners' self-approach goals might relate to progress in a particular lesson, or alternatively a longer-term goal such as achieving Grade 8. Vallerand (1997) outlines this distinction between situational and contextual motivation, defining situational motivation as "the motivation individuals experience when they are currently engaging in an activity" (p. 293), and contextual motivation as "one's usual motivational orientation towards a specific context" (p. 290). In musical learning, situational factors such as specific feedback after a performance may impact immediate motivational outcomes such as whether one engages in instrumental practice the same day but are unlikely to affect longer-term motivational dispositions unless the same type of feedback is experienced repeatedly. Considering the current UK music education context

in which there is a decline in the number of children learning an instrument (Arts Council England, 2023), it may be more valuable to focus on contextual motivation, with the aim of influencing the longer-term motivational outcomes of adolescent instrumental learners, rather than more specific motivation for an isolated performance scenario. Research on contextual motivation has advantages in comparison to research on situational motivation as it can be more useful to applications in real-life contexts (Vallerand, 1997).

Music teachers may only have a temporary impact on the achievement goals of instrumental learners. This was apparent in Study 1 and was also shown in previous research on achievement goals in another educational context, where teaching intervention did result in a temporary reduction in learners' performance goals, but these goals reverted back to their original levels six months later (O'Keefe et al., 2013). The authors note that this fluctuation in performance goals may be because performance goals might be more responsive to the learning context and its relative emphasis on normative comparison. O'Keefe et al.'s (2013) research was with high ability adolescents studying a science course, and normative comparison may be even more prevalent for adolescent instrumental learners who can be more frequently exposed to the performance level of their peers. Normative comparison may not only occur in the classroom environment but is also prevalent in extra-curricular music contexts, and so it is likely performance goals may be emphasised even more in these settings (Bull, 2019; Ng, 2017). Other factors outside the music teaching environment such as peer and family influence may have a stronger influence on the achievement goal orientations of instrumental learners. Vallerand (1997) describes motivation as a "social phenomenon" (p. 277), meaning that goal setting takes place in the context of relationships to others. A simplified version of Vallerand's (1997) hierarchical model of motivation, outlining the interaction between social factors, contextual motivation and outcomes, is presented in Figure 6.1.

There was some indication in the results of Studies 1 and 2 that instrumental learners' attitudes to music may have an important influence on their achievement goal orientations. The value adolescents place on music can determine their quantity and quality of motivation in relation to instrumental learning. Value beliefs have been found to determine other motivational outcomes in relation to music (Hallam, 2013; Hallam et al., 2016; Holster, 2023; Ng, 2017; Ng & Hartwig, 2011) and therefore may also influence instrumental learners' achievement goal orientations. In relation to Vallerand's (1997) hierarchical model, value beliefs are likely influenced by more stable contextual factors such as family support rather than temporary changes in the music classroom environment.

Whilst Study 2 examined the relationship between self-efficacy and achievement goals, it may be more appropriate to examine adolescent instrumental learners' broader musical competence beliefs, as these are more likely to determine their longer-term motivation for instrumental learning. Self-efficacy beliefs relate to perceived capabilities to carry out a specific task (Bandura, 2006), whereas

Figure 6.1

Hierarchical Model of Intrinsic and Extrinsic Motivation (Vallerand, 1997, p. 274)
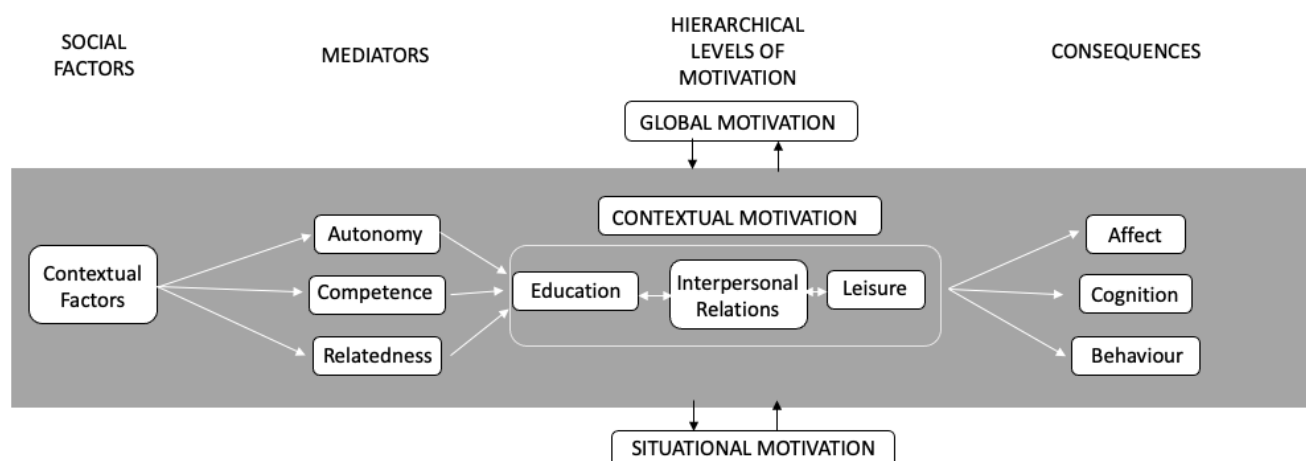
competence beliefs are less situational and might be more important in relation to longer-term motivation. This study therefore seeks to understand the achievement goals of adolescent instrumental learners from a broader perspective in relation to their longer-term, rather than task-specific, musical motivation.

6.1.2   Achievement Goals as Defined by Instrumental Learners

As well as examining potential influences on achievement goals, Studies 1 and 2 were useful in applying and testing the 3 x 2 achievement goal model for the first time in the context of instrumental learning. The wording of the scale items resulted in a reduced model in the first study, comprising mastery-approach, mastery-avoidance and performance goals. In Study 2, the full 3 x 2 model was tested, and in this study self- and task-approach goals were the most prevalent, whilst the other-approach goal had the lowest mean score. Whilst there was a distinction between the approach and avoidance dimensions of self and task goals in the Study 2 quantitative data, these goal orientations were not so prevalent in the interview data. Participants alluded to self-approach, task-approach, other-approach and other-avoidance goals, however there was no evidence of self- and task-avoidance goals. Elliot et al. (2015) recommend focusing research on the specific goals most pertinent to the research context, therefore it would be valuable for the development of further research on achievement goals in musical learning to define which goals from the 3 x 2 model are most valid for populations of adolescent instrumental learners.

6.1.3   Research Questions

This purpose of this study was to broaden the scope of the research beyond self-efficacy and the role of the teacher to identify other influencing factors on achievement goals. Study 3 functioned as an exploratory study with the purpose of informing the theoretical model for the following study. As well as exploring a fuller range of influences on achievement goals, this study also aimed to gauge which

achievement goals from the 3 x 2 model are most relevant to populations of adolescent learners, with the intention of defining a more parsimonious model. In addition, to ensure the findings of the research are relevant to as broad a range of learners in the English music education context as possible, the study also employed a more representative sample of adolescent instrumental learners, not including those receiving solely whole class ensemble tuition, as this tuition model is not commonplace in English secondary schools. Two main research questions guided this study:

1. What are the achievement goals of adolescent instrumental learners?
2. What factors influence the achievement goals of adolescent instrumental learners?

6.2 Method

6.2.1 Study Design

A qualitative interview design was used for this study to explore the experiences of adolescent instrumental learners in depth. While Studies 1 and 2 used a mixture of quantitative and qualitative approaches for triangulation purposes, the present study was part of a sequential design in conjunction with Study 4. Inductive thematic analysis was employed resulting in a theoretical model which was then tested in Study 4. To fully answer the research questions, it was important to gain detailed insights into participants' own perspectives, both in terms of their achievement goal beliefs and the varied influences on these goals. A semi-structured interview approach was most useful for this purpose, as it explored the same themes with all participants, whilst also allowing for some flexibility in order to probe the responses of participants further. Achievement goals have not previously been investigated using qualitative interview methods in music contexts, therefore the design of this study was unique in relation to other achievement goal research in music education, contributing to this field of research by prioritising participant perspectives in the collection of data.

6.2.2 Participants

Interview participants were recruited from the same state-funded secondary school as Studies 1 and 2, though the sample only included pupils who took optional individual or small group instrumental lessons rather than compulsory whole class ensemble tuition as experienced by participants in Studies 1 and 2. Some Year 7 and 8 pupils had additional optional instrumental tuition alongside whole class ensemble tuition, and these pupils were included in the overall sample. Fifteen pupils, aged 11-17, were invited to take part on the basis that they were receiving additional optional instrumental tuition within school, with the aim of recruiting a diverse cohort of ages, instrument type, ability level and gender. All pupils identified in this sample were provided with information about the study, and consent was granted

from parents/carers for nine pupils in total. Demographic information about the sample is presented in Table 6.1.[2]

6.2.3   Procedure

A semi-structured interview process was used, with questions designed to prompt participants to discuss various aspects of their musical journey and motivational influences. Questions were derived from achievement goal theory and previous research, although direct references to specific achievement goals were avoided so as not to lead participants.

A pilot interview was first carried out to check whether the questions were understandable for adolescent learners and whether they would be open-ended enough to elicit detailed responses from the participants. A Year 9 pupil took part in the pilot interview, selected using the same criteria as the main sample of participants. The pilot interview lasted just under 15 minutes, though the participant was able to speak at length about many of the questions and did not require much prompting. The participant reported following the interview that the questions had been easy to answer. After listening back to the pilot interview, some additional questions were added to the interview schedule to adhere more closely to the research questions and ensure all lines of inquiry would be satisfactorily covered. The final interview schedule, indicating those questions added following the pilot interview, can be seen in Appendix H.

Table 6.1

Table of Participants

		n
Gender[a]	Male	*4*
	Female	*5*
First Study Instrument	Wind	*2*
	Strings	*2*
	Brass	*2*
	Percussion	*2*
	Guitar	*1*
Lesson Type	Group	*1*
	Individual	*8*
	Total	*9*

Note. [a]Gender is represented as a binary variable as this was reflective of this sample in which no pupils identified as non-binary.

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[2] Note that ethnicity and EAL information is not included in the demographic data for this sample as all participants in the sample were White British and English was their first language.

For Question 1 ("Can you describe your last instrumental lesson to me?"), an additional prompt question was added to ask specifically about the nature of small group lessons. Whilst not all participants received group lessons, it was important to investigate whether those receiving group lessons experienced feelings of peer comparison, based on the results of Study 2. Also, in light of the school context of this study, where most pupils being interviewed had experienced whole class ensemble tuition in Year 7 and 8, it was interesting to investigate what had motivated some pupils to continue learning the instrument after the compulsory period of tuition had ended. Therefore, an additional prompt question of this nature was added to Question 2 ("Can you remember why you decided to start learning the ___?"). Additionally, "Why do you practise?" was added as a main question, having only been a prompt question in the pilot interview. As this was one of the principal research aims of the thesis, it was important that all participants answered this question, which allowed for more inductive analysis of participants' reasons for their musical motivation. Additional prompt questions were also added to explore the concept of achievement goals further, determine whether participants appeared to be more intrinsically or extrinsically motivated, and to link to the theme of self-efficacy from Study 2. These additional questions and prompt questions allowed each of the research questions to be explored fully, and also made it more likely that interview participants would speak for longer in each interview.

Interviews took place in person with the school setting and were recorded using a voice recorder app on an iPad, with the exception of one interview which took place via telephone during the Covid-19 pandemic. Participants were reassured that their responses would be treated anonymously and would not affect their academic progress. Interviews ranged between 13 and 18 minutes long. Interviews were transcribed using NVivo, with transcripts sent to participants to allow them to modify any answers. No modifications were requested although one participant contacted me to clarify the meaning of one of their answers.

6.2.4   Analysis

Similar to Study 2, thematic analysis (Braun & Clarke, 2022) was employed to examine the interview data. Braun and Clarke's six-phase approach to thematic analysis was followed, with initial transcription of the interviews carried out using NVivo software, followed by familiarisation with the data by re-reading transcripts and note-taking, generating codes, then continually reviewing, refining and defining themes. The initial coding of themes resulted in 94 initial codes. At this point, codes that were not relevant to the research questions were discarded, and multiple codes were combined if they were considered to represent similar ideas. This provided a more manageable set of codes to work with at a broader thematic level. The final list of codes can be seen in Appendix I, and a sample of coded material from one transcript can be seen in Appendix J.

To aid with the analysis, the remaining codes were printed and used to create a visual map of the interview themes; this aided flexibility as each of the codes could be moved around and links between codes more easily seen to gain an impression of the overall themes. A final map and hierarchy of themes was then developed. Braun and Clarke (2022) define themes as patterns of "shared meaning organised around a central concept" (p. 77), as opposed to topic summaries. Therefore, I avoided grouping codes around theoretical concepts such as achievement goals, and instead searched for patterns of meaning, considering achievement goals as strands running through each theme. In this sense, a mixture of inductive and deductive approaches to the thematic analysis were used. Whilst the development of themes was inductive, and prioritised participants' experiences in the data, prior theory did inform some of the codes, such as 'performance-avoidance goal', and the final interpretation of the data was guided by theory, thus employing a more deductive approach. Braun and Clarke (2022) acknowledge that most thematic analysis employs a mixture of inductive and deductive approaches, as all researchers are guided by their prior understanding of theory and cannot approach a dataset without also being influenced by their own perspectives and experiences.

To aid with the final definition of themes, three transcripts were also reviewed by my PhD supervisor as a second coder, who independently annotated the transcripts with codes and summarised emergent themes from each of the transcripts. We then had a discussion to agree on areas of thematic overlap and divergence to ensure that intercoder consistency was achieved (Cofie et al., 2022). Braun and Clarke (2022) advise that having a single coder is normal when using thematic analysis, as subjective interpretation of the data is a key aspect of reflexive thematic analysis. However, for the present study, it was considered to be helpful to use a second coder for some of the transcripts, as the themes developed from this interview study would be used to develop a final model to be tested in Study 4, therefore achieving intercoder consistency helped to develop richer insights into the data, ensuring that no important themes were missed.

6.3   Results

Five overarching themes were identified through the inductive analysis: family support, social music making, musical identity, ownership over the learning journey, and intrinsic value of music making. A thematic map showing links between themes is presented in Figure 6.2. Each of the themes will be presented in turn and then considered together in relation to the research questions. Pseudonyms are used in the presentation of the data to preserve participant anonymity.

Figure 6.2

Thematic Map Based on Inductive Analysis, Showing Influences on Motivation
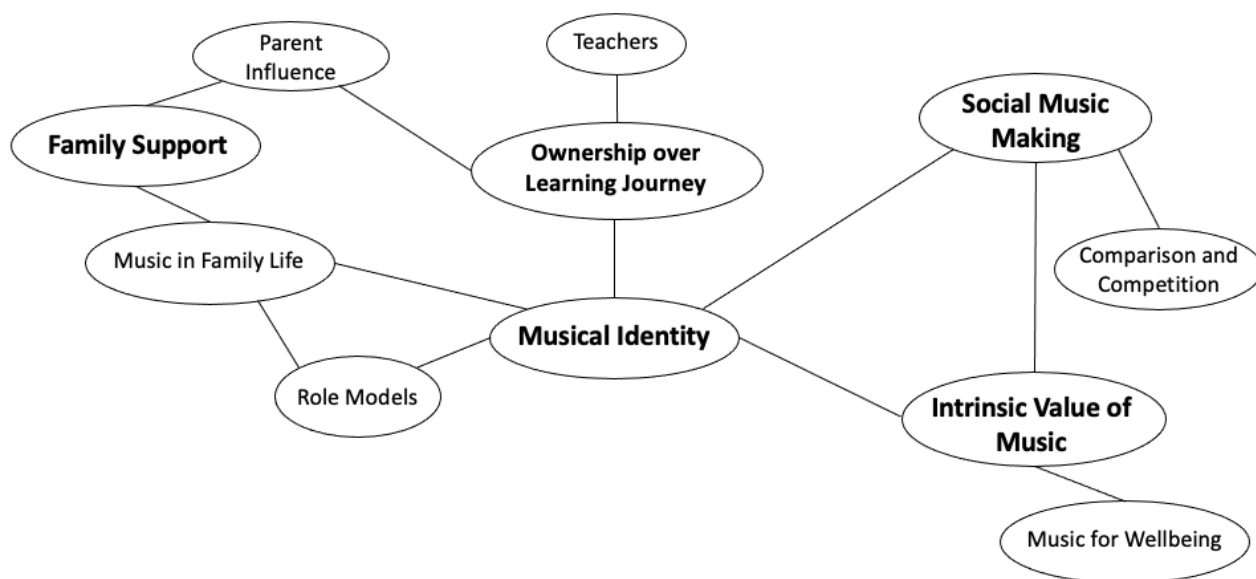
Note. Bold text represents the main themes. Non-bold text denotes sub-themes. Straight lines represent links between themes and sub-themes where they were considered important to the overall thematic analysis.

6.3.1   Family Support

Family members were referred to frequently throughout the interviews, suggesting family support was particularly important to participants' experiences of instrumental learning. Many participants spoke at length about the important role music played in their home lives:

> My [mum's] always been interested to hear what I've been up to, and my dad and my brother as I say they both play guitar so we'll just try and find something funky to do. I'll maybe make up a groove and he'll try and work along with that. (Tom)

Parents often played an active role in their children's music learning, sometimes playing music alongside their children, and at other times, supporting during practice sessions: "usually if I practise she'll hear me and then she'll give me feedback" (Faye). It seems likely that having musically engaged parents may have influenced these children to start learning an instrument. Eight out of nine participants mentioned parents or other family members who played an instrument.

Family members also appeared to have some influence over the amount and quality of practice undertaken. Most participants reported that their parents were highly supportive of their musical development, and some felt that they were principally motivated to practise because their parents told

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them to, highlighting a tension between extrinsic and intrinsic motivation. For example, when asked why they practised, one participant responded, "I don't know, because really my mum makes me, she considers it a homework so she'll be like, 'have you played your clarinet?', and I'm like 'no', and she'll be like 'go do it', and I'm like 'ok'" (Lucy).

Siblings were also included in the theme of family support. Several participants reported that they decided to start learning an instrument after seeing an older sibling do the same, for example, "the reason I started to play the trumpet was because [my sister] started in Year 4" (Lewis), and "we were given the choice of all the brass instruments, and my brother played the trumpet and my sister played the trombone" (Jane) . Whilst this musical influence from older siblings was often positive, a more competitive sibling relationship was also described by one interviewee: "my brother, he's doing Grade 3 trumpet and he's like teasing me, so I'm like, well I'm going to do Grade 1 so you can't tease me" (Lucy). Other relatives were also important for some participants at the start of their journeys, for Lewis: "my grandma as she introduced me to music" (Lewis). It was clear for these participants that their family members were influential at the outset of their instrumental learning journeys as well as influencing their ongoing musical engagement through practice and enabling performance alongside family members.

6.3.2   Social Music Making

Music formed an important aspect of the social lives of many of the participants. The availability of formal and informal music making opportunities seemed crucial to both the musical progress and the forging of social bonds for these young musicians:

> We've got to play at The Sage and things like that, and I've done little things like… the youth project…. These were fun, because again they're expanding my knowledge of music and everything, and they're fun cello pieces to play. Then I do jazz band which I play bass guitar for, and I'd actually started playing bass guitar especially for jazz band, and I've improved a lot I think from where I started because of it, and that's let me play in like the school shows and things. (Ben)

> With that group specifically, you can't avoid it because they live and breathe off music but it's quite fun to have a group of people you can just talk about music with and we all like the same styles of music so it's fun to talk about. (Tom)

The dominance of social music making in the lives of these participants suggests that the influence of peers might be a key factor in these adolescent instrumental learners' desire to continue learning an instrument. Social music making was also linked to perceptions of comparison and competition amongst those interviewed. The majority of participants gave examples of when they had compared their own musical

ability to their peers' after being exposed to their peers' playing through social music-making. These participants generally considered this comparison to be a positive motivational stimulus:

> I think it's seeing people around me my age who also play instruments, and it's not necessarily just violin it's all instruments, if they're improving, if they're doing well it kind of motivates me to do well to catch up to them, or progress with them. (Rebecca)

However, some participants also reported more negative experiences of peer comparison in their younger years:

> If I wasn't as good as my friends who played…it stopped me from practising and it made me less motivated to practise 'cause I just thought: 'well, there's not really much point cause there's other people who are better than me'. (Rebecca)

> It's kind of like if you're behind them but you learnt an instrument at the same time, it's irritating, 'cause you want to be at the same level as them if you started at the same time. (Jane)

Young musicians may not develop the resilience to cope with peer comparison until their later teenage years, and perhaps after they have reached a certain standard of ability. This was particularly apparent in the discussion with older participants like Rebecca, whose experience of peer comparison changed throughout her musical journey. After a certain age, this participant was not as concerned with comparing her musical ability to that of her peers, as she stated, "we used to compare each other's progress and how well we did in exams compared to them and things like that but it's not so much anymore" (Rebecca). The links between social music making, peer comparison and motivation are clearly worth exploring further due to their implications on adolescents' musical engagement.

6.3.3   Musical Identity

Many older participants often discussed their long-term musical aspirations and expressed a desire to be known as musicians, whilst others valued music as a shorter-term hobby. There was a clear distinction between these two groups. One older participant described the importance of music to his sense of self, revealing, "music is my biggest thing in life I think" (Ben). It appeared that some participants considered themselves to be 'musicians', while others did not see music as such an integral part of who they were. Musical identity was therefore an important theme within these interviews. For example, one of the younger participants felt his peers would "know" him by watching him perform, indicating he saw music as a defining part of the image that he wanted to portray to others. He also mentioned that he wanted to "be

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a musician by the end of school" (James), perhaps demonstrating he did not feel his musical identity was fully formed. Whilst this was one of the younger participants some of the older participants were even more conscious of the importance of music to them, viewing it as a key part of their identity:

> I think I've found a hobby that I really like, cause music is my biggest thing in life I think, and I don't think when I picked up guitar I don't think I expected it but guitar is one of my favourite things to do. (Ben)

> I think like what she said helped me realise that it wasn't so much a school subject cause I think that's how I viewed it before, but that it was…something that I had that other people didn't, but after we talked over everything, I realise that it was something that I had that other people didn't have and that I wanted to carry on doing. (Rebecca)

Musical identities might also be formed through shared social interactions around music. One participant considered his group of friends to be particularly musical, which likely contributed to his own sense of self as a musician:

> With that group specifically, you can't avoid it because they live and breathe off music but it's quite fun to have a group of people you can just talk about music with and we all like the same styles of music so it's fun to talk about. (Tom)

Some participants conveyed the idea that music had become more important to them with age, therefore musical identity may become stronger over time throughout adolescence:

> I don't really think I had any ambitions when I started playing just because I feel like…I only did it because my sister did it, but yeah, I think I've got more of an understanding of what music is and what it means to me than when I was like 10, 11. (Rebecca)

One key influence on the musical identities of these learners might have been their experiences of music in home and family lives. As already discussed, many of the participants experienced regular music-making at home, either performing with family members, or receiving help with practice from musical parents or other relatives. Learners with relatives who actively engage in music-making might be more likely to see themselves as musicians. In one case, there was a sense that music-making might form part of a larger family legacy:

I have an uncle who is a professional pianist and composes for the royal philharmonic and he's always been a very musical influence on me and same with my mum, I think probably my uncle the most. (Faye)

If I didn't have my dad there as the guitarist it wouldn't show me that I'm good at music. (James)

There is a clear link therefore between the theme of musical identity and music in family life, the experience of which seemed to make it more likely that these instrumental learners would adopt musical identities.

There was a sense that musical role models were integral to learners' aspiration to and formation of musical identities. Several musical role models were identified by participants; some were famous musicians, and some were family members, as indicated above, explaining the link between role models and music in family life in the thematic map (Figure 6.2). The improvement trajectories of these other musicians also provided a source of motivation for these young musicians:

My dad likes to do his research and so he shares me lots of facts about famous musicians…he likes to tell me about how The Beatles started playing banjo chords on a guitar and then came to where they were but it took like hours and hours of practice, so that's a big motivator. (Ben)

There's lots of other drummers who have went through this and a lot of amazing drummers that could have been where I would be, doing Grade 1 or something like that and it kind of makes me think that, yep if they can do it I can probably do it. (James)

Probably my dad most of all 'cause I mean when he does the guitar he kind of rearranges and tells me what to do and yeah he's really good at guitar, and…he's kind of my idol in a way. (James)

The existence of role models in the lives of adolescent instrumental learners appeared to be important in the development of their personal musical identities and may have influenced their orientations towards specific musical goals and aspirations. For example, Ben's acknowledgement of the amount of practice undertaken by The Beatles links with the concept of the mastery goal, and the importance of effort in making progress. James had a clear aspiration to be as good as a drummer in a recent film he had seen: "I think the fact that I might be able to be some sort of Whiplash kind of drummer, I kind of want to get to that stage where I can just play anything really fast" (James). The idolisation of performers and the imagining of future identities as musicians was clearly important to these learners, and along with social music making

and music in family life, musical identity appeared to be key to the motivation of these participants, explaining the central role of this theme in the thematic map (Figure 6.2).

6.3.4   Ownership over the Learning Journey

Participants conveyed different levels of autonomy when discussing their musical development and approaches to practice. One participant had a clear sense of volition over his musical journey, stating, "my future I feel is very oriented around music, not just about work and stuff but home life and what goals I have to do with where I get my instruments" (Ben). This same participant also articulated clearly what he wanted to achieve from his guitar lessons: "there's a lot of things that might change what we do so for example if I wanna go to Mr Smith about something in my composition, he'll show me something I can do on guitar or something" (Ben). Others similarly conveyed a feeling of joint decision making within their lessons: "well I usually warm up and then I'll play through a piece and then we'll identify what needs working on and then we'll go through that" (Faye). However, other learners seemed to be fed up with the lesson content and wanted to have more autonomy over the repertoire performed: "I don't have an issue doing the exams and stuff, but I do just…want to play more, than have to focus on learning loads of scales and all that kind of thing" (Lewis). In this example it was apparent that the instrumental teacher directed the lesson content with less choice given to the pupil.

Younger participants often struggled to articulate any clear goals. When asked what they were working towards on their instrument, they responded with statements such as, "I'm not sure right now I think it's grade 2" (Ellie), "I'm not sure, I think it's mainly up to the teacher, I think we've been trying to do grade 1 for a while" (Jane), "the ones that Miss Simpson picked because they were in the book" (Lucy). Whilst it would be expected that instrumental teachers would have more control over the direction of lessons and the most suitable repertoire for instrumental learners in the early stages of musical development, the difference in autonomy between some of the learners interviewed was quite stark.   It is therefore possible that age and expertise both play a role in young musicians' abilities to articulate goals and take ownership over their musical journeys.

The practice routines of participants also showed differing degrees of autonomy over their musical learning.   Some learners were very self-motivated, as in the case of this participant: "I'm not being forced to do it 'cause I don't have a time limit on when I need to sit an exam or anything so I can just sit down and play when I want to play" (Tom). For others, practice was monitored or controlled by other people, mostly their parents. This link between parent influence and the theme of ownership over the learning journey is shown in the thematic map (Figure 6.2). One learner had help from a parent during practice sessions: "my mum being a clarinet player, if I need help she'll often help me, she'll often take over but yeah *(laughs)"* (Faye). Another learner often had to be reminded to practice by her parent: "really because my mum makes me, she considers it a homework, so she'll be like, have you played your clarinet, and I'm like no, and she'll be like go do it" (Lucy). It was clear from the interviews that the participants had very different levels

of ownership over their musical learning journeys, in their experiences in lessons and their attitudes and approaches to practice. It is likely that these varying experiences of autonomy are a key indicator of these participants' overall motivation to learn an instrument.

6.3.5   *Intrinsic Value of Music Making*

The intrinsic value of music making was conveyed by participants when they discussed the enjoyment they got from musical experiences aside from achieving any specific musical goals. When participants related these experiences, their intrinsic motivation towards learning an instrument was most clear. For one learner, playing the drums had a powerful effect on his mood: "yeah it's good fun just bashing the drum…probably kind of like when you hit a drum it… sets off a chain reaction that feels really good for some reason" (James). Another participant considered the repertoire itself to be the key motivator, stating, "the piece itself encourages me, if that makes sense, because I want to play it" (Jane).

Learning an instrument was considered by some participants to be beneficial for well-being, as a tool for stress relief and emotional regulation:

> I use guitar more as a stress relief instrument, so say if I need a break from revision or something I'll go and pick up my guitar. (Ben)

> I struggle to get my emotions out, talking to people and things like that. I struggle with that kind of stuff and I just let it build up, but when I play violin it's a way for me to forget about those and to release my emotions…it helps me express certain things. (Rebecca)

> I just enjoy the adrenaline of playing the drums and guitar and stuff like that, it makes me feel good about myself, and it makes me feel even more confident playing music. (James)

It is likely that these experiences contributed to the musical identities of these young musicians, as they perceived a personal connection to music-making through its use as a tool for emotional regulation and expression.

As well as the value of music in emotional regulation, participants also found intrinsic value in specific musical experiences and accomplishments.   They were asked in the interviews if they had any fond performance memories, with one participant responding, "it might be playing at The Sage, because that's a very different feeling to all the others… mostly exhilarated. It's a crazy feeling playing at The Sage" (Ben). Whilst many adolescents might experience nerves when performing for others, this did not seem to be a problem for some of the participants interviewed, including this drummer: "it was fun to do, it was only a small gig, there weren't loads of people there, it was just nice to be kind of in the spotlight" (Tom). The value in this musical accomplishment came from the social aspect of playing music for other people. These

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performance memories might have been powerful motivators for these instrumental learners to want to continue their musical journeys. In summary, the intrinsic value of music making was an important theme which provided a slightly different perspective on young musicians' motivation, which is more often considered in terms of learners' musical goals and other extrinsic factors.

6.4   Discussion

6.4.1   *What are the Achievement Goals of Adolescent Instrumental Learners?*

The first research question sought to understand which achievement goals adolescent instrumental learners most closely identified with, and whether each of the six achievement goals in Elliot et al.'s (2011) 3 x 2 model were relevant to this population. Four of the six achievement goals were apparent in the interviews: other-approach, other-avoidance, self-approach and task-approach.

Other-approach and avoidance goals were mostly framed by discussions around social music making and family influence, defined by one participant as, "showing an improvement the quickest, I think the whole competitive element it doesn't take away from the fun of it but it makes it more interesting" (Ben). Another participant was motivated by demonstrating his ability to others, "if it's someone who maybe I feel like I'm on the same level with I might think I'm going to prove them wrong" (Tom).

Participants seemed to fluctuate between the approach and avoidance dimensions of the other-based goal, portraying a desire to outperform their peers, as well as simply not wanting to fall behind. The other-avoidance goal was portrayed by one participant in particular, who stated in reference to her brother, "I'm going to do grade 1 so you can't tease me" (Lucy). Both other-approach and avoidance goals were considered to be strong motivators, encouraging participants to practise more often. Previous research has suggested that in contrast to mastery goals, there is no relationship between other-based goals and self-reported practice time (Schmidt, 2005). The present research however suggests that other-approach and avoidance goals might have positive implications for adolescents' motivation to practise.

Self-approach goals were evident throughout the interviews, with eight participants indicating they had a desire to improve their playing for their own sense of achievement.   One participant had clear ambitions in relation to their future, influencing their self goal: "I think for me I know I need to practise to improve and I've got a motivation there because I want to go on and carry on doing music when I'm older" (Rebecca).

Task goals were identified occasionally when participants were focusing purely on the music, rather than practising with the aim of self-improvement or outperforming others:

> I think if we're working on anything in particular that I really want to do, it's sort of that the piece itself encourages me, if that makes sense, 'cause I want to play it…it's always the piece that matters, if it's a piece that you don't like then you're not going to do it. (Jane)

However, participants' discussion of task goals was mostly linked to their self-approach goals; one participant articulated his goal as follows: "I might practise on a hard [piece]…so it…help[s] me a bit more, I don't know, maybe get a merit along the way" (James). Task goals appeared to be adopted by learners for the purpose of improvement, thus overlapping with the self-approach goal.

This close link between task and self-based goals has been acknowledged by Elliot et al. (2011): "the task-based goal of understanding new course material and the self-based goal of expanding one's knowledge base are clearly intertwined" (p. 633). The present study suggests the distinction between self and task goals in the 3 x 2 achievement goal model may be limited to certain domains or levels of expertise, and is perhaps not relevant to adolescent instrumental learners.

Elsewhere in relation to the 3 x 2 achievement goal model, there was no indication that participants in this study adopted either self-avoidance or task-avoidance goals in relation to their instrumental learning. These participants were not concerned about the danger of performing worse than previously or losing musical skills. Elliot et al. (2015) do not recommend using the full 3 x 2 model in every piece of achievement goal research, and it seems plausible that task-avoidance and self-avoidance goals are not important for this population of adolescent instrumental learners. This may be due to the age and ability level of participants. In musical terms, self-avoidance goals might be defined as the desire to avoid performing poorly in comparison to previous performances, and task-avoidance goals might be defined as the desire to avoid not knowing the necessary skills to play a certain piece. Adolescent instrumental learners are likely to be aware that they are not yet experts on their instrument, and so these task-avoidance goals might not be relevant. In relation to self-avoidance goals, most beginning and developing young instrumental learners experience noticeable improvements at this stage of their musical journey, rather than a decline in skill level. It is therefore possible that adolescent instrumental learners do not consider self-avoidance and task-avoidance goals as key motivating forces.

One unique insight from this study is that adolescent instrumental learners may hold multiple achievement goals in relation to different aspects of their musical lives. Participants oscillated between different achievement goals depending on the context of the discussion. Some participants for example conveyed a self-approach goal, yet later identified comparison with others as a key motivator. Most studies in achievement goal theory have captured the goals of learners at one specific point in time using quantitative methods, although some researchers have advocated for multiple goal profiles and theorised that goals can change in response to different situations (Ng 2017; Pintrich, 2000). Ng (2017) classified primary school musicians as multiple goal students when they reported strong mastery and performance-approach goals. There were more positive outcomes for these learners in comparison to those who only adopted a mastery goal. Future research in this field might examine the interaction between other types of goals, particularly task- and self-approach goals, to investigate whether the interaction of these goal types results in different outcomes than when they are considered in isolation. The interview data from the present study supports Ng's (2017) view that multiple goal profiles consisting of both mastery and

performance goals may be more powerful motivators for adolescent instrumental learners than singular achievement goals.

6.4.2   *What May Influence the Achievement Goals of Adolescent Instrumental Learners?*

The interview findings suggest that the achievement goals of adolescent instrumental learners may be influenced by family and peer relationships, as well as musical identity. These factors also appear to interact in their influence on the achievement goals of instrumental learners. Firstly, parents appeared to be heavily involved in many participants' instrumental practice routines, and these behaviours may encourage learners to strive for other-approach or avoidance goals to please their parents. One participant was told to practise by a parent, and other participants had family members who were actively involved in their practice sessions. More informal practice also took place in family settings, with some participants playing music for fun with family members, though any link with achievement goals was less clear in these cases.

Family influence is undoubtedly a prominent factor in the motivation of young musicians, with evidence to suggest this is one of the main reasons why young people both begin and continue to learn an instrument (Howe & Sloboda, 1991; McPherson, 2009), supported by the results of the present study. Other research with children aged 10-14 has found that controlling parental involvement in homework activities was significantly correlated with learners' adoption of performance goals (Gonida & Cortina, 2014), and this may also be the case for instrumental practice, as experienced by some of the present interview participants. Indeed, Creech (2010, 2014) advocates for an autonomy-supportive approach to practice, arguing that too much parental involvement may be detrimental to the goal-setting process, with instrumental learners striving to please their parents rather than setting more intrinsic task- and self-approach goals. In other contexts, research has shown there may also be a link between parents' achievement goals and those of their children. Friedel et al. (2007) found that children's perceptions of their parents' goal emphases had strong correlations with their own mastery and performance goals for learning mathematics. Whilst the effect of teacher goal emphases has been investigated in music contexts, showing an impact on the self-efficacy of musicians (Matthews & Kitsantas, 2013), the effect of parent goal emphases has yet to be explored in relation to instrumental learning. On the basis of the findings of the present study which indicate parents might have a role to play in instrumental learners' goal orientations, as well as other studies that have shown links between parental attitudes and achievement goals, it would seem useful for future research in this area to explore links between instrumental learners' achievement goals and those of their parents.

Peer relationships formed through social-music making also appeared to lead to the adoption of different achievement goals for many participants. Whilst competitive friendships tended to be perceived positively by most learners, some participants also recalled some instances where peer comparison was less motivating. This was particularly the case for those who were younger and less musically experienced.

Participants who had more positive experiences of peer comparison seemed more likely to orient towards other-approach goals, whereas others who compared themselves negatively to their peers either communicated other-avoidance goals, or task and self goals to detract from the comparison with their more musically able peers. Other researchers have found that social aspects of music making are an important factor impacting the continued motivation of young musicians (e.g. Adderley et al., 2003; Holster, 2023; MacNamara et al., 2006; Patrick et al., 1999). In one study, Bull (2019) found that talented young orchestral musicians in the UK strongly valued the competitive and hierarchical nature of their ensembles, however this positive experience may be limited to particularly high performing adolescents, as the interviews were carried out with instrumentalists in the National Youth Orchestra, with players of an extremely high standard compared to those in the present research context. Competition might be a healthy motivator for some learners, though this positive impact on motivation is unlikely to be universal. It is likely that the relationship between peer comparison and achievement goals might be moderated by participants' age, ability level and self-concept.

6.4.2.1   Musical Identity and Achievement Goals

Musical identity played a key role in these adolescents' motivation to learn an instrument, as indicated in the model in Figure 6.2. Many of the participants' interview responses showed strong parallels with measures used to assess musical identity and musical self-concept in other studies. For example, López-Íñiguez et al.'s (2022) Musical Identity Measure (MIM) includes items such as, "music helps me to express myself" (p. 748), to measure emotional attachment to music, closely mirroring the words of the interview participant Rebecca: "it's also a way to express myself and allow my emotions". Some participants alluded to the stress-relieving benefits of playing an instrument, aligning with the item "Music helps me to cope with stress" in Fiedler and Spychiger's (2017, p. 169) measure of musical self-concept (MUSCI_youth). Other participants emphasised the importance of music to their future selves, "my future I feel is very orientated around music, not just about like work and stuff but like home life and what goals I have to do with where I get my instruments" (Ben), again showing close similarities to the MIM: "I cannot imagine a life without music" (López-Íñiguez et al., 2002, p. 748). The data from these interviews therefore support the findings of other researchers who have highlighted different aspects of musical identity.

Participants' tendencies towards specific achievement goals were linked to these self-perceptions of musical identity. In the interviews, the older participants tended to convey more established musical identities compared to the younger participants, also accompanied by clearer musical ambitions for the future. One of these participants described a crucial turning point in her musical journey, when her stronger sense of musical identity began to outweigh her concern with peer comparison. Thus, a more established sense of musical identity might increase the likelihood of self goals in relation to adolescents' instrumental learning. This link between musical identity and age is supported by literature on musical identity. Manturweska's (1990) research on the lifespan of Polish professional musicians identified the

adolescent years as a crucial phase in musicians' development, where they form and develop their "artistic personality" (p. 134). Hargreaves and colleagues (2015) also draw on the work of various researchers who identify adolescence as a key phase in the development of self-identity. They propose that identity formation is comprised of two stages: exploration and commitment. Exploration refers to the consideration of and engagement in various pursuits of interest, whereas commitment occurs later when adolescents have fully decided on a musical (or other) identity (Hargreaves et al., 2015). As identity formation is an evolving process, is it likely that most teenagers may not reach the stage of commitment until later adolescence, potentially explaining the more established musical identities of some of the participants in the present study.

Some researchers have also highlighted the importance of relationships with others in the formation of musical identities, which may explain the change in some participants' achievement goal orientations as they progressed through adolescence. Manturzewska (1990) notes the importance of peer relationships in developing musical identities during adolescence, and Hargreaves et al. (2015) propose that "children's self-concepts become increasingly based on comparisons with others in middle childhood through to adolescence" (p. 765), though in the later teenage years, identities appear to become more stable and continuous. Comparison with others certainly appeared to form an important part of some of the interview participants' self-presentations of musical identity (e.g. "we were talking about whose music was the best and we were all saying that music is rubbish, my music's best" - James). A concern with the opinions of others is closely associated with the concept of an other-approach goal, and when discussing their peers, participants often compared their ability level, conveying a desire to perform better than their peers. It is possible that during this phase of identity formation in adolescence, music learners might be more likely to adopt other-based goals. Other participants seemed to have outgrown this phase and were more concerned with their own musical progress rather than that of their peers, representing the self-approach, rather than other-approach goal.

Several studies with adult musicians have shown that social comparison might not form such an important aspect of musical identity perceptions as originally hypothesised. Research with performance postgraduates showed that social factors were the lowest reported factor in the MIM compared to other factors including career calling and emotional attachment (López-Íñiguez et al., 2022), and research with a broader range of adult musicians showed that social factors did not form part of their overall self-perceptions of musical identity (Burland et al., 2022). These results, though employing quantitative measures with much larger samples, differ considerably from the findings in the present study which indicate social music making is an important aspect of adolescents' musical identities. This difference is likely to be explained by the differing age of the participants, and as noted by the authors, the often-isolated nature of instrumental practice at university level (López-Íñiguez et al., 2022). However, validation of the MUSCI_youth measure of musical self-concept with adolescent musicians also showed that community factors in music-making (e.g. "the convivial facet in music means a lot to me") might be less

important in terms of musical self-concept than factors such as mood management ("music relieves me from daily routine") and ideal musical selves ("I would like to have higher musicianship") (Fiedler & Spychiger, 2017). As musical identities become more established during the adolescent years, self-based goals relating to musical progression and emotional regulation might become more important to adolescent instrumental learners, with the importance of social music making and comparison lessening over time.

As already indicated, family members likely influenced the achievement goal orientations of many of the instrumental learners in this study, particularly in fostering other-based goals in relation to music practice. Family members also play a key role in the early musical identity formation of young musicians, with Manturzewska (1990) highlighting the importance in infancy and early childhood of having at least one caregiver with a strong interest in music, to support early emotional musical connections. Children who grow up in households where music does not form part of family life may be less likely to form musical identities. Whilst this aspect of Manturzewska's research focuses on early childhood, it does seem to be supported by the experiences of the participants in the present study, many of whom experienced music as a key part of their home life, and thus may have been more likely to learn an instrument as a result.

Musical identity is closely linked to the concept of passion, which has been associated with achievement goals in research with musicians. Bonneville-Roussy and colleagues (2011) distinguish between two types of passion for an activity: harmonious passion which occurs when one freely engages in an activity for the purpose of pleasure, and obsessive passion which is more likely to occur due to external influences and can have detrimental consequences for well-being. Their research which explored the passion and achievement goals of classical musicians aged 15 to 74, found that harmonious passion predicted mastery goals, whereas obsessive passion predicted both performance-approach and performance-avoidance goals (Bonneville-Roussy et al., 2011). Interestingly, harmonious passion and mastery goals were then linked to increased amounts of deliberate practice in this same study. Whilst all participants in this study conveyed passion for music-making, the quality of passion as either harmonious or obsessive might result in different achievement goals. Musicians who have a harmonious passion for music more congruent with their own personal identity, rather than linked to the perceptions of others, might be more likely to pursue mastery goals. Although this research was largely conducted with an older population, the results seem to support the findings of the present study, in which those participants who conveyed stronger personal musical identities were more likely to pursue self-approach and task-approach goals, whereas those who had not fully established their sense of musical identity seemed more likely to pursue other-based goals in response to the opinions of others. In summary, musical identity might be considered a key influence on the achievement goal orientations of the adolescent instrumental learners in this study, a trend which is supported by the findings of other researchers and is therefore worth exploring further with a broader population of instrumental learners.

6.5   Conclusions

This study provides valuable evidence to contribute to the understanding of adolescent instrumental learners' achievement goals and their influences, helping to answer research questions 1 and 2 of this thesis. In relation to research question 1, the interview data suggested other-approach, other-avoidance and self-approach goals may be most prevalent amongst adolescent instrumental learners, whilst task-approach goals appear to be less common, and task- and self-avoidance goals may not be relevant to this context. In the context of musical learning, it may be most useful to consider task and self goals together as one goal dimension, mirroring previous research in music learning contexts (e.g. Miksza, 2011; Nielsen, 2008; Smith, 2005). The results of this study also confirm and expand upon the principal findings of Studies 1 and 2. A broader range of influences on achievement goals have been proposed, namely family, peers, and musical identity.

6.5.1   Implications for Music Teachers

Several recommendations for music teachers working with adolescent instrumental learners can be made based on this exploratory study. For adolescent instrumental learners, a stronger sense of musical identity led to more focused self-approach goals and increased motivation for making music in later life. Young musicians should therefore be directed towards positive musical role models, and educators should be conscious of celebrating the achievements of young musicians to give them a sense of musical self-worth from the outset of their musical journeys. Musical experiences were central to the family lives of many of the participants interviewed, resulting in more opportunities to make music with others, as well as fostering a sense of musical identity and belonging. Teachers should ensure they provide access to musical role models and ensemble performance opportunities for all young musicians so those whose family circumstances differ are provided with similar experiences.

A clear link was found between social music making and comparison with peers, leading to other-approach and avoidance goals. Whilst these goals did not appear to have negative consequences for the older participants, there was some indication that peer comparison might lessen motivation in younger musicians. Music teachers should therefore be careful to avoid using a language of comparison in ensemble settings with young pupils, as well as providing opportunities for adolescents to perform with people of a diverse range of abilities and ages.

6.5.2   Limitations

This exploratory study was designed for the purpose of informing the larger-scale research in Study 4. Therefore, this research was carried out on a small-scale in a specific educational setting, as is common in qualitative research. Conclusions should therefore be considered within the specific context of this study. The children interviewed were from a relatively privileged social background and had been given musical opportunities by their families which are not available to many other young people. Future research in this

area should interview adolescents from a wider range of schools and musical backgrounds, particularly those who might learn in more informal contexts.

The interviews themselves were quite short (between 13 and 18 minutes long), and some participants spoke for longer than others, potentially due to their relationship with myself as their music teacher. Focus group interviews may be a useful alternative method in future research to encourage adolescent musicians to discuss their musical experiences and goals more freely with their peers.

6.5.3   Next Steps

Based on the results of this and the first two studies, there is a need to increase the scope of the research to include instrumental learners from a range of different school settings across England. Broadening the scale of the research will allow the achievement goal model to be tested with a larger sample, to fully examine its relevance to the wider context of instrumental learning. The final study will also incorporate all proposed achievement goal influences into the same model to be tested empirically, namely teacher influence, competence beliefs, family and peer influence, musical identity, and age. Incorporating these factors into a larger model will allow for the comparison of different factors and potentially highlight the most important influences on achievement goal orientations. Finally, as the influences on achievement goals are now more clearly defined, there is a need to examine the impact of achievement goal orientations on different musical outcomes, most importantly long-term commitment to musical learning and practice behaviours.

7   Study 4

7.1   Introduction and Rationale

The overall aims of this thesis were to determine the achievement goals held by adolescent instrumental learners, clarify the influences on these achievement goals, and ascertain the impact of these achievement goals on adolescents' commitment to musical learning, in the form of practice behaviours and continuation rates. This final study aimed to bring these three research questions together into one overarching model, informed by the findings of the previous three studies.

The first aim was to determine the prevalence of different types of achievement goals in the population of adolescent instrumental learners. The data from Studies 1, 2, and 3 confirmed previous research findings that mastery goals are consistently stronger than performance goals in populations of instrumental learners. In relation to the 3 x 2 achievement goal model, self goals may be more dominant than task goals overall, though in Study 3 there appeared to be an overlap between self- and task-approach goals. Self-avoidance and task-avoidance goals appear to be less relevant for this population. A reduced achievement goal model, more relevant to populations of adolescent instrumental learners, is therefore proposed, shown in Figure 7.1. The original proponents of the 3 x 2 achievement goal model recommend employing more targeted models to investigate specific research questions (Elliot et al., 2015). This final study therefore aimed to confirm whether the more refined achievement goal model shown in Figure 7.1 was relevant to a larger sample of adolescent musicians from across England.

This thesis has employed a sequential research design using a mixture of quantitative and qualitative methods to explore different aspects of achievement goal theory with instrumental learners. Qualitative observation methods in Study 1 were employed to investigate the impact of a teaching intervention and examine the role of the music teacher in promoting mastery achievement goals in a

Figure 7.1

Achievement Goal Model for Adolescent Instrumental Learners
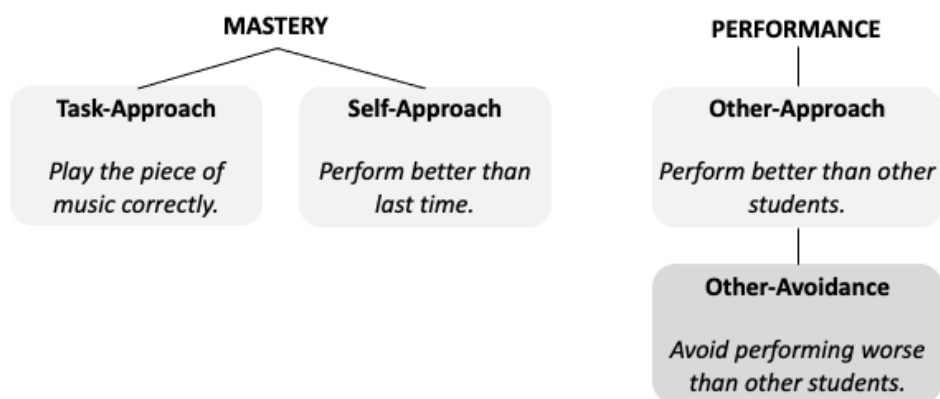
classroom setting. In conjunction with analysis of quantitative survey data, it was found there are likely to be other influences determining the achievement goal orientations of instrumental learners than solely teaching methods. Study 2 examined the relationship between self-efficacy beliefs and achievement goals, using an explanatory sequential design with semi-structured interviews to explain links between self-efficacy and achievement goals found in the survey data. Data from the interviews indicated there was a range of interacting influences on achievement goals, which were then explored in Study 3 in a small-scale qualitative interview study. In summary, a range of influences on achievement goals were found across Studies 1, 2 and 3, including teacher influence, family relationships, peer relationships, musical identity, and competence perceptions. Findings from Study 3 suggested musical identity in particular may play a key role in the adoption of particular achievement goals, mediating influences from other factors such as family and peer influence. Strong parallels can be drawn between this web of influences and self-determination theory (Ryan & Deci, 2020), which shall now be discussed before the presentation of the final hypothesised model.

7.1.1   *Self-Determination Theory and Achievement Goals*

Self-determination theorists propose that learner motivation is situated on a continuum from extrinsic to intrinsic motivation, and is determined by the satisfaction of the basic psychological needs of autonomy, competence and relatedness (Ryan & Deci, 2000c). More intrinsically motivated learners engage in behaviours that are aligned with their personal identity, whereas extrinsically motivated learners undertake tasks in response to external pressure or the desire to please others (Ryan & Deci, 2000a) (see 1). Various researchers have applied self-determination theory to the context of musical learning, including Evans (2015) who outlined examples of musical behaviours congruent with each type of motivation. Learners with integrated motivation might have thought patterns such as, "I practise because music is the most important thing to me" (Evans, 2015, p. 76). This particular example has a stark similarity to a quote from one of the participants from Study 3, "Music is my biggest thing in life I think" (Ben). In contrast, those who are externally motivated are more likely to convey avoidance-related motivation, for example "I will get in trouble if I don't do it" (Evans, 2015, p. 76). Self-determined motivation is strongly linked to the concept of identity, and might explain the apparent links between musical identity and adolescent instrumental learners' achievement goals in Study 3.

The basic psychological needs of autonomy, competence and relatedness might be representative of the range of achievement goal influences found in Studies 1, 2 and 3. Peer influence was a common theme throughout all three studies, as well as family and teacher support, which could all represent the psychological need of relatedness. Autonomy can be encouraged by both parents and teachers as indicated in the lesson observations (Study 1) and interview data (Study 3). Learner autonomy is commonly acknowledged as an important influence on mastery goals (Ames, 1992; Hruska, 2011). Competence and self-efficacy beliefs were positively associated with mastery and other-approach goals in Studies 1, 2 and 3,

and have previously been associated with learners' achievement goal orientations in other educational contexts (Elliot & Church, 1997). It is likely that the implied influences on achievement goals found in the previous three studies are indicative of adolescent instrumental learners' basic psychological need satisfaction. There is a clear argument for combining self-determination and achievement goal theories into a more holistic model of musical motivation, which might explain adolescent instrumental learners' engagement in practice, and longer-term commitment to music making. This integration of theoretical models of motivation is an important next step in understanding learner motivation (Elliot & Sommet, 2023; Sommet & Elliot, 2017).

Self-determination theory and achievement goals have previously been linked in contexts other than music education. In research with undergraduate education students, Ciani et al. (2011) found that learners' relatedness and autonomy satisfaction predicted their self-determined motivation, which in turn predicted mastery-approach and mastery-avoidance goals. There was no link found in this study between self-determined motivation and performance goals. With secondary school students in Norway, Diseth et al. (2012) also investigated whether teachers' support of basic psychological needs predicted learners' achievement goal orientations. In this study, competence and relatedness support from the teacher predicted learners' adoption of mastery goals. Self-determined motivation was not included in this model as a mediating factor, though it is likely to be important in the relationship between psychological need satisfaction and achievement goals (Diseth et al., 2012). Other researchers have examined the role of basic psychological need satisfaction in predicting learners' achievement goals at the point of secondary school transition. Duchesne et al. (2017) found the satisfaction of basic psychological needs increased learners' adoption of mastery goals, and reduced the likelihood that they would adopt performance-avoidance goals. Each of these studies provides evidence that psychological need satisfaction influences learners' achievement goal orientations, however a full model incorporating basic psychological satisfaction, self-determination and a wider range of achievement goals, for example using the 3 x 2 model, is yet to be examined.

To my knowledge, there have been no studies investigating the link between self-determination theory and learners' achievement goal orientations in musical contexts. Music teachers' promotion of mastery goals in the music ensemble setting can impact learners' competence beliefs (Yoo, 2021), however the impact of these beliefs on learners' own achievement goal orientations were not measured in this study. Researchers have also found an association between different types of passion and the achievement goals of adult performers, where harmonious passion led to higher mastery goals and obsessive passion led to higher performance-approach and avoidance goals (Bonneville-Roussy et al., 2011). Harmonious passion is more internalised in one's identity, whereas obsessive passion occurs when individuals feel controlled by external pressures (Bonneville-Roussy & Vallerand, 2020). Though there are similarities between harmonious and obsessive passion and self-determination theory in the degree to which motivation is congruent with self-identity, Bonneville-Roussy and colleagues (2011) draw the important distinction that

obsessive passion still stems from an enjoyment of the activity unlike extrinsic motivation, or indeed amotivation. Combining self-determination theory and achievement goal theories seems to be the next logical step in understanding the motivation of adolescent instrumental learners more fully.

7.1.2   Outcomes of Achievement Goals

As the main aim of Studies 1, 2 and 3 was to define the influences on achievement goals, the outcomes of different goal orientations have yet to be examined in this thesis. For research on adolescent instrumental learners' motivation to be relevant to music educators, it is important to consider the impact of these goals on motivational outcomes, rather than as an end point in themselves. The third and final research question of this thesis aimed to examine the impact of achievement goals on adolescent instrumental learners' musical engagement.

One such indicator of instrumental learners' commitment is their practice behaviour. This is important as deliberate practice is widely acknowledged as crucial in developing performance expertise (e.g. Bonneville-Roussy & Bouffard, 2015; Ericsson et al., 1993). Adolescents who adopt a mastery goal have been reported to use more metacognitive strategies (Miksza, 2009b) and practise for longer (Ng, 2017; Schmidt, 2005). Though there have been other studies linking the achievement goals and practice behaviours of university aged musicians or professional performers (Bonneville-Roussy et al., 2011; Liu, 2023; Nielsen, 2008; Smith, 2005), there has still been no research linking achievement goals to adolescent instrumental learners' practice habits in UK music education settings.

Self-determined motivation and basic psychological need satisfaction have also been linked to musicians' practice behaviours. Evans and Bonneville-Roussy (2016) tested a path model including basic psychological need satisfaction, self-determined motivation, and practice frequency, finding that university musicians' quantity and quality of practice were both predicted by their psychological need satisfaction through self-determined motivation. Similar patterns were found with younger musicians; the amount of practice undertaken by high school string players in the USA was influenced by their basic psychological need satisfaction (Evans & Liu, 2019). In this study however, practice time was also related to the frustration of basic psychological needs. This relationship might be due to the external motivation needed by some young musicians to practice. There may be a different relationship between autonomy and practice time for younger musicians, for whom more parent support is required to engage in sustained practice (Creech, 2010). Evans and Liu (2019) did not include a measure of self-determined motivation in their study, and this would be beneficial in explaining the relationship between basic psychological need frustration and practice time. Based on research so far on self-determined motivation, achievement goals, and engagement outcomes, it seems reasonable to assume that more intrinsic motivation, coupled with a mastery goal orientation, might lead to more deliberate practice behaviours and increased practice time.

Another indicator of engagement in instrumental learning is how long children persist with learning their instrument. One study found that instrumental learners oriented towards mastery goals are more

likely to indicate longer-term commitment to musical learning than those oriented towards performance-approach goals (Ng, 2017). Higher self-determined motivation and psychological need satisfaction can also predict children's intentions to continue learning (Evans et al., 2013; Evans & Liu, 2019; Freer & Evans, 2019; Gerelus et al., 2020; Yoo, 2021). With the exception of two studies on self-determined motivation (Evans et al., 2013; Gerelus et al., 2020), all these studies explored learners' intentions to continue playing, rather than actual continuation rates, therefore further research is needed to determine how much impact self-determined motivation has on long-term engagement in instrumental learning. There is also a need to measure whether achievement goal orientations influence actual levels of continuation by using longitudinal study designs, as Ng (2017) collected data on intentions to continue, rather than actual continuation rates.

7.1.3   Research Questions

This final study seeks to address the identified gaps in the literature by testing a path model consisting of relationships between basic psychological need satisfaction, self-determined motivation, achievement goals, practice behaviours and continuation rates with adolescent instrumental learners. The relationship between self-determination theory and achievement goals has yet to be tested in a music education context, and the proposed model may explain the links between different influences on achievement goals shown in the data from Studies 1, 2 and 3. The model will also include practice behaviours, practice time and continuation rates to evaluate the impact of achievement goals on musical engagement outcomes. This study adds to the understanding of achievement goal theory in musical learning by applying the refined achievement goal model (see Figure 7.1) to a large sample of adolescent instrumental learners in England. Age and ability level are also included in the model to evaluate the relative influence of these factors on adolescent instrumental learners' motivation. The hypothesised path model is presented in Figure 7.2. The following research questions guide the data collection and analysis methods of this study.

1. What are the achievement goal orientations of adolescent instrumental learners?
2. Do basic psychological need satisfaction and self-determined motivation explain adolescent instrumental learners' achievement goal orientations?
3. Do achievement goal orientations influence the practice habits of adolescent instrumental learners?
4. Do achievement goal orientations influence the continuation rates of adolescent instrumental learners?

Figure 7.2

Hypothesised Path Model of Basic Psychological Needs, Self-Determined Motivation, Achievement Goals and Motivational Outcomes
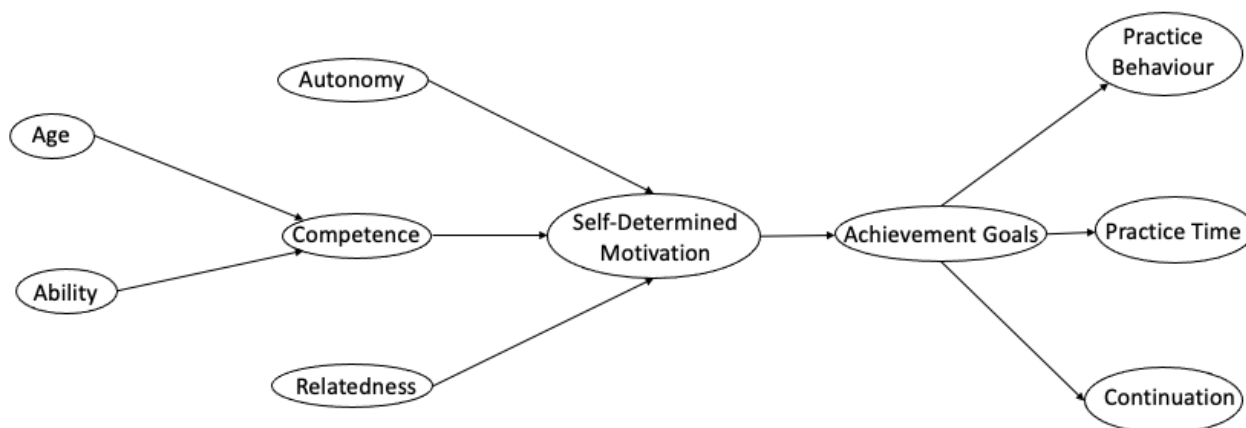
Based on the findings of previous research in other contexts it is hypothesised that there will be strong relationships between self-determination and achievement goals. More intrinsic motivation is likely to have stronger connections to task- and self-approach goals, whilst more extrinsic motivation is likely to be linked to other-approach and other-avoidance goals. Amotivation is hypothesised to have no significant relationships with any of the achievement goals. Based on previous research in self-determination and achievement goal theories, intrinsic motivation, self-approach, and task-approach goals are expected to positively impact practice time, practice behaviours, and continuation rates for instrumental learning. It also seems likely based on the findings from Study 3 and other research (Evans & Liu, 2019), that there will be links between extrinsic motivation, other-approach goals, and practice time.

7.2   Method

7.2.1   Study Design

This study utilised quantitative methods for data collection and analysis. More deductive quantitative methods were most appropriate for this final study which aimed to determine any causal relationships between psychological need satisfaction, self-determination, achievement goals and motivational outcomes using a much larger sample of adolescent instrumental learners. The study also took a longitudinal form, with data collected at two time points 12 months apart. Longitudinal approaches have not yet been used to gather concrete data on instrumental learners' continuation rates in achievement goal research, and so this aspect of the study design was considered a valuable addition to achievement goal research in the field of music education.

7.2.2   Participants

The final sample consisted of 195 respondents. The respondents came from 14 secondary schools across England, a mixture of state-funded and independent schools. 40% (n = 79) of respondents identified as male, 53% (n = 103) as female, and 1% (n = 2) as non-binary. Demographic data on ethnicity and EAL status was not available. Respondents played instruments from a variety of different families; 24.1% (n = 47) were pianists, 19% (n = 37) were guitarists (including bass guitar and ukulele), 17.4% (n = 34) were string players, 15.9% (n = 31) were woodwind players, 12.8% (n = 25) were drummers, and 8.2% (n = 16) were brass players.

The sample was weighted towards younger pupils, with 26% (n = 51) of respondents in Year 7 (aged 11-12), decreasing in a linear fashion to 3.1% (n = 6) of respondents in Year 13 (aged 17-18).   The distribution of grade level was similar, with 25.6% (n = 50) of respondents reporting that they were at pre-Grade 1 standard, with 4.2% (n = 8) reporting that they were Grade 8 standard and above. Full demographic data for the variables age and ability are presented in Tables 7.1 and 7.2.

7.2.3   Procedure

Data were collected in two stages. The initial questionnaire contained questions on basic psychological need satisfaction, self-determined motivation, achievement goals, practice time and practice behaviours, as well as demographic characteristics including age and ability level. A follow up survey was sent to the contact teachers for each school 12 months later, to collect information on learners' continuation rates.   Initial questionnaires were sent out to schools across England, with schools recruited through my own personal contacts in the music education community, as well as some schools recruited through music teacher forums on social media. After sending information to these schools about the study, 14 teachers consented for their school to take part in the study.   Contextual information about each school is presented in Table 7.3. Teachers in each school distributed the questionnaires to all pupils in Years 7-12 (aged 11-17) who were currently having small group or individual instrumental lessons. Teachers were given the choice of whether to distribute paper or electronic versions of the consent form and questionnaire to maximise the response rate. The electronic version of the first questionnaire was distributed using Qualtrics. Parents/carers were asked to provide consent for participants, with information about the study provided either on paper if using this format of the questionnaire or included in the Qualtrics link if using the electronic format.

The second phase of data collection used Google Forms, and at this stage no questionnaires were sent to pupils, as the data could be provided by the contact teachers in each school. To facilitate the collection of follow up continuation data, in the first questionnaire participants were asked to provide their first name and first letter of their surname, so they were identifiable by their teacher. Data were returned at this second stage for 10 of the original 14 schools from the first phase of the data collection. After the

Table 7.1

Number of Participants by Year Group

Year Group (age)	Frequency	Percent	Valid Percent
Year 7 (11-12)	51	26.2	26.8
Year 8 (12-13)	39	20.0	20.5
Year 9 (13-14)	39	20.0	20.5
Year 10 (14-15)	28	14.4	14.7
Year 11 (15-16)	16	8.2	8.4
Year 12 (16-17)	11	5.6	5.8
Year 13 (17-18)	6	3.1	3.2
Missing	5	2.6	
Total	195	100.0	

Table 7.2

Ability Level on Primary Instrument

		Frequency	Percent	Valid Percent
Valid	Pre-Grade 1	50	25.6	26.6
	Grade 1	24	12.3	12.8
	Grade 2	21	10.8	11.2
	Grade 3	22	11.3	11.7
	Grade 4	24	12.3	12.8
	Grade 5	20	10.3	10.6
	Grade 6	9	4.6	4.8
	Grade 7	10	5.1	5.3
	Grade 8	4	2.1	2.1
	Grade 8+	4	2.1	2.1
	Missing	7	3.6	
Total	195	195	100.0	

Note. Grade level is represented by participants' self-reports of their most recent music examination grade, or approximate standard reached.

follow up data were collected, names were then removed from the dataset to preserve participant anonymity. Analysis of all quantitative data was carried out using JASP and RStudio.

7.2.4   *Measurement Instruments*

The first questionnaire consisted of 5 sections, with scales measuring different aspects of motivation, participants' practice routines and behaviours, and demographic characteristics.

Items from the Basic Psychological Need Satisfaction and Frustration Scale (Chen et al., 2015) were adapted slightly for the context of instrumental learning, for example the item, "I feel a sense of choice and freedom in the things I undertake" (p. 227) was altered to, "In my instrumental lessons I have a sense of choice and freedom in the pieces I play." Relatedness was also measured separately for teachers, peers and parents. In previous basic psychological need research in music education contexts, relatedness has been measured using a single index, however as influences from teachers, peers and parents were unique in Studies 1, 2 and 3, it was considered important to measure each of these factors as individual variables. Participants responded to items on a 7-point Likert scale. This measure has also been validated by other researchers in music education contexts (Freer & Evans, 2019; Yoo, 2021).

Self-Determined Motivation was measured using Sheldon et al.'s (2017) Relative Autonomy Index (RAI), measuring amotivation, extrinsic motivation, negative introjection, positive introjection, identification and intrinsic motivation. This measure was used to due to the separation of introjected motivation into two separate dimensions of positive and negative introjection. These positive and negative dimensions are theoretically close to the approach and avoidance dimensions of achievement goals, where positive introjection represents feelings of pride, and negative introjection the avoidance of feelings of shame (Sheldon et al., 2017). The RAI items were adapted for the context of instrumental learning, for example the item, "I once had good reasons for doing X, but now I don't" (Sheldon et al., 2017, p. 21), was changed to, "I once had good reasons for learning an instrument, but now I don't." Participants responded to these items on a 7-point Likert scale. Sheldon et al.'s (2017) scales were used in Miksza et al.'s (2019) research with university music students, though amotivation was not measured in this study, and introjection was not measured as separate positive and negative factors. Integrated motivation was also part of the original model of self-determined motivation (Ryan & Deci, 2000a), though this factor is not included in the RAI as it is considered difficult to measure using self-report scales (Sheldon et al., 2017).

Achievement goals (task-approach, self-approach, other-approach, and other-avoidance) were measured using Elliot et al.'s (2011) scales, again adapted for the context of instrumental learning. Items for these scales were altered slightly from the versions used in Study 2, so the wording of the items was simpler and more consistent across the full range of items. Scales for task-avoidance and self-avoidance were not included in this study as they were not deemed to be relevant to this research context (see Section 6.4.1). Participants responded to the achievement goal items on a 7-point Likert scale.

Table 7.3

Summary of School Information

School	School Type	n	%
School type	State Funded Academy Comprehensive	12	86
	State Funded Academy Grammar School[a]	1	7
	Independent[b]	1	7
Single sex/mixed	Mixed	11	79
	All Girls	2	14
	All Boys	1	7
Location	North East	10	71
	Yorkshire	2	14
	East	1	7
	Midlands	1	7

[a]Grammar schools in England are academically selective with pupils often required to sit an entrance exam. [b]Independent schools in England are fee-paying schools.

Practice behaviours were measured using the Method and Behaviour scales from Miksza's (2012) measure of self-regulated practice behaviour for beginning and intermediate instrumental students. Some items from the original scales were removed as they were considered likely to induce social desirability bias, for example, "Come well prepared to music rehearsals and lessons." Participants responded to practice behaviour items on a 5-point Likert scale. Practice time was measured by asking participants how long they typically spent during a single practice session, and how many days they had practised their instrument over the past 14 days. A total practice time score was calculated for each participant by multiplying the number of days of practice by the value reported for time per day.

Participants were also asked to state their primary instrument and approximate standard reached on the instrument as a measure of ability level. Data were not collected on lesson types to keep the questionnaires as short as possible to maximise the response rate. As questionnaires were only distributed by teachers to those receiving small group or individual tuition, it was not hypothesised that there would be much difference in motivational traits between these groups, compared to the participants in Studies 1 and 2 who had whole class ensemble tuition and likely very different learning experiences. Full versions of all the final scales can be seen in Appendix K.

In the second phase of data collection, data were collected on the continuation rates of participants, 12 months after the completion of the first questionnaire. A Google Form was sent to the contact teachers from each school, asking them to provide continuation data for each pupil. Teachers responded to the following question: "Please indicate whether each pupil below is still learning their

instrument during the current school term," with a choice of responses from, "Yes, they are still having lessons on the same instrument," "No, they have stopped having lessons on this instrument," and, "Not sure." Teachers were also given the opportunity to add any additional relevant information. Only one teacher provided additional information to indicate one participant had changed to a different instrument rather than stopping instrumental lessons altogether.

7.3 Results

7.3.1 Internal Consistency

First, Cronbach's alpha was calculated for each scale as a measure of internal consistency. Each of the scales for basic psychological need satisfaction and self-determined motivation had acceptable levels of internal consistency ($\alpha >= 0.735$). Each of the achievement goal scales consisted of 3 items, with 7-point Likert-scale responses. Other-approach ($\alpha = 0.910$) and other-avoidance ($\alpha = 0.901$) had high levels of internal consistency. However, the internal consistency of the task-approach ($\alpha = 0.612$) and self-approach ($\alpha = 0.342$) scales was poor. A composite mastery goal comprising both task-approach and self-approach scales achieved slightly improved internal consistency ($\alpha = 0.617$) though this was still below recommended levels (Taber, 2018). The scale for practice behaviour had a good level of internal consistency ($\alpha = 0.800$).

Confirmatory factor analysis was also carried out for each of the latent variables to determine whether the proposed factor structure for each variable was a good fit to the data. This was particularly important for the achievement goal scales which had poor levels of internal consistency. For basic psychological need satisfaction, all fit statistics indicate that the 5-factor model (Autonomy, Competence, Relatedness-Teacher, Relatedness-Peers, Relatedness-Parents) was the best fit to the data. All fit statistics demonstrated good model fit, other than a significant chi-square test, though chi-square test statistics are commonly known to be sensitive to sample size as well as non-normal data (Whittaker & Schumacker, 2022). Fit statistics are presented in Table 7.4.

For Self-Determined Motivation, the 6-factor model (Amotivation, External Motivation, Negative Introjection, Positive Introjection, Identified Motivation, Intrinsic Motivation) was tested using confirmatory factor analysis. The fit statistics overall suggested this was not an acceptable fit to the data, with a significant chi-square test result (p <.001), and the RMSEA outside the suggested index of good model fit (Whittaker & Schumacker, 2022). Modification indices were therefore examined, and model fit was improved with some alterations. Two items with the lowest factor loadings were removed and two suggested modifications were added to the model: an error covariance between IDE2 ("Because learning an instrument is personally important to me") and IDE4 ("Because learning an instrument is meaningful to me"), and an additional path with a negative factor loading from IDE3 ("Because it is my personal choice to learn an instrument") to External Motivation. These modifications improved model fit to acceptable levels (see Table 7.5).

For achievement goals, the 4-factor model (Other-Approach, Other-Avoidance, Task-Approach, Self-Approach) was tested using confirmatory factor analysis. Fit statistics were mostly within the accepted boundaries suggested by Miksza and Elpus (2018), though item SA2 ("My goal is to play well on my instrument relative to how well I've played in the past") was removed due a low factor loading. An alternative achievement goal model was tested combining task-approach and self-approach goals into one overarching Mastery Goal factor, due to the poor internal consistency of the task-approach and self-approach scales. Study 3 had indicated that there might be overlap between these two achievement goals therefore this was considered to be theoretically plausible. Examination of the Spearman's rank correlations for all task-approach and self-approach items also showed the scales for these goals were closely related and there was justification for combining them into a single factor. The 3-factor model had marginally improved fit statistics and it was decided to proceed with this model. Fit statistics for both achievement goal models are presented in Table 7.6.

Finally, for practice behaviours, alternative 2-factor and 1-factor models were tested using confirmatory factor analysis. The 2-factor model had separate dimensions for practice method and behaviour in line with the original scales (Miksza, 2012). Neither the 1-factor nor 2-factor model showed a good fit to the data. A revised 1-factor model was therefore tested, and items with the three lowest factor loadings were removed. This improved model fit statistics to acceptable levels (see Table 7.7).

7.3.2 Descriptive Statistics

Descriptive statistics were calculated prior to the inferential statistical analysis. Firstly, the mean scale score was calculated for each variable, shown in
Table 7.8. For basic psychological needs, Parent Relatedness had the highest mean score by some distance (M = 6.590, SD = 0.671), and Competence had the lowest mean score (M = 5.276, SD = 0.973). For self-determined motivation, mean scores increased in a linear fashion from External to Intrinsic Motivation. It is notable that Amotivation had a slightly higher mean score (M = 2.241, SD = 1.157) than External Motivation (M = 1.891, SD = 1.098). For achievement goals, the Mastery Goal had a much higher mean score (M = 6.030, SD = 0.571) than Other-Approach (M = 3.838, SD = 1.677) and Other-Avoidance (M = 3.997, SD = 1.745) goals, which both had a much greater degree of variance.

The three most common practice behaviours were, "I spend practice time on things I cannot do very well" (M = 4.15, SD = 0.83), "I practise challenging music" (M = 4.01, SD = 0.85), and I practise difficult spots very slowly" (M = 4.02, SD = 1.06), and the lowest by far was, "I practise with a metronome" (M = 2.31, SD = 1.26). Descriptive statistics were also calculated for participants' self-reported practice routines, comprising the number of days practised over the previous fortnight (M = 6.65 days, SD = 3.47), and the average amount of practice time per day (Mdn = 15-30 minutes). Distribution of time practised is shown in Figure 7.3 and Figure 7.4.

Descriptive statistics for continuation rates were also calculated. Data were collected on continuation rates 12 months after the initial questionnaire was completed. Out of the schools that responded to the follow-up survey, 47% of the original respondents had continued learning the same instrument and 15% were not having lessons on the same instrument. Data for continuation rates were missing for 38% of respondents.

Factor scores for each variable were used in all subsequent analyses. Prior to conducting any more statistical tests, normality testing was carried out on each of the latent factor scores to test for assumptions. Results of normality testing indicated that all factor score distributions were non-normal and so non-parametric testing was used in all subsequent analyses.

Table 7.4

Chi-square test: Fit statistics for the 5-factor Basic Psychological Need Satisfaction Model

Model	X²	df	p	RMSEA	CFI	TLI	SRMR
Factor model	263.193	160	<.001	0.058	0.956	0.948	0.048

Table 7.5

Chi-square test: Fit statistics for the 6-factor Self-Determined Motivation Model

Model	X²	df	p	RMSEA	CFI	TLI	SRMR
6-Factor model	696.165	237	<.001	0.102	0.981	0.978	0.090
6-Factor modified model	406.495	192	0.000	0.076	0.921	0.905	0.055

Table 7.6

Chi-square test: Fit statistics for Achievement Goal Models

Model	X²	df	p	RMSEA	CFI	TLI	SRMR
4-Factor Model	104.728	38	0.000	0.095	0.943	0.917	0.040
3-Factor Model	124.218	51	0.000	0.086	0.938	0.919	0.043

Table 7.7

Chi-square test: Fit statistics for Practice Behaviours

Model	X²	df	p	RMSEA	CFI	TLI	SRMR
2-factor model	186.424	103	0.000	0.065	0.828	0.799	0.064
1-factor model	187.720	104	0.000	0.065	0.825	0.798	0.064
1-factor modified model[a]	93.391	65	0.012	0.048	0.925	0.910	0.053

[a] *The 1-factor modified model did not include items METH11, METH6 and METH7.*

Table 7.8

Descriptive Statistics for Scale Scores

		Valid	Missing	Mean	Std. Deviation	Min.	Max.
Basic Psychological Needs	Autonomy	195	0	5.684	0.924	2.500	7.000
	Competence	195	0	5.276	0.973	2.250	7.000
	Teacher Relatedness	195	0	5.905	0.884	3.000	7.000
	Peer Relatedness	195	0	5.517	1.009	1.500	7.000
	Parent Relatedness	195	0	6.590	0.671	3.250	7.000
Self-Determined Motivation	Amotivation	195	0	2.241	1.157	1.000	7.000
	External Motivation	195	0	1.891	1.098	1.000	7.000
	Negative Introjection	195	0	2.118	1.166	1.000	6.250
	Positive Introjection	195	0	4.914	1.241	1.250	7.000
	Identified Motivation	195	0	5.626	1.039	1.000	7.000
	Intrinsic Motivation	194	1	6.126	0.891	1.000	7.000
Achievement Goals	Mastery	193	2	6.030	0.571	4.167	7.000
	Other Approach	193	2	3.838	1.677	1.000	7.000
	Other Avoidance	193	2	3.997	1.745	1.000	7.000
Practice Behaviours		191	4	3.447	0.648	1.750	4.917

Figure 7.3

Frequencies of Average Days Practised per Fortnight
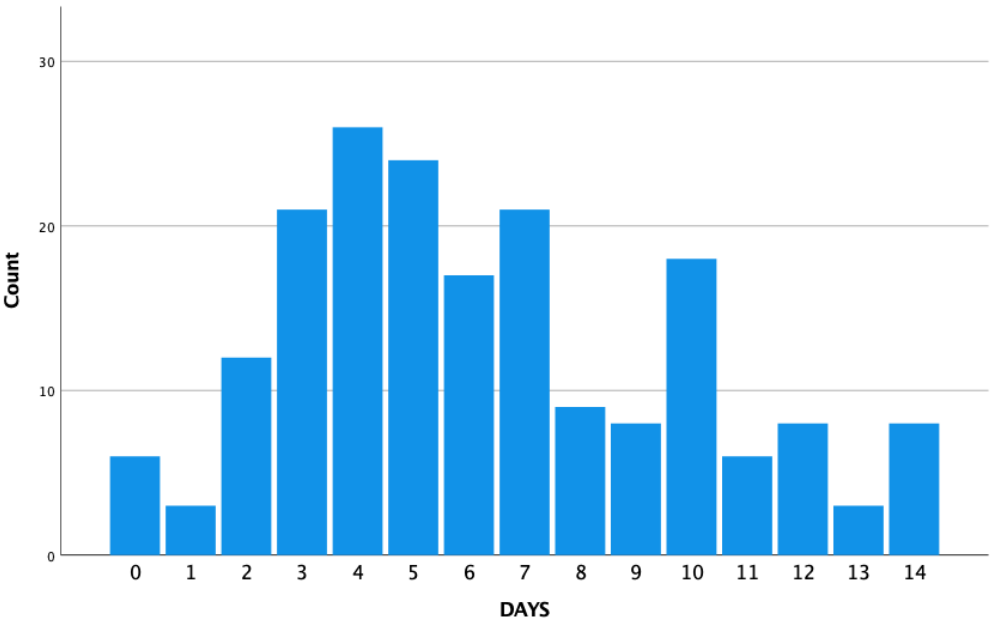
Figure 7.4

Frequencies of Average Practice Time per Day
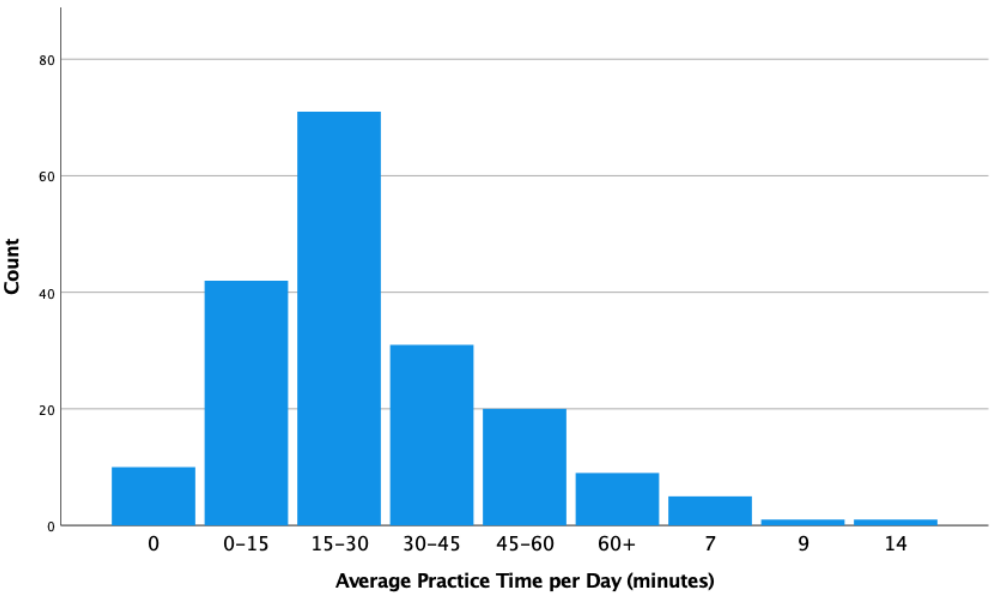
7.3.3   Group Comparisons

The Kruskal-Wallis H test (non-parametric equivalent to ANOVA) was used to compare the means of different demographic groups for each of the latent variables for basic psychological needs, self-determined motivation, achievement goals and practice habits. Group differences were calculated for gender, age, ability, instrument type, and school. There were no significant differences between groups for gender, instrument, or school for any of the motivation variables or practice habits.

There was a significant effect of age on External Motivation (H (6) = 21.218, p = 0.002) and Negative Introjection (H (6) = 14.124, p = 0.028). Dunn's post-hoc comparisons were conducted using the Bonferroni correction. The difference between Year 7 and Year 11 for External Motivation was statistically significant (p = <.001), with Year 11 reporting much higher levels of External Motivation. The difference between Year 7 and Year 11 for Negative Introjection was also statistically significant (p = <.001), as was the difference between Year 9 and Year 11 (p = 0.021). Figure 7.5 and Figure 7.6 display levels of Negative Introjection and External Motivation by year group.

There was also a significant effect of age on the Mastery Goal (H (6) = 15.389, p = 0.017). Dunn's post-hoc comparisons revealed there were significant differences for the Mastery Goal between Year 8 and 13 (p = 0.034) and Year 10 and 13 (p = 0.036), with Year 13 reporting significantly lower mastery goals than learners in Year 7 and 10 (see Figure 7.7).

There was a significant effect of ability level on Competence (H (9) = 28.897, p = <.001). Dunn's post-hoc comparisons revealed there were significant differences in feelings of perceived competence between pre-Grade 1 and Grade 2 participants (p = 0.003) and pre-Grade 1 and Grade 4 participants (p = 0.017). Figure 7.8 displays feelings of competence by Grade Level, showing an overall increasing trend.

Finally, there was a significant effect of ability on External Motivation (H (9) = 18.818, p = 0.027). Dunn's post-hoc comparisons revealed there were significant differences in External Motivation between Pre-Grade 1 and Grade 6 pupils (p = 0.024). Figure 7.9 displays the peak in feelings of External Motivation for Grade 6 pupils.

7.3.4   Correlations

A series of Spearman's rank-order correlations were run to assess the relationships between latent variables. A full table of correlations can be seen in Table 7.9. All correlations between basic psychological need satisfaction and self-determined motivation were consistent with self-determination theory. In relation to achievement goals, each of the factors for basic psychological need satisfaction had weak but significant associations with the Mastery Goal, and there was a weak but significant negative correlation between Peer Relatedness and Other-Avoidance goals. Each of the basic psychological need satisfaction factors also had moderate correlations with practice behaviours and time. For self-determined motivation

Figure 7.5

Negative Introjection by Year Group

Figure 7.6

External Motivation by Year Group

Figure 7.7

Mastery Goal by Year Group

Figure 7.8

Competence by Ability Level

Figure 7.9

External Motivation by Ability Level
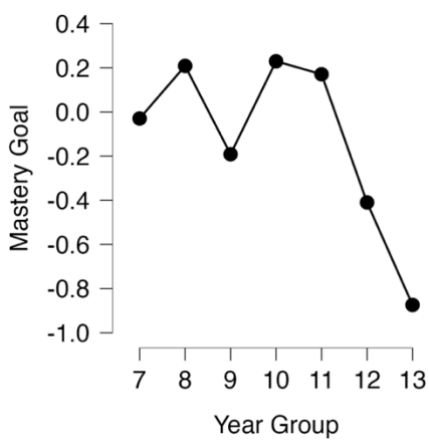
and achievement goals, Other-Avoidance and Other-Approach goals were positively correlated with more extrinsic motivation (Amotivation, External, Negative Introjection), and negatively correlated with Intrinsic Motivation. The Mastery Goal was negatively correlated with Amotivation and External Motivation but had positive correlations with Positive Introjection, Identified Motivation, and Intrinsic Motivation. There were no significant correlations between Positive Introjection and Other-Approach or Other-Avoidance goals. Practice Behaviour and Practice Time followed similar trends, they were both negatively correlated with Amotivation, and Practice Behaviour was negatively correlated with External Motivation. Both measures of practice were positively correlated with Positive Introjection, Identified Motivation, and Intrinsic Motivation. Practice Behaviour and Practice Time both also had weak but significant correlations with the Mastery Goal. There was also a significant association between Practice Time and age, as well as Practice Time and ability.

7.3.5 Multiple Regression Analyses

A series of multiple linear regression analyses were carried out to determine paths between each of the latent variables using the factor scores. Collinearity statistics indicated high levels of multi-collinearity for Intrinsic Motivation, Identified Motivation and Positive Introjection. Rather than remove one of these variables from the analysis, it was more appropriate theoretically to use a single Relative Autonomy Index (RAI) score to represent participants' overall level of self-determined motivation. This method has been recommended by self-determination theorists as it can result in a more parsimonious model (Sheldon et al., 2017; Vallerand, 1997). The overall unweighted RAI score was calculated using the factor scores as recommended by Sheldon et al. (2017), as follows: INTRI + IDENT + IJPOS − IJNEG − EXTERN − AMOT.

Collinearity statistics for the basic psychological needs factors also suggested a high level of multicollinearity for Teacher Relatedness and Autonomy. The correlation between these two factors was very high at $r = 0.916$ ($p = <.001$), suggesting these two factors might represent the same variable. Teacher Relatedness was therefore removed from the regression models.

The regression to predict Practice Behaviour from achievement goals and Self-Determined Motivation (RAI) was found to be statistically significant ($F(4, 186) = 5.539$, adj. R2 = .106), though only Self-Determined Motivation added statistically significantly to the prediction. Interaction effects were also included for achievement goals and were not found to be a statistically significant predictor of Practice Behaviour. These regression coefficients are presented in Table 7.10. The multiple regression to predict Practice Time from Achievement Goals and Self-Determined Motivation was not found to be statistically significant ($F(4, 186) = 1.497$, adj. R2 = .031), however Self-Determined Motivation to Practice Time still had a significant path. Interaction effects were also included for achievement goals and were not found to be a statistically significant predictor of Practice Time. These regression coefficients are presented in Table 7.11.

Age was included in the regressions to predict achievement goals, as group differences for age were found in the Kruskal-Wallis H test. The regression to predict the Mastery Goal from age and Self-

Determined Motivation was found to be statistically significant ($F_{(2, 186)}$ = 5.390, adj. R2 = .045), and Self Determined Motivation added statistically significantly to the prediction. These regression coefficients are presented in Table 7.12. The regression to predict the Other-Approach Goal from age and Self-Determined Motivation was found to be statistically significant ($F_{(2, 186)}$ = 6.869, adj. R2 = .059), and Self-Determined Motivation added statistically significantly to the prediction. These regression coefficients are presented in Table 7.13. The regression to predict the Other-Avoidance Goal from age and Self-Determined Motivation was also found to be statistically significant ($F_{(2, 186)}$ = 5.758, adj. R2 = .048), and Self-Determined Motivation added statistically significantly to the prediction. These regression coefficients are presented in Table 7.14.

The regression to predict Self Determined Motivation from Basic Psychological Needs, age and ability level was found to be statistically significant ($F_{(6,181)}$ = 17.782, adj. R2 = .350). Autonomy, Competence and ability level all added statistically significantly to the prediction. These regression coefficients are presented in Table 7.15.

For basic psychological needs, the regression to predict Autonomy from age and ability level was found to be statistically significant ($F_{(2,185)}$ =4.108, adj. R2 = .032). The only variable to add statistically significantly to the prediction was ability level. These regression coefficients are presented in Table 7.16. The regression to predict Competence from age and ability level was found to be statistically significant ($F_{(2,185)}$ = 13.596, adj. R2 = .119). Both age and ability level added statistically significantly to the prediction. These regression coefficients are presented in Table 7.17. The regression to predict Parent Relatedness from age and ability level was found to be non-significant and all individual paths were also non-significant. The regression to predict Peer Relatedness from age and ability level was also found to be non-significant ($F_{(2,185)}$ = 2.587, adj. R2 = .017), however ability level did add statistically significantly to the prediction. These regression coefficients are presented in Table 7.18.

Two moderation tests were run to assess whether Autonomy and Competence were moderating factors between ability level and Self-Determined Motivation. There was a significant interaction found between Autonomy and ability level on Self-Determined Motivation (β =.362, CI (0.147, 0.537), t = 3.460, p= < .001) (See Table 7.19). The less autonomous participants experienced an increased negative effect of ability level on Self-Determined Motivation. Higher ability level reduces self-determined motivation, but this trend might be moderated by learners' feelings of autonomy. This moderation effect is visually represented in Figure 7.10.

There was a similar significant interaction found between Competence and ability level on Self-Determined Motivation (β =-.240, CI (0.031, 0.535), t = 2.211, p = 0.028) (see Table 7.20). Higher feelings of competence reduced the negative effect of ability level on learners' self-determined motivation. This moderation effect is visually represented in Figure 7.11.

A path model with all standardised path coefficients leading to Practice Behaviour and Practice Time is shown in Figure 7.12. A trimmed path model with all non-significant path coefficients removed is also shown in Figure 7.13 for clarity of interpretation.

Table 7.9

Spearman's Rank Correlations

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
1.Year Group	—																	
2.Grade	0.617***	—																
3.Autonomy	0.048	0.222**	—															
4. Competence	-0.008	0.300***	0.702***	—														
5.Teacher Relatedness	0.016	0.175*	0.916***	0.593***	—													
6.Peer Relatedness	9.521x10⁻⁴	0.120	0.271***	0.366***	0.354***	—												
7.Parent Relatedness	-0.096	0.012	0.475***	0.485***	0.551***	0.437***	—											
8. Amotivation	0.154*	0.178*	-0.423***	-0.383***	-0.405***	-0.230**	-0.358***	—										
9.External	0.266***	0.230**	-0.340***	-0.315***	-0.320***	-0.137	-0.346***	0.734***	—									
10.Negative Introjection	0.210**	0.191**	-0.265***	-0.281***	-0.197**	-0.013	-0.256***	0.432***	0.750***	—								
11.Positive Introjection	-0.034	-0.001	0.246***	0.218**	0.263***	0.229**	0.185**	-0.247***	-0.172*	0.232**	—							
12. Identified	-0.012	0.012	0.443***	0.419***	0.438***	0.303***	0.334***	-0.584***	-0.424***	-0.020	0.825***	—						
13. Intrinsic	-0.144*	-0.090	0.501***	0.483***	0.495***	0.303***	0.438***	-0.692***	-0.718***	-0.445***	0.473***	0.809***	—					
14.Other Avoidance	0.016	0.021	-0.037	-0.042	-0.053	-0.166*	-0.121	0.247***	0.228**	0.196**	0.040	-0.112	-0.204**	—				
15.Other Approach	0.047	0.060	0.006	-0.022	-0.009	-0.117	-0.077	0.292***	0.283***	0.212**	0.057	-0.140	-0.232**	0.888***	—			
16.Mastery	-0.059	-0.004	0.200**	0.225**	0.225**	0.239***	0.276***	-0.200**	-0.226**	-0.100	0.294***	0.307***	0.329***	0.319***	0.298***	—		

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
17.Practice Behaviours	-0.039	0.019	0.391***	0.341***	0.380***	0.222**	0.321***	-0.204**	-0.149*	-0.055	0.203**	0.337***	0.348***	-0.059	-0.062	0.167*	—	
18.Practice Time	0.214**	0.341***	0.385***	0.340***	0.377***	0.233**	0.313***	-0.193**	-0.121	-0.030	0.187**	0.320***	0.329***	-0.049	-0.052	0.159*	0.987***	—

* p < .05, ** p < .01, *** p < .001

Table 7.10

Coefficients for Self-Determined Motivation and Achievement Goals on Practice Behaviours

Model		Unstandardized	Standard Error	Standardized	t	p	Tolerance	VIF
H_0	(Intercept)	-3.434×10^{-7}	0.065		-5.275×10^{-6}	1.000		
H_1	(Intercept)	0.004	0.062		0.061	0.952		
	Other Avoidance	-0.039	0.146	-0.042	-0.269	0.788	0.194	5.163
	Other Approach	-0.010	0.147	-0.011	-0.070	0.945	0.190	5.274
	Mastery	0.136	0.081	0.129	1.669	0.097	0.808	1.237
	SDM (RAI)	0.054	0.015	0.265	3.492	< .001	0.837	1.194

Disturbance calculation = $\sqrt{1 - R2} = \sqrt{1 - 0.106} = .945$

Table 7.11

Coefficients for Self-Determined Motivation and Achievement Goals on Practice Time

Model		Unstandardized	Standard Error	Standardized	t	p	Tolerance	VIF
H_0	(Intercept)	21.419	1.063		20.142	< .001		
H_1	(Intercept)	21.446	1.058		20.271	< .001		
	Other Avoidance	1.121	2.492	0.074	0.450	0.653	0.194	5.163
	Other Approach	-0.202	2.501	-0.013	-0.081	0.936	0.190	5.274
	Mastery	-1.015	1.381	-0.059	-0.735	0.463	0.808	1.237
	SDM (RAI)	0.634	0.263	0.190	2.408	0.017	0.837	1.194

Disturbance calculation = $\sqrt{1 - R2} = \sqrt{1 - 0.031} = .984$

Table 7.12

Coefficients for Self-Determined Motivation and Age on Mastery Goal

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics	
							Tolerance	VIF
H₀	(Intercept)	-0.007	0.062		-0.119	0.905		
H₁	(Intercept)	0.280	0.335		0.835	0.405		
	Age	-0.032	0.037	-0.063	-0.861	0.390	0.961	1.040
	SDM (RAI)	0.041	0.014	0.214	2.937	0.004	0.961	1.040

Disturbance calculation = $\sqrt{1 - R2} = \sqrt{1 - 0.055} = .972$

Table 7.13

Coefficients for Self-Determined Motivation and Age on Other-Approach Goal

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics	
							Tolerance	VIF
H₀	(Intercept)	0.003	0.071		0.040	0.968		
H₁	(Intercept)	0.338	0.381		0.886	0.377		
	Age	-0.038	0.042	-0.065	-0.905	0.367	0.961	1.040
	SDM (RAI)	-0.059	0.016	-0.267	-3.702	< .001	0.961	1.040

Disturbance calculation = $\sqrt{1 - R2} = \sqrt{1 - 0.069} = .964$

Table 7.14

Coefficients for Self-Determined Motivation and Age on Other-Avoidance Goal

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics	
							Tolerance	VIF
H₀	(Intercept)	0.005	0.070		0.069	0.945		
H₁	(Intercept)	0.423	0.380		1.113	0.267		
	Age	-0.048	0.042	-0.082	-1.128	0.261	0.961	1.040
	SDM (RAI)	-0.054	0.016	-0.244	-3.360	< .001	0.961	1.040

Disturbance calculation = $\sqrt{1 - R2} = \sqrt{1 - 0.048} = .975$

Table 7.15

Coefficients for Basic Psychological Needs, Age and Ability Level on Self-Determined Motivation

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics	
							Tolerance	VIF
H_0	(Intercept)	-0.084	0.322		-0.260	0.795		
H_1	(Intercept)	1.942	1.565		1.241	0.216		
	Autonomy	1.899	0.364	0.407	5.217	< .001	0.570	1.754
	Competence	0.849	0.409	0.179	2.074	0.040	0.465	2.149
	Peer Rel.	0.435	0.290	0.096	1.500	0.135	0.841	1.189
	Parent Rel.	0.227	0.280	0.050	0.813	0.418	0.907	1.103
	Age	0.004	0.210	0.002	0.019	0.985	0.546	1.831
	Ability	-0.543	0.148	-0.305	-3.662	< .001	0.502	1.992

Disturbance calculation $= \sqrt{1 - R2} = \sqrt{1 - 0.371} = .629$

Table 7.16

Coefficients for Age and Ability Level on Autonomy

Model		Unstandardized	Standard Error	Standardized	t	p	Collinearity Statistics	
							Tolerance	VIF
H_0	(Intercept)	-0.004	0.069		-0.065	0.948		
H_1	(Intercept)	0.479	0.404		1.187	0.237		
	Age	-0.098	0.053	-0.174	-1.850	0.066	0.583	1.715
	Ability	0.103	0.036	0.270	2.866	0.005	0.583	1.715

Disturbance calculation $= \sqrt{1 - R2} = \sqrt{1 - 0.043} = .978$

Table 7.17

Coefficients for Age and Ability Level on Competence

Model		Unstandardized	Standard Error	Standardized	t	p	Tolerance	VIF
							Collinearity Statistics	
H_0	(Intercept)	-8.316×10^{-4}	0.068		-0.012	0.990		
H_1	(Intercept)	0.879	0.379		2.319	0.021		
	Age	-0.174	0.050	-0.313	-3.486	< .001	0.583	1.715
	Ability	0.176	0.034	0.469	5.212	< .001	0.583	1.715

Disturbance calculation = $\sqrt{1 - R2} = \sqrt{1 - 0.128} = .933$

Table 7.18

Coefficients for Age and Ability Level on Peer Relatedness

Model		Unstandardized	Standard Error	Standardized	t	p	Tolerance	VIF
							Collinearity Statistics	
H_0	(Intercept)	-0.013	0.071		-0.183	0.855		
H_1	(Intercept)	0.464	0.421		1.102	0.272		
	Age	-0.090	0.055	-0.154	-1.621	0.107	0.583	1.715
	Ability	0.085	0.038	0.215	2.265	0.025	0.583	1.715

Disturbance calculation = $\sqrt{1 - R2} = \sqrt{1 - 0.027} = .986$

Table 7.19

*Moderation test for Ability Level * Autonomy on Self-Determined Motivation*

Model		Unstandardized	Standard Error	Standardized	t	p	Lower	Upper
							95% CI	
H_0	(Intercept)	-0.084	0.322		-0.260	0.795	-0.719	0.551
H_1	(Intercept)	1.564	0.476		3.285	0.001	0.625	2.504
	Ability	-0.468	0.106	-0.263	-4.434	< .001	-0.676	-0.260
	Autonomy	1.168	0.491	0.251	2.380	0.018	0.200	2.137
	Ability ✻ Autonomy	0.342	0.099	0.362	3.460	< .001	0.147	0.537

Table 7.20

*Moderation test for Ability Level * Competence on Self-Determined Motivation*

Model		Unstandardized	Standard Error	Standardized	t	p	95% CI Lower	Upper
H_0	(Intercept)	-0.084	0.322		-0.260	0.795	-0.719	0.551
H_1	(Intercept)	1.956	0.516		3.792	< .001	0.938	2.973
	Ability	-0.587	0.116	-0.329	-5.063	< .001	-0.815	-0.358
	Competence	1.447	0.514	0.305	2.813	0.005	0.432	2.462
	Ability ✳ Competence	0.283	0.128	0.240	2.211	0.028	0.031	0.535

7.3.6 Continuation Rates

To measure the impact of motivation on continuation rates, the Mann-Whitney U Test was used to calculate whether there were differences in motivation for continuing and non-continuing participants. Significant differences between groups were found for Autonomy (U = 911, p <.010), Competence (U = 859, p <.004) and Peer Relatedness (U = 984, p <.034). Participants who continued with lessons on their primary instrument had reported higher scores for autonomy, competence, and peer-relatedness 12 months prior.

A logistic regression was run to predict continuation rates from ability level, Self-Determined Motivation, and achievement goals. The logistic regression model was statistically significant (χ^2 (113) = 15.327, p = 0.009). McFadden's R^2 was weak (R^2 = 0.118) though the model correctly classified 80% of cases. Self-Determined Motivation and ability level both added statistically significantly to the model. Higher Self-Determined Motivation was associated with increased continuation rates, with a 1 unit increase in Self-Determined Motivation increasing the likelihood of continuing to learn an instrument by 15%. Higher ability level was also associated with increased continuation rates, with each additional grade level increasing the likelihood of continuing to learn an instrument by 43%. Other-Approach and Other-Avoidance goals impacted continuation rates in the hypothesised directions with a large effect size (Sullivan & Feinn, 2012), though these were non-significant in the regression model. Regression coefficients and odds ratios are presented in Table 7.21.

A logistic regression was also run to predict continuation rates from Practice Time and Practice Behaviours. The logistic regression model was not statistically significant (χ^2 (117) = 2.230, p = 0.328). Full and trimmed path models leading to continuation rates are presented in Figure 7.14 and Figure 7.15. Path models for continuation rates are presented separately from those for practice habits for clarity of interpretation.

Figure 7.10

Moderation effect of Autonomy on Ability and Self-Determined Motivation (RAI)
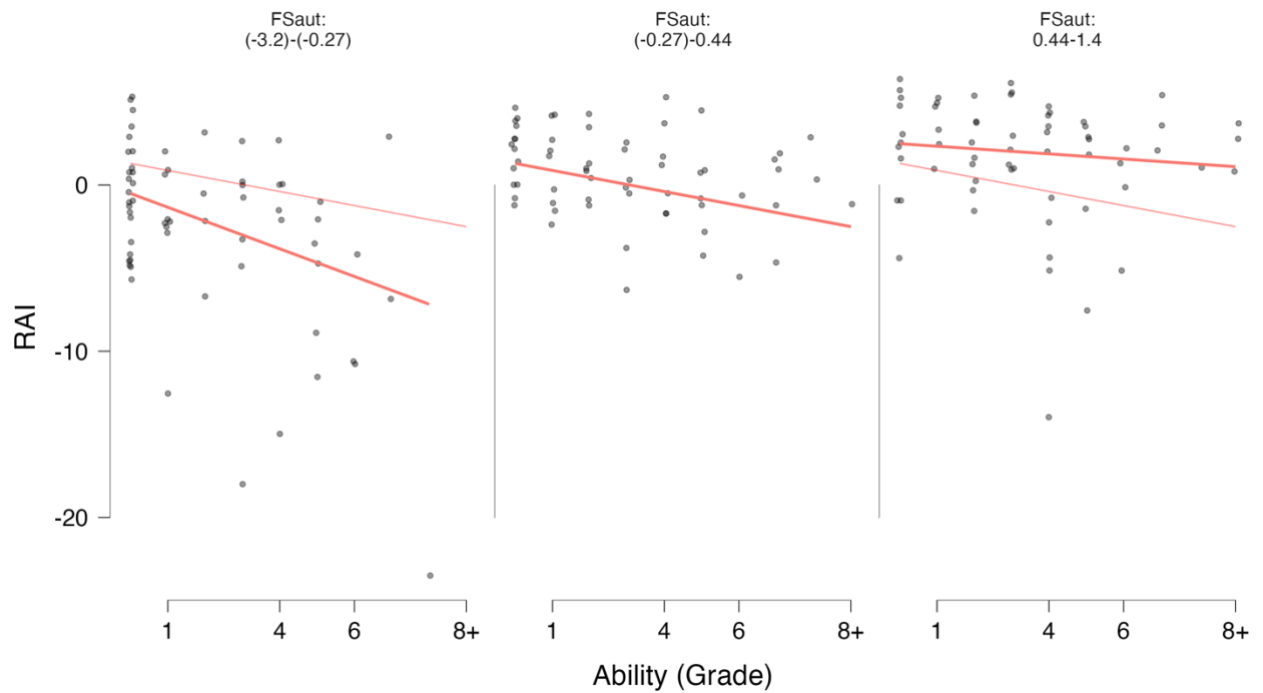
Figure 7.11

Moderation effect of Competence on Ability and Self-Determined Motivation (RAI)
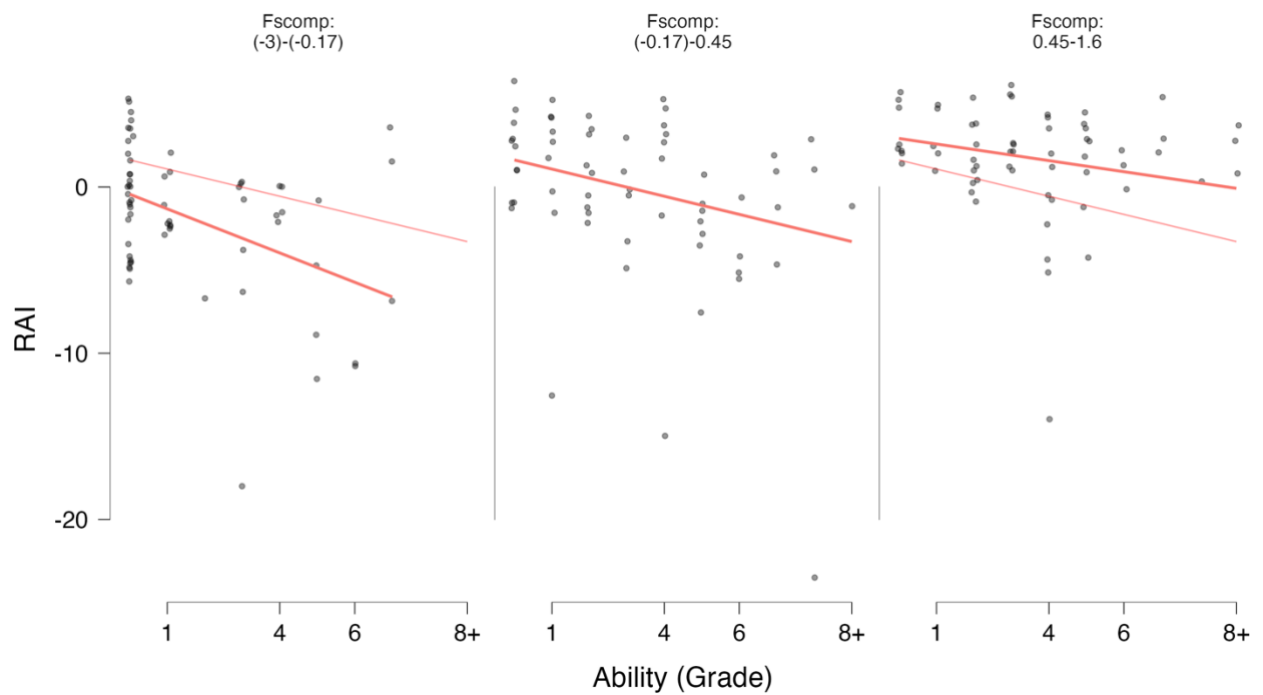
Table 7.21

Coefficients and Odds Ratios for Achievement Goals, Self-Determined Motivation and Ability on Continuation Rates

	Estimate	Standard Error	Standardized[+]	Odds Ratio	z	Wald Statistic	df	p	Lower bound	Upper bound
						Wald Test			95% Confidence interval	
(Intercept)	0.090	0.433	1.410	1.094	0.208	0.043	1	0.835	-0.759	0.940
Other Avoidance	-0.699	0.548	-0.674	0.497	-1.275	1.627	1	0.202	-1.773	0.375
Other Approach	0.856	0.514	0.851	2.355	1.667	2.777	1	0.096	-0.151	1.864
Mastery	-0.092	0.321	-0.074	0.912	-0.286	0.082	1	0.775	-0.721	0.537
SDM (RAI)	0.143	0.060	0.652	1.154	2.375	5.641	1	0.018	0.025	0.261
Ability	0.361	0.129	0.831	1.434	2.786	7.760	1	0.005	0.107	0.614

Disturbance calculation $= \sqrt{1 - R2} = \sqrt{1 - 0.118}. = .939$

Note. Continuation level 'Continued' coded as class 1.

Figure 7.12

Full Path Model for Practice Habits
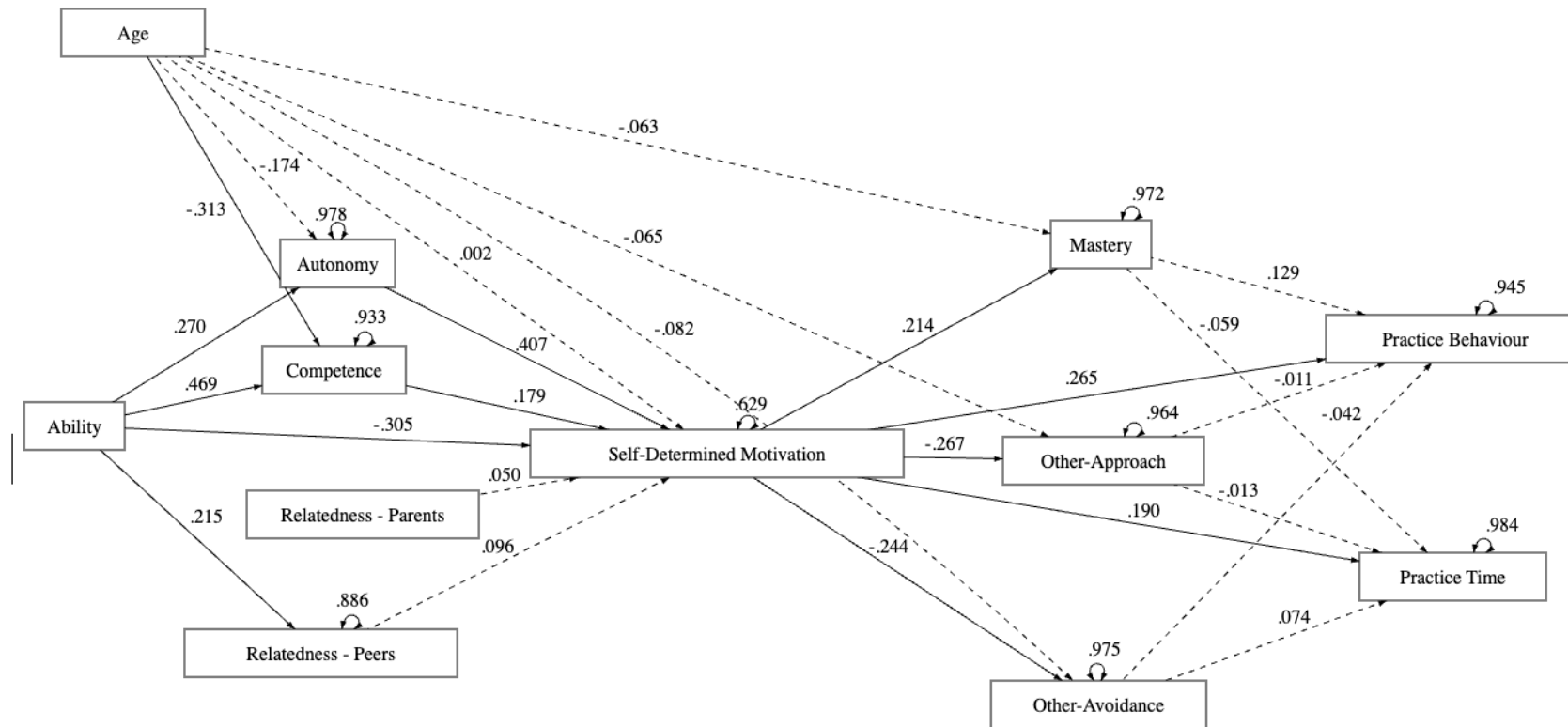
Notes. Non-significant path coefficients are displayed along dotted lines. All path models were drawn using semdiag (Mai et al., 2023).

Figure 7.13

Trimmed Path Model for Practice Habits with only significant path coefficients shown.

Figure 7.14

Full Path Model for Continuation Rates
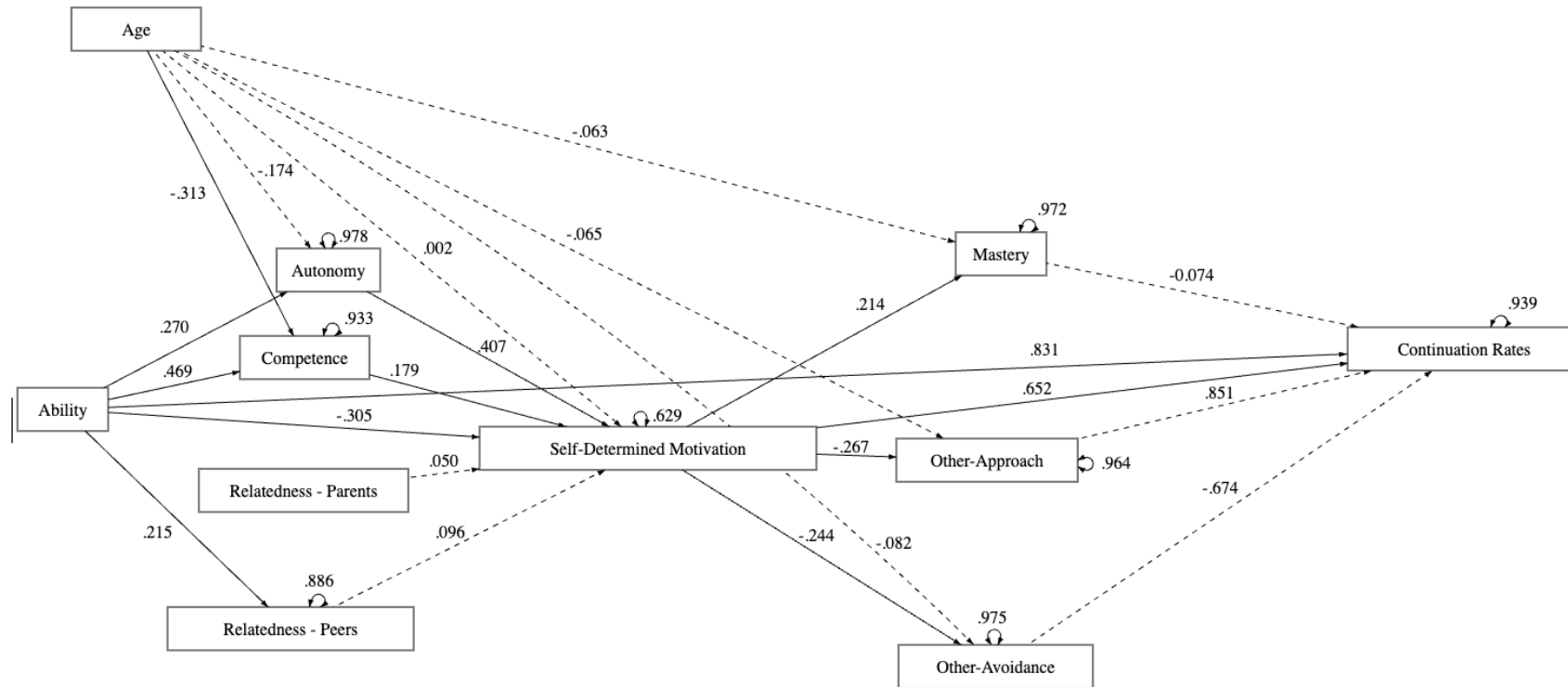
Nots. Non-significant path coefficients are displayed along dotted lines.

Figure 7.15

Trimmed Path Model for Continuation Rates with only significant path coefficients shown
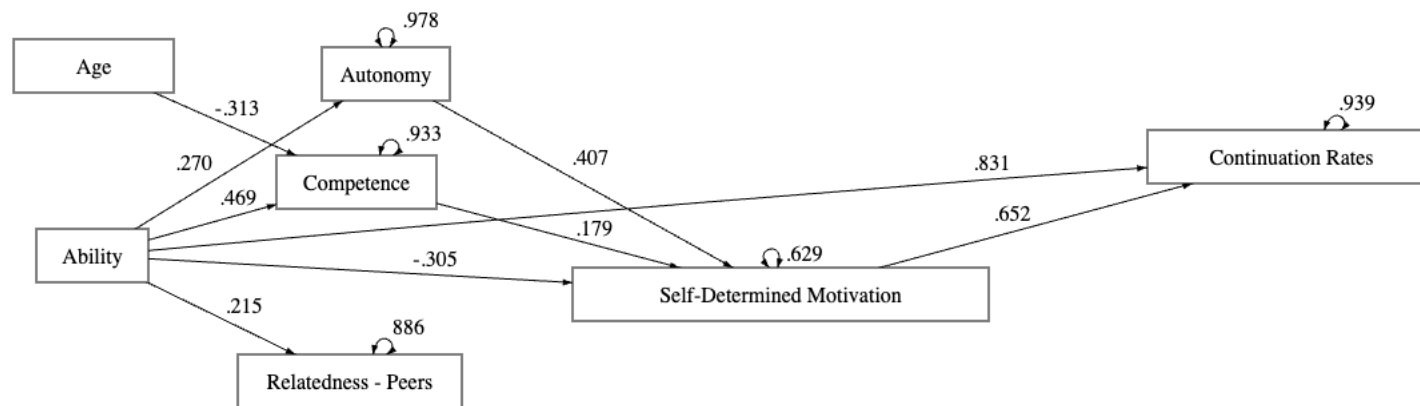
7.4   Discussion

7.4.1   What are the achievement goal orientations of adolescent instrumental learners?

This study measured the achievement goals of a larger sample of adolescent instrumental learners than the previous three studies, and also tested a more refined achievement goal model to examine its relevance to the population of adolescent instrumental learners. The data for achievement goals indicated there is an overlap between task-approach and self-approach goals. This was similar to the quantitative analysis of achievement goal data in Study 1 and was also implied in the analysis of the Study 3 interview data. In the present study, factor analysis specified an achievement goal model which combines task-approach and self-approach goals into one composite mastery-approach goal. One of the main objectives of this thesis was the test the application of Elliot et al.'s (2011) 3 x 2 achievement goal model to music education contexts, and though the difference between task- and self-based goals was theoretically plausible in relation to music learning, the data from this study suggests this distinction may not be particularly relevant for adolescent instrumental learners.   The trichotomous model of achievement goals comprising mastery, performance-approach and performance-avoidance has previously been validated in other music education research (Nielsen, 2008; Smith, 2005) and the present research confirms this model might be most suitable for the music education setting.

Instrumental learners in this study were much more likely to adopt mastery goals, followed by other-approach and other-avoidance goals. This follows trends from other research, where studies on achievement goals in music education have consistently found that mastery goals are the most common among school-aged musicians (Miksza et al., 2016; Ng, 2017; Schmidt, 2005). The mean score for other-avoidance goals was marginally higher than that for other-approach goals, though this difference was small enough not to be regarded as significant in terms of achievement goal theory.

7.4.2   Do basic psychological need satisfaction and self-determined motivation explain adolescent instrumental learners' achievement goal orientations?

The second aim of this study was to examine the relationship between self-determined motivation and achievement goals, expanding upon the work of researchers in other educational settings (Ciani et al., 2011; Diseth et al., 2012; Duchesne et al., 2017). If basic psychological need satisfaction and self-determined motivation are related to achievement goals, these factors may explain the different goal orientations of adolescent instrumental learners and would have important implications for music educators striving to encourage learners to adopt skill-oriented mastery goals.

The data relating to basic psychological need satisfaction and self-determined motivation will first be considered. One unique aspect of the present research in comparison to other studies was the separation of relatedness into distinct parent, peer and teacher relatedness measures. These groups each have different roles to play in influencing young musicians' motivation, as found by previous researchers (Creech & Hallam, 2011; Holster, 2023; Sichivitsa, 2007) as well as in Studies 1, 2, and 3 of the present research. Participants reported much stronger parent relatedness than relatedness to peers and teachers, and parent relatedness was also higher than autonomy and competence perceptions. Correlations between each of the basic psychological needs and self-determined motivation were all in the expected direction, with a clear linear pattern between psychological need satisfaction and intrinsic motivation.

The regression analyses confirmed that autonomy and competence perceptions influenced the self-determined motivation of instrumental learners, however there were fewer clear associations between relatedness measures and self-determined motivation. Peer and parent relatedness were not found to influence self-determined motivation in the regression analysis. Previous research found competence and relatedness both influenced intrinsic motivation, external regulation and amotivation (Yoo, 2021). The differences in these results may be explained by the different factor structure in the present study, with included separate factors for relatedness. Autonomy was also presumed to represent teacher relatedness due to the high multi-collinearity between these factors in the initial regression analysis. In Yoo's (2021) research, autonomy did not predict self-determined motivation, contrasting with the present results. The data from the present study indicates there is a relationship between psychological need satisfaction and self-determined motivation, with autonomy and competence having the strongest influence on self-determined motivation. These findings are mostly consistent with the work of other self-determination theory researchers in music education (Evans & Bonneville-Roussy, 2016; Yoo, 2021).

The relationship between self-determined motivation and achievement goals was one of the main focuses of this study. Though relationships between self-determined motivation and achievement goals had been empirically tested in other educational settings (Ciani et al., 2011; Diseth et al., 2012; Duchesne et al., 2017), these links had not yet been tested in music education contexts. Both the correlation and regression analyses in this study showed there is a relationship between adolescent instrumental learners' self-determined motivation and their achievement goal orientations. Correlations showed that positive introjection, identified regulation and intrinsic motivation are all associated with the mastery goal. Learners who played an instrument for reasons of identity pursuit and intrinsic value were more likely to pursue mastery goals. Conversely, other-approach and other-avoidance goals had negative relationships with identified and intrinsic

motivation, but positive relationships with amotivation and external regulation. Learners who saw less personal value in practising were more likely to pursue other-based goals, to impress or avoid performing poorly compared to others. Introjection was separated into positive and negative introjection as these appeared to align with other-approach and avoidance goals. These correlations were not as expected. Negative introjection was positively correlated with both other-approach and other-avoidance goals, whereas positive introjection was not associated with either of the other-based goals. Whilst this result was unexpected, it might indicate that more simplified models comprising a single RAI score for self-determined motivation, such as that used in the regression models, might be more useful and interpretable in explaining adolescent instrumental learners' motivation.

In the regression analyses, there was a positive path from self-determined motivation to the mastery goal, and negative paths to both other-approach and avoidance goals, controlling for the age of participants. This study builds on the work of previous research which found that self-concept of ability and parent support were associated with instrumental learners' adoption of mastery and performance-approach goals (Ng, 2017). These findings make an important contribution to music motivation research as whole, by linking two key theoretical perspectives on motivation which have thus far only been tested in isolation in music education contexts, as well as developing a model of the relationships between basic psychological needs, self-determined motivation and achievement goals which could be further tested in future research with other instrumental learners.

7.4.2.1   Other Influences on Self-Determined Motivation and Achievement Goals

Other influences on self-determined motivation and achievement goals were also considered as part of the data collection and analysis, as the data from Study 3 suggested that adolescent instrumental learners' age and ability level may have some impact on their overall motivation. Comparison of means in the present study showed a significant effect of age on external motivation and negative introjection. There was a peak in both external motivation and negative introjection for pupils aged 15-16 (Year 11), which may be explained by pupils working towards external GCSE examinations at this point in their school careers. Pupils in this age bracket may be more concerned with external achievement measures than younger learners who enjoy learning an instrument without as many externally imposed pressures.

In relation to achievement goals, the prevalence of the mastery goal fluctuated between the ages of 11-16 (Years 7-11), before falling significantly for students aged 16-18 (Years 12-13). This result was unexpected, as the interviews in Study 3 previously indicated there may be a connection between age and mastery goal orientations, as participants developed a stronger sense of musical identity throughout their school journey.   There may be several reasons for the drop in mastery

goals in the final years of secondary school. At this age, many pupils are likely to be considering university applications, a process which itself emphasises competition for places at university, as well as the need to achieve a normative grade. At this age, young musicians may also be more concerned with their broader musicianship rather than more specific self and task goals, measured by items such as "My goal is to get a lot of notes right in the pieces of music I play" (TA1), and "My goal is to perform better on my instrument than I have done in the past" (SA1). These specific goals might not be so important for older instrumental learners who have perhaps developed a stronger musical identity and may not be concerned with specific performance indicators or comparisons of performance achievement. Longitudinal research measuring changes in self-determined motivation and achievement goals throughout the secondary school years would be useful to enhance understanding of the relationship between age and achievement goal orientations.

When controlling for other variables in the regression analysis, age was not a significant predictor of either self-determined motivation or the mastery goal, suggesting other factors were more important in influencing learner motivation. Age and ability level both predicted feelings of competence, which in turn predicted self-determined motivation. Surprisingly, age had a negative association with competence perceptions, whilst ability level increased learners' feelings of competence. Previous research with instrumental learners also found their self-belief in musical ability increased with expertise (Hallam et al., 2016). The relationship between ability level and self-determined motivation was more complex. Higher ability pupils were more likely to be extrinsically motivated, illustrated by the significant peak in External Motivation for learners at Grade 6 level. Instrumental learners performing at higher levels of expertise may feel more pressure to reach certain standards and meet the expectations of others. Some researchers have found that young musicians are likely to experience increased perfectionist traits as they progress through school (Patston & Osborne, 2016), and feelings of perfectionism might have a compounding effect on the negative relationship between expertise and self-determined motivation.

These negative effects of ability level on learners' self-determined motivation were moderated by the satisfaction of basic psychological needs, namely autonomy and competence. Supporting these basic psychological needs is therefore more important for music educators working with adolescent instrumental learners at higher levels of expertise. Teachers can promote feelings of autonomy by providing their pupils with choice over repertoire selection or learning activities, as well as explaining the benefits of specific practice strategies (Evans, 2015). They can promote feelings of competence by emphasising skill development over success in specific performances, as well as praising students for effort over ability (Evans, 2015). Whilst ability level may have a detrimental impact on learners' self-determined motivation, it is encouraging that basic psychological need

satisfaction might lessen the negative effect of expertise on motivation, and this is something that music educators may be able to influence.

7.4.3 Do achievement goal orientations influence the practice habits of adolescent instrumental learners?

The third research question of this study aimed to explore the relationship between adolescent instrumental learners' achievement goal orientations and practice habits, represented by practice behaviour and practice time. There were very weak (though significant) correlations between mastery goals and both measures of practice, but no associations were found between other-based goals and practice habits. When controlling for other factors, no significant relationships between achievement goals and practice habits were found. Other researchers have previously found relationships between achievement goals and practice habits (Liu, 2023; Miksza, 2009b; Nielsen, 2008; Schmidt, 2005; Smith, 2005), however these studies all employed only correlational analysis, and therefore did not account for the influence of other variables, which are measured in the present study. One study which did control for the influence of other factors found that learners who adopted both mastery and performance-approach goals spent more time on practice than those who were solely focused on mastery goals (Ng, 2017). This composite mastery and performance-approach goal may be indicative of learners' overall motivation, rather than the distinct influence of specific achievement goals. Other factors controlled for in this study (Ng, 2017) were more representative of psychological needs (e.g. self-concept and parental support) than self-determined motivation. It does appear that self-determined motivation has more of an influence on practice habits than specific achievement goal orientations.

More intrinsically motivated participants reported a greater use of deliberate practice behaviours, as well as more time spent practising. This result was expected and confirms other research findings with adult musicians that intrinsic motivation can lead to more deliberate practice, and amotivation is negatively associated with the deliberate practice (Passarotto et al., 2022). Intrinsic motivation has also been positively associated with practice time in research with university students (Evans & Bonneville-Roussy, 2016; Liu, 2023). In the present research, more detailed insights into self-determined motivation and practice are revealed by the correlation data for each level of the self-determined motivation continuum. Overall, there were stronger associations between more intrinsic motivational beliefs and practice habits. Interestingly, while there was a negative relationship between external motivation and practice behaviour, there were no significant relationships between external motivation, negative introjection and practice time. Extrinsic sources

of motivation may be more important in promoting regular practice routines with younger pupils in the beginning stages of learning an instrument (Creech, 2014; Davidson et al., 1995).

In summary, self-determined motivation had more of an impact on practice habits than specific achievement goals. Adolescent instrumental learners appear to adopt the same practice habits whether they wish to outperform their peers or just improve their own skill level; perhaps learners recognise value of effective practice regardless of the reason for this practice. The adoption of the goal itself is likely more important than the specific type of goal in influencing practice habits. This study provides important new data on the relative impact of self-determined motivation and achievement goals on measures of practice, which until now had not been fully explored in research on the motivation of young musicians.

7.4.4   Do achievement goal orientations influence the continuation rates of adolescent instrumental learners?

The final research question sought to determine the impact of achievement goal orientations on whether adolescent instrumental learners continued to engage in instrumental tuition. Regression analyses indicated that self-determined motivation and ability level were more important than achievement goals in predicting whether instrumental learners continued learning their instrument. The strong relationship between self-determined motivation and continuation rates was unsurprising, confirming findings from previous studies (Gerelus et al., 2020; Yoo, 2021).

Path coefficients between other-approach and avoidance goals followed the expected directions, with other-approach goals positively associated with continuation whilst other-avoidance were negatively associated with continuation. Though these paths were non-significant they both had a large effect size, indicating the distinction between approach and avoidance goals might still be an important predictor of adolescent instrumental learners' long-term commitment. Whilst other researchers in achievement goal theory have found mastery goals were associated with instrumental learners' commitment, the present study measured actual continuation rates using longitudinal data. Previous studies only collected data on learners' intentions to continue (Miksza et al., 2016; Ng, 2017; Tan & Miksza, 2018). The data from the present study therefore provides a more robust evidence base on the actual outcomes of achievement goals. As these results were still non-significant further evidence is needed to draw more robust conclusions about the connection between other-approach and avoidance goals and the instrumental learners' continuation rates. Future research might also explore any differences between learners' initial intentions to continue and actual continuation data to check for changes in commitment level over time.

7.5   Conclusions

The findings of Study 4 make a valuable contribution to the understanding of the place of achievement goals in the motivation of adolescent instrumental learners. It is apparent that a simplified achievement goal model comprising three goal dimensions: mastery, other-approach and other-avoidance, might be most appropriate for adolescent instrumental learners. Factor analysis distinguished between these goal orientations, and they were also found to have different relationships with self-determined motivation. This study was the first to examine the link between self-determination and achievement goal theories using path modelling, thus making an important contribution to the wider literature on adolescent instrumental learners' motivation. Different levels of self-determined motivation predicted learners' achievement goal orientations, with more intrinsic motivation leading to mastery goals, and more extrinsic motivation leading to other-approach and other-avoidance goals. Achievement goals did not have a significant impact on practice habits, though other-approach and avoidance goals may predict learners' long-term musical engagement. Overall, self-determined motivation appeared to be more important than achievement goals in influencing the commitment of these adolescents to instrumental learning.

Though the findings of this study do advance the understanding of the place of achievement goals in instrumental learning, additional research in a wider range of educational settings, such as more informal contexts, would validate these findings further so more robust conclusions could be drawn which might be applicable to the wider population of adolescent instrumental learners in the UK.

7.5.1   *Implications for Music Teachers*

A number of recommendations can be made for music teachers in similar settings on the basis of the findings of this study. Music teachers have an important role to play in enhancing the psychological need satisfaction of instrumental learners, and promoting autonomy and competence beliefs appears to be particularly important in developing learners' intrinsic motivation. More intrinsic motivation can increase mastery goals, as well as time spent on practice, deliberate practice behaviours, and the likelihood of continuing to learn an instrument in the future. Instrumental teachers can enhance learners' perceptions of autonomy by involving them in decision making with regard to the direction of lessons as well as acknowledging students' feelings and opinions (Evans, 2015; Freer & Evans, 2019). Teachers can encourage competence beliefs by pitching lesson tasks at an appropriate level of challenge, giving clear instructions and feedback to learners to enhance their learning, and emphasising the importance of effort over talent (Evans, 2015; Freer & Evans, 2019). There was also evidence indicating other-approach and avoidance goals might predict learners'

continuation rates. Music teachers should therefore be conscious of any orientation towards other-avoidance goals in their language use, encouraging learners to strive towards their own personal goals rather than comparing themselves to others. De-emphasising comparison in the learning environment might persuade adolescents to keep learning their instruments for longer.

7.5.2   Limitations

There were some limitations to this study which should be addressed in future research. As the recruitment of schools was mostly limited to my own personal contacts in the music education community, the sample was not fully representative of adolescent instrumental learners across England, being heavily weighted towards schools in the North-East of England. The sample was also skewed toward younger secondary school pupils, and consequently the ability range of participants was uneven, with over 50% of participants at Grade 2 standard or below. The study design, with questionnaires distributed to pupils through their school music teachers, did not necessarily capture data from the broader spectrum of young instrumental learners, an increasing number of whom might be self-taught (ABRSM, 2021). Collecting data from self-taught instrumentalists would provide a broader picture of self-determined motivation as the learning trajectories of self-taught musicians are very different to those learning instruments in more formal settings (Green, 2002; Watson, 2016). The questionnaire data could also have been helpfully supplemented with additional demographic data such as socio-economic status to explore the influence of socio-demographic factors on self-determined motivation and achievement goals. Finally, the follow up data on continuation rates were only available for 62% of the original sample, and therefore a fuller dataset might have resulted in different outcomes for the paths between self-determined motivation, achievement goals and continuation rates.

8   General Discussion

The research presented in this thesis had two overarching purposes. Firstly, to advance theoretical understanding of achievement goals in instrumental learning contexts by applying the 3 x 2 model to music education settings, aiming to achieve clearer insights into the influences on and outcomes of adolescent instrumental learners' achievement goals. Secondly, to expand achievement goal research to populations of adolescent instrumental learners in school settings in England, as this theory of motivation was as yet underexplored in English music education contexts. Developing understanding of the achievement goals of adolescent instrumental learners, including the influences on and impact of these goals, might have important implications for music educators seeking to influence the motivation of adolescent instrumental learners in English secondary schools. The four empirical studies were guided by three overarching research questions:

1. What are the achievement goals of adolescent instrumental learners?
2. What influences adolescent instrumental learners to adopt different achievement goals?
3. What impact do achievement goals have on the engagement of adolescent instrumental learners?

This general discussion will summarise the findings across the four studies, drawing conclusions in relation to each of the research questions. A series of recommendations will be outlined for music educators, parents and policy makers on the basis of the findings, and the limitations of the research will be recognised, linking to suggestions for future research directions.

8.1   Key Findings

8.1.1   *What are the achievement goals of adolescent instrumental learners?*

The first research question aimed to understand the achievement goal orientations of adolescent instrumental learners in England. Whilst there have been other studies investigating achievement goals with school-aged musicians (Miksza, 2009b; Miksza et al., 2016; Ng, 2017; Schmidt, 2005), these studies took place in the USA and Australia, and their results might not be directly applicable to English contexts. In particular, the music education system in USA high schools is markedly different to that of English secondary school settings (Johnson & Fautley, 2017). Additionally, the expanded 3 x 2 achievement goal model included separate task and self goal dimensions (Elliot et al., 2011) which were yet to be examined within the context of instrumental

learning. Therefore, one of the aims of this thesis was to apply this expanded achievement goal model to the context of instrumental learning, contributing to the development of achievement goal research in the field of music education.

8.1.1.1   The Achievement Goal Model in the Context of Instrumental Learning

Overall, the results suggest that the full 3 x 2 achievement goal model might not be relevant to populations of adolescent instrumental learners. Musicians in this age bracket might not consider task and self goals to be distinct from one another, and are also not concerned with task- and self-avoidance goals. Therefore, a trichotomous model comprising a singular mastery goal alongside other-approach and other-avoidance goals is likely to be the most relevant to adolescent instrumental learners. The achievement goal scales were refined throughout the research process due to reflection and comparison with other studies, therefore the results from each study cannot be directly compared, though to help clarify the findings a summary of the differences between achievement goal measures and models used in each of the studies will now be outlined. Appendix C can be referred to, to compare differences between scales.

In Study 1, though the measurement scales were based on the full 3 x 2 achievement goal model (Elliot et al., 2011), factor analysis identified a 3-factor model in the data, comprising performance, mastery-approach and mastery-avoidance goals. The performance goal included scales for other-approach and other-avoidance, whilst the mastery-approach and mastery-avoidance factors comprised self- and task-based items. Although the mastery-approach and mastery-avoidance goals were identified as separate factors in the exploratory factor analysis, there was a strong correlation between these two goal orientations, indicating participants were likely to orient to both mastery-approach and mastery-avoidance goals simultaneously. Previous research assessing the validity of the 2 x 2 achievement goal model with instrumental learners found similarly that young musicians may not perceive a difference between approach and avoidance achievement goal orientations (Miksza, 2009a). On reflection, the validity of the measure used in Study 1 is questionable, as the scale items included the stem "my main goal is to," which contradicts the notion that learners may hold multiple achievement goals simultaneously (Harackiewicz et al., 2002; Pintrich, 2000b; Senko & Tropiano, 2016).

Further scale development took place before Study 2; the stem "my main goal is to" was removed from the scale items, and items were also changed to be applicable to both individual and group tuition, reflecting the different learning contexts of participants in each sample. In this study the full 3 x 2 achievement goal model was used as the internal consistency of each of the scales was found to be acceptable within this dataset. The scale items used in this study were more closely

aligned to the original items used in Elliot et al.'s (2011) 3 x 2 measure, and correlation analysis indicated that learners in Study 2 did distinguish between task-approach and self-approach goals.

As the achievement goal data were inconsistent between Studies 1 and 2, one of the aims of Study 3 was to clarify adolescent musicians' achievement goal orientations by using qualitative methods to prioritise their own perspectives on motivation. The data from this study indicated task goals and self goals were often conflated by the interview participants, and task- and self-avoidance goals were also not prioritised by instrumental learners at this age.

Consequently, the scales used in Study 4 measured only four goals (self-approach, task-approach, other-approach, other-avoidance), and factor analysis found a 3-factor model comprising mastery, other-approach and other-avoidance was the best fit to the data in this study. Whilst the scales for other-approach and other-avoidance were still highly correlated, the distinction between these goals follows similar models used by other research on achievement goals in music education contexts (Miksza, 2009a; Miksza et al., 2016). The terms 'other-approach/avoidance' are used rather than the 'performance-approach/avoidance' terminology used by other researchers, as this delineates the meaning of these goal orientations more clearly in a music context than the word performance, which might be associated with musical performance more generally.

One advantage of employing a mixed methods research design in four separate studies was that it allowed for the continual refinement of the achievement goal scales and model, meaning the reliability and validity of the measures used improved throughout the research process. Prior to this research the full 3 x 2 model had not yet been used in music contexts, therefore it was necessary to adapt the 3 x 2 scale items from the original model (Elliot et al., 2011) for music learning contexts. It was not possible to use pre-validated scale items from other music research as these did not include separate scales for task and self goals. However, this meant there was inconsistency between the quantitative measures used to measure achievement goals in Studies 1, 2 and 4, so these results are not directly comparable. Each of the studies were carried out with different populations of instrumental learners which likely explains much of the variation in results. While the first study comprised beginner violinists in whole class ensemble settings, Study 2 gathered data from a more varied demographic of learners from individual, small group and whole class ensemble teaching settings. Study 3 was a small-scale study with only nine participants receiving small group and individual tuition, whilst Study 4 employed a much larger sample of pupils from multiple schools across England, representing a wider age and ability range. For this reason, the quantitative data from Study 4 are considered the most reliable indicator of adolescent instrumental learners' goal orientations, though the results still lack generalisability to other contexts.

It is not possible to draw clear comparisons between the results of the present research and previously published studies due to their varied research contexts as well as differing achievement goal models used. For example, Ng (2017) only measured mastery and performance-approach orientations, but also examined multiple goal complexes comprising both these goals. Achievement goal theorists do not recommend that researchers measure every possible goal orientation, instead recommending that researchers should be selective in which goals might be most applicable to their own context (Elliot et al., 2015). The findings of this thesis therefore add value to the field of achievement goal research in musical learning, as the 3 x 2 model had not been tested with instrumental learners prior to this research, and the full data from Study 4 supports Elliot et al.'s (2015) recommendation that more selective models might be most appropriate for specific contexts, in this case with adolescent instrumental learners. Previous research on achievement goals in musical learning also suggested self- and task-avoidance goals might not be relevant for adolescent instrumental learners (Miksza, 2009a). This is encouraging for music educators, as mastery-avoidance goals have previously been linked to outcomes such as lower achievement (Hulleman et al., 2010) and worry (Elliot & McGregor, 2001) in other learning contexts. The varying definitions of achievement goals and different models used by researchers have been criticised by some researchers who highlight problems in drawing clear comparisons and conclusions between studies (Elliot & Murayama, 2008; Hulleman et al., 2010; Senko & Tropiano, 2016). In light of this criticism, the following section will clarify the meaning of each goal type as conceptualised within the research. This is also helpful as this was the first set of studies applying the 3 x 2 achievement goal model to music education contexts.

8.1.1.1.1   *Definitions of Achievement Goals*

The mixed methods research design employed in this thesis was particularly useful in clarifying definitions of each achievement goal from the perspective of instrumental learners. As yet, achievement goal research in musical contexts had mostly used deductive quantitative methods to collect data on learners' achievement goals. The interviews in Studies 2 and 3 therefore not only informed the subsequent model used in Study 4, but also enhanced understanding of how these goals are conceptualised by adolescent instrumental learners. Definitions of each achievement goal model are presented in Table 8.1 alongside quotes from participants in Study 3 which bring each achievement goal to life in the context of adolescent instrumental learning.

Firstly, relating to task and self goals, though some learners were focused specifically on developing skills or mastering certain pieces of music, for example, "it's always the piece that matters" (Study 3, Jane), most learners associated task goals with their overall goal of self-improvement. The crossover between task- and self-approach goals was summarised by one

Table 8.1

Achievement Goal Definitions

	Mastery	**Other-Approach**	**Other-Avoidance**
Goal definition	Focused on improving skill and understanding.	Focused on the attainment of other-based competence.	Focused on the avoidance of other-based incompetence.
Exemplification	*"I would like to get better at it and then be able to play more pieces."*	*"I feel like I'd like to be the better musician".* *"I want to be at the same level as them"*	*"I'm going to do grade 1 so you can't tease me"*

Note. *Other-approach and other-avoidance definitions are from Elliot et al. (2011, p. 634)

participant, who enjoyed the challenge of playing difficult pieces to improve: "I quite like once you've, there's a really difficult piece, and seek the ability to play that piece and know you can, so like surpassed a barrier type thing" (Study 3, Lewis). Elliot et al. (2011) have acknowledged the close relationship between task and self goals stating, "both have an evaluative standard that may be used privately" (2011, p. 633), though they proposed task goals are more likely to result in flow experiences than self goals which also require the learner to cognitively monitor their progress in relation to past experiences.

The interview data from Studies 2 and 3 suggested it is possible that task and self goals may overlap in music learning contexts because learners were most likely to focus on learning repertoire for graded performance exams. Interestingly, this progression through graded exams may have been a barrier for one participant who mentioned, "I don't have an issue doing the exams and stuff, but I do just…want to play more, than have to focus on, learning loads of scales and all that kind of thing" (Study 3, Lewis). Graded performance exams, though acknowledged as important by many of the interview participants, did not appear to be intrinsically enjoyable for these learners. These progression frameworks might be externally imposed by figures of authority such as teachers or parents, and subsequently adopted in relation to self goals by participants. All nine participants in Study 3 and four out of ten participants in Study 2 mentioned graded exams, and national data shows that in England, 225,390 certificates were awarded for graded music performance examinations in the year 2021-22 (Ofqual, 2023)[3]. This progression route is therefore dominant in

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[3] Data were the number of certificates awarded for music performance exams from the following exam boards: ABRSM, Music Teachers' Board, RSL Awards Ltd, Trinity College London, and University of West London in the year 2021-22.

formal music education settings, and the data from the interviews in Studies 2 and 3 suggests these exams were closely linked to instrumental learners' self-approach goals.

There was a greater overlap between task and self goals in the quantitative data from Study 4 than in Study 2. One reason for this might be the different demographic of each of the studies. Most learners in Study 2 learnt their instruments in the context of whole class ensemble teaching and did not partake in graded performance exams like many of the participants in Study 4. The Study 2 participants were therefore arguably more likely to focus on more imminent task goals in relation to lesson content than the Study 4 participants who were focused on longer-term self-approach goals, in the pursuit of graded performance exams. It is also worth noting that most of the learners in Study 2 learnt their instruments as part of the compulsory school curriculum, in comparison to the participants in Study 4 who had opted to learn their instruments and likely had longer-term musical ambitions. The sample from Study 4 was more representative of adolescent musicians learning in formal contexts, and the trichotomous goal model might only be valid for instrumental learners in these settings. In contrast, task goals may be more important for young musicians learning in informal contexts, who may be less likely to undertake graded performance examinations. There is an increasing number of self-taught adolescent musicians in the UK (ABRSM, 2021), therefore alternative goal models, including task goals, should be examined with learners from more varied contexts in future research.

There were some indications in the Study 2 and 3 interview data that there might be a unique motivational orientation, separate from the traditional conceptualisations of achievement-based goals. For some participants, playing an instrument was a tool for wellbeing, for example in allowing learners to express emotions or reduce stress. Very similar responses were gathered from adolescent instrumental learners in Australia, who played instruments for the purpose of relaxation and expression (Lowe, 2012). This motivational orientation is clearly distinct to self goals focused on improvement and task goals focused on "[doing] the task correctly" (Elliot et al., 2011, p. 634). This might be termed a 'wellbeing' goal and would not be appropriate as part of an expanded achievement goal model, as achievement goals represent "competence-relevant aims that guide and direct behaviour" (Elliot et al., 2015, p. 192). An important point is thus highlighted here, that not all instrumental learners might be oriented towards achievement-related goals, and there is scope for future research exploring the prevalence of 'wellbeing' goals alongside achievement goal orientations.

The original version of the 3 x 2 achievement goal model included task-avoidance (avoid doing tasks incorrectly) and self-avoidance goals (avoid performing worse than before) (Elliot et al., 2011). The interview data from Studies 2 and 3 indicated that the avoidance dimensions of the task

and self goals may not be relevant to populations of adolescent instrumental learners. No participants in either of these interview studies gave indications that they were strongly oriented to these avoidance goals, with only one participant in Study 2 stating their aim was "to be able to just play [the piece] without making any mistakes" (Study 2, Hannah). Whilst participants did report these goals in the quantitative data in Studies 1 and 2, this may be a result of response bias rather than learners' actual goal orientations (Wetzel et al., 2016). It is possible that the relatively high mean scores for all achievement goal orientations in each study might also be a result of acquiescence response bias, in the tendency for participants to agree rather than disagree with the scale items (Knowles & Condon, 1999). This type of response bias may be particularly prevalent in research with secondary school instrumental learners keen to portray a positive attitude towards instrumental learning, also signifying social desirability bias (Wetzel et al., 2016). In Miksza's (2009a) study with high school band students, mastery-avoidance goals were also the least reported, though they were still moderately positively correlated with mastery-approach goals. Younger musicians may not be concerned with this type of goal at this stage in their musical development. To summarise, on the basis of results from Studies 3 and 4 in particular, it is recommended that future achievement goal models used with adolescent instrumental learners in formal educational settings contain mastery-approach, other-approach and other-avoidance goals, as presented in Table 8.1. There is scope for further research with different populations of adolescent instrumental learners, to investigate the prevalence of task goals in more informal learning contexts, as well as the concept of 'wellbeing' goals as opposed to achievement-related goals.

8.1.1.2 Relative Importance of Achievement Goals

The relative importance of each achievement goal was compared within and across the four studies to determine whether adolescent instrumental learners overall orient more strongly towards certain achievement goals. In each study, mastery-approach goals were the most prominent, regardless of which achievement goal model was used. Firstly, considering the quantitative data, in Study 1 mastery-approach goals achieved the highest mean score for both intervention and control groups, in Study 2 self-approach and task-approach goals achieved the highest mean scores, and in Study 4 mastery goals were markedly higher than other-based goals. These trends were supported by the interview data from Studies 2 and 3, where participants frequently mentioned their goal was mostly to improve, representing the self-approach goal. The survey data from Studies 1, 2 and 4 also showed that other-based goals were consistently the lowest reported across all samples, despite the differences in learning contexts.

The interview data also indicated that instrumental learners may hold multiple achievement goals simultaneously and might change between goals dependent on their circumstances. One

participant in Study 3 conveyed a dual self-approach and other-approach goal in relation to her upcoming graded exam: "I think to an extent I want to do well for myself to get it… but it's almost a little bit like you want to show off how you've done on it" (Study 3, Faye). Some interview participants in Study 3 recounted changes in their goal orientation, for example, "the reason I did grades in the first place was to improve, I feel like the competition's just came along in recent years" (Ben, Study 3). The view that different achievement goals might be adopted simultaneously and that they are changeable depending on context is endorsed by researchers in other educational contexts (Ciani et al., 2011; Harackiewicz et al., 2002) as well as in music settings (Ng, 2017). The mixed-methods design of the present research was an advantage in understanding this more malleable nature of adolescent instrumental learners' achievement goal profiles. Studies in music contexts, and indeed in general education contexts, have largely utilised quantitative survey methods to capture data on achievement goals on a single occasion. Thus, the present research contributed uniquely to the understanding of the nature of adolescent instrumental learners' achievement goals by employing qualitative methods and prioritising the personal perspectives of participants.

8.1.2   *What influences adolescent instrumental learners to adopt different achievement goals?*

The second research question aimed to understand why adolescent instrumental learners might pursue different achievement goals. Whilst researchers have evaluated the impact of different achievement goals on various musical outcomes, to my knowledge there is yet to be any published empirical research examining the influences on instrumental learners' achievement goals. This is a significant gap in the achievement goal literature which the present research sought to address.

Based on the results of each of the four studies, a visual map of the influences on achievement goal influences is proposed, presented in Figure 8.1. This map shows the crucial influence of self-determined motivation on adolescent instrumental learners' achievement goals, in conjunction with learner autonomy, competence beliefs and musical identity. These factors interact with one another as well as influencing achievement goals directly. Relationships with teachers, family members and peers also influence achievement goals through each of these factors. For example, music teachers can influence instrumental learners' perceptions of autonomy, which in turn might influence their orientation towards mastery or performance goals directly, as well as indirectly through self-determined motivation. This next section of this chapter will examine the different levels of this model, firstly by explaining the proposed causal relationship between self-determined motivation and achievement goals.

Figure 8.1

Map of Influences on Achievement Goals

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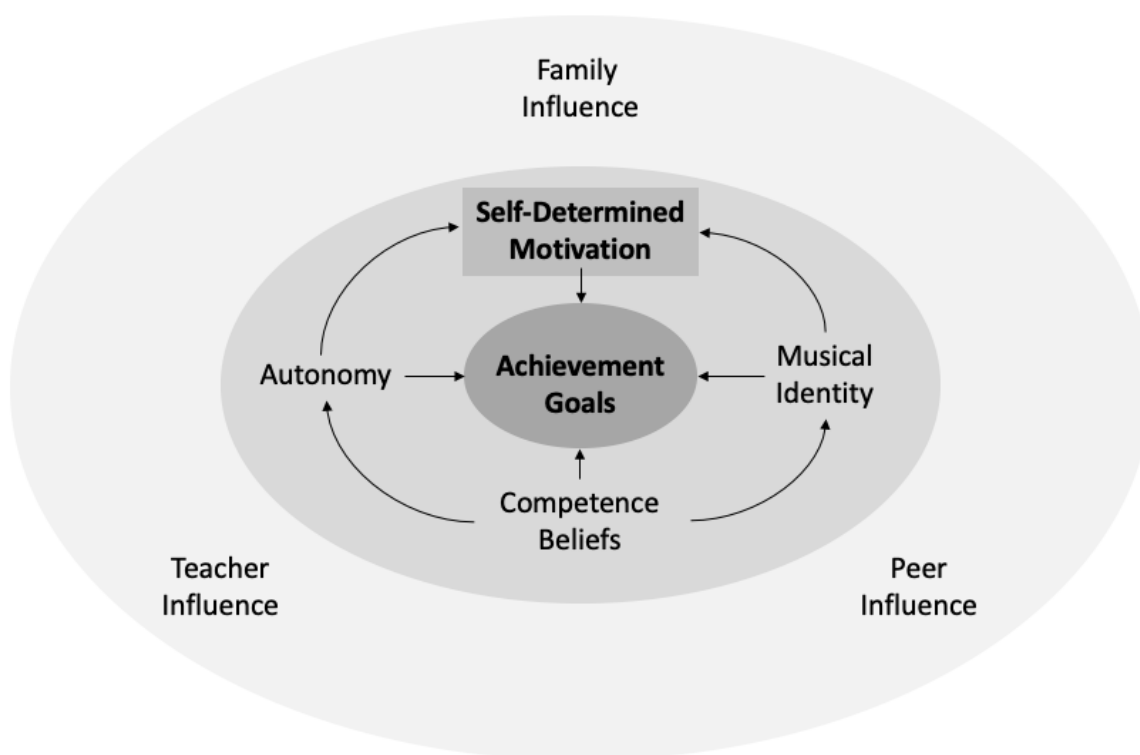
8.1.2.1   Self-Determined Motivation and Achievement Goals

The degree of self-determined motivation held by instrumental learners can influence their orientation towards different achievement goals. Self-determined motivation occurs at different levels of extrinsic motivation from amotivation through to intrinsic motivation (see Figure 8.2). The regression analyses in Study 4 indicated that instrumental learners' overall self-determined motivation was a significant predictor of all three achievement goal orientations. More intrinsically motivated learners were more likely to orient towards mastery goals and less likely to orient towards other-approach and other-avoidance goals. The correlation data further confirmed that intrinsic motivation, identified motivation, and positive introjection were more closely associated with mastery goals than amotivation, external motivation, and negative introjection, which were more closely associated with other-approach and other-avoidance goals. This relationship between self-

Figure 8.2

Taxonomy of Self-Determined Motivation (from Evans, 2015, p. 76)

Type of Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Behavioural regulation	No regulation	External	Introjected	Identified	Integrated	Intrinsic
Perceived locus of causality	Impersonal	Relatively External	← →		Relatively Internal	Internal
Characteristics and behaviours	No intention No behaviour Low perceived competence	Rewards and punishments Compliance and defiance	Guilt, shame Social approval Ego involvement	Understanding the value and importance of behaviour to identity	Identity pursuits are aligned with the self	Behaviour is undertaken for its own sake
Music practice relevant behaviours	"I don't want to practise." "Practising seems pointless, I'm not a good musician anyway." "I don't understand why I should bother practising."	"I will get in trouble if I don't do it." "I chose music because it is an easy subject." "I practise because my mum said to."	"I practise because I am supposed to." "I will feel proud of myself if I can practise." "I will feel bad if I don't practise." "My family will think I am a good boy/girl if I practise."	"It is important for me to practise." "I don't enjoy practising but I can see that it will help me to learn this difficult piece."	"I know that if I want to be a professional musician one day, I need to practise a lot." "I practise because music is the most important thing to me."	"I enjoy playing my favorite pieces." "When I play my instrument, I lose track of time and get lost in the moment." "I love playing my instrument."

determined motivation and achievement goals parallels findings from earlier studies in other educational settings (Ciani et al., 2011; Diseth et al., 2012; Duchesne et al., 2017), and importantly provides new evidence to show this link is also apparent in music learning contexts. The interview data were particularly useful in demonstrating these links through participants' own lived experiences, giving real-life examples of the music behaviours proposed by Evans (2015) (see Figure 8.2).

The interview data supported this causal link between self-determined motivation and achievement goals. Participants conveyed attitudes across the full spectrum of self-determined motivation, and clear links to achievement goals were evident. Though amotivation was not conveyed by many participants, there was an indication in the discussion with one participant that amotivation might lead some instrumental learners to orient towards avoidance goals. This participant compared their lack of interest in music to other subjects: "in other lessons if I'm bad at something then I will care about it more because for me that subject is more important…but for music I just don't feel like it's important so I don't" (Study 2, Chris). The self-preservation strategies employed by this participant were indicative of an other-avoidance goal; he sought not to appear incompetent by emphasising his lack of effort and interest in instrumental learning.

External and introjected motivation were often conveyed by participants who were reminded by their parents and teachers to practise, linking to other-approach or avoidance goals. For example, one participant recalled a "reward system where if you turn up to three lessons in a row you get a first dinner pass" (Study 2, Chris). For these participants, other-approach and avoidance goals were adopted to fulfil external expectations. Introjection, associated with "social approval" and "ego involvement" (Evans, 2015, p. 76), is also linked to other-approach and other-avoidance goals.

Interview participants often acknowledged that they practised in order to impress others, for example when talking about the musical success of a peer, one participant stated, "I'm quite competitive in my music so I would probably think to myself, he's done really well, let's try and beat that in my next performance" (Study 2, Jacob). The measurement model used in Study 4 for self-determined motivation included both positive and negative introjection. Positive introjection is represented by feelings of pride whereas negative introjection is represented by feelings of guilt (Sheldon et al., 2017). There is a close association between these positive and negative dimensions of introjection and other-approach and other-avoidance goals. In Study 4, negative introjection was correlated with both other-approach and avoidance goals, but there were no significant patterns between positive introjection and the other-based goals. Negative introjection, the avoidance of guilt and shame, might therefore be more important than feelings of pride in the formulation of other-based goals for instrumental learners.

More intrinsic motivational patterns were associated with the mastery goal in both the interview and survey data. Goals of self-improvement were often linked to participants' future musical aspirations, for example, "I know I need to practise to improve and I've got a motivation there because I want to go on and carry on doing music when I'm older" (Study 3, Rebecca). Whilst instrumental practice itself might not be inherently enjoyable for some learners, they still see the value in undertaking instrumental practice to achieve their future musical goals. In this respect, identified motivation was more congruous with self goals rather than task goals. Intrinsic motivation was particularly prevalent in participants' discussions of the emotional value of playing an instrument. One participant mentioned, "you can kind of destress with it" (Study 3, Tom), and another confided "when I play violin it's a way for me to forget…and to release my emotions" (Study 3, Rebecca). For these young musicians, their goal was simply to enjoy the experience of making music, often for emotional relief, rather than in practising in the service of self-approach goals. This goal type might be likened more to the task goal than self- or other-based goals, though as discussed in Section 8.1.1.1.1, it might represent a separate 'wellbeing' goal, linking closely to intrinsic motivation.

As well as self-determined motivation, the data from the four studies indicated other factors are also important in influencing adolescent instrumental learners' achievement goals. These influences were both direct and indirect, being mediated by self-determined motivation. In the following discussion, each of these factors will be discussed in relation to self-determined motivation and achievement goals, and influences from teachers, family and peers will also be considered in relation to each of the factors.

8.1.2.2   Autonomy Support

The autonomy perceptions of instrumental learners in all four studies had an important impact on their self-determined motivation and achievement goals. Though autonomy and intrinsic motivation are closely related in self-determination theory (Ryan & Deci, 2000a), there have been conflicting findings in previous research on the link between the autonomy satisfaction and self-determined motivation of instrumental learners. Whilst one study found autonomy perceptions did impact the motivation of university-aged musicians (Evans & Bonneville-Roussy, 2016), this link was not apparent in research with high school musicians (Yoo, 2021). In the present research, autonomy was an important influence on adolescents' self-determined motivation. Autonomy perceptions were also linked to learners' adoption of mastery goals, particularly in Studies 1, 3 and 4. The observation of whole class ensemble teaching in Study 1 showed that autonomy was promoted much more with one group in comparison to the other group. Although the nature of the music curriculum in this school meant that it was compulsory for all Year 7 and 8 pupils to engage with whole class ensemble teaching, meaning these participants had no choice over whether or not they learnt to play an instrument, or many cases which instrument they would learn to play, there were other factors in the whole class ensemble teaching environment that might still have supported the autonomy perceptions of the learners in these contexts. The amount of lesson time devoted to independent instrumental practice, and the communication style of the teacher, both appeared to impact the goal climate of the whole class ensemble setting. One group perceived a higher mastery classroom goal structure and reported stronger personal mastery goal orientations overall. Relating to instrumental learners in more common tuition contexts, some participants in Study 3 also gave the impression that they gained more autonomy over their practice as they got older, as well as developing more intrinsically motivated mastery goals. The Study 4 correlation analysis showed a relationship between autonomy and mastery goals, though autonomy was not a significant predictor of achievement goals when controlling for self-determined motivation in the regression analysis. Instrumental learners' self-determined motivation might therefore account for the relationship between autonomy and mastery goal orientations.

The autonomy satisfaction of instrumental learners can be fostered by both parents and teachers. The interview data showed that participants had different levels of autonomy in relation to their instrumental practice. Whilst some parents were heavily involved in their children's practice, more intrinsically motivated participants had more control over their practice routines, for example, "because it's something which I've chosen to do because I enjoy it, I find that I can play better with that and just do it myself when I want to" (Study 3, Tom). Encouragingly, most participants in these studies considered their parents' musical involvement to be supportive rather than controlling,

indicating they all had some level of autonomy over their learning, though some of the learners still depended on parental support particularly in the early stages of learning an instrument, as experienced by this participant:

> I think when I was younger it was almost like you keep playing because your mum tells you to and then I was bought a clarinet so you had to carry on, but now it's got a bit more like my own ambitions of just trying to almost complete it and keep going with it. (Study 3, Faye)

Previous research on parent-child relationships has acknowledged that parents have an important supportive role to play in the beginning stages of learning an instrument (Creech, 2010, 2014). Complete autonomy over practice routines is likely to occur only once learners have developed the habits necessary to sustain practice, and whilst younger instrumental learners benefit from practical and behavioural support, older instrumental learners may require more emotional support (Creech, 2010). Navigating this transition from controlling to more autonomy-supportive behaviour might be challenging for parents, though this may be particularly important in influencing learners' pursuit of mastery goals.

Teachers might have a more important role to play than parents in enhancing the autonomy perceptions of instrumental learners in formal learning settings. In Study 1 in the whole class ensemble tuition setting, autonomy messages were conveyed through implicit teacher communication, with phrases such as, "I'll let you decide," "You can have a go," and "is that alright with everyone?". This style of communication may have contributed to the higher mastery classroom goal structure reported by pupils in this group. Autonomy was also promoted by the instrumental teachers of learners in one-to-one teaching settings. Several interview participants commented they were able to choose which repertoire they wanted to learn, and the most intrinsically motivated pupils were also given more control over the direction and content of their weekly lessons. This autonomy support from teachers enhanced the intrinsic motivation of these instrumental learners, and thus their tendency to orient towards mastery goals more than other-based goals. It was notable that in Study 4, the factors of teacher-relatedness and autonomy had a very high correlation, indicating that the teacher might have the most influence over learners' autonomy perceptions. Previous researchers have highlighted autonomy-supportive teaching as being important in the promotion of mastery goals in the music classroom (Hruska, 2011; Tucker, 2020), and the present research indicates that this relationship between autonomy satisfaction and mastery goals might be mediated by self-determined motivation.

Whilst teacher influence was important in enhancing learners' autonomy satisfaction in this research, this research is specific to formal instrumental learning settings, and for young musicians in more informal learning contexts, autonomy might be satisfied through other means. It is likely that learners in less formal settings, particularly those who are self-taught, experience much higher levels of autonomy, and it would be interesting to investigate whether this might lead to a higher prevalence of mastery goals with this population of adolescent instrumental learners. Unfortunately, the different achievement goal scales used in Studies 1, 2 and 4 do not allow for the comparison of achievement goal orientations across learners in the different samples from these studies, but it may also be the case that autonomy perceptions might be higher for learners in small group and individual tuition settings compared to those in whole class tuition contexts. Further research comparing the autonomy perceptions of learners in these different teaching settings would therefore also be valuable.

8.1.2.3   Competence Beliefs

Instrument learners' competence beliefs might be a key influence on their orientation towards different achievement goals. Early achievement goal research found that competence expectancies predicted the mastery, performance-approach and performance-avoidance goal orientations of psychology undergraduates (Elliot & Church, 1997), and evidence from the present research indicates this might also be the case for adolescent instrumental learners.

The relationship between competence beliefs and achievement goals varied across the three quantitative studies, though there were generally positive associations between competence and mastery goals, and some positive links between competence and performance goals. In Studies 1 and 2, high competence beliefs were linked to both mastery and other-approach goals, though in Study 2 there were also links between self-efficacy and avoidance goals. In Study 4, there was a positive correlation between competence and the mastery goal, but not with other-approach and other-avoidance goals. These differences in results may be explained by the different achievement goal scales (outlined in Section 8.1.1.1) and sample demographics, as well as varying measurements of competence across the studies. Whilst Studies 1 and 4 measured competence perceptions as a broad indicator of musical self-belief, Study 2 measured the self-efficacy beliefs of learners pertaining to more specific performance situations, as recommended by Bandura (1997). Therefore, no clear conclusions as to the exact relationship between competence and specific achievement goal orientations can be made at this stage, though the interview data gave more of an indication as to how instrumental learners' competence beliefs might affect their achievement goals.

The interview participants with lower competence perceptions were more inclined to pursue mastery goals or other-avoidance goals, rather than other-approach goals. Some participants

believed attempting to emulate the success of their peers would be pointless, preferring to focus on mastery goals of self-improvement or learning new pieces of music, whereas other participants aimed to 'catch up' with their peers, conveying an other-avoidance goal. In contrast, those with higher competence perceptions were more likely to strive to outperform their peers, indicating a tendency towards the other-approach goal. There is some indication that competence beliefs might impact adolescent instrumental learners' choice of achievement goals, but this might depend on the value placed on competition by these learners. High or low competence perceptions are unlikely to directly influence other-approach and other-avoidance goals if learners are not concerned about comparison with their peers. This may explain the lack of association between competence and other-based goals in the Study 4 analysis.

Instead, competence might predict achievement goal orientation through self-determined motivation as a mediating factor. In Study 4, competence beliefs had a positive association with positive introjection, identified and intrinsic motivation, and a negative association with amotivation, external motivation and negative introjection. Competence was also a significant predictor of overall self-determined motivation in the regression analysis. These data support findings from other research which showed adolescent instrumental learners' competence perceptions predict their level of self-determined motivation (Yoo, 2021). Competence beliefs therefore still have an important role to play in overall learner motivation, and higher competence perceptions lead to more intrinsic motivation, which in turn can influence the adoption of mastery goals. In contrast, extrinsic motivation as a consequence of lower competence perceptions can lead instrumental learners towards other-approach and avoidance goals. Though the overall relationship between competence beliefs, self-determined motivation and achievement goal orientation requires further clarification, it does appear that competence beliefs have some role to play in learners' orientation towards different achievement goals.

Instrumental learners' competence beliefs might be influenced by comparison with peers as well as their teachers. Whilst some interview participants compared themselves favourably in relation to their peers, others were more negative about their own musical ability, and it was apparent that this might affect their overall motivation to practise. The survey data from Study 2 also suggested that self-efficacy beliefs may be lower when instrumental learners compare their ability level to their peers'. With regards to teacher influence, in Study 1, one group reported higher competence perceptions than the other. The quality of teacher feedback received by this group was observed to be much more specific, individualised, and process-oriented than the other group, and might have contributed to the overall higher reported ability perceptions of pupils in this group. Self-determination theory researchers have also endorsed this type of feedback to promote music

learners' competence beliefs (Evans, 2015; Freer & Evans, 2019), supporting the importance of competence beliefs in developing overall motivation for instrumental learning.

It has been suggested that competence beliefs are just as important as task values in learners' motivation towards learning an instrument (Lowe, 2012), and the present research findings suggest that competence beliefs might also have a role to play in influencing the specific achievement goals of instrumental learners. The influence of competence beliefs might be twofold, directly orienting instrumental learners towards approach or avoidance dimensions, depending on their self-perceptions of ability, as well as influencing musicians' achievement goal tendencies by impacting their self-determined motivation. Competence beliefs are also likely to be an important factor in the construction of musical identities, which will be discussed in the following section.

8.1.2.4   Musical Identities

The achievement goal orientations of instrumental learners might be influenced by their perceptions of musical identity. It was evident, particularly in the interview data from Study 3, that adolescents with a more established sense of musical identity were more inclined to pursue mastery goals over other-based goals. Identity beliefs are embedded in more intrinsic forms of motivation, particularly identified and integrated motivation (see Figure 8.2), and this link between musical identity and self-determined motivation may also explain some of the achievement goal choices of instrumental learners.

The interview participants in Studies 2 and 3 conveyed varying degrees of musical identity; some described music as their main interest, and at the other end of the extreme one participant portrayed the opinion that music was their least favourite subject at school. Musical identities are therefore clearly linked to learners' value beliefs regarding musical learning. Interview participants who had more established musical identities were more able to articulate specific task and self goals related to their musical aspirations. Examples of these musical ambitions included the desire to achieve high performance grades, pursue music in higher education, or to join musical ensembles after leaving school. These ambitions showed strong parallels with measures of musical identity used in other research with adult musicians (López-Íñiguez et al., 2022). Learners recognised the importance of practising to make improvements towards these goals, thus orienting towards self-approach goals, and more specifically potential-based goals (Elliot et al., 2015). There was also evidence to suggest that those with a stronger sense of musical identity were no longer concerned with the musical activities of others, an indicated by one participant who commented they were less concerned about the opinions of their peers after they discovered their own unique musical identity. Musical identity might therefore not only lead to increased mastery goals, but also a reduction in other-approach and avoidance goals, shown in the path model in Study 4 (see Figure 7.13).

Age may be a key factor in the development of musical identities. One learner only discovered their musical identity halfway through adolescence: "I think I've got more of an understanding of what music is and what it means to me than when I was like 10, 11" (Study 3, Rebecca). Generally, the older interview participants in Studies 2 and 3 were more likely to convey long-term musical aspirations in comparison to younger pupils, who saw music as a hobby. The adolescent years are crucial in either the formation or rejection of musical identities (Symonds et al., 2017). Evans and McPherson (2017a) have applied models of identity formation to adolescent musicians identifying various stages of identity consolidation. The authors note, "identity achievement occurs when the person has fully explored and experimented with a range of personal and social identities and arrived at a conscious and coherent identity that dictates a path for their future" (Evans & McPherson, 2017a, p. 215). It seems unlikely that instrumental learners would reach this stage of identity achievement until later in adolescence, and this appears to have been the case for the participants interviewed in the present research.

8.1.2.4.1 *Social Influences on Musical Identity*

As instrumental learners' mastery goals appeared to be influenced by musical identity beliefs, it is worth considering what other factors apart from age might contribute to the development of musical identities in adolescent instrumental learners. Researchers acknowledge the role of various other factors in constructing musical identity, including family, friendships, educational opportunities, self-belief, and musical preferences (Hallam, 2017; Symonds et al., 2017). Evans and McPherson (2017a) emphasise the role of psychological need satisfaction in contributing to musical identity, with a particular focus on relatedness to others. This link between social influences and musical identity, as well as achievement goal orientations, was evident in the present research.

In Study 4, relatedness to peers, parents and teachers was associated with mastery goals, and there was a negative association between peer-relatedness and other-avoidance goals. Surprisingly, relatedness to peers and parents did not contribute significantly to self-determined motivation in the regression model. However, social influences on musical identity might encompass factors beyond just relatedness, such as family musical involvement and music making with peers. These aspects of social influence are likely not captured by the relatedness scale items used in Study 4 such as "I feel close to my parents," or "I feel connected to my peers." These scales do not account for the musical social connections so important to the construction of musical identity, as found in the work of Manturzewska (1990). A range of social influences on musical identity and achievement goals were apparent throughout the research and this was broader than the concept of relatedness, as measured in this final study.

Family involvement in musical activities was key to the construction of musical identities for several interview participants. These participants recalled occasions when they played music alongside family members, listened to music with their parents, and attended concerts. Many participants also made the decision to start learning an instrument because their older siblings already had instrumental lessons, echoing findings from other studies (ABRSM, 2021; Mateos-Moreno & Hoglert, 2023). For some learners, music-making was important in continuing musical family legacies; one participant had been gifted their great-grandfather's violin, and another proudly reported that their uncle had composed music for a well-known orchestra. The importance of family support in the construction of instrumental learners' musical identities has also been recognised by Symonds et al. (2017) who note that learners with stronger musical identities have often experienced "the embeddedness of musical pursuit within other areas of life" (p. 525). This construction of musical identity within the family environment is in fact likely to begin in infancy and early childhood, and strengthened in later childhood as music remains a part of learners' home lives (Manturzewska, 1990).

Relationships with friends are also key to the construction of musical identities for instrumental learners. Several interview participants described music making activities with friends, both in school ensembles and more informal settings such as playing in bands with friends and composing in a group. Some participants spoke about music frequently with their friends and for one participant, music helped to forge social bonds:

> With that group specifically, you can't avoid it because they live and breathe off
> music but it's quite fun to like have a group of people you can just talk about music
> with and we all like the same styles of music so it's fun to talk about. (Study 3, Tom)

When adolescents' musical identities are constructed in relation to their peer group, they may be more likely to pursue other-approach and avoidance goals. Some participants who spoke about their musical friendships conveyed a desire to "show off" (Study 3, Ben) or "prove [they were] better" (Study 3, Tom) than their friends. Interestingly, these participants also appeared to be more oriented towards mastery goals in other aspects of their musical lives, indicating that instrumental learners' achievement goals might change in response to different situations. The importance of peer groups in the construction of musical identities has also been recognised by previous researchers (e.g. Hargreaves et al., 2015; Manturzewska, 1990). One study which focused on the period of school transition in England found that learners' involvement in musical activities at the start of secondary school was particularly impacted by the perceptions of their peer group (Symonds et al., 2017). The

desire for social belonging also impacts on wider conceptions of musical identity beyond performance, influencing the type of music that adolescents listen to, as well as the specific instruments they are interested in learning (Lamont & Hargreaves, 2019; Symonds et al., 2017). This desire for social belonging might lead some instrumental learners to orient towards other-approach goals as they continue to form their musical identities.

Adolescent instrumental learners' identities might not always be dependent on the musical interests of their peers, as in the case of one participant who was proud of their musical identity because it made them unique, motivating them to carry on learning their instrument: "I realised that it was something that I had that other people didn't have and that I wanted to carry on doing" (Study 3, Rebecca). Social belonging may be less vital to the construction of musical identity for older adolescents, as in the case of this participant who appeared to have an already well-established musical identity. Research with adult musicians has indeed found that social factors might not be so important in the construction of musical identities in later life (Burland et al., 2022; López-Íñiguez et al., 2022). Competence perceptions might counteract the impact of social comparison on musical identity as musicians develop in expertise. The changing formation of musical identity may also be accompanied by a change in achievement goal orientation, as indicated by some interview participants in the present research who reported they were less concerned about the opinions of their peers later in adolescence.

Whilst the impact of social influences may change with age, for younger musicians, social influences do appear to influence the construction of learners' musical identities and value beliefs in relation to musical learning. Family involvement in music-making conveyed the message to participants that music has value, and participants who engaged in musical activities with their friendship groups were more likely to have stronger musical identities than those who played their instrument in isolation, again confirming research with older musicians who practise in more isolated contexts (López-Íñiguez et al., 2022) . Adolescent instrumental learners' musical identity beliefs lead to higher self-determined motivation, but also might influence their orientation towards specific achievement goals. Musical identities constructed in relation to others, and particularly the peer group, might be more associated with other-approach goals, whilst more individual musical identities, more prevalent in older adolescence, might be more closely associated with mastery goals.

In summary, the findings of this research make an important contribution to the understanding of adolescent instrumental learners' achievement goals, by defining various influences on learners' achievement goal orientations. Self-determined motivation has a crucial role to play in these learners' tendencies towards specific achievement goals, and the path model

presented in Study 4 (Figure 7.13) contributes new evidence to connect self-determined motivation and achievement goals in musical learning contexts. As hypothesised, more intrinsic motivation leads to the adoption of mastery goals, whereas more extrinsic motivation leads to other-approach and other-avoidance goals for teenage musicians. Self-determined motivation may also account for relationships between other factors and achievement goals in music learning contexts. Autonomy satisfaction, competence beliefs, and musical identities all appeared to influence self-determined motivation and may lead to the adoption of specific achievement goals for adolescent instrumental learners. Elliot and Sommet (2023) have highlighted the need for more research integrating different theories of motivation, and the present study accomplishes this by connecting self-determined motivation and achievement goal theories, generating a more holistic understanding of the motivation of adolescent instrumental learners.

8.1.3   What impact do achievement goals have on the engagement of adolescent instrumental learners?

The final research question aimed to examine the impact of different achievement goal orientations on the engagement of adolescent instrumental learners in the form of practice habits and long-term commitment to instrumental learning. Deliberate practice is widely acknowledged to support musical progression (Hallam et al., 2021; Sloboda et al., 1996), and this thesis sought to evaluate the impact of achievement goal orientations on adolescent learners' practice habits, building on previous work of achievement goal researchers in other instrumental learning contexts (Miksza, 2009b, 2011; Ng, 2017; Nielsen, 2008; Schmidt, 2005; Smith, 2005). Additionally, in light of the recent decline in the number of pupils learning instruments in UK schools (ABRSM, 2021), and adolescence being particularly associated with instrumental lesson dropout (Driscoll, 2009; Ruth & Müllensiefen, 2021) this research aimed to ascertain whether specific achievement goal orientations might influence adolescent instrumental learners to continue with lessons.

8.1.3.1   Achievement Goals and Practice Habits

The evidence gathered across the research indicated that self-determined motivation is likely to be more important than achievement goal orientations in determining the specific practice behaviours and amount of practice undertaken by instrumental learners. Data examining the link between achievement goal orientations and practice habits were largely inconclusive. Study 4 sought to quantify the relationship between achievement goals and practice habits using self-report measures of practice behaviour and practice time. There were no statistically significant effects of achievement goals on either measure of practice when controlling for self-determined motivation in

the regression analysis, indicating that intrinsic motivation is more important in determining the quantity and quality of practice that adolescent instrumental learners undertake.

The regression coefficient from the mastery goal to practice behaviours was approaching significance and was much stronger than that for other-approach and avoidance goals, so mastery goals are still likely to influence more adaptive practice behaviours than other-based goals. Other researchers found similar tentative associations between mastery goals and the practice strategies of instrumental learners (Miksza, 2011; Nielsen, 2008; Smith, 2005), and therefore this potential relationship should not be ignored and is still worth exploring further in future research. One advantage of the present research over these previous studies on practice and achievement goals was that practice behaviour was analysed as a more comprehensive measure in Study 4, in comparison to previous research which examined practice strategies separately from one another (Miksza, 2011; Smith, 2005). This research therefore contributed to the understanding of the relationship between adolescent instrumental learners' achievement goals and the concept of deliberate practice as a whole, advancing the work of these previous researchers.

The lack of a clear trend between achievement goals and practice behaviours might be partially due to learners' lack of knowledge about effective deliberate practice techniques. School-aged instrumental learners have reported using a much greater range of practice strategies only after receiving specific practice instruction from their teachers (Mieder & Bugos, 2017; Prichard, 2021). The amount of specific practice instruction experienced by learners in the present research is not known, though any potential link between achievement goals and practice behaviours is likely to be unrealised unless learners know how to engage in effective deliberate practice.

Though the regression analysis in Study 4 indicated there was no relationship between achievement goals and practice time, there were some indications in the interview data that other-approach goals might prompt instrumental learners to undertake more practice. For example, one participant mentioned, "there's a rival in cello that motivates me to practise a lot more" (Study 3, Ben). However, learners also reported an increase in practice time leading up to graded performance examinations, linked to mastery (specifically self-approach) goals. There was also a suggestion in the interviews that there are links between external motivation, other-avoidance goals and learners' reluctance to practise. Participants who were more extrinsically motivated needed more frequent reminders to practise, and appeared to practise much less than their more intrinsically motivated peers. It is likely that practice time increases as a consequence of more general achievement motivation, and whilst the reasons for this practice may differ according to achievement goal orientations, there were no apparent differences in the amount of practice undertaken as a specific

consequence of different achievement goals. Any increases in adolescent instrumental learners'
practice time may already be accounted for by intrinsic motivation.

8.1.3.2 Achievement Goals and Continuation Rates

This thesis also sought to determine whether the different achievement goal orientations of
adolescent instrumental learners made it more or less likely that they would continue learning their
instrument in the future. Whilst one study previously found mastery goals were positively related to
primary school-aged musicians' future learning intentions (Ng, 2017), no studies had yet examined
this relationship using data on actual continuation rates. To address this gap in the research, a
longitudinal design was employed in Study 4 to test whether the continuation rates of instrumental
learners were related to their previously reported achievement goals. Evaluation of the effect sizes
in the regression model to predict continuation rates showed that other-approach and other-
avoidance goals were likely to be a strong predictor of whether adolescents would continue learning
their instruments one year later. Other-approach goals were associated with continuation and other-
avoidance goals were associated with discontinuation of instrumental lessons. Self-determined
motivation and ability level also predicted continuation rates in the same model and these regression
coefficients were significant. There was no observed relationship between mastery goals and
continuation rates. The relationship between other-avoidance and dropout may be indicative of a
more general lack of motivation in learners with other-avoidance goals. Instrumental learners who
are more focused on avoiding the appearance of failure rather than striving towards success are
arguably less likely to value musical learning, and low value beliefs relating to music were previously
found to be a strong indicator of adolescent instrumental learners' intentions to stop music lessons
(Freer & Evans, 2018; Holster, 2023).

The lack of relationship between mastery goals and continuation rates in the Study 4 data
was surprising, considering previous research findings that linked mastery goals to learners' overall
commitment to persist in musical learning (Ng, 2017; Tan & Miksza, 2018). However, the present
research gathered data on actual continuation rates and is therefore arguably more valuable for
researchers seeking to understand what might cause learners to give up instrumental lessons.
Mastery goals might be less important in predicting learners' continuation than originally
hypothesised. Whilst there were some indications in the Study 2 and 3 interviews that learners with
mastery goals may have longer-term musical aspirations, related to their stronger musical identities,
these studies were limited to few participants and were exploratory in nature. Instrumental lesson
dropout is also influenced by a myriad of factors, not all relating to motivation, including the cost of
lessons and availability of teachers (ABRSM, 2021; Lowe, 2012; Symonds et al., 2017), therefore any

potential influence of achievement goals on instrumental learners' continuation rates should always be considered alongside these other factors.

8.1.4 Summary of Findings

Overall, detailed insights have been gained through this research into the nature of adolescent instrumental learners' achievement goals, the influences on these goals, and the impact of these goals on measures of musical engagement. In this research the 3 x 2 achievement goal was applied to the context of musical learning for the first time, and it was established that a reduced model consisting of mastery, other-approach and other-avoidance goals might be most relevant to populations of adolescent instrumental learners in formal music education settings. The musicians in this study consistently rated mastery goals above other-based goals, though it was evident from both the quantitative and qualitative data that these achievement goals are malleable, and learners may adopt multiple achievement goals at the same time for different purposes.

Another important contribution to the field of music achievement goal research was in the development of a model of influences on the achievement goals of adolescent instrumental leaners (Figure 8.1). Data confirmed links between instrumental learners' self-determined motivation and achievement goals, situating self-determined motivation as a mediating influence between autonomy, competence and musical identity, and achievement goals. Young musicians' achievement goals are also influenced by their experiences of different teaching styles as well their relationships with family members and peers.

Finally, further evidence was gathered on the relationship between achievement goals and measures of musical engagement. There were some indications that mastery goals might lead to more deliberate practice habits, and other-approach and other-avoidance goals might predict adolescents' continued engagement in instrumental learning. The inclusion of achievement goals and self-determined motivation in the same model allowed the relative influence of these different aspects of motivation to be considered for the first time in relation to instrumental learning. Results indicated that self-determined motivation is likely to be more important than achievement goals in determining instrumental learners' overall engagement outcomes, though achievement goals might still to have a unique role to play, particularly in predicting the long-term commitment of young musicians.

8.2   Implications for Music Educators, Parents and Policy-Makers

The findings of this research have important practical implications for music educators and various other groups involved in the music education of adolescents. There has been a significant

decline in the number of pupils learning instruments and studying music in English school settings in recent years (ABRSM, 2021; Arts Council England, 2023; Underhill, 2022), with dropout from instrumental lessons particularly prevalent during the teenage years (ABRSM, 2021; Hallam & Burns, 2017; Ruth & Müllensiefen, 2021). Developing understanding related to the motivation of instrumental learners might aid educators in increasing the number of adolescents continuing to learn an instrument both within and beyond school. Helpful recommendations can also be drawn from the findings for parents and policy makers involved in decisions relating to music education in the UK. Whilst this research primarily focused on the influences and outcomes of achievement goals, the implications drawn from the research findings are broader, relating to intrinsic motivation and adolescents' value beliefs about musical learning. The first five main implications are for music educators in whole class, small group and individual teaching settings, and are outlined as follows.

8.2.1   *First Implication for Music Educators: Music Educators Should Promote Learner Autonomy in Teaching Contexts*

Throughout all four studies, autonomy perceptions were key to instrumental learners' interest and continued engagement in musical activities. For the research participants, autonomy satisfaction led to higher intrinsic motivation and increased the likelihood that they would orient towards mastery goals. It is important for music educators to establish autonomy-supportive teaching environments to achieve positive motivational outcomes, and other researchers have similarly found links between teacher autonomy-support and instrumental learners' valuing of music (Freer & Evans, 2018, 2019). Music educators can promote learner autonomy in whole class ensemble teaching settings, as well as in more individual and small group instrumental tuition contexts.

8.2.1.1   Whole Class Ensemble Teaching Settings

The findings of Study 1 point to different ways in which music teachers might promote learner autonomy in whole class ensemble teaching settings. The provision of task choice and collaborative learning have previously been recommended for educators seeking to promote mastery goals in the classroom (Ames, 1992; Hruska, 2011). However, in the present research, task choice and group work were not wholly successful in establishing learner autonomy and mastery goals, and might have hindered progress overall for the learners who experienced this teaching method. Alternative methods of promoting autonomy are therefore recommended for music educators teaching in whole class ensemble settings. In these contexts, the provision of learner autonomy needs to be carefully managed to establish effective learner behaviours in the classroom, as too much choice might result in slower progress and lessen learners' focus on skill development, as

found with one of the groups observed in Study 1. Teaching methods other than surface-level task design are more effective in establishing an autonomy-supportive classroom environment, and are outlined in the following sections.

8.2.1.1.1 *Provide supported individual practice time in whole class teaching contexts.*

One way in which music teachers might encourage more learner autonomy is through the provision of extended individual practice time within lessons, supported by instruction on deliberate practice techniques. Although ensemble playing is a key feature of whole class instrumental lessons, educators should also prioritise time within lessons for learners to engage in more independent instrumental practice, with teacher support. The provision of these independent practice opportunities in Study 1 was likely to be a key factor in establishing a mastery-focused classroom goal structure, as well as higher rates of pupil progress within the lesson. Devoting lesson time to instruction on practice techniques has been found in other research to enhance learners' use of deliberate practice strategies outside of the classroom (Mieder & Bugos, 2017; Prichard, 2021), and the inclusion of guided independent practice time within lesson contexts provides learners with the opportunity to use these practice techniques in the classroom with teacher support. Teaching instruments within whole class ensemble settings can be particularly challenging for music educators due to the differing ability levels of pupils within the classroom (Matthews, 2021), so the provision of independent practice time within these lessons is also beneficial for pupil progress as learners are able to work at their own pace and receive more individualised support.

8.2.1.1.2 *Use autonomy-supportive language in whole class teaching contexts.*

The subtleties of teacher language are particularly important in establishing an autonomy-supportive environment for instrumental learners. Examples of autonomy-supportive language from Study 1 included, "I'll let you decide…what's going to help you remember" and, "you might want to just make a note of them just as a reminder for yourself" (Teacher, Intervention Group, Study 1). In these examples, learners were encouraged to make decisions for themselves, promoting a sense of independence and autonomy over their own instrumental practice. This style of teacher communication also emphasised skill promotion, ultimately contributing to more of a mastery goal environment. Music educators should therefore consider their use of language, replacing more directive language with other styles of communication to foster learner autonomy. One way for educators to do this might be to record themselves teaching to monitor and reflect on their communication style in terms of how it promotes learner autonomy. Suggestions of prompt phrases that teachers could use to promote learner autonomy are included in Appendix A (Mastery Prompt Phrases – Authority).

8.2.1.2   Small Group and Individual Teaching Settings

Whilst whole class ensemble teaching is a common feature of primary school music curricula in England, small group and individual instrumental tuition are more common in secondary schools. There are likely to be more opportunities for instrumental teachers to promote learner autonomy in these small group and individual lesson contexts. For example, teachers can allow pupils to choose which repertoire they wish to work on, allow them to decide on the lesson focus, or encourage them to bring their own music to lessons to work on with the teacher. This is arguably more practical in individual rather than small group or whole class teaching settings. Research in more informal learning contexts has also found the provision of choice can increase adolescent musicians' motivation overall (Green, 2007). Children are increasingly making music in informal contexts in England (ABRSM, 2021), and it is possible that the greater sense of autonomy instrumental learners experience in these contexts might be a key contributing factor to their motivation. Music educators in more formal learning settings should also seek to promote learner autonomy through the provision of as much learner choice as is appropriate and possible in each learning setting, without any detrimental impact on learners' behaviour.

8.2.2   Second Implication for Music Educators: Music Educators Should De-Emphasise Peer Comparison

Other-approach and other-avoidance goals are inherently associated with comparison with others. Whilst this competition was motivating for some learners, leading to a greater amount of practice (Studies 2 and 3), as well as the increased likelihood of continuing to learn an instrument (Study 4), other participants were more negatively impacted and demotivated by peer comparison, as it affected their competence perceptions (Studies 2 and 3). There appears to be a cyclical relationship between peer comparison, competence beliefs, and other-approach goals, whereby peer comparison affects learners' competence beliefs, in turn influencing their orientation towards approach or avoidance goal dimensions. An orientation towards other-approach and avoidance goals increases learners' concerns about the ability level of others, and so the cycle continues. This cyclical relationship is depicted in Figure 8.3. This cycle might be productive if comparison to peers results in positive self-perceptions but is likely to have a detrimental impact if instrumental learners rate their performance ability negatively in comparison to their peers'.

Figure 8.3

Relationship Between Peer Comparison and Other-Based Goals

It is therefore recommended that music educators emphasise mastery goals in instrumental learning settings, encouraging learners to focus on their own goals of self-improvement and task-mastery, thus de-emphasising peer comparison. This might be more important in whole class ensemble teaching settings as well as group rehearsals where learners are continually exposed to the ability level of their peers. There are several methods music educators can adopt to reduce emphasis on peer comparison in these contexts. Whilst some recommendations have been made previously to reduce peer comparison in music classroom settings, these were predominantly anecdotal (Hruska, 2011). The present research provides clearer evidence on how peer comparison might affect learners' goal adoption in music learning settings, drawing evidence particularly from the lesson observations carried out in Study 1. Recommendations for teachers in whole class ensemble settings, and individual and small group teaching contexts are outlined in the following sections.

8.2.2.1   Whole Class Ensemble Teaching Settings

Whole class ensemble teachers should aim to provide feedback to learners privately wherever possible, particularly when this feedback consists of more summative grades. One tool to support this might be in allowing learners to record and upload any summative performance assessments to online platforms such as Google Classroom with are now widely available in school settings. Confidential feedback can then be provided by the teacher online. As already recommended, allowing space in lessons for individual supported practice time can also allow the teacher to provide individual feedback in private rather than in front of the rest of the class.

Where formative feedback is provided in public in whole class ensemble settings, this should be focused on the process of skill development, rather than more evaluative comments on performance ability. One example of public process-oriented feedback was observed in Study 1, where the teacher shared the learning process of one pupil with the rest of the class to prompt other pupils to try the same strategy: "Luke hasn't written every single note on for a start, he doesn't need to, because he's worked out that the pattern just follows the pattern of your fingers" (Teacher,

Control Group, Study 1). It is recommended that any comparisons between pupils should be similarly process-oriented rather than focused on performance outcomes.

Music educators in ensemble settings should avoid a language of comparison when working with young musicians. Comparative language, either framed positively or negatively, might lead to an increased focus on other-approach or avoidance goals for these learners. Examples might include, "listen to how well 'X' plays this piece," or, "well done, you have given the best performance in the class today." In Study 1, the teacher used more comparative language with one group, for example praising particular groups of pupils, criticising individual pupils for their lack of effort, and writing pupil names on the board to recognise their effort. This group reported higher performance goals overall than the group who experienced fewer comparative judgements in their observed lesson. Music educators working in whole class ensemble settings should aim to avoid any comparative statements or singling certain pupils out in front of the class for their higher or lower performance ability. Adolescents are already acutely aware of their peers' ability level without this also being amplified by the teacher.

Rank-based seating is another approach sometimes adopted by music educators which might lead to peer comparison, and should mostly be avoided by teachers in whole class ensemble teaching settings and rehearsal contexts. Although this seems to be more common practice in the USA, for example in competitive orchestra festivals for high school musicians (Hendricks, 2014), rank-based placement still does occur in some school and county ensembles in the UK (Bull, 2019). Music educators working with adolescent musicians should avoid rank-based seating where possible, particularly between learners who are a similar age and ability level. More competitive ensemble environments have also been found to negatively impact the competence perceptions of instrumental learners in previous research (Hendricks, 2014), and may in turn influence a tendency towards other-avoidance goals and reduced overall motivation for instrumental learners. Rank-based seating is likely to be more effective in groups with mixed ages and ability levels, providing role models for less experienced instrumental learners to aspire to. This provision of role models may in fact aid with the process of musical identity consolidation for younger musicians (Hargreaves et al., 2015).

8.2.2.2   Small Group and Individual Teaching Settings

Whilst in small group and individual teaching settings there may be less opportunities for instrumental learners to compare themselves to one another than in whole class teaching contexts and ensemble rehearsal settings, music educators should still be conscious of avoiding any ability comparison between pupils. In small group lessons, similar to whole class ensemble teaching settings, teachers should aim to keep feedback to pupils process-oriented rather than performance-

focused so learners are guided on how they can improve rather than comparing their performance outcomes with one another. Where possible, pupil groupings should be kept as homogenous with regards to age and ability as possible to minimise comparisons. Pupils of the same age and ability are more likely to compare themselves to one another, as in the case of one interview participant from Study 3:

> When I was in Year 7, 8 and 9, there were three of us all on the same grade, and we were all doing them at about the same time so we used to compare each other's progress and how well we did in exams compared to them and things like that. (Rebecca)

Whilst peer comparison might seem to be a natural part of adolescence, music educators should aim to minimise this as much as possible in lesson contexts, ensuring that each pupil receives the same amount of praise and positive feedback.

Whilst in individual lesson contexts there may be less opportunity for direct peer comparison, teachers should be aware of the risk of comparing pupils to other groups or individuals that they teach. One way of fostering task and self goals in instrumental learners might be to encourage them to set their own goals for improvement, encouraging pupils to keep these goals skill-focused rather than on more normative means of comparison such as graded exams, which allow for easier comparison with other learners. Letting pupils choose their own repertoire might also be one way of avoiding teaching the same pieces of music to all learners, thus minimising the chance of comparison between groups of learners.

8.2.3   *Third Implication for Music Educators: Music Educators Should Provide Individualised, Process-Oriented Feedback to Instrumental Learners*

Competence beliefs are important for the overall motivation of instrumental learners, enhancing their intrinsic motivation, as well as influencing learners' adoption of achievement goals, particularly their orientation towards approach or avoidance goals. Music educators can support instrumental learners' perceptions of competence by providing them with specific skill-based feedback, focused on the process of learning, rather than specific performance outcomes. The provision of individual process-oriented teacher feedback was observed in Study 1 with the group that were engaged in an extended period of individual practice. The feedback given by the teacher was focused on skill development and learning strategies, whereas feedback given by the teacher with the other group focused on achieving a correct performance. With this second group, the teacher often provided learners with solutions rather than the skills they needed to develop their

own solutions to musical problems. This approach appeared to be detrimental to the progress of learners in this class, as well as their orientation towards a mastery goal, as they were more focused on producing a correct performance rather than their skill development on the violin. Providing instrumental learners with process-oriented feedback can enhance their sense of competence by increasing their overall skill level, and also increase learners' autonomy satisfaction by providing them with the tools to improve without needing the support of the teacher.

The provision of process-oriented feedback is frequently recommended by researchers promoting mastery-goal oriented teaching approaches in other education contexts (e.g. Ames, 1992; Anderman et al., 2002). The present research contributes to this literature by providing specific recommendations for music educators on how this approach might be used in music teaching settings. These approaches can work in both larger group teaching contexts as well as small group and individual teaching settings. Examples of process-oriented feedback in instrumental learning contexts could include encouraging pupils to work out fingering or bowing patterns themselves, and it is also helpful for the teacher to engage pupils in a conversation about why different techniques and approaches might be more effective. In addition, providing instrumental learners with instruction on different practice techniques will encourage them to focus on the process of practising, rather than just the final performance result. Learners who received process-oriented practice instruction in other studies reported a much greater variety of strategies used in their own independent practice (Mieder & Bugos, 2017; Prichard, 2021). Explaining to pupils the purpose of specific tasks in lessons can also enhance the focus on task goals rather than normative performance outcomes. Examples of statements that instrumental teachers could use in lessons are provided in Appendix A (Mastery Prompt Phrases – Task) (e.g. "What practice strategy would be most effective to help you learn this?"). Process-oriented feedback and instruction can enhance learners' motivation to practise and might also contribute towards the adoption of mastery goals due to the teacher's emphasis on skill development rather than performance outcomes.

8.2.4 Fourth Implication for Music Educators: Music Educators Should Provide Support for Instrumental Learners to Develop Musical Identities

Musical identity is one of the key factors influencing the self-determined motivation and thus the achievement goals of instrumental learners, and music educators seeking to increase the musical engagement of adolescent instrumental learners should focus on methods that can support them in building their sense of musical identity (Hallam & Burns, 2017). This is particularly important for educators working with instrumental learners in secondary schools, as the transition between primary and secondary school has been highlighted as a key period for the formation of musical

identity. General recommendations for educators in school contexts will first be outlined before specific recommendations for teachers in whole class ensemble teaching settings and instrumental teachers in small group and individual contexts will be presented.

8.2.4.1　Extra-Curricular Musical Provision

The provision of extra-curricular musical opportunities during the period of transition from primary to secondary school is particularly important for young musicians in either establishing or losing their sense of musical identity (Symonds et al., 2017). Music educators have a vital role to play in providing these opportunities for learners who may not experience music outside of the school context, as the positive family-oriented musical experiences reported by some participants in the present research are not afforded to all teenage musicians (Hallam & Burns, 2017).

Most instrumental learners who participate in group music-making do so in school settings, though a large proportion also participate in musical groups outside of school, most commonly with friends for fun (ABRSM, 2021). The interview participants in Studies 2 and 3 who conveyed a greater degree of intrinsic motivation recounted a wide range of extra-curricular musical activities, including orchestras, jazz bands, rock bands, composition with friends, and more informal 'jamming' sessions with friends and family members. Building musical connections with others is vital for the formation of musical identity as adolescents relate to others with similar interests (Hargreaves et al., 2015). Music educators should therefore seek to provide a range of opportunities, both formal and informal, for instrumental learners to make music in groups with other young musicians. These opportunities could include more formal ensembles such as orchestras and choirs, but might also include provision for pupils to form their own groups and rehearse independently, such as spaces and equipment for rock bands to develop and rehearse. In my own setting, identifying pupils who might wish to join a rock band, introducing them to one another, and providing equipment for them to use has been transformational in allowing a number of students to establish musical connections across peer and year groups.

Music educators should also strive to increase opportunities for music-making that might not typically already be provided in secondary school settings, but are of interest to pupils. Symonds et al. (2017) provided one case study example of a pupil who was unable to join a djembe ensemble in secondary school despite displaying a talent for djembe playing in their primary school, resulting in a reduced musical identity over time. During the time of primary to secondary school transition, music teachers should aim to gather as much information about pupils' musical interests and prior musical experiences as possible and aim to provide opportunities in secondary school that will cater to these musical interests.

Notably, music technology now plays a key role in the construction of musical identities for many adolescents (Hallam, 2017). Different forms of music-making that are increasingly popular with adolescents in the UK are the use of digital software, tablets and smartphones to make music, as well as DJing (ABRSM, 2021). As these opportunities are not specific to instrumental learners, they open up the possibility of musical identities for a wider range of pupils, not solely pupils who play an instrument (Lamont, 2002). Music educators should therefore be proactive in identifying where further opportunities could be provided to meet the musical interests of young musicians, to further support their development and consolidation of musical identities.

8.2.4.2 Signposting of Role Models

Musical role models are key to the construction of musical identities for adolescents (Ivaldi & O'Neill, 2004), and this was a key theme in the Study 3 findings. For these interview participants, sometimes these role models were family members, but they also spoke about role models in the form of famous musicians and performers they had seen at concerts. Pupils from disadvantaged backgrounds may have less access to these role models, particularly those who are from non-musical families, and who might not have the resources to attend concerts. Research with younger musicians (aged 6-7) showed that whilst children might have musical ambitious and the desire to succeed, a lack of musical role models at this age may preclude future musical involvement and the decision to pursue music in later life (Pitts, 2017). Music educators therefore have a role to play in either identifying possible musical role models in the school context, or in providing opportunities for instrumental learners to see professional musicians perform. Music teachers should make use of their local music hubs as a possible mechanism for building links with local musicians beyond the school context. The identification and signposting of these role models by music educators may increase adolescent instrumental learners' sense of personal musical identity, thus enhancing their intrinsic motivation for musical learning and desire to pursue music as a career in the future. In particular, music educators should provide these opportunities to learners from disadvantaged backgrounds, as these learners may have access to these musical role models outside of school contexts and may benefit the most from these opportunities in terms of strengthening their musical identities.

8.2.4.3 Support Perceptions of Competence

Musical identity is often fostered through self-perceptions of competence. This pattern was found in Study 4, where feelings of competence increased instrumental learners' tendencies towards intrinsic motivation. In the interview studies, participants often compared their ability to their peers, in some cases claiming that they were tempted to stop playing their instrument if they did not

consider themselves to be as talented as their peers: "If I wasn't as good as my friends who played it stopped me from practising…I just thought well there's not really much point 'cause there's other people who are better than me" (Study 3 – Rebecca). Research with adult musicians has also found that musical ability is the strongest indicator of musical self-concept (Spychiger, 2017). To support young musicians' self-conceptions of musical identity, music educators have an important role to play in encouraging competence perceptions through the feedback they provide to their pupils. Rather than just focusing on performance outcomes, instrumental teachers should provide positive feedback where pupils have demonstrated improvements in their playing, no matter how small, so they experience feelings of success during lessons. Teachers should also emphasise that mistakes are part of the learning process, so that pupils do not become discouraged by errors, and attribute them to a lack of musicianship. Recommendations for phrases that instrumental teachers could incorporate into their practice to support perceptions of competence are provided in Appendix A. This supportive language can be used by music teachers in whole class, small group and individual instrumental teaching settings.

8.2.4.4   Developing Musical Identities in Whole Class Ensemble Settings

Supporting instrumental learners to develop musical identities can be a particular challenge in whole class ensemble settings, as evidenced by the relatively low percentage of pupils who decide to continue learning their instrument after primary school (ABRSM, 2021). This has been my personal experience in my own school setting, which bears resemblance to the national picture in England, where in some places progression routes are as low as 15% following primary school WCET programmes (Hallam, 2016). One reason for this may be the lack of choice given to pupils as to which instrument they learn as part of these programmes. In research evaluating the success of the primary WCET programme, pupils were only given a choice over which instrument they learnt in a small number of settings (Hallam, 2016), and one recent study in the UK found that the instruments children want to play are typically not the same as those they are offered in whole class ensemble programmes (ABRSM, 2021). This is likely to have an impact on the musical identities of these learners, as if they are playing an instrument which they did not choose, they are less likely to form established musical identities relating to these instruments.

Whilst practical considerations likely limit how much choice can be provided to pupils, music educators in these settings could consider how they might develop pupils' sense of relatedness to the instrument they play. One way of achieving this might be to expose pupils to more role models who play the same instrument, beyond the school context. Providing these opportunities might increase pupils' desire to want to continue learning the instrument. Music educators should also direct pupils to opportunities where they could learn other instruments outside the whole class

ensemble setting. Where cost is a barrier for pupils in learning a second instrument, other opportunities might be provided where pupils can make music without having to pay for lessons, for example offering keyboard clubs within school, or showing pupils how they could make music using online technologies.

8.2.4.5 Developing Musical Identities in Small Group and Individual Tuition Settings

Instrumental learners who have lessons in small group and individual tuition contexts might be exposed to less opportunities for ensemble playing that allow them to build musical connections with their peers. As making music with peers can play a key role in the formation of musical identity in adolescence (Symonds et al., 2017), instrumental teachers in small group and individual settings should identify opportunities that adolescent instrumental learners could take part in beyond the teaching studio. Music teachers in school settings should therefore work closely with instrumental teachers to ensure as many pupils as possible are accessing ensemble music making opportunities.

Whilst social music making opportunities are important and should be emphasised by instrumental teachers, they should also be aware of other factors that can support the development of musical identities when ensemble music making is less accessible. This might be particularly important for learners who play instruments which are less commonly used in ensemble music making, for example the piano. Teachers should be aware of their own significant role in supporting the formation of musical identity; as Manturzewska (1990) highlights, the teacher-student relationship is just as important as peer group relationships during adolescence in developing the "artistic personality" (p. 133). Teachers should act as musical role models but could also identify musicians beyond the school context for pupils to relate to. Teachers should also emphasise the emotional benefits of learning and practising an instrument, and encourage pupils to set their own musical goals, which all support instrumental learners' development of musical identities.

8.2.5 Fifth Implication for Music Educators: Music Educators Should Promote the Value of Instrumental Learning for Wellbeing

Whilst this research focused on the outcomes of achievement goals in the form of practice habits and continuation rates, the data showed that task-based goals can have other positive implications for instrumental learners. The interview methods employed in Studies 2 and 3 were particularly useful in highlighting other factors which would not have been found if using only more deductive quantitative research methods.

An emphasis on task-approach goals might be beneficial for adolescent instrumental learners in fostering emotional regulation and wellbeing through music making. Several interview participants reported the inherent benefits of playing an instrument in terms of reducing stress,

relaxing, and expressing emotions. These benefits occurred through instrumental practice alone and were not linked to self-approach or other-approach goals. Elliot et al. (2011) linked task goals to the concept of flow, noting that the nature of task goals means learners are not required to evaluate their level of success in relation to other factors such as past experiences or the ability of others, enabling learners to "remain absorbed in the task" (p. 633). Previous researchers have also found that mastery goals predict flow with high school musicians (Miksza et al., 2016; Tan & Miksza, 2018, 2019), and the findings of the present research supported this link through adolescent instrumental learners' accounts of their own experiences. Flow has been associated with the subjective wellbeing of music students (Tan & Sin, 2021), and therefore is a worthwhile goal for music educators seeking to enhance students' overall wellbeing as well as their enjoyment of music-making. Music educators should therefore promote task-based goals with instrumental learners as these are most likely to lead to increased learner wellbeing. Similarly, mastery goals have been reported to predict musical creativity amongst secondary school students (Mawang et al., 2018), a goal many music educators would agree is worth pursuing.

One specific method music teachers could use to encourage task goals to achieve flow, is in the choice of repertoire provided to instrumental learners. Several interview participants in the present research highlighted the importance of repertoire in encouraging them to practise, and named specific pieces that they enjoyed learning either because of their technical challenge, mood of the music, or because they had heard them before. If possible, teachers should give pupils choice over repertoire, allowing them to learn pieces that they enjoy and that balance challenge with skill level (Custodero, 2002). As previously discussed, this may be easier in small group and individual tuition settings than in whole class ensemble contexts. In whole class ensemble settings, educators could therefore encourage pupils to choose their own music to practice at home outside of the classroom, encouraging them to play their instruments for intrinsic reasons other than just homework practice.

Although the adoption of task goals might result in more flow experiences and enhanced learner wellbeing, music educators might also consider an alternative perspective that achievement-based goals, focused on the attainment of competence (Elliot et al., 2011), might not be relevant, or indeed beneficial, for all instrumental learners. Whilst the present research has primarily focused on achievement goals as predictors of musical outcomes such as continuation rates and practice behaviours, Evans and McPherson (2017a) argue that goals such as continuation rates should not be pursued by music teachers to the detriment of other outcomes such musical identities and the psychological wellbeing of pupils. Music educators should also promote the broader benefits of music making for wellbeing, and competence-based achievement goals might not always be

appropriate for these purposes. De-emphasising the importance of summative performance assessments and encouraging learners to pursue music-making and playing their instrument for fun is extremely important for music educators if we are to continue to promote the intrinsic value of making music, beyond the need to achieve academic success.

8.2.6   Implications for Parents

Several key recommendations can be drawn from the findings of this research for parents who wish to motivate their children to continue learning an instrument. The interview participants in Study 2 with higher musical self-efficacy identified family support as important in increasing their perceptions of competence prior to a music performance. One way in which parents can increase the confidence of children leading up to performance assessments is by helping with their instrumental practice. However, in the adolescent years the nature of this support should be supportive rather than controlling to enhance intrinsic motivation (Creech, 2014). Parents can provide practical support to instrumental learners in terms of space and resources, give encouragement and praise, and allow pupils to direct their own practice rather than interfering too much (Creech, 2014). This is a fine balance for parents to achieve, particularly when learners seem reluctant to practise, but can be vitally important for instrumental learners in sustaining musical motivation.

Many interview participants from Studies 2 and 3 recounted examples of playing their instruments alongside family members, supporting their self-perceptions of musical identity, and their enjoyment of music learning. However, not all young instrumental learners have family members who play a musical instrument, and there are other ways in which these parents might support their children's musical development. Parents can listen to music and discuss musicians together with their children to provide a positive motivational stimulus. Introducing music learners to a range of musical role models, either by attending concerts together, or even watching performers on the internet can help to encourage learners to adopt musical identities and stimulate motivation. Exposing children to professional musicians, by any means, at a young age, might be transformative in allowing these music learners to envision their own future selves as musicians (Pitts, 2017). Parents also have an important role to play in supporting music learners to identify and work towards future musical goals. Identifying clear musical goals for the future is congruent with a stronger musical identity (Fiedler & Spychiger, 2017; López-Íñiguez et al., 2022) and increases the likelihood that pupils will continue to learn an instrument for longer.

Some of the interview responses highlighted the potential for negative musical comparison with siblings in the home environment, stimulating other-avoidance goals. Parents should therefore

avoid comparing their children's musical achievements, which might be more exaggerated at home than in school environments. Reducing emphasis on normative measures of ability such as graded exams can also be helpful in encouraging children to focus on their own trajectories of musical improvement rather than comparison with one another.

8.2.7   *Implications for Policy Makers*

The findings of this research point to several recommendations for policy makers involved in decisions relating to the music education of children in the UK. In this section, policy makers are considered to include national and local government departments involved in education, local music hubs, music education charities, and school and academy trust leaders. Each of these organisations make decisions relating to the music education of young people and where funding and resources should be directed.

Firstly, policy makers involved in the design and implementation of whole class ensemble teaching programmes, including school leaders and local music hubs, should consider the implications of these programmes on young musician's musical identity beliefs. There was some indication in the results of Studies 1 and 2 that the limited choice of instruments available for pupils involved in this school's whole class ensemble teaching programme might have impacted on these children's perceptions of musical autonomy and musical identity, and their intentions to continue learning an instrument. Whilst these findings were specific to this one secondary school context, it is likely that similar trends might exist in primary school settings also delivering whole class ensemble teaching programmes. Hallam (2016) highlights that pupil choice is a vital aspect of these whole class ensemble teaching programmes in primary schools, however this is not always possible. Local music hubs who deliver whole class ensemble teaching programmes should consider whether they are able to provide some form of choice for pupils taking part in these programmes, and if not, what other opportunities can be made available for young people who wish to learn a different instrument. Ensuring young people can choose an instrument that most appeals to them might be vital in sustaining their long-term motivation to play an instrument (ABRSM, 2021).

School leaders should consider the impact of school-wide assessment processes on adolescents' competence beliefs and self-identities. The teenage years are a crucial period in the development of musical identities, and one of the main factors which affects adolescents' self-perceptions of musical identity is comparison with their peers (Hargreaves et al., 2015). Some of the participants interviewed in Studies 2 and 3 acknowledged that this peer comparison had a detrimental effect on their motivation to practise their instrument or even continue learning. Schools that emphasise normative assessment practices might increase the likelihood of peer

comparison, and therefore school leaders should minimise the need for testing in music lessons, particularly during Key Stage 3, so that pupils are less exposed to negative comparison with their peers.

Many of the interview participants in Studies 2 and 3 were from higher socio-economic backgrounds, and therefore were able to access instrumental lessons and other cultural capital opportunities outside of school. Examples of these opportunities included attending concerts, taking part in different musical ensembles, and performing alongside family members who were also musical. These opportunities were linked to the formation of musical identities for these participants. Many adolescents in the UK do not benefit from these same opportunities (Hallam & Burns, 2017), and therefore policy makers should direct funding and resources to support adolescents who might not access musical opportunities outside of school. One example of the provision of musical opportunities for disadvantaged children is the Exchanging Notes Project (Kinsella et al., 2019), which utilised partnerships between schools and other music education providers to expand musical provision to a broader range of learners. One notable outcome of this project was the development of musical identities in many of the young musicians who took part. Similarly, evaluation of the In Harmony project, which provides orchestral music-making opportunities for children from the most deprived areas of England, showed that pupils who were engaged with this project were much more likely to want to continue learning their instrument than children who did not participate in the project (Lord et al., 2016). Policy makers and charitable organisations should therefore continue to invest in these opportunities, particularly focusing their provision within school contexts where all adolescents can access them.

Finally, one of the most pertinent findings from this thesis was the acknowledgement of many participants that learning an instrument was key to supporting their emotional wellbeing. Recent research has shown that 22.6% of children aged 11-16 in England have a probable mental disorder (NHS England, 2023). In light of this statistic, policy makers should be exploring every possible option to support and improve adolescents' well-being. Learning an instrument for the young people in the present research reduced stress, aided emotional expression, and allowed them to temporarily forget about other unhelpful emotions (Study 3). Other research with young people across England has shown that many young people use music as a tool to support their wellbeing, and interestingly the effects of making music were more impactful than just listening to music (Youth Music, 2020). Policy makers and school leaders should therefore acknowledge the importance of music-making in supporting adolescents' mental health, prioritising the teaching of music in schools and ensuring resources are available for young people to make music beyond the classroom. School leaders might also consider funding and resourcing programmes akin to the Exchanging Notes

project (Kinsella et al., 2019) for adolescents who are at greater risk of mental ill health, supporting these young people to engage in music-making to improve their wellbeing. Similarly, funding should be made available for these young people to learn an instrument, who might not be able to access instrumental teaching otherwise, acknowledging the impact that playing an instrument and participating in music-making with peers can have on adolescents' mental health.

8.3   Methodological Limitations

There were some methodological limitations during this research, that if addressed would enhance understanding of achievement goals even further. The specific limitations of each individual study have already been outlined in the relevant chapters, however the most important limitations with regards to the overall research are discussed in this section, accompanied by recommendations for how they might be addressed in future research.

Firstly, with regards to the research context, the sample for Studies 1, 2 and 3 was drawn from the same secondary school setting. Whilst this afforded several practical advantages in terms of the accessibility of participants and the ease of arranging teaching interventions and interviews, the findings from these studies can only be generalised to other pupils studying music in the same school or very similar contexts. Whilst there was a higher proportion of disadvantaged learners in Study 1[4], most interview participants in Studies 2 and 3 had a higher socio-economic status, indicated by their ability to afford instrumental tuition. The school in which the research took place offered numerous extra-curricular activities and musical experiences to pupils. These experiences likely impacted these learners' motivation for instrumental learning and might look different for instrumental learners in different school settings and with more disadvantaged socio-economic backgrounds. It would be valuable in future research on the achievement goals of adolescent instrumental learners to seek out different research settings with more diverse groups of learners.

One important aspect of this research was my own dual role as teacher-researcher. As outlined in Chapter 3, I am a music teacher in the main school setting for each study, with all participants in Studies 1, 2, 3 and a large proportion of participants from Study 4 from this same school. The teaching intervention and lesson observations carried out Study 1 were with my own classes, and therefore I was observing and analysing my own teaching within these lessons. This dual role undoubtedly influenced my own interpretation of the observation data. At first, I approached this quasi-experimental study with prior expectations of how successful the intervention would be in influencing learners' achievement goals. When initially analysing the observation data it was

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[4] In Study 1, 34.61% (Control Group) and 42.85% (Intervention Group) of learners received Pupil Premium funding, compared to a national average of 23.8% of pupils eligible for free school meals (Department for Education, 2024).

apparent that my interpretation of the lessons was influenced by these expectations. Additionally, though only one lesson was observed with each class, I was very familiar with the participants having taught them for over one year prior to the teaching intervention and lesson observations. My knowledge of the pupils in terms of their behaviour and musical ability therefore was much broader than the data gathered in the observation transcripts, influencing my perception of the classroom environment when analysing each video observation. I therefore sought to reduce this bias in the observation analysis by returning to the observation analysis five years after the intervention and observations originally took place. This increased the distance between the analysis and my own expectations as the teacher of each class, and enhanced my ability to be objective when observing and analysing each lesson. While this reduced the impact of my own bias as the teacher, it might have been more beneficial to ask another music teacher to carry out the teaching intervention in a different school, however this was not practical within the confines of this study. It is recommended that any future research employing intervention designs in music classroom settings should separate the role of the teacher and researcher, with the intention of increasing the reliability of the results.

This dual teacher-researcher role also influenced the implementation and analysis of the interviews in Studies 2 and 3. Steps were undertaken to reduce the impact of my role as a teacher in the school, including focusing the interviews on participants' experiences of their instrumental lessons with other teachers and assuring participants that their responses would not be shared with their instrumental teacher. My role as a teacher did appear to increase rapport with the interview participants as well as enhancing my understanding of their musical experiences (Dwyer & Buckle, 2009), however it also might have impacted the content and depth of participants' responses due to the teacher-pupil power dynamic. Future research employing qualitative interview methods to explore the achievement goals of adolescent musicians could use designs where the interviewer is not as familiar to interview participants to address these concerns.

Relating to the quantitative aspects of the research design, some of the measurement instruments used could be refined further, specifically the measures for achievement goal orientations and practice habits. As outlined in Section 8.1.1.1, the achievement goal scales used in Studies 1, 2 and 4 were altered for each study, resulting in different factor structures and achievement goal patterns for each of the studies. Consequently, it was not possible to make direct comparisons between the results of each study. The final study indicated that a 3-factor structure was most appropriate, consisting of mastery, other-approach and avoidance-goals. This 3-factor structure was supported by the qualitative interview data from Studies 2 and 3, however this model should be tested with more diverse populations of instrumental learners before any firm conclusions are made about the suitability of this achievement goal model for other music learning contexts. The

need for further development of achievement goal scales in relation to instrumental learning has previously been recognised (Miksza, 2009a), and it is apparent there is still further work to be done with regards to this goal.

Study 4 examined the practice habits of instrumental learners by using self-report data to capture participants' estimated practice time and practice behaviours. Previous research has suggested self-report data on practice time (Madsen, 2004), and practice strategies (Pike, 2017) might be unreliable, though self-report data is still commonly used in studies on both practice time and practice behaviours (How et al., 2022). Reliability of the data on practice habits could have been enhanced by employing triangulation in the form of video recordings, observations, and diary methods. Other studies on learners' goals relating to their instrumental practice have utilised observational methods to examine participants' practice strategies (Miksza, 2009b; Taylor, 2020), however the scope of the present research did not allow these methods to be employed, and so data were reliant on self-report measures. Refinement of the measurement instruments used for practice habits might have resulted in different outcomes and clearer conclusions about the link between achievement goals and practice habits. The Study 4 data indicated that mastery goals might lead to more deliberate practice strategies, though this data was inconclusive, and further research on the relationship between achievement goals and instrumental practice is recommended to confirm this link. In future research on links between mastery goals and practice behaviours, more consideration should be paid to the reliability and validity of the measurement instruments used for practice.

Finally, the data on continuation rates in Study 4 were limited as continuation data were only returned for 62% of the original survey participants, highlighting one methodological limitation of conducting longitudinal research, affecting the external validity of the results (White & Arzi, 2005). It might have been useful to gather data in the original survey on participants' intentions to continue, which could have then been compared with actual continuation rates. This would have also allowed for comparisons to be drawn with other studies linking instrumental learners' achievement goals with their intentions to continue (Ng, 2017; Tan & Miksza, 2018). It is important to measure the impact of motivation on actual outcomes rather than predicted outcomes, and so longitudinal methods are still valuable and further research of this nature is recommended to examine the longer-term outcomes of achievement goals.

8.4   Directions for Future Research

The results of this research point to some areas worth exploring further in future studies on achievement goals in musical learning. The present research is the first to my knowledge which has employed longitudinal designs to examine achievement goals in music learning settings. A

longitudinal design was used in the first quasi-experimental study, as well as in the final study to gather data on continuation rates. This was a valuable and unique advantage of the research, and more studies employing longitudinal designs are recommended to develop further insights into the achievement goals of instrumental learners. It was apparent from the interview data that learners' achievement goal orientations are likely to change over time and in response to different learning contexts. Longitudinal studies measuring changes in achievement goal orientations over time would allow researchers to consider the relationship between achievement goals and age, as well as the prevalence of different achievement goals in a range of learning contexts. Research of this nature would help to develop a clearer understanding of the influences on instrumental learners' achievement goals beyond the findings of the present research.

One of the most important influences on adolescent instrumental learners' self-determined motivation and achievement goals was their sense of musical identity. Whilst other researchers have examined the role of musical identity in adolescent musicians' motivation (Creech et al., 2020) the proposed link between musical identity and achievement goals has not yet been tested empirically. It would be useful to explore the relationship between adolescent instrumental learners' identity beliefs and achievement goals using more deductive methods. One recent study on musical identity developed the Musical Identity Measure (MIM) to assess the musical identity self-perceptions of musicians over the age of 18 (Burland et al., 2022). Though this measure was specifically tested with adult musicians, it could be worthwhile to use the MIM to examine the musical identity beliefs of adolescent instrumental learners. It would be particularly useful to employ the MIM alongside measures of achievement goals to test the hypothesised causal relationship between musical identity and achievement goal orientations.

Finally, associations between the achievement goals of parents and children could also be measured in musical contexts, building on the work of researchers in Greece who found parent achievement goal emphases were associated with the goal orientations of their children aged 10-14 (Gonida & Cortina, 2014). As parent influence was found to be an important influence on the autonomy, practice routines, and musical identity of the participants in the present research, it would be interesting to measure whether there are also links between the achievement goals of adolescent instrumental learners and their parents. If a link between the achievement goals of adolescent musicians and their parents is found, this would likely represent another important influence on the achievement goals of adolescent instrumental learners.

Finally, there is also a need for research on achievement goals to take place with samples of instrumental learners who participate in music in less formal settings. An increasing number of young people in the UK make music through non-traditional means (ABRSM, 2021) and motivation

for these learners is likely to look very different to those learning through more traditional routes. For example, whilst many of the participants in Study 3 were focused on self-approach goals in relation to graded performance exams, this is less likely to be the case for learners in non-formal music education settings. For these learners, task-approach goals might be more prevalent than for the participants in the present research. The application of achievement goal theory to instrumental learners in non-formal contexts would be a positive addition to the current achievement goal research, broadening understanding of adolescent instrumental learners' motivation to reflect the increasingly diverse nature of the music education landscape in the UK.

8.5   Final Remarks

This research makes a valuable contribution to the understanding of the motivation of adolescent instrumental learners. Importantly, the research has advanced theoretical understanding of achievement goals in music learning contexts, particularly in England. One unique contribution of this research is in the identification of some of the factors that influence adolescent instrumental learners' adoption of different achievement goals. Young musicians may seek a range of achievement-related goals in relation to their instrumental learning, and often these are influenced by relationships with others, feelings of competence, autonomy, and musical identity, which enhance the intrinsic motivation of learners.

The research has important implications for music educators seeking to develop healthy motivational patterns in adolescent instrumental learners. Whilst other-approach goals may have positive implications for long-term musical commitment, mastery goals were most closely associated with instrumental learners' intrinsic motivation and may be the most beneficial for instrumental learners' overall musical engagement and wellbeing. Whilst aiming to increase the engagement of instrumental learners through practice habits and long-term musical commitment is a worthy goal, this research has highlighted other valuable consequences of adopting a mastery goal. By promoting mastery goals, music educators can reduce the negative impact of peer comparison on adolescents' competence perceptions, and encourage young musicians to appreciate the intrinsic enjoyment that can be gained from learning an instrument.

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Appendix A

Study 1: Mastery Prompt Phrases

TASK	AUTHORITY
"The reason why we are doing this is…" "Why do you think we are doing this task?" "What do you want to improve on?" "What practice strategy would be most effective to help you learn this?" "What would make this easier to play?" "Do you understand why…"	"Which task do you want to complete?" "Why do you want to complete this task?" "What could you take responsibility for in this task/in your group?" "How have you improved?" "What do you still need to do to improve?" "Decide which part of the piece you want to work on first."
RECOGNITION	**GROUPING**
"This pupil has really improved since last lesson." Merits for: Effort Most Improved	"I want you to work together on this task" "What can you ask your group for help with?" "What could you help other people in your group with?" Use random numbering for questioning. "Has anyone got any ideas to help?"

EVALUATION

"You have really improved on this aspect of the piece"

"How could you improve this even more?"

"I can see how much effort you have put into this lesson."

"I don't mind if it isn't perfect, as long as I can see that you have tried."

"What can we learn from that mistake?"

"I am going to give you feedback based on how much you have improved."

"Don't be afraid to make mistakes, they are just part of the learning process."

"Let's try that again."

"What did I do differently when I played this?"

Appendix B

Study 1: Measurement Scales

		Achievement Goal Scales	
Task - Approach	TAP1	My main goal is to play the pieces of music right in my lessons.	+
	TAP2	My main goal is to perform well for my music assessments.	+
	TAP3	My main goal is to understand the music that we are given in lessons.	+
Task- Avoidance	TAV1	My main goal is to avoid playing badly in music lessons.	+
	TAV2	My main goal is to avoid performing poorly in my music assessments.	+
	TAV3	My main goal is to avoid misunderstanding the music that we are given in lessons.	+
Self- Approach	SAP1	My main goal is to keep improving my performance skills.	+
	SAP2	My main goal is to perform better in my next music assessment than last time.	+
	SAP3	My main goal is to become a better performer compared to previous lessons and assessments.	+
Self- Avoidance	SAV1	My main goal is to avoid becoming worse at playing my instrument.	+
	SAV2	My main goal is to avoid performing worse than my last music assessment.	+
	SAV3	My main goal is to avoid becoming worse at my instrument than in previous lessons and assessments.	+
Other- Approach	OAP1	My main goal is to perform better than other people in my class.	+
	OAP2	My main goal is to perform better in assessments than other people in my class.	+
	OAP3	My main goal is to play my instrument better than other people in my class.	+
Other- Avoidance	OAV1	My main goal is to avoid being worse at my instrument than other people in my class.	+
	OAV2	My main goal is to want to avoid performing worse in assessments than other people in my class.	+
	OAV3	My main goal is to avoid looking like I can't play my instrument in lessons.	+
		Perceptions of Teacher Goal Orientation	
Teacher Mastery Goal	TMG1	My teacher thinks mistakes are okay as long as we are learning.	+
	TMG2	My teacher wants us to understand our work, not just memorize it.	+

	TMG3	My teacher really wants us to enjoy learning new things	+
	TMG4	My teacher recognizes us for trying hard.	+
	TMG5	My teacher gives us time to really explore and understand new ideas.	+
Teacher Performance Approach Goal	TPAG1	My teacher points out those students who get good grades as an example to all of us	+
	TPAG2	My teacher lets us know which students get the highest scores on a test.	+
	TPAG3	My teacher tells us how we compare to other students.	+
Teacher Performance Avoidance Goal	TPAVG1	My teacher tells us that it is important that we don't look stupid in class	+
	TPAVG2	My teacher says that showing others that we are not bad at class work should be our goal.	+
	TPAVG3	My teacher tells us it's important to join in discussions and answer questions so it doesn't look like we can't do the work.	+
	TPAVG4	My teacher tells us it's important to answer questions in class, so it doesn't look like we can't do the work.	+

Perceptions of Classroom Goal Structure

Mastery Goal Structure	MGS1	In our class, trying hard is very important	+
	MGS2	In our class, how much you improve is really important	+
	MGS3	In our class, really understanding the material is the main goal	+
	MGS4	In our class, it's important to understand the work, not just memorize it.	+
	MGS5	In our class, learning new ideas and concepts is very important	+
	MGS6	In our class, it's OK to make mistakes as long as you are learning.	+
Performance Approach Goal Structure	PAGS1	In our class, getting good grades is the main goal.	+
	PAGS2	In our class, getting right answers is very important	+
	PAGS3	In our class, it's important to get high scores on tests	+
Performance Avoidance Goal Structure	PAVGS1	In our class, showing others that you are not bad at class work is really important.	+
	PAVGS2	In our class, it's important that you don't make mistakes in front of everyone.	+
	PAVGS3	In our class, it's important not to do worse than other students	+
	PAVGS4	In our class, it's very important not to look dumb.	+
	PAVGS5	In our class, one of the main goals is to avoid looking like you can't do the work	+

Other Variables

Competence Perceptions	SE1	Compared with other pupils in the class, I think I am good at music.	+

	SE2	When I set musical goals for myself, I am sure I can achieve them.	+
	SE3	I expect to do well in music in the future.	+
	SE4	I am confident in my ability to improve on my instrument.	+
Attitude to Music	V1	I would rather spend more time in music class and less in other classes.	+
	V2	Knowing how to play music isn't really an important goal in my life.	-
	V3	To be honest, I really have little desire to learn music	-
	V4	Studying music can be important to me because I think it will someday be useful in getting a good job	+
	V5	Learning music is worth the effort.	+
	V6	I plan to give up studying Music after Year 9.	-
Parent Support	P1	My parents really encourage me to study music.	+
	P2	My parents encourage me to practise my violin as much as possible	+
	P3	My parents show interest in anything to do with my music lessons	+
	P4	My parents have emphasised the importance music will have for me when I leave school.	+
	P5	My parents feel that I should really try to learn my instrument.	+
Peer Influence	F1	My friends work hard in their music lessons.	+
	F2	My friends are good at playing their instrument.	+
	F3	My friends tend to not put any effort into their music lessons.	-
	F4	My friends encourage me to do well in my music lessons.	+

Overview of Achievement Goal Scales across each Study

	Original scales from Elliot et al. 2011	Study 1	Study 2	Study 4
Task-Approach	• To get a lot of questions right on the exams in this class. • To know the right answers to the questions on the exams in this class. • To answer a lot of questions correctly on the exams in this class.	• My main goal is to play the pieces of music right in my lessons. • My main goal is to perform well for my music assessments. • My main goal is to understand the music that we are given in lessons.	• I want to play the pieces of music right in my lessons. • I want to get a lot of the notes and rhythms right when I perform in my lessons. • I want to know how to play the pieces of music given to me in lessons.	• To play the pieces of music I am learning correctly. • To know how to play the pieces of music I am learning. • To get all the notes right when I play my instrument.
Task-Avoidance	• To avoid incorrect answers on the exams in this class. • To avoid getting a lot of questions wrong on the exams in this class. • To avoid missing a lot of questions on the exams in this class.	• My main goal is to avoid playing badly in music lessons. • My main goal is to avoid performing poorly in my music assessments. • My main goal is to avoid misunderstanding the music that we are given in lessons.	• I want to avoid playing badly in music lessons. • I want to avoid not knowing how to play the pieces of music in my lessons. • I want to avoid not knowing the notes and rhythms of the music I play in lessons.	
Self-Approach	• To perform better on the exams in this class than I have done in the past on these types of exams.	• My main goal is to keep improving my performance skills. • My main goal is to perform better in my next	• I want to get a better result in my next music exam or assessment than last time.	• To perform better in my next music exam or performance than last time.

	Original scales from Elliot et al. 2011	Study 1	Study 2	Study 4
	• To do well on the exams in this class relative to how well I have done in the past on such exams. • To do better on the exams in this class than I typically do in this type of situation.	music assessment than last time. • My main goal is to become a better performer compared to previous lessons and assessments.	• I want to keep improving my performance skills. • I want to become a better performer compared to previous lessons and assessments.	• To get a better result in my next music exam or performance than last time. • To perform better in my next music exam or performance than I usually do.
Self-Avoidance	• To avoid doing worse on the exams in this class than I normally do on these types of exams. To avoid performing poorly on the exams in this class compared to my typical level of performance. • To avoid doing worse on the exams in this class than I have done on prior exams of this type.	• My main goal is to avoid becoming worse at playing my instrument. • My main goal is to avoid performing worse than my last music assessment. • My main goal is to avoid becoming worse at my instrument than in previous lessons and assessments.	• I want to avoid becoming worse at playing my instrument. • I want to avoid getting a worse result than my last music exam or assessment. • I want to avoid playing worse in lessons and exams than I usually do.	
Other-Approach	• To outperform other students on the exams in this class. • To do well compared to others in the class on the exams. • To do better than my classmates on the exams in this class.	• My main goal is to perform better than other people in my class. • My main goal is to perform better in assessments than other people in my class. • My main goal is to play my instrument better	• I want to get a higher result in my next music exam than other students. • I want to perform better than other students who play the same instrument as me. • It is important to me that other students in my	• To play my instrument better than my peers. • To get a better result in my next music exam than my peers. • To do better in my next performance or exam than my peers.

	Original scales from Elliot et al. 2011	Study 1	Study 2	Study 4
		than other people in my class.	school think that I am a good performer.	
Other-Avoidance	- To avoid doing worse than other students on the exams in this class. - To avoid doing poorly in comparison to others on the exams in this class. - To avoid performing poorly relative to my fellow students on the exams in this class.	- My main goal is to avoid being worse at my instrument than other people in my class. - My main goal is to want to avoid performing worse in assessments than other people in my class. - My main goal is to avoid looking like I can't play my instrument in lessons.	- It is important to me that other students in my school don't think I am a bad performer. - I want to avoid performing worse than other students who play the same instrument as me. - I want to avoid getting a lower mark in my next music exam than other students.	- To avoid playing my instrument worse than my peers. - To avoid getting a worse result in my next music exam than my peers. - To avoid playing less well than my peers.

Study 2: Measurement Scales

		Achievement Goal Scales	
Task -	TA1	I want to play the pieces of music right in my lessons.	+
Approach	TA2	I want to know how to play the pieces of music given to me in lessons.	+
	TA3	I want to get a lot of the notes and rhythms right when I perform in my lessons.	
Task-	TAV1	I want to avoid playing badly in music lessons.	+
Avoidance	TAV2	I want to avoid not knowing how to play the pieces of music in my lessons.	+
	TAV3	I want to avoid not knowing the notes and rhythms of the music I play in lessons.	+
Self-	SA1	I want to keep improving my performance skills.	+
Approach	SA2	I want to get a better result in my next music exam or assessment than last time.	+
	SA3	I want to become a better performer compared to previous lessons and assessments.	+
Self-	SAV1	I want to avoid becoming worse at playing my instrument.	+
Avoidance	SAV2	I want to avoid getting a worse result than my last music exam or assessment.	+
	SAV3	I want to avoid playing worse in lessons and exams than I usually do.	+
Other-	OA1	I want to perform better than other students who play the same instrument as me.	+
Approach	OA2	I want to get a higher result in my next music exam than other students.	+
	OA3	It is important to me that other students in my school think that I am a good performer.	+
Other-	OAV1	I want to avoid performing worse than other students who play the same instrument as me.	+
Avoidance	OAV2	I want to avoid getting a lower mark in my next music exam than other students.	+
	OAV3	It is important to me that other students in my school don't think I am a bad performer.	+
		Self-Efficacy Scale	
Self-Efficacy	SE1	I am confident that I can perform my pieces with the correct fingerings, rhythms and tuning.	+
	SE2	I am confident that I can perform with good interpretation of the dynamics, phrasing and style of the music.	+
	SE3	I am confident that I can play to the very best of my ability.	+

SE4	I am confident that I can generally handle the challenges of the performance/exam.	+
SE5	I am confident that I can play in a way that will impress the examiner/teacher/audience.	+
SE6	I am confident that I can play at a level that is equal to the best student musicians in my year group.	+

Appendix E

Study 2: Interview Schedule

Introduction	Thank you for agreeing to take part in this interview today. I would like to find out more about what motivates you to play your instrument, and also what might have influenced your beliefs about how good you are as a performer.
Mastery/Failure Experience	Think about a time when you were really happy with a performance you did. Can you describe that memory or experience and how it made you feel? Think about a moment when you weren't so pleased with a performance you gave. Can you describe that memory or experience and how it made you feel?
Social Persuasion	Can you think of someone who might have encouraged you as a musician? What sort of things has this person done or said to encourage you? Can you think of someone who might have discouraged you as a musician? What sort of things has this person done or said to discourage you? How did the things these people did or said make you feel?
Modelling Influence	Can you think of someone similar to you musically? What makes you pick this person? If you see this person perform particularly well, how does it make you feel in terms of your own musical ability? Does it make you feel like you are capable of doing the same? Or would you feel like you couldn't play as well as them? If you saw this person perform not as well, how would it make you feel in terms of your own musical ability? Would it make you feel like you would also perform badly, or would you feel like you can do better than them?
Somatic Experience	When you perform, can you describe how it makes you feel? In what ways do you feel self-confidence, or a lack of self-confidence affects your performance ability?
Achievement Goals and influences	What would you say your primary goal is when playing your instrument? Is it to perform well in exams, perform better than other people, or just to keep improving?

Age/ability influence	Do you think this goal has changed as you've got older or progressed on your instrument? If you do think it has changed, can you point to a reason why it might have changed?
Teacher influence	How much do you think your instrumental teacher influences your musical goals?
Family/peer influence	Do you think your family or friends might also influence your musical goals?
Peer influence	Do you think you have the same goals as other students in the school? Or do you think you are different?
Conclusion	Do you have any further questions or comments for me today?

Appendix F

Study 2: Interview Codebook

Code	Files	References
Achievement Goals		
Other-Approach	9	16
Other-Avoidance	2	2
Self-Approach	9	16
Self-Avoidance	0	0
Task-Approach	2	6
Task-Avoidance	1	1
Autonomy	1	1
Avoidance behaviours	2	3
Emotional Somatic Responses		
Negative Emotion	2	3
Negative Physical Response	2	2
Positive Emotion	5	6
Responses-Self-Efficacy Link	1	1
Expectations of Self	2	3
External pressures	1	1
Extra-curricular music	2	7
Extrinsic motivation	1	1
Family musical	3	6
Fear of mistakes	1	1
Importance of music to self	1	1
Importance of Practice	7	11
Low motivation	1	9
Negative attitude to music	1	5
Past Experiences		
Negative Experience	7	9
Past Experience-Self-Efficacy	3	3
Positive Experience	6	6
Peer comparison	3	4
Resilience	3	3

Code	Files	References
Self-Efficacy		
High Self-Efficacy	7	14
Low Self-Efficacy	6	18
Social Persuasion		
Family Persuasion	8	10
Negative Persuasion	2	4
Peer Persuasion	5	8
Positive Persuasion	9	12
Social Persuasion-Self-Efficacy	6	10
Teacher Persuasion	9	15
Teacher goals	5	6
Vicarious Modelling		
Modelling-Self-Efficacy Link	5	6
Negative Modelling	1	1
Peer Modelling	8	15
Positive Modelling	6	6
Teacher Modelling	1	1

Sample of Coded Transcript from Study 2 Interviews

Reference 6: 3.80% coverage

Erm, well sometimes when I'm playing piano and I haven't done scales for a while, and I can't really remember them for a few minutes I get quite annoyed at that, erm because I know I should know them, and should remember them, but I can't and so

Reference 7: 0.02% coverage

So how would you say that makes you feel?

Reference 8: 6.34% coverage

It does just annoy me a bit and sometimes I know it's silly but it does make me feel a bit like I can't play. I can play, I know I can, because I'm doing my Grade 2, erm I haven't done Grade 1 yet but my teacher said I'd be fine to do Grade 2, so I know I can play but sometimes I just feel I can't because I'm, I might be a bit stressed out because of homework and stuff and it builds up on top of that.

Reference 9: 0.97% coverage

Right, ok. Erm, can you think of someone who's maybe encouraged you as a musican?

Reference 10: 0.78% coverage

My mum has encouraged me a lot

Reference 11: 0.39% coverage

Ok, and what kind of things has she said or done to encourage you do you think?

Reference 12: 2.32% coverage

Well she's given me loads of ways that I can practice and calmed me down a bit when I was a bit annoyed and she's helped me a lot

Reference 13: 0.10% coverage

Ok

Reference 14: 1.48% coverage

With scales and how to do them properly and the speeds that I should be doing the pieces and how to build up working on them

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Study 3: Interview Schedule

Question	Prompts
Can you describe your last instrument lesson to me?	Pieces? Group/individual lessons? How long was it? Favourite part? What did you do first? What does your teacher like to work on with you? *Group Lessons – Do you see yourself as a similar standard to the other person in your group?[1]*
Can you remember why you decided to start learning the _____[e.g. violin]?	Did anyone suggest it to you? See anyone playing? Hear a piece with it in? How long have you been learning? *What has made you want to carry on playing your instrument?*
What do you enjoy about learning your instrument?	Type of pieces? Play in any groups? Fondest memory?
Why do you practice?	*Would you see yourself as self-motivated?* *Do your parents ever remind you to practice?*
What are you working towards on your instrument?	Why do you want to work on this? Does your teacher or your parents have a say in what you work on? Do you choose your own pieces? *Are you working towards this for yourself or is there a part of it where you think you are working on this to show other people?* *Why do you think this is?*
What is your biggest ambition as a [e.g. violinist] _____ ?	Why do you practice? What do you want to achieve by the time you leave school? Do you see yourself carrying on playing when you leave school? Why?
Do you think your ambitions have changed since you started playing?	Did you always want to…? Why do you think that is? Have you had any experiences that have changed your opinion of playing?
Do your parents get involved much in your [violin] playing?	Do they ever listen to you practice? Talk to you about your lessons?
Do you have friends that also play instruments?	What do they play? Do you play in any groups with them? Do you talk much about music with your friends? *Do you ever find yourself comparing yourself to your friends?*
You mentioned you were working towards _____ (Q4). If you had to rate yourself on a scale of 1-10, how confident do you feel about doing well in that performance?	Why would you give yourself a _____ rather than a _____? Have you always felt that confident? *What do you think helps you feel confident leading up to a performance?* *What do you think might affect your confidence?*

Can you tell me about the last time you gave a performance or did an exam?	What was the exam or performance? Do you think it went well? Describe what happened? How did you feel during/after the performance?
Who encourages you with your _____ [e.g. violin] playing?	Friends/family/teachers? Can you think of anything they have said or done to encourage you? Is there anyone who has discouraged you? *Who do you think is your biggest musical influence?* *Do you think you would still practise if you didn't have this encouragement from friends/family/teachers?*
Is there anything else you want to tell me about your musical influences?	
Do you have any questions for me?	

Note. [1]Questions in italics are those added following the pilot interview process.
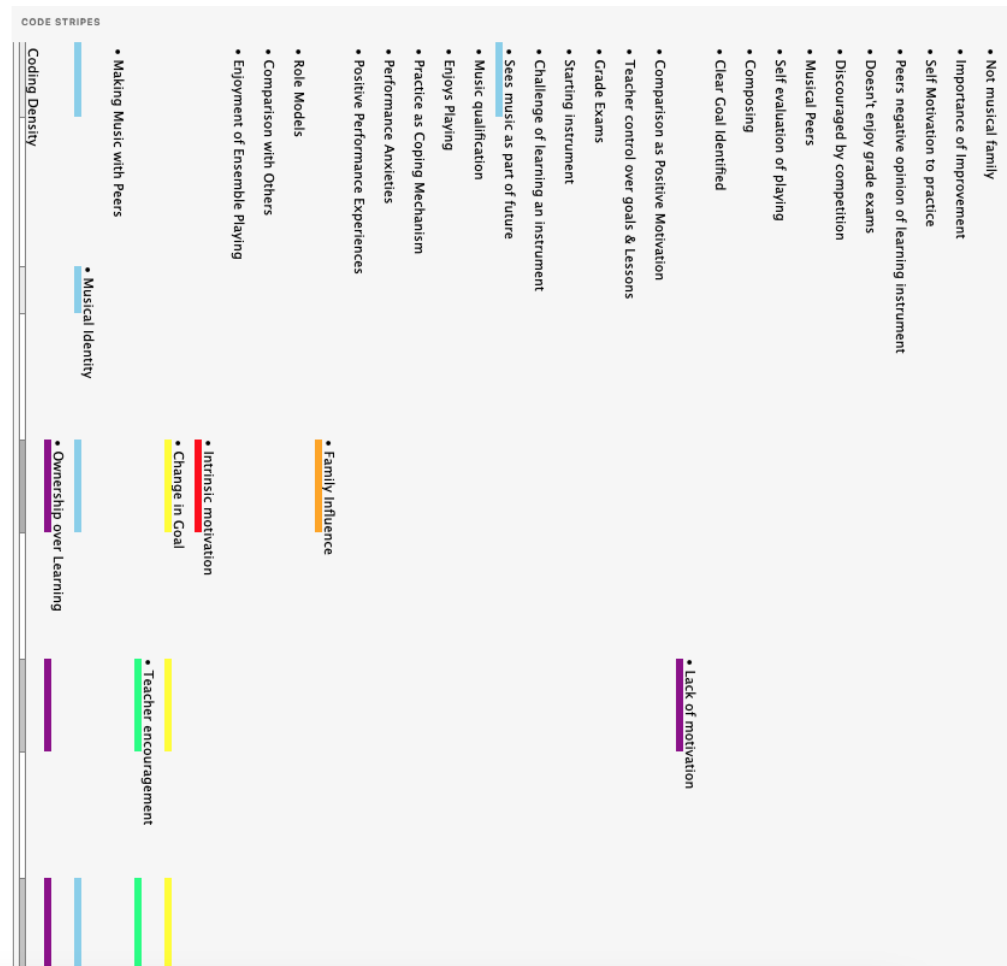
Appendix I

Study 3: Codebook

Code	Files	References
Autonomy in lessons	5	8
Challenge of learning an instrument	3	4
Change in goal	5	10
Clear goal identified	5	7
Comparison as positive motivation	4	7
Comparison with others	8	23
Composing	2	2
Confidence boost	4	4
Confident	2	2
Confident for performance	2	2
Describing taste in music	2	2
Difficulty of succeeding in music industry	2	2
Discouraged by competition	2	2
Doesn't enjoy grade exams	2	3
Enjoyment of ensemble playing	8	27
Enjoys playing	6	11
Extrinsic motivation	1	2
Family influence	9	46
Feeling prepared	6	9
Grade exams	9	24
Importance of improvement	8	22
Importance of influence of others	5	7
Importance of repertoire	2	2
Innate musical ability	1	1
Intrinsic motivation	7	22
Lack of motivation	1	1
Lack of pressure	1	1
Music as confidence boost	2	2
Music as hobby	5	6
Music qualification	5	9
Musical identity	3	6
Musical peers	9	22
Not competitive	2	4
Not concerned about grades	1	1
Not musical family	1	1
Own choice of repertoire	2	2
Peers' negative opinion of learning instrument	2	3
Performance anxieties	8	19
Performance-avoidance goal	1	3
Performing by oneself	3	3
Positive influence from friends	3	3
Positive performance experiences	9	29
Practice as coping mechanism	5	8
Practice difficult sections	1	1
Practice frustration	2	5

Code	Files	References
Preference for accurate playing over challenge	1	2
Pressure with deadlines	1	1
Reminders to practice	5	6
Resilience to mistakes	2	3
Role models	7	14
Scales and technique	3	4
Sees music as part of future	2	3
Self-evaluation of playing	4	6
Self-motivated to do grade	2	2
Self-motivation to practice	6	14
Show off grade	3	4
Starting instrument	7	7
Teacher control over goals & lessons	6	11
Teacher encouragement	7	15
Time commitment	5	6
Upcoming performance	1	1

Reference 43: 2.41% coverage

I don't know, erm, I would like to, well I don't think I would like to play in a professional orchestra or anything like that, but maybe, like I would like to go to a different country with my violin and like play somewhere abroad, that would probably yeah, like study music playing violin at a different country

Reference 44: 0.93% coverage

Ok, cool, and so you obviously see yourself carrying on after you leave school which was going to be my next question, erm why is it that you want to do music at university?

Reference 45: 0.82% coverage

It's like my main interest, it's what I think I'm good at, I just yeah I would like to know more about it

Reference 46: 0.01% coverage

Great, erm do you think your ambitions have changed since you started playing the violin?

Reference 47: 2.04% coverage

I don't really think I had any ambitions when I started playing just because I feel like it was kind of I only did it because my sister did it, but yeah, I think I've got more of an understanding of what music is and what it means to me than when I was like 10, 11

Reference 48: 0.01% coverage

Right and so if you could point to like a time when maybe that changed, it shifted, and you realised oh I want to pursue this as a career, what, when would that be?

Reference 49: 1.74% coverage

It was in like April when I was in Year 9 I just completely gave up, and I didn't practice at all, I had no motivation to do anything, and like my violin teacher was like I nearly quit, my violin teacher kept me on and kept me going and then err, yeah

Reference 50: 0.83% coverage

What was it that erm your violin teacher said or did then to kind of persuade you to keep going? Can you remember?

Reference 51: 3.77% coverage

I think like what she said helped me realise that it wasn't so much a school subject cause I think that's how I viewed it before, but that it was like, and also like I didn't so much realise that it was something that I had that other people didn't, but after we like talked over everything and she, yeah, I realised that it was something that I

Study 4: Measurement Scales

		Basic Psychological Needs	
Autonomy	A1	In my instrumental lessons I have a sense of choice and freedom in the pieces I play.	+
	A2	In my instrumental lessons I feel I have been doing what really interests me.	+
	A3	In my instrumental lessons I feel free to express my ideas and opinions.	+
	A4	In my instrumental lessons I feel like I have input in deciding what to do.	+
Competence	C1	I feel confident when I play my instrument.	+
	C2	I feel capable at playing my instrument.	+
	C3	I am good at playing difficult pieces.	+
	C4	I do not feel very competent when I am performing and practising my instrument.	-
Relatedness-Teacher	RT1	I feel cared about by my instrumental teacher.	+
	RT2	I feel connected to my instrumental teacher.	+
	RT3	I feel close to my instrumental teacher.	+
	RT4	I feel supported by my instrumental teacher.	+
Relatedness-Peers	RF1	I feel cared about by my peers.	+
	RF2	I feel connected to my peers.	+
	RF3	I feel close to my peers.	+
	RF4	I feel supported by my peers.	+
Relatedness-Parents	RP1	I feel cared about by my parents.	+
	RP2	I feel connected to my parents.	+
	RP3	I feel close to my parents.	+
	RP4	I feel supported by my parents.	+
		Self-Determined Motivation	
Amotivation	AMO1	I once had good reasons for learning an instrument, but now I don't.	+
	AMO2	Honestly, I don't know why I learn an instrument.	+
	AMO3	I'm not sure, I wonder whether I should continue learning an instrument.	+
	AMO4	I used to know why I lean an instrument, but I don't anymore.	+
External Motivation	EXT1	Because important people (i.e., parents, teachers) will like me better if I learn an instrument.	+
	EXT2	Because if I don't learn an instrument, others will get mad.	+
	EXT3	Because I'll get in trouble if I don't learn an instrument.	+
	EXT4	Because I don't have any choice but to learn an instrument.	+
	IJN1	Because I would feel guilty if I didn't learn instrument.	+

Negative Introjection	IJN2	Because I would feel ashamed if I didn't learn an instrument.	+
	IJN3	Because I would feel like a failure if I didn't learn an instrument.	+
	IJN4	Because I don't want to feel bad about myself.	+
Positive Introjection	IJP1	Because I want to feel proud of myself	+
	IJP2	Because I want to prove to myself that I am capable.	+
	IJP3	Because learning an instrument boosts my self-esteem.	+
	IJP4	Because I want to feel good about myself.	+
Identified Motivation	IDE1	Because I strongly value learning an instrument.	+
	IDE2	Because learning an instrument is personally important to me.	+
	IDE3	Because it is my personal choice to learn an instrument.	+
	IDE4	Because learning an instrument is meaningful to me.	+
Intrinsic Motivation	INT1	Because I enjoy learning an instrument.	+
	INT2	Because learning an instrument is fun.	+
	INT3	Because it is a pleasure to learn an instrument.	+
	INT4	Because learning an instrument is interesting.	+
Achievement Goals		
Task-Approach	TA1	My goal is to get a lot of notes right in the pieces of music I play.	+
	TA2	My goal is to know how to play the pieces of music I am learning.	+
	TA3	My goal is to play most of the pieces that I am learning correctly.	+
Self-Approach	SA1	My goal is to perform better on my instrument than I have done in the past.	+
	SA2	My goal is to play well on my instrument relative to how well I've played in the past.	+
	SA3	My goal is to perform better on my instrument than I typically do.	+
Other-Approach	OA1	My goal is to play my instrument better than my peers.	+
	OA2	My goal is to get a better result in my next music exam than my peers.	+
	OA3	My goal is to do better in my next performance or music exam than my peers.	+
Other-Avoidance	OAV1	My goal is to avoid playing my instrument worse than my peers.	+
	OAV2	My goal is to avoid getting a worse result in my next music exam than my peers.	+
	OAV3	My goal is to avoid playing less well than my peers.	+
Practice Habits		
Behaviour	BEH1	I try to get one section of music perfect before practising the next.	+

	BEH3	I listen to my own playing while I practise to make sure I am not reinforcing bad habits.	+
	BEH4	I think about pieces I'm practising by singing them through in my mind.	+
	BEH5	If I can't play a piece correctly I stop to think about how it should sound.	+
	BEH7	When I'm practising I stop playing and try to think about the best way to work out a problem.	+
Method	METH1	I mark trouble spots in the music when practising.	+
	METH2	I carefully look through a new piece before practising.	+
	METH3	I spend practice time on things I cannot do very well.	+
	METH5	I practise difficult spots very slowly.	+
	METH6	I begin each practice session with warm-ups.	+
	METH7	I practise the day after a rehearsal or lesson.	+
	METH9	I set specific practice goals.	+
	METH10	I practise at least a little bit every day.	+
	METH11	I practise challenging music.	+
	METH12	I spend some practice time sight-reading new music.	+
	METH14	I practise with a metronome.	+