

**The Effect of a Mindset Intervention on Saudi Undergraduates'
Language Learning Motivation**

Haifa A. Al-Ghamdi

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Dedication

This thesis is dedicated to my parents Abdullah and Aziza,

for their endless love and support

for their encouragement to go on this adventure

for raising me to believe anything is possible

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First and for most, I would like to express my gratitude and thank God for giving me the opportunity to pursue my doctoral studies, for providing me with patience and strength to complete this journey, and for surrounding me with great family and friends who supported me during the whole journey.

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Abstract

A number of studies have been conducted to improve learners' motivation to learn a foreign language in the Saudi context. However, most of these studies were based on various motivational strategies to boost learner' motivation rather target their core beliefs about themselves and their abilities in learning another language. The current study aims to achieve this by adopting Dweck's Implicit Theories (Mindsets). Research on mindset showed how students with a tendency towards a growth mindset, are more motivated, set more learning goals and are more likely to react in a mastery way. On the contrary, those with a tendency towards a fixed mindset, have more performance goals and are more likely to react in a helpless manner which in turn decrease their motivation. However, there is lack of research on the mindset theory with regards to language learning and this is the first mindset intervention study focusing specifically on language learning.

The current study aims to examine the effectiveness of a mindset intervention on Saudi university L2 learners' mindset beliefs and motivation. It seeks to explore whether a language mindset intervention would promote growth mindset beliefs among language learners and in turn improve their motivational characteristics. More specifically, it aims to find out whether adopting more growth mindset beliefs in language learning would promote a higher level of motivation, more mastery responses in failure situations, orientation towards learning rather than performance goals and process rather than person attributions.

A quasi-experimental design is implemented in this study which consist of two groups: the experimental group that receives the intervention ($N=103$) and the control group that attends regular classes ($N=113$). A mixed method approach is used in collecting data in which both

questionnaire surveys with follow-up interviews are used in two phases to examine the immediate and delayed effect of the intervention. Results for one-way ANCOVA of the immediate post-intervention test reveal a significant difference in learners' language mindset beliefs, attitudes toward learning English, L2 motivational intensity, goal orientation and responses to failure situations between the two groups.

This is supported by the results of repeated measures ANOVA showing a significant positive effect of the intervention on the same scales among the experimental group only, which is also supported in results of the first phase of the interviews. The positive effects of the intervention did not last in the longer-term (two months later), but the second phase of the qualitative data revealed that the majority of interview respondents had retained new beliefs, remained growth oriented and motivated, held positive attitudes, and reacted in a mastery manner. The findings indicate that language mindset interventions could be effective in altering learners' language mindset beliefs and L2 motivation but need to be recurrent in order to have a more lasting effect.

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Chapter 1: Introduction

Being born in a family that looks highly upon education, I have been raised with a great interest in learning and development. My father is a professor at King Abdulaziz University and in 1986, we travelled to the UK in a scholarship to pursue his higher education in virology. Influenced by my father, I have always dreamed to be a lecturer at the university. As a student in school, I have always cared to be among the top achievers and strived to obtain the highest marks in class and I have always been in the top list. Being educated in a highly performance-based atmosphere where students are ordered by grades, has led me to set such performance goals. I can still remember when the teachers announce our names and marks in class starting from the highest to the lowest. Name lists of the top 10 students in school were posted in the entrance of the school and it was a thrilling moment to see my name listed always on the top 5. Despite its overemphasis on performance, it has always encouraged me to work harder and achieve better.

As I reached secondary school, I started to develop an interest in language learning and decided to complete my bachelor's degree in English language. No foundation year was required at that time, but I discovered new challenges upon studying at university level. Achieving high grades was not something easy like in school, my first semester's grades were way below my expectations and disappointed me. However, it was not long until I realized how much harder I needed to work to widen my knowledge; through using different strategies and collaborating with friends, my achievement improved dramatically. I was proud to graduate with a distinction and with the second highest GPA in my department. I was keen to achieve this grade as I knew it was crucial to pursue a career in university teaching.

My dream came true when I was finally appointed to work as a Teaching Assistant in the English Language Institute (ELI) at a public university in Jeddah, teaching English as a Foreign Language (FL) to foundation year students. The first time I was given a schedule to teach, I had mixed feelings of excitement and worries. Excitement because this is the place where I always dreamed to be and worries because with no training or previous experience, I had no idea how successful I was going to be as a teacher. It was a great responsibility to teach foundation year students as I knew how important it was to strengthen their English skills before they specialize in their majors of study. Firstly, because many majors are taught entirely in English where a high level of competence in English is required, and secondly because students who fail to pass the English course (or any course during the foundation year) are forced to leave the university. At that time, the English course comprised of two subjects: listening/speaking and reading/writing, which were taught to students daily (1-2 hours per day) during the whole year. Although the outcomes of the course may not have been very useful in terms of preparing them for their majors, it slightly improved their general English skills, but at the same time was not overwhelming as the requirements and class duration were reasonable. Recognizing the low English proficiency level of students entering the university, the Institute began developing a more extensive English program that could further improve students' level before pursuing their studies.

A great deal of research has revealed that the level of English proficiency among Saudi learners is poor. Al-Nujaidi (2003) explains that Saudi students graduate from secondary school with a limited English vocabulary of around 500-700 words despite studying English for nine years. This indicates that most of them do not have the required amount of words to express themselves and speak appropriately in English. Al-Shumaimeri (2003) supports this by adding

that most graduates of secondary schools lack the ability to make a short conversation. Despite the huge efforts exerted to develop the process of teaching-learning English in Saudi Arabia, Al-Seghayer (2014) stated that program delivery mechanisms and outcomes are below expectations and learners' proficiency in English remains insufficient. He attributed this performance to some constraints involving beliefs, curriculum components, pedagogical and administrative aspects. He explained that many Saudi students believe English is a difficult subject to learn and have negative feelings of fear, anxiety and reluctance when learning it. In fact, a large number of Saudi secondary students declared that if English was an optional course, they would not choose it (Al-Zahrani (2008). It is therefore important to acknowledge that the Saudi educational system has weaknesses that may contribute to under performance in English proficiency.

English is not an optional subject even at the university. The English course is a compulsory subject in all Saudi universities during the foundation year. Recognizing the importance of improving university learners' English proficiency, the Institute decided to increase the duration of English classes to 18 hours per week providing an intensive program to be completed during the foundation year. Freshman students are required to take an English proficiency exam, upon which they are divided into one of four levels. Those who are placed in level one need to complete all four levels during the foundation year (two levels per semester) while those placed in level four just need to complete that level. From my experience in teaching different levels, levels 1 and 2 were perceived as quite easy by students, starting from very basic skills, while level 3 becomes somewhat harder and level 4 is lengthy and hard for most of the students. Students' struggles and failures are mostly in the last two levels.

Teaching English for five years has opened many opportunities for me to observe and explore many aspects of language classrooms in Saudi Arabia. I can still remember my students'

messages at the end of the semester saying that I was the best English teacher that they had ever had. I was enjoying my role as a teacher who not only delivered information but was always there to listen and support. Regular contacts with students had been an opportunity to understand their struggles, challenges and the obstacles they encountered during their learning experience. The fact that I was a recent graduate enabled me to understand what they have been through and encourage them to move forward. They have always enjoyed the stories I shared with them about my struggles as a student and how I managed to overcome them.

Despite the positive impact I felt I had on them, it was still very common to see many learners lose interest in learning English, lack motivation to exert effort, feel hopeless to develop themselves in learning or in the worst cases feel helplessness and withdraw from the course. It was common to see students passively attending English classes, struggling to pass the courses or even fail and lose their chance to complete their bachelor's degree. I knew that failures and challenges were a natural part of the learning process and that an important characteristic of successful learners is the way they approach these difficulties and setbacks. Being successful entails the ability to adjust after failure, to learn from the experience and even exert more effort to improve the situation. But the question remained, how could I teach learners those adaptive responses?

I have always felt that a crucial part of my work is to inspire learners and motivate them to learn, to leave a positive unforgettable impact on their learning experience as a whole, not only in the English class. This was the most challenging part of my teaching experience. Encountering learners who recognized the importance of learning English and would like to learn it but lost motivation or felt helpless to develop their English skills, has been a thought-provoking experience for me. Observing many learners who categorized themselves as 'not a language

person' and believed this was due to negative experiences in learning or being labeled by teachers or parents as incompetent language learners, has encouraged me to search for a way that brings hope that was missing in their English classes. Seeing many students give up when unable to communicate or withdraw from the course when failing, has inspired me to think deeply about what can help promote an adaptive approach when facing difficulties and raise learners' awareness to perceive those setbacks in a positive way to become successful language learners.

During the phase of preparing for my PhD study, all these thoughts came to my mind. What can I do to help increase L2 motivation among Saudi learners? What can help them believe that they are able to develop and learn? What can help them promote adaptive methods of study in the face of difficulties? And many more questions. During this dilemma, I was lucky to meet my colleague Fatema Albalwai who inspired me to set the scene for my study. During the exploration phase of her research on the reasons behind Saudi students' L2 demotivation, she found that learners' mindset beliefs can help to explain their demotivation and maladaptive reactions to difficulties and suggested that this could be a starting point for my research study. It was fascinating for me to read about the mindset theory by Carol Dweck as I came to realize that peoples' acquired beliefs about themselves play a significant role in how they function (Dweck, 2008). In fact, the way learners' perceive and react to difficulties depends on the extent of their belief that they can improve their abilities and overcome challenges (Dweck, 2000; Rattan & Georgeac, 2017). I spent a few weeks reading on the history of research by Dweck & Leggett, (1988) on mindsets and discovered that learner's motivation and reactions to situations can be, at least partially, attributed to their mindsets (or implicit theories). The implicit theories imply that people have unique mindsets through which they perceive and explain the world and incidents around them, which make them feel, think and act differently in similar situations (Dweck, 2000,

2006). It was interesting to see how mindsets could be linked to my students' motivation and reactions, but the question remained: will I be able to change those mindsets?

Throughout my reading, I have come to know that being fearful of challenges and helpless in reactions are all maladaptive approaches used by unsuccessful learners (Albert Bandura, 1993; Stradling et al., 1991). Not only in the Saudi context, but it is also common in second language (L2) learning to see unsuccessful learners who avoid challenges and give up, have negative feelings and attitudes more than successful ones (Gan et al., 2004) and this could negatively affect L2 learners' competence and confidence (Horwitz, 2001; MacIntyre, 1995; Phillips, 1992). From there, I thought it is important to let learners understand that, although they have no control over their situation, they do have control over the way they perceive difficulties, the way they handle them and overcome them. Exploring the vast amount of research on mindsets, I have found many mindset intervention studies which have apparently proven to be effective in changing learners' mindset beliefs, goals, motivation and achievement in several subjects (e.g. Aronson, 1999; Aronson et al., 2002; Blackwell et al., 2007; Paunesku et al., 2012; Rangel et al., 2020), and I was interested to discover that no intervention studies had been conducted focusing specifically on L2 learning. I thought a language mindset intervention study would be a valuable contribution to the mindset literature and potentially a turning point for my students to change their beliefs and increase their motivation in L2 learning. So, I decided this would be a legitimate topic to pursue for my doctoral study and planned to create a set of motivational materials specifically designed for the Saudi students. I wanted to fill this gap by creating language mindset materials and deliver them in a mindset intervention study to foster a growth-mindset view of language learning among FL learners in Saudi Arabia in the hope eventually that this would enable university students in the ELI to make more progress in English.

The thesis starts with an introduction explaining the problem, the rationale and aim of this research. It also provides an outline of the thesis structure. The second chapter contains the literature review, starting with an overview of L2 motivation research followed by a review of motivational studies conducted in the Saudi context. The second part of the literature review focuses on mindset research beginning with an illustration of the theory and its relationship with other motivational factors: achievement goals, responses to failure situations and attribution styles. This is followed by a review of mindset intervention studies with a special focus on language mindsets in the last section. Chapter 3 is a detailed description of the methodology followed in conducting this research. It starts by stating the aim and research questions followed by a detailed description of the reasoning and design of data collection methods and instruments. Next, it provides an overview of the sample, implementation plan and procedures followed in collecting and analyzing data. Chapter 4 presents the quantitative findings and Chapter 5 presents the qualitative findings. Both sets of results are then discussed in Chapter 6 in relation with previous research and theory. The last Chapter (7) provides a summary of my findings, limitations of the current research and implications for pedagogy and future research.

Chapter 2: Literature Review

2.1 Introduction

Research on motivation and its effect on learning in general and language learning in particular has received a great deal of attention from researchers. Within this area of research, there is a general agreement that second language (L2) motivation is associated with successful language learning and it is considered a driving force that enables learners to exert more effort in learning an L2. It is generally believed and has been empirically found that more motivation is related to higher levels of success in language learning and lack of sufficient motivation might hinder even highly competent learners from achieving success in learning the language (Lamb et al., 2019; Wlodkowski, 1999). It has also been suggested that many learner-centered factors are affected by motivation, such as attitudes, learning strategies, language anxiety and goal orientation (Gardner, 2001; Oxford & Shearin, 1994). The importance of motivation in L2 learning is undeniable and looking for practical ways to reinforce or sustain motivation among learners requires considerable attention.

In Saudi Arabia, English language is a compulsory subject during the foundation year in all universities. Despite its importance and relevance for many bachelor's degrees, it is common to observe learners who withdraw from the course, seek to pass the required score only or be passive recipients of teaching in the classroom. Even with tremendous efforts exerted to enhance the process of teaching-learning English, English programs in Saudi Arabia are still insufficient in delivering the expected outcomes (Al-Seghayer, 2014). Al Shlowiy (2014) explained that one of the main challenges of language learning in Saudi Arabia is learners' low motivation. As an instructor in one of the Saudi universities for more than 5 years, it is of great interest to me to

explore empirical ways that could boost learners' motivation. Contrary to other studies that have tackled the aspect of motivation from teachers' perspectives by implementing various motivational strategies, my aim is to boost L2 motivation from within the learners' themselves by changing their beliefs and how they perceive their abilities.

This chapter will include two main parts. Part 1 focuses on L2 motivation research in general. It offers a definition of motivation and then provides a summary of the four recognized historical phases of L2 motivation, followed by a brief review of the main findings from L2 motivation research. The following section reviews L2 motivational studies specifically in the Saudi context. Part 2 focuses on the Mindset theory and research starting with a description of the theory and its relationship with other related constructs. Then, recent mindset intervention studies in general academic motivation are reviewed with a special concentration on language mindset research in the last section.

2.2 L2 Motivation Research

2.2.1 Definition of Motivation

Motivation is a word derived from the verb *movere* in Latin. It is the reason that makes a person move towards certain actions, make certain choices or make an effort and keep on doing a certain thing (Dörnyei & Ushioda, 2011). It is a person's psychological force that pushes him or her to achieve certain goals or gain satisfaction for certain needs (Slavin, 2006). There has been numerous research and theory on the concept of motivation over the decades where various theoretical models of motivation have been developed by many scholars covering different variables and understandings of this concept, which provoked a considerable debate about what

constitutes motivation. The only aspect of motivation that was agreed upon by many scholars is its focus on the direction and magnitude of human behavior which includes the choice of an action, degree of persistence and effort (Dörnyei & Ushioda, 2011). It has been defined by Dörnyei and Ottó (1998) as "the dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes whereby initial wishes and desires are selected, prioritized, operationalized and (successfully or unsuccessfully) acted out" (p. 65). This definition focuses on the dynamic aspect of motivation and includes several influential factors that drive learners' desire to learn, but it is a general definition that applies to any learning context.

Language learning motivation is the motivation to learn or acquire a second language (L2). (Ellis, 1994) defines it as the effort which learners put into learning an L2 due to their need or desire to learn it. Lightbown and Spada (2001) look at L2 motivation as a complex phenomenon that could be defined based on two factors: "learners' communicative needs and their attitudes towards the second language community" (p.33). They believe learners' motivation to learn an L2 depends on the way they perceive the L2 community and their recognition of the need to speak an L2 in order to communicate. It is what Gardner and Lambert (1972) refer to as integrative motivation. They explain how language learner motivation is distinctive from other types of learning motivation as the learner is expected to be willing "to identify with members of another ethnolinguistic group and take on very subtle aspects of their behavior, including their distinctive style of speech and their language" (p.135). So integrative motivation is about learners' desire to take part in the L2 community activities and improve their target language (Gardner, 2001). This definition seems to be somewhat limited to the integrative aspect of motivation which is not relevant in educational settings or in contexts where there is no direct

relation between the learner and the L2 community. Ellis's definition is also limited on the behavioral aspect of motivation, focusing on effort. A more general and inclusive definition of language motivation is the 'state of cognitive and emotional arousal, which leads to a conscious decision to act, and which gives rise to a period of sustained intellectual and/or physical effort in order to attain a previously set goal (or goals)' (Williams & Burden, 1997, p.120). It involves the cognitive, emotional and behavioral aspects of motivation.

A more specific type of motivation that is common to educational psychology is classroom learning motivation. The current study focuses on this type of motivation, more specifically on motivation in language classrooms. In the current study, L2 motivation refers to learners' level of interest to learn English as a foreign language due to their desire or need to develop themselves in using this language, which affects the level of effort exerted to achieve this goal. So, it involves learners' motivation to learn the language whether this interest is due to personal desire or a requirement to achieve a certain level of proficiency.

Below is a brief description of L2 motivation based on four different perspectives which have developed over time.

2.2.2 The Four Phases of L2 Motivation Research

A remarkable diversity of theories and approaches to researching L2 motivation have been developed, which have been categorized chronologically. Three stages of L2 motivation research have been described by Dörnyei (2005) starting from the social-psychological period, followed by the cognitive-situated period and then the process-oriented period. A fourth phase was added 6 years later by Dörnyei and Ushioda (2011) focusing on the socio-dynamic perspectives.

This first phase of L2 motivation research has created an extensive literature that perceived motivation in the context of various social psychological variables, such as attitudes toward the culture, community and speakers of the target language (Dörnyei & Ushioda, 2011). It was characterized by a social-psychological perspective originated by the two social psychologists Wallace Lambert and Robert Gardner. As noted above, they initiated the theoretical concept of integrative orientation, which has been granted a considerable attention in the field of L2 motivation (Dörnyei & Ushioda, 2009). Gardner and Lambert (1972) explain how language learner motivation is distinctive from other types of learning motivation as the learner is expected to be willing “to identify with members of another ethnolinguistic group and take on very subtle aspects of their behavior, including their distinctive style of speech and their language” (p.135). A key tenet of this approach is that the attitudes toward the L2 and its community has a significant influence on individuals’ L2 learning behavior. Another pioneering aspect of Gardner and Lambert’s work is their focus on non-cognitive factors, like motivation, as a causal effect on learners’ achievement.

During this period, Gardner developed the socio-educational model proposing that aptitude and motivation are the two main factors that affect L2 performance (Gardner, 1985). However, there was more emphasis on motivation in his model as Gardner was more concerned with how learners could succeed in L2 learning even with a low aptitude. Nevertheless, he did not explain why some learners with low aptitude could be still motivated to learn while others are not, and what could mediate the relationship between the two factors. Perhaps this could be explained in light of the mindset theory, which will be illustrated with details in the second part of this Chapter (See Chapter 2, Section 3). Furthermore, despite receiving a lot of popularity, Gardner’s theory of integrative motivation, did not receive a lot of support as contradictory results have

been found in empirical studies examining this concept. Although it was found to be a main predictor of L2 achievement in the context of Canada, this causality hypothesis was not supported in other studies (Au, 1988; Crookes & Schmidt, 1991).

In the late 1980s and 1990s, motivation research in language learning has shifted towards the cognitive perspective, concentrating on the influence of learners' mental processes on their motivation (Zoltan Dörnyei, 2005). This cognitive-situated period was the second phase of L2 motivation research, and was characterized by two perspectives: bringing L2 motivation research in line with mainstream motivational psychology and its cognitive revolution, and focusing on the situated analysis of motivation in language learning contexts (Dörnyei & Ushioda, 2011). Cognitive motivation theories in mainstream psychology were utilized for better understanding L2 motivation (Dörnyei, 2003; Mills, 2014).

A number of L2 motivation theories were developed during this period focusing on new variables from the cognitive theories of motivation. (e.g. Crookes & Schmidt, 1991; Dörnyei, 1994; Tremblay & Gardner, 1995; Williams & Burden, 1997). One of the main motivation theories in psychology during this period was the attribution theory developed by Weiner (1976). It implies that the way we attribute our past failures and successes, and the causal reasons we use for their attributions, have a great impact on our motivation in future actions (Zoltan Dörnyei & Ryan, 2015). Based on this theory, Ushioda (1996) identified two attributional patterns to positive motivational outcomes in language learning: attributing success to personal or internal factors and attributing failures to temporary forces. However, based on the psychological theory of mindsets, it can be argued that it is not the causal attribution that plays a role on motivation, but rather the way this attributional cause is perceived. The same attributional pattern (e.g. personal) could be perceived differently by learners in terms of its stability or controllability and

these have a major effect on motivation. This notion is further explained in light of Dweck's mindset theory, as will be illustrated in the following section (Chapter 2, Section 2).

Another dominant theory during this period was the self-determination theory or SDT, which is based on Edward L. Deci and Richard M. Ryan's work on intrinsic/extrinsic motivation (IM/EM) in the 1980s (Dörnyei & Ushioda, 2011). They identified three main psychological needs that act as the base for people's self-motivation: autonomy, competence and relatedness. This involves the feeling of self-control, the feeling of being related to other people and the feeling of personal ability. SDT focuses on internal motivational states of learners measured by a continuum of motivational types. As explained by Ryan and Deci (2000), the continuum ranges from non-self-determined to self-determined in which amotivation is placed at the left end of the continuum representing non-autonomous individuals who have no motivation to do certain actions. The middle part of the spectrum represents different degrees of external motivation ranging from 'completely external' forces followed by 'somewhat external' in which external drives are led by internal self-controls. More internal drives are gradually integrated with external regulation reaching a completely internal motivation stage toward the right end of the continuum. The current study focuses on one of the core psychological needs in this theory, which is competence. It is tackled through the psychological framework of implicit theories (mindsets), considering the way learners perceive their abilities and competence as a main factor that affect their learning experience and L2 motivation.

The social cognitive theory is considered one of the key theoretical foundations in foreign language (FL) motivation research during the cognitive situated period. The social cognitive learning theory focuses on learners' self-beliefs and self-knowledge (A Bandura, 1989). Self-regulation and self-efficacy are two main constructs from the theory that have played a role in

the research. The former refers to a person's 'mechanisms for perception, evaluation and regulation of behaviour' (Bandura, 1978, p.348) It implies that future behaviour is regulated by reflection on past behaviour. The latter refers to one's own beliefs about his competence and abilities. A learner's self-efficacy beliefs influence his/her motivation as stronger self-efficacy beliefs may make the learner feel that achieving a task and obtaining a positive result seem attainable, and thus increase the chance of his/her engagement in an activity. This is also confirmed by mindset theory which proposes that believing in one's ability to develop and learn, has a great impact on his learning motivation.

Within this theory, individuals are considered self-reflective and self-regulative (Mills, 2014). Bandura (1997) argues that the practice of self-reflection has a great effect on human agency. This is because examining and reflecting on one's thoughts and behaviours may enable a person to change his way of thinking and subsequent actions, and this has important implications especially in academic settings (Mills, 2014). Thus, students' perceptions about themselves, their ideas, beliefs and abilities could orient the way they perform academically. Self-efficacy beliefs are considered one of the essential instruments of self-reflection (Bandura, 1997). They refer to a person's beliefs in his/her abilities to do a certain task and may predict subsequent performance (Mills, 2014), motivational outcomes or future success more than previous attainments or knowledge (Schunk, 1991). According to self-efficacy theory, a person's self-perception in a certain situation is one of the best predictors of his behaviour in that situation (Bandura, 1989). Learners' beliefs about their abilities to cognitively process academic information have been found to affect learners' motivation and learning (Schunk, 1991). For instance, Schunk (1989) explains how beliefs and judgements of one's abilities can affect academic outcomes. As students start working on a certain task, they have various self-efficacy beliefs that differ

according to their abilities, attitudes and previous experiences as well as situational aspects (e.g. teacher feedback), all these affect how they work. They start to pick up cues about how well they are learning and predict their future performance. Hence, they become motivated once they realize they are making progress and becoming more skilful, which boosts their self-efficacy to perform better and in turn improves their learning experiences. Schunk (1989) also states that believing a difficulty will be faced in comprehending certain material, lowers a student's efficacy for learning it, unless the learner believes that there are other approaches that can help him/her to perform better. However, those who do believe in their abilities to handle information processing demands feel efficacious as they know they will learn from performing such tasks. So, an individual's beliefs in their ability of information processing may determine their reaction when facing a challenging or difficult situation. Those who believe in their abilities to handle challenging tasks of information processing, will consider these tasks a chance to learn, whereas those who feel that certain tasks are beyond their abilities, may lose their confidence and feel less able to perform it.

This phase was followed by the third process-oriented period of L2 motivation research in which theoretical approaches were developed with a focus on changes in language learners' motivation over time (Dörnyei & Ushioda, 2011). It focuses on the process of motivation and its development as an interaction between individuals and contexts (Zoltan Dörnyei & Ryan, 2015). This period witnessed the development of several models and theoretical frameworks focusing on the temporal dimension of L2 motivation, starting from the work of Williams and Burden (1997), Ushioda (1996) and Dörnyei and Ottó (1998), which opened the way for other process-oriented approaches to L2 motivation. The most prevalent models during this period were the process model of L2 learning developed by Dörnyei and Ottó (1998) and L2 motivational self-

system by Dörnyei (2005). In the process model, the motivated behavioral process is divided into three phases: a pre-actional phase of motivation involving goal orientation, values and expectancies, an actional phase referring to motivation that occurs during an action which energizes it, and a post-actional phase process involving evaluation of the action result and making interpretations and attributions by comparing initial expectancies and final outcomes (Dörnyei & Ushioda, 2011). The focus of motivation and related variables in the current study seems to cover the three phases of motivation and how learners' mindset could have an effect on these processes. As will be seen, the study concerns learners' goal orientation (pre-actional phase), L2 motivation (actional phase), attribution styles and responses to failure situations (post-actional phase).

Recently, the process-oriented research has merged into a new period called the socio-dynamic period. One of the limitations of the process model has been pointed out by Dörnyei (2009), who explained that the process-oriented paradigm, despite reconceptualising motivation as a changing cumulative arousal, is still a linear cause-effect model that is not sufficient to explain the complexity of the motivational system. Thus, he suggested adopting a complex dynamic systems approach to radically reformulate L2 motivation. Since then, L2 motivation research has shifted from a process-oriented linear cause-effect model to a more dynamic system perspective which recognises the complex relations between various components of motivation, with a particular interest on the relations between the self-concept and context. This period has witnessed the introduction of three approaches to reconceptualise L2 motivation: a person-in-context relational view of motivation (Ushioda, 2009), the L2 Motivational Self System (Dörnyei 2009b) and motivation from a complex systems perspective (Dörnyei, 2009a). A system is considered dynamic when it involves at least two elements that are related to each other and change over

time. Thus, language mindset, L2 motivation, learners' attitudes and goal orientation should be looked at as a dynamic meaning system where its components are highly related and at the same time changeable over time depending on various situational factors. Recognising that learners' traits display a great amount of variation in different times and situations, these constructs have been looked at from an individual differences perspective as personal traits that characterise individuals to examine their effect and relation on each other. However, they are still not considered stable or monolithic and cannot be treated as generalisable constructs across different times and situations. It is important to look at those motivational characteristics as a complex dynamic system that has complex relations between its component and is dynamic over time.

2.2.3 Review of Relevant L2 Motivation Studies

This section is a summary of the main findings of L2 motivation research which I have deemed most relevant to the current study. Many studies have been carried out to identify or validate motivational strategies for L2 teachers/learners. One of the most prominent frameworks that has been empirically validated is Dörnyei's Motivational Strategies MotS Framework. These studies range from those that simply gather teachers' perceptions on the importance of certain MotS (e.g. Cheng & Dörnyei, 2007; M.-J. Guilleaux, 2013), both teachers and students' views (e.g. Sugita & Takeuchi, 2010; Ruesch et al., 2012) to those that examine the effect of certain motivational strategies on learners' motivation and behavior (e.g. Guilleaux & Dörnyei, 2008; Papi & Abdollahzadeh 2012; Wong 2014). Some studies (Moskovsky et al. 2013; Alrabai, 2016) were quasi-experimental designs in which certain contextually identified motivational strategies were used with experimental groups and their motivational effect compared with traditional teaching techniques. More details on these two studies will be provided in section 2.1.4 on L2 motivational studies in the Saudi context.

As Lamb (2017) summarizes, these studies collectively show that some motivational strategies are considered highly important universally, such as maintaining a good teacher-student relationship, behaving appropriately as a teacher and fostering self-confidence among learners. The results also indicate how effective these motivational strategies could be in enhancing learners' motivated behavior and attitudes toward L2 learning (Guilloteaux & Dörnyei, 2008; Moskovsky et al., 2013; Papi & Abdollahzadeh, 2012). However, it is important to consider the contextual variations in utilizing these motivational strategies as certain strategies might be valued differently across countries. In addition, it is important to consider the usefulness of these strategies from learners' point of views, as Bernaus and Gardner (2008) found that it is the way these strategies are used and perceived among learners that have an effect rather than the employment of these strategies. It has also been noted that the effectiveness of these motivational strategies could be mediated by some learner-related variables such as self-regulation and the ideal L2 self (e.g. Mezei, 2014). Thus, when utilizing motivational strategies, it is critical to look at learner-related variables that could have an effect on the way they perceive these strategies and their effectiveness on boosting their motivation.

The other type of study which aims at increasing learners' L2 motivation is the theory-based studies utilizing certain psychological theories of motivation in L2 classrooms; the most prominent of these are: the self-determination theory (SDT), the L2 motivational self-system and self-cognitive theory (Lamb, 2017). The use of SDT in L2 pedagogy was pioneered by Noels and colleagues (Noels, 2001; Noels et al., 1999). They found that supporting learners' autonomy and competence has led to more internalized motivation among learners. This has been confirmed in other studies (e.g. Carreira et al., 2013; Pae & Shin, 2011; Pelletier et al., 2001) indicating that

internal motivation could be increased by autonomy-supportive teachers with successful instructional methods.

Another dominant framework that has been widely explored and empirically tested is the L2 motivational self-system (Dörnyei, 2009b). Global empirical investigations of this framework have revealed that the ideal L2 self and the L2 learning experience are consistently related to intended or actual learning effort (See Taguchi et al., 2009) and the former is strongly linked with motivated behavior (Kormos et al., 2011). In fact, a recent meta-analysis by Al-Hoorie (2019) has found that the three components of the L2MSS (ideal L2 self, ought to L2 self and L2 learning experience) are significant predictors of subjective intended effort. A number of studies have provided evidence that learners' L2-related visions can be empirically developed using various methods, such as imagery sessions (Magid & Chan, 2012), an Ideal L2 self-Tree activity (Chan, 2014), self-enhancement activities (Sampson, 2012) and role playing as international experts (Munezane, 2013), resulting in motivated learning behavior among learners. Despite the positive outcomes of these studies and the great influence future self-guides can have on L2 learning motivated behavior, it is important to be aware of research (e.g. Kormos et al., 2011; Roshandel et al., 2018) which indicates the importance of self-efficacy on the L2 motivational self-system; Dörnyei & Ushioda (2011) argued that one of the prerequisites for effective future self-guides is the learner's sense of controllability over their action and their belief in the possibility of achieving his/her future image. Without a belief in ones' self, it would be hard to visualize himself/herself in the future or feel that the future self-image is realistic and conceivable.

Research that has attempted to enhance self-efficacy among L2 learners and examine its influence on motivation and achievement has been rare but influential. In a study by Graham and

Macaro (2008), it was found that a 6-month training course for French low-intermediate learners in listening comprehension strategies has resulted in an increase in their self-efficacy and L2 listening proficiency. Likewise, Mills and Péron (2009) has found that a global simulation technique was effective in improving learners' writing self-efficacy beliefs. Also, Matsumoto et al. (2013) found that using some key reading strategies, has affected learners' positively in terms of their intrinsic and extrinsic motivation as well as their reading self-efficacy. Previous research on the role of self-efficacy in language learning has provided evidence that these beliefs are indicators of achievement and that strengthening self-efficacy beliefs enhances linguistic proficiency. Dörnyei (2000) proposed that self-beliefs are dynamic and fluctuating, and therefore certain classroom practices and materials could make a change in L2 learners' beliefs. Mills (2014) believes that certain curricular choices may foster self-efficacy beliefs leading to improvement in linguistic proficiency and achievement. As described in the introduction, from my experience in teaching FL learners, I have noticed that learners hold various beliefs regarding their abilities in language learning and that they can be influenced by the role of the teacher. These self-beliefs and judgements on individuals' own efficacy seem to affect how they perform and act, which influence their motivation and achievement. This issue will be further illustrated in the second part of this chapter from a psychological point of view through the Mindsets theory. It will demonstrate why some learners perceive their abilities differently and how their beliefs affect the way they think and react in various academic situations.

In contrast to the theory-based research, other empirical studies have tested the motivational properties of a particular teaching approach or innovative practice. Among these, Lamb (2017) claimed that Computer Assisted Language Learning (CALL)-related research is the most common. The use of digital technology is a creative way of teaching L2 in contemporary times

and it became an increasingly popular way especially during the worldwide intensification of online teaching during the Covid pandemic. One of the important features of these innovative methods is their motivational aspect for language learners and their positive attitude toward these methods. In their systematic review of 37 studies using computer technology pedagogies, Grgurovic et al. (2013) found that the overall results are positive and supported technology-based pedagogy for language learning. Studies investigating learners' views in technology-supported classrooms in varied contexts have confirmed their enjoyment and increased motivation; for example, in Malaysia (Abdul Razak, 2000), Saudi Arabia (Al Shammari, 2007) and the US (Ducate & Lomicka, 2013). In his review, Lamb (2017) mentioned four motivational benefits associated with CALL. One of these is increasing autonomous learning and individualisation by using various technology-based methods, such as a blogging project (Bhattacharya & Chauhan, 2010), an online course (Sanprasert, 2010) and mobile learning (Kim et al., 2013). Another motivational benefit of CALL is increasing the opportunity of communication in L2. For instance, an online chat task was effective for intensive L2 practice and was rated positively by participants (M. Freiermuth & Huang, 2012). Likewise, intensive speaking practice through video conferencing (Jauregi et al., 2012) resulted in high satisfaction and enthusiasm among learners. Similar results were found in Freiermuth's (2017) and Wehner et al.'s (2011) studies, providing more evidence for the positive effect of CALL. Indeed, Macaro et al. (2012) have noted that the effect of CALL on promoting more positive views toward L2 learning is stronger than the linguistic outcomes.

Nevertheless, Lamb (2017) has pointed out that a few studies using CALL were found to have an adverse influence on L2 learning. In Stockwell's (2013) review, he mentioned two studies that yielded negative effects on learners' motivation (Castellano et al., 2011; Chen & Cheng, 2008)

highlighting some aspects that need to be considered to avoid this, such as ensuring that learners' language proficiency and IT skills are appropriate to use the technology and providing enough guidance to enable them use it properly. So, it is learners' readiness and ability to use the technology that needs to be considered well before adopting a technology-based environment in order to obtain a positive effect of this technology on their motivation.

2.2.4 Motivational Studies in the Saudi Context

Believing in the importance of context and its impact on what constitutes an effective and suitable motivational method, the main focus in reviewing motivational studies in this section is on the Saudi context. A systematic method was followed in identifying and reviewing motivation research in the Saudi context to ensure coverage of the most relevant and important studies. First, the procedure of searching was done with four searching tools: The Saudi Digital Library (SDL), University of Leeds Library (UoL), Web of Science and ProQuest. Most studies were accessed through the SDL, this being the largest online library for academic information and resources in the Arab world. It consists of more than 446 thousand full-text e-books, 169 databases with millions of full-text articles and more than 5 million theses and dissertations. It is constantly updated with up-to-date references from more than 300 global publishers. To ensure inclusion of all relevant studies, 3 other research tools have been checked afterward using various keyword searches until no new articles have been found. The UoL was accessed as one of the major UK libraries and for practical reasons as a researcher in the same university. Web of Science is the largest accessible research tool consisting of a wide range of databases which indexes almost 65 million items annually (Reuters, 2016), and ProQuest is also a reliable search tool that collects the most used databases, it is a comprehensive, varied, and multidisciplinary research platform.

Several keyword searches were used containing permutations of key terms such as ‘motivation’, ‘language learning’ and ‘second language’. The keyword searches were restricted to the abstract of articles only as titles are too limited (resulting in 7 articles only) and the whole article is too broad and brought up many irrelevant studies (resulting in more than 8000). The boolean operators AND and OR were used as appropriate to include several terms of the same construct and limit the search at the same time (see Appendix A for details on keyword searches and outcomes of searching in each database). The truncation feature was used with the word ‘motivation*’ to cover any term related to motivation. Also, other restrictions were applied to minimize the number of studies in which only peer reviewed articles were considered, and other limits of language and date were selected in which all studies should be written in English and published between 2000 and 2019. The total number of relevant studies found was 53 and an exclusion criterion was followed manually to exclude studies that were not relevant or did not meet quality criteria measures (e.g. lack of clear data analysis, lack of sampling details). For example, studies on young learners or where motivation was not the main focus of the study were excluded. The final number of studies included in this section is 29 studies. These were then sorted into two main categories: conceptual studies and intervention studies. This division provides the organizational structure of this section.

The first part deals with studies that explore learners’ motivation and perceptions on motivational teaching strategies, studies that look at factors affecting motivation and studies that examine the relationship between L2 motivation and other variables. The second part deals with intervention studies that aim at enhancing L2 motivation. This includes studies examining the effect of motivational strategies, studies that deploy a certain teaching method or theory in L2 classrooms and technology-based interventions. The number of intervention studies in the Saudi

context seem to be more than in other contexts. That seem to be for feasibility reasons as most researchers in Saudi Arabia are funded by the government and facilitated to collect their data. Researchers who work in academic sectors also support each other by participating in studies and allowing researchers to conduct their studies in their own classrooms and contact their learners. This has resulted in a wide range of intervention studies in the country which will be reviewed in the second section of this chapter with a link to L2 motivational studies in other contexts.

2.2.4.1 Conceptual Studies

Studies examining Learners' L2 Motivation and Related Constructs

This section focuses on research that measures learners' motivation or their perceptions of motivational methods. One of these studies measured different types of learners' motivation (mainly intrinsic, but also includes instrumental, extrinsic and integrative) using questionnaires (Moskovsky & Alrabai, 2009). Extrinsic and instrumental motivation were used differently in the study in which extrinsic motivation was used generally to refer to motivation to learn for external factors (e.g. gain social acceptance) whereas instrumental motivation refers to the motivation to learn English as an instrument to enable doing something else (e.g. communicate with others, get a better job, watch movies). Findings from this research revealed high levels of motivation among Saudi EFL learners with instrumental motivation being the most highly ranked followed by intrinsic motivation and then extrinsic ones. Nevertheless, it is important to note that the items of some scales were very few, such as extrinsic and integrative motivation scales in which only 1 and 2 items respectively were used. This could have an effect on the reliability of these items and results.

Other studies looked at students and teachers' perceptions on methods for promoting motivation. For instance, Alshehri (2014) investigated learners' and teachers' views on MotS. He found strong agreement between both sets of views regarding the teacher role as a motivating factor. However, there were some variations in that teachers favored MotS that focus on learners' future academic outcomes while learners preferred MotS that promote the social aspects of learning like participation and interaction with L2 speakers. Another study by Alseghayer (2013) looked at learners' perceptions regarding online reading motivation in terms of four aspects: the intrinsic value of reading online English texts, the extrinsic value of reading online English texts, the attainment value of reading, and reading efficacy. The results indicate high levels of motivation to read online texts and a positive effect of the four constructs on learners' amount of reading online texts with extrinsic value having the highest effect.

Looking at studies on MotS in the Saudi context and other contexts, there seems to be general agreement that teacher-related strategies are highly rated by both learners and teachers. These strategies include the teacher role (e.g. setting an example with one's personal behaviour) and teacher-learner relationship (e.g. teacher's academic or emotional support)(Alshehri & Etherington, 2017; Guilloteaux & Dörnyei, 2008b; Papi & Abdollahzadeh, 2012). It is not surprising that learners' motivation is influenced by teachers' motivation and that the teacher is perceived as a primary aspect of motivational strategies. This link between teachers and learners' motivation has been researched in the literature though not extensively, but a relationship was found by Bernaus, Wilson & Gardner (2009) between Spanish teachers' motivation and learners' motivation mediated by the use of motivational strategies. Some studies (e.g. Henry & Thorsen, 2018) have even examined the effect of teacher-student relationship (moments of classroom interaction between teachers and students) on learners' motivation and found that teacher-student

relationships are likely to have an influence on learners' L2 motivation. In studies focusing on MotS and its effect on learners motivation (e.g. Alrabai, 2016; Moskovsky, et al., 2013), the teacher's behavior was among the most important factors. Teachers' positive strategies and attitudes were also found to be among the most important strategies for boosting learners' motivation used by language teachers in other contexts (e.g. Guilloteaux & Dörnyei, 2008; Papi & Abdollahzadeh, 2012). It is what Lamb (2017) concluded in his state-of-the-art review of motivational studies in language teaching, saying that the teacher role was highly valued among motivational strategies by teachers and learners in different contexts and that positive teacher-student relationships and boosting learners' self-confidence play an important role in learners' motivation.

Studies on Factors Affecting L2 Motivation

A number of studies have attempted to explore the factors that affect motivation positively or negatively. Al Harthi (2016) investigated the motivating and demotivating factors among Saudi EFL learners and found some cultural and educational factors that affect motivation. Fear of social criticism, teacher reaction and classroom practices were the most common factors affecting motivation adversely. Also, some teachers' and learners' beliefs about language learning seem to play a role in demotivation, like the belief that learning EFL is difficult. Parental encouragement was mentioned as a motivating factor and lack of it for some learners as a demotivating one. In another study, Shah (2017) evaluated learners' learning experience by concentrating on the contextual motivational factors. Learners reported their dissatisfaction with teachers' inadequate use of motivational strategies. Despite their positive views about the English course and its effectiveness in developing their language, they expressed their boredom due to long class hours. This was related in some cases to teachers' incompetence or

unpreparedness. Bukhary & Bahanshal (2013) found that many students were not motivated to attend or participate in English classes and that teachers revealed their dissatisfaction of learning outcomes despite the efforts they exerted to promote a good language learning experience. They attributed this to the strict instructions they have to follow to complete the curriculum in a limited time, leaving no space for personalizing this learning experience. In Awad's (2014) study, classroom engagement aspects were reported as a motivational factor. The teacher was also referred to as a main motivator as well as parent and peer support. Learners expressed their desire to know more about the target language culture, information which they felt their textbooks lacked. In his study, Al-Sharief (2013) found that most participants were motivated to learn and had positive attitudes towards English, its culture and their English teachers. However, the demotivating factors were related to the environment, materials and method. From the results of these studies, it can be concluded that the most commonly reported positive motivational factors seem to be related to the teacher role, and encouragement of parents and peers, while some teacher practices, and contextual factors like the materials, as well as lack of entertainment and long learning hours, were demotivating for learners.

Studies on the Relationship between L2 Motivation and Affective Factors

A few motivational studies in the Saudi context have investigated L2 motivation in relation to other affective variables. For instance, Almurshed and Aljuaythin (2019) explored the relationship between L2 motivation and anxiety and found that learners suffered from high levels of anxiety but were still highly motivated. They concluded that a high level of anxiety does not prevent learners from being motivated to learn a foreign language. Furthermore, Alrabai & Moskovsky (2016) examined the relationship between five affective variables (motivation, anxiety, attitudes, self-esteem and autonomy) and L2 achievement. A significant correlation was

found between all the variables with anxiety showing a negative relation with all the rest. L2 achievement was also significantly correlated with all variables, though the direction of correlation was negative with anxiety. The results also revealed the importance of these affective factors for L2 achievement as they accounted for 85%-91% of this variance with motivation being the strongest predictor for learners' achievement.

Alamer and Lee (2019) developed a motivational process model in an attempt to examine the relationship between basic psychological needs (autonomy, competence and relatedness) and the key constructs of three main motivational theories (self-determination theory, goal orientation and motivational emotions) which collectively predict L2 achievement among Saudi language learners. Using a structural equation modelling approach, they found that the model accounted for 28% of the variance in L2 achievement. This showed a good level of validity for the four factors together (basic psychological needs, self-determination theory, goal orientation and motivational emotions) in predicting L2 achievement. The final model suggests that motivational tendencies of students start with the fulfillment of psychological needs. When these needs are satisfied, they would contribute to an increase in learning goals and performance approach goals. The type of goal orientation in turn, would affect the motivational emotions of learners and these emotions would determine the nature of learner's motivation. More specifically, mastery goal approach would positively affect the motivational emotions while performance avoidance would influence the emotions negatively. Positive emotions are more likely related to endorsing more internal motivation while negative emotions may lead to external motivation or avoidance of bad experiences or in the worst cases, lack of motivation and interest in learning. Thus, the motivational emotions of learners were found to be directly related to the type of motivation (Intrinsic, extrinsic or amotivation).

This model seems useful in understanding some of the important factors affecting L2 achievement, but it is a linear model that looks too simplified to explain the complex nature of the relationship between motivational factors and achievement. The sequence of the four theoretical accounts of motivation found in the results was different from the initial hypothesized sequence which could indicate the inadequacy of looking at the relationship between these factors in a simple one-to-one pattern. The link between these factors seem too interconnected and complex to be presented in such a limited process model and if this study is duplicated, another sequence could appear as these factors could affect each other in different ways. Thus, it seems necessary to examine the relationship between these factors using a complex dynamic system approach in a complex model where each variable is measured in relation to all other variables.

Studies on the L2 Motivational Self-System (L2MSS) and its relationship to other constructs

Most of the studies that looked at the relation between motivation and other constructs focused specifically on the L2MSS and its relationship with other factors. For example, Alqahtani (2018) explored the links between the three constructs of the L2MSS, English learning anxiety, parental encouragement, religious interest and intended learning effort. The results revealed that the ideal L2 self and attitudes towards learning were motivators for learners to make more effort, and the ought to L2-self increased their language learning anxiety. Parental encouragement and religious interest influenced learners' ideal selves and attitudes towards learning.

Furthermore, Khan (2015) and Moskovsky et al. (2016) examined the relation between the L2MSS and L2 achievement. While the former study focused only on the relationship between

these two aspects, the latter explored the relation between the three constructs of the L2MSS theory and learners' intended effort and examined the effect of the theory as a predictor of L2 achievement. Different results were obtained from the two studies; Khan (2015) found that both the ideal L2 self and ought-to L2-self correlate significantly with learners' intended effort to learn English and that only the ideal-self correlates significantly with L2 achievement, whereas Moskovsky et al. (2016) confirmed the L2MSS overall as a good predictor of learners' intended effort but not L2 achievement. This last result is consistent with Al-Hoorie's (2019) finding in his recent meta-analysis, which found that the three components of the L2MSS (ideal L2 self, ought to L2 self and L2 learning experience) are significant predictors of subjective intended effort. Variations in the results could be attributed to other factors that could mediate the relation between the L2MSS constructs and L2 achievement, such as opportunities for L2 use and psycholinguistic processing mechanisms as mentioned by Segalowitz, Gatbonton and Trofimovich (2009). In addition, variations in proficiency test exams used in each study could have made a difference in the results, a factor also mentioned by Al-Hoorie (2019) in his meta-analysis review of L2MSS studies. For instance, comparing Khan (2015) and Moskovsky et al. (2016), the former used course grades from final exams as a measure of L2 achievement without providing enough details of its reliability or adequacy in measuring language proficiency, whereas the later used an IELTS reading and writing exam drawn from an IELTS book, therefore not including any measure of oral proficiency.

Some studies were conducted to explore learners' motivation using the L2MSS either to investigate predictors of L2 motivation (Eusafzai, 2013) or to assess or validate this theory in measuring L2 motivation (Alshahrani, 2016; Alharbi, 2017; Alqahtani, 2017). Using factor and regression analysis, Eusafzai (2013) found seven predictors of the L2 motivational self among

Saudi learners: 1) attitudes towards learning English, 2) instrumentality-promotion, 3) instrumentality-prevention 4) attitudes towards the L2 community, 5) value of studying English, 6) parental encouragement and 7) English Anxiety, with the first two being the strongest factors. When examining the relationship between the L2MSS constructs, Alshahrani (2016) found that all components of the theory are strongly correlated whereas Alharbi (2017) found a positive correlation between the ideal L2 self and ought to L2 self and between the ideal self and L2 learning experience. Results of the regression analysis in all three studies (Alshahrani, 2016; Alharbi, 2017; Alqahtani, 2017) confirmed the validity of the three components of the theory and its usefulness in assessing L2 motivation.

Some studies have focused on specific components of the L2MSS, such as the ideal L2 self and learning behavior. For instance, Alharthi (2014) found from interviewing 132 students that positive future images of themselves and the L2 community is a motivating factor that pushed them to invest in English learning. Moreover, Al-Otaibi (2013) examined the relationship between learners' vision of future ideal L2 selves and their regulated behavior. Correlation analysis indicated that regulated learning behavior is associated with learners' vision of ideal L2 selves and this was supported in the qualitative data in which most participants expressed how their vision of future selves motivated them to exert more effort. However, such causal claims can only be properly evidenced by intervention research, and as we shall see in the next section, a surprising amount of this has been done in Saudi Arabia.

2.2.4.2 Intervention Studies

This section includes Saudi intervention studies that have attempted to utilize a certain procedure or method to boost learners' motivation. Eleven studies have been considered in this review i.e.

those which met the search criteria explained at the beginning of Section 2.4. Table 1 below provides a summary of these studies, which can be divided into three types: studies on MotS, studies implementing a certain theory or teaching method, and technology-based interventions.

Table 1: Summary of Intervention Studies investigating L2 Motivation in the Saudi Context

Study	Population	Research Aims	Method of Investigation	Main Findings
Alrabai (2016)	Phase 1: 204 EFL school/university teachers. Phase 2: 437 male learners aged 15–25 and 14 teachers in 5 schools/universities.	1.To identify the most popular MotS among Saudi teachers of EFL (Phase 1). 2. To examine whether implementing these MotS would increase learners' L2 motivation and achievement (Phase 2).	Quasi-experimental design: 1. Implementing 6 MotS (identified in Phase1) by trained teachers in experimental groups during a 10-week course 2. Observing lessons using an observation scheme like the 'motivation orientation of language teaching' (MOLT). 3. Learner motivation survey administered at beginning and end of course.	The use of MotS in the experimental group resulted in an increase in learners' motivation as evidenced in observed class behavior and survey responses– compared to the control group who received traditional pedagogy. Increased learner motivation in the experimental group resulted in higher L2 achievement
Moskovsky et al. (2013)	14 teachers, 296 male learners of diverse backgrounds and aged from 12 to adult.	To examine the causal influence of contextually appropriate MotS on learners' trait and state motivation.	Quasi-experimental design: 10 preselected MotS were implemented in experimental groups for 8 weeks; control groups received traditional teaching.	The use of 10 MotS increased the L2 motivation of learners in the experimental groups; and this increase was greater in state than in trait motivation.
Madkour & Mohamed (2016)	108 students (58 males and 50 females) from the College of Languages and Translation at Al-Imam Mohammad Ibn Saud Islamic University in Saudi Arabia.	Explore the effect of students' multiple intelligences profiles on their motivation and language proficiency.	Quasi-experimental design involving two groups. The first studied in a traditional classroom relying on memorizing language rules while the second group depended on using multiple intelligences in learning. Students' multiple intelligences questionnaire was developed identifying the English language activities that they were interested in and benefited from. In addition, students' grade records, assignments, attendance, and class observation were analyzed.	Results indicated that becoming aware of their multiple intelligences contributed to enhancing learners' motivation which helped them improve their language skills. It was found that teaching strategies that depend on memorizing language rules hinder learners from improving their language proficiency.

Study	Population	Research Aims	Method of Investigation	Main Findings
Ahmed & Dakhiel (2019)	35 12th grade students between 18 and 19 years old (in one of the high schools of Jeddah).	Examine the effectiveness of learner-centered teaching on learners' attitude towards EFL and academic self-motivation.	An 8-week training program was implemented involving active learning-based training sessions based on three-strategies learning modules (Cooperative Learning: Think, Pair, Share, and Think Out Loud). Attitude towards EFL and academic self-motivation were measured pre and post training.	The results indicated a significant improvement in learners' attitude towards EFL and academic self-motivation between pre and post scores.
Kassem (2018)	60 EFL students in their first year in the English Department at Prince Sattam Abdulaziz University were divided into control (n=30) and treatment (n=30) groups.	Examine the effect of a Hybrid Problem-based Learning approach on learners' speaking proficiency and motivation.	A whole semester intervention in which the control group was taught speaking using a traditional method while the treatment was taught using a Hybrid Problem-based Learning. A mixed method data collection: Quantitative phase using pre and post questionnaires to measure learners' speaking proficiency and their L2 motivation. Qualitative phase using semi-structured interviews with students and instructors and class observations throughout the semester.	The results indicated a significant difference between the treatment and control group regarding their speaking proficiency and motivation, in favour of the experimental group.
Oraif (2018)	55 female undergraduate EFL learners participated in the study, 6 participants from each group were interviewed.	Explore the effect of a flipped approach in an EFL writing classroom on learners IM and outcomes.	A mixed method approach in an experimental design was used in which one group was taught writing in a flipped classroom and the other in a non-flipped class. Pre and post questionnaires and writing exams were administered followed by interviews.	The flipped classroom group had significantly higher IM than the other group. They also showed a higher satisfaction of the basic psychological needs (competence, autonomy and relatedness) and a more positive attitude about the environment as a supportive factor for these needs.

Study	Population	Research Aims	Method of Investigation	Main Findings
Alzubi, Singh and Hazae 2019)	70 male EFL undergraduates from a reading class.	Investigate the impact of Reading Learning Strategies (RLS) using smartphones and applications on learners' psychological autonomy (motivation, self-efficacy, agency, positive attitudes, desire to seek information and the need to achieve).	The intervention program was implemented over 12 weeks with the experimental group by using RLS via smartphones and applications. Pre and post questionnaires were administered to both the experimental and control groups.	A significant positive correlation was found between using RLS and improvement in psychological autonomy. Post- intervention results showed a significant increase in the psychological autonomous features of the experimental group compared to the control.
(Alshahrani, 2017)	39 university students registered in an English course and 2 non -native teachers participated in the study.	Examine the effect of Twitter on some psychological aspects of EFL learners (attitude, confidence, motivation, interest in L2 culture, social interaction and engagement) and L2 achievement.	Mixed method approach using pre and post questionnaires (measuring learners' attitudes toward English and the L2 culture, motivation, confidence, social interaction and confidence) and an achievement test. Twitter was used as a platform for learning an intensive English course where authentic materials of language use are posted by native speakers in the form of video clips, images, articles and dialogues. This platform was used by participants for learning, through shared materials, posting tweets and interacting with peers.	The participants reported high levels of motivation and confidence and positive attitudes towards learning and the L2 culture as an increased level of interaction. No statistical significance was found in the achievement test between the control and experimental groups.
Ali (2017)	80 Saudi male EFL students from the university of Bisha.	Measure the effect of Blackboard on EFL learner's motivation.	Mixed method approach using a questionnaire that measures intrinsic and extrinsic motivation and an open-ended question on the factors that motivate or demotivate learners to use Blackboard (a web-based platform for virtual learning)	The mean scores of learners' motivation showed a high level of both intrinsic and extrinsic motivation indicating that Blackboard has fostered learners' motivation. Students also were more motivated to use Blackboard

Study	Population	Research Aims	Method of Investigation	Main Findings
Ahmad et al. (2017)	61 Saudi preparatory year EFL learners from the pre-intermediate level were selected and divided into experimental (N=31) and control (N=30) groups.	Examine the effect of using Smartboards on the motivation of Saudi university EFL learners.	Quasi-experimental design in which the experimental group was taught with a Smartboard and the control group was taught with traditional whiteboard for seven weeks. A questionnaire was administered to both groups pre and post the treatment.	than traditional teaching, but felt that they need help from teachers and administrators to use it and suggested some modifications or requirements to facilitate using it. A significant difference in motivation was found between the experimental and control groups, which could be attributed to the use of the Smartboard.
Gamlo (2019)	30 female EFL university students	Investigate the effect of integrating mobile game-based applications in EFL learning on learners' motivation	Learners were required to use mobile game applications in learning English over a six-week period. Data was collected via pre- and post-questionnaires. The pre-questionnaire was used to explore learners' motivation to learn English. The post- questionnaire was to collect their views regarding the applications and its effect on their motivation.	Learners' motivation was highly instrumental before the integration. After the integration, the learners thought that the applications are useful and increased their motivation.

As shown in Table 1 above, studies implementing MotS in the Saudi context (Alrabai, 2016; Moskovsky, et al., 2013) have adopted quasi-experimental designs in which contextually identified MotS by teachers have been implemented with Saudi EFL learners yielding positive results on their motivation and achievement as evidenced in the results of the experimental group over the control. Both studies involved actual observations of classroom practices to observe teachers' or/and learners' behaviors. This confirms the positive relation found between teachers' motivational practice and learners' classroom engagement and self-reported L2 motivation in previous studies in other contexts (Guilloteaux & Dörnyei, 2008a; Papi & Abdollahzadeh, 2012)

Theory-based studies or studies examining a certain teaching method were mainly conducted using an experimental design with two groups, one as a treatment receiving a certain method in learning English and the other as a control receiving traditional teaching. Despite using various methods (multiple intelligences, learner-centered teaching, hybrid problem-based learning, flipped classroom and RLS), they all showed a positive impact on L2 motivation. The fact that a treatment of 3 months or less is providing such results seem promising, but it is important to note that most of these studies are on a small scale that may not be generalizable. Another limitation in Ahmed & Dakheel's (2019) study is that no control group was used to compare with the experimental, which make the results questionable.

Technology-based studies were mainly conducted to examine a form of technology as a teaching method or a platform for interaction and learning on L2 motivation. The overall results of these studies are encouraging as learners' views seem positive and their motivation is high when using these forms of technology in L2 learning. This is in line with learners' views on technology-based L2 pedagogy in other contexts (e.g. Akbulut, 2008; Öz, 2015) in which they showed positive attitudes toward the use of technology in language learning. This was also mentioned by Felix (2005) in his review of CALL studies saying that learners' perceptions are generally positive regarding the use of

technology except for the fact that more technical support is needed by learners as Ali (2017) found in his study. In these studies, technology-based instruction was found to be effective in boosting learners' motivation but made no significant difference in learners' achievement. This is in line with studies in other contexts (e.g. Echávez-Solano, 2003; Rachels & Rockinson-Szapkiw, 2018). In addition, Alshahrani's (2017) study provided evidence for Twitter as a technology-based method for L2 learning that was effective in increasing communication and interaction among L2 learners, as found in other contexts (e.g. Freiermuth & Huang, 2012; Jauregi et al., 2012). This also confirms one of the motivational benefits of using CALL mentioned by Lamb (2017).

Despite showing a positive effect on learners' motivation, some of these studies are problematic in their research design. For instance, Ali (2017) and Gamlo (2019) did not have a control group, nor did they measure motivation before the treatment to examine within-group differences. Despite having a control group, Alshahrani (2017) only measured learners' perceptions post intervention. Thus, these studies do not provide strong evidence with regards to the actual motivational effect that these types of technology have on learners.

2.2.4.3 Concluding Remarks

Looking at the focus of L2 motivational studies in the Saudi context, most have attempted to motivate learners using various classroom motivational methods or relate learners' motivation to other individual factors. A factor that could mediate the effect of any motivational strategy or technology-based method is the learners themselves as it is learner's motivation that is targeted. And if we think about how effective this could be, we should look at how learners perceive these methods, the learning process and their abilities. It is vital to know whether the learner herself has the potential to improve herself, has the belief that she is able to develop her skills when motivated. The way she perceives herself and her skills and abilities is determined by what Carol Dweck called her mindset, which could make all the difference in the usefulness of these methods. Based on this

theory, endorsing more of a growth-mindset (believing that abilities can change) could increase the effectiveness of motivational strategies and boost learners' motivation, while a fixed mindset (believing that abilities are fixed and cannot be changed) could have an adverse effect. That is because a person's self-perception in a certain situation is the best predictor of his behavior in that situation (Bandura, 1989). In other words, learners' beliefs about themselves would determine the way they behave and how motivated they are to put in more effort. For instance, if a learner believes that developing herself in a certain area is impossible or difficult, there is little chance that any external motivators would work unless the learner started to believe in the possibility to change her abilities. Likewise, teachers' motivational strategies could only be effective in motivating learners to learn English only if the learners do believe in themselves that they are capable in improving themselves in English. Otherwise, there will be no value for any methods used to boost their motivation.

Taking a look at the theoretical frameworks adopted in these studies, the L2MSS and the SDT are the most popular. Despite its popularity, the L2MSS does not seem sufficient to explain how a learner with a fixed mindset (believing his abilities are fixed and cannot be developed) can use her future self to motivate herself if she does not fully believe that she is able to achieve this future image. Even though it has been proven effective in motivating a number of learners, it does not seem to be adequate for learners who perceive themselves negatively or do not believe in themselves. The SDT also illustrates learners' level of determination expressed as internal or external depending on the type of motivation and explains three psychological needs that motivate the learner to initiate certain behaviors, but lacks the capacity to interpret the reason why these needs might vary from one person to another. It fails to explain why some learners might be intrinsically/ extrinsically motivated or not motivated at all, and how the way they perceive themselves and their abilities could have an effect on their motivation.

The aim of the current study is not just to measure learners' motivation, but to work on their deep beliefs about themselves with regards to language learning. It is what we refer to here as their 'language mindset'. Believing that the change is always stronger when it comes from within the learner himself rather than external factors, our intervention focuses on changing learners' beliefs and the way they perceive their own language abilities, using motivational sessions based on the mindset theory. Details on this theory and relevant research will be illustrated in the following section.

2.3 Mindset Theory and Research

2.3.1 Implicit Self-theories (Mindsets): Growth vs. Fixed Mindset

The concept of implicit theories is based on the idea that each person develops beliefs and basic assumptions regarding the malleability of human attributes such as ability, intelligence and personality (Dweck, 2000). They are called implicit theories because they are "largely implicit or poorly articulated" (Dweck et al., 1995, p.267). The psychologist Carol Dweck and her colleagues developed the framework of implicit theories after extensive research for around three decades and discovered the powerful effect of these self-theories on humans' lives. Dweck (2012) states that such beliefs people create about themselves, strongly influence what they want and whether they will be successful in a certain area. They also affect the way people think, feel and act, shaping their worlds and giving different meaning to their experiences (Dweck, 2000).

Research has found that these implicit theories or belief systems are divided into two types: *entity theory* and *incremental theory*; which Dweck referred to later as 'fixed mindset' and 'growth mindset', respectively (Dweck, 2000, 2006; Dweck & Leggett, 1988). People with a fixed mindset believe that personal attributes such as intelligence are fixed and cannot be changed. On the contrary,

people with a growth mindset consider these traits flexible and that there is always a possibility to change or improve them. A number of studies have shown that each theory (or mindset) is related to a network of joint beliefs endorsed by the individual to explain traces of his behaviour (e.g. Ames & Archer, 1988; Plaks et al., 2009; Robins & Pals, 2002; Ryan & Mercer, 2012b). These beliefs include achievement beliefs, effort beliefs, and beliefs on ability, goal orientation and reactions to failure situations. Most of Dweck's (2000) studies also illustrate the impact of these two mindsets on motivation and achievement.

The next sections demonstrate how findings from mindsets research relate to responses to challenges and setbacks, achievement goals, attribution styles and actual achievements. In each section, examples of research will be reviewed to show the relation between mindsets and each of these domains, including research which seems less supportive of the theory. In this document, I have chosen to use the more accessible term 'mindset' rather than 'implicit theories' which is commonly used in the psychology literature.

2.3.2 Mindset and Responses to Failure Situations: Helpless vs. Mastery-oriented Responses

Two distinct reactions to failure situations were discussed by Dweck and colleagues in their early work on implicit theories: *helpless* and *mastery-oriented* responses (Diener & Dweck, 1978, 1980; Dweck, 1975). The helpless manner originally describes individuals holding the idea that situations are out of their control. Dweck (2000) used the term *helpless* to refer to students' view of failures as circumstances that are uncontrollable and unchangeable. This was further extended to include other reactions when facing failure; such as intelligence denigration, lower expectations, less persistence and weaker performance. However, the *mastery-oriented* response describes students with a hardy reaction to failure; even with their present difficulties, their concentration is on achieving mastery (Diener & Dweck, 1978, 1980).

Previous research has found different attribution patterns associated with responses to failure situations (Diener & Dweck, 1978). Attributions are about causality perceptions, allocating a certain reason for why an incident might have occurred (Weiner, 1972). The helpless pattern is allied with attribution of failure to factors they perceive as uncontrollable like lack of ability. In contrast, attribution of failure in the mastery-oriented pattern is associated with lack of effort and thus the concentration in this pattern is more on improving performance through making more effort (Dweck, 2000). These two patterns were revealed in Diener and Dweck's research (1978, 1980) as they conducted the same study, once with fifth graders and next with fourth, fifth and sixth-grade students, showing either helpless or mastery-oriented responses to failure based on a questionnaire. They were given a set of problem-solving activities that were easy to solve followed by four difficult activities that they could not solve to track their reactions when encountering a challenge. By having students think out loud when solving the activities and interviewing some of them, two distinct patterns emerged. Those who showed a helpless response to failure, immediately lost faith in their intelligence and blamed their abilities for the failure. They also quickly gave up trying and showed negative emotions and disappointment when given the hard task. On the other hand, the mastery-oriented group showed a different reaction as they started to give instructions for themselves to try harder, focusing on ways to develop their performance rather than being concerned with reasons for their failure.

Similar attribution styles were found also in another study that examined college learners' mindset beliefs, causal attributions and responses to failure as well as success situations (Robins & Pals, 2002). Questionnaires were distributed 6 times during the 4 years of college. Fixed mindset learners attributed failure to ability and success to other external uncontrollable factors while growth mindset learners attributed success to effort but did not attribute failure to lack of effort. These attribution styles indicate that fixed mindset learners showed a helpless response in both failure and success situations attributing both results to uncontrollable factors, even when succeeded, they attributed

success to luck. This study provides evidence that fixed mindset learners could react in a helpless manner not only in failure situations but also in times of success.

Thus, people reacting in a helpless or mastery pattern seem to have distinct views of failure. While the former consider failure a measure of abilities and an unchangeable situation, the latter consider it a learning opportunity that can be improved. This was found to be related to the core beliefs of the mindset theory. Dweck's framework proposes that a person's core beliefs can create various response patterns when encountering difficulty (Dweck, 2000; Dweck & Leggett, 1988). A consistent finding in mindset research is that students' mindset has numerous implications for how they react to challenges and setbacks. Learners endorsing a fixed mindset, are more likely to show a helpless response in failure and challenging situations, as opposed to growth mindset learners who tend to respond to failure in a mastery-oriented pattern (e.g. Diener & Dweck, 1980; Robins & Pals, 2002; Yeager & Dweck, 2012).

2.3.3 Mindset and Achievement Goals: Performance vs. Learning Goals

The achievement goal theory has been dominant in the academic motivation literature for many years (Senko et al., 2011). Two different goals have been identified in the achievement goals literature: performance goals and learning goals. The performance goal is about showing one's abilities and intelligence to win positive judgments of performance and avoid negative ones, to look smart. People who set such goals try to avoid mistakes by completing tasks they already know they are good at and avoid challenging ones. Rather than focusing on showing the current level of competence, a learning goal is about increasing competence by mastering new skills and understanding new things to develop one's self (Dweck, 2000). An example of this type of goal is students expressing their interest to master a certain skill in order to gain internal satisfaction (e.g. Robins & Pals, 2002) or students expressing their interest in learning as a reason for their study (e.g. Dupeyrat & Mariné, 2005).

It is important to note that these two goal types have been found to be independent of each other, meaning that individuals may show low or high orientations toward both of them simultaneously as evidenced in some studies (e.g. Ames & Archer, 1988; Roedel & Schraw, 1995). Dweck (2000) states that both goals are universal and absolutely normal and could be achieved at the same time, but in reality, these goals are usually in conflict where one is more important than the other, and the danger is when performance goals are overemphasized. This is because focusing on performance goals can result in passing up learning opportunities which involve a risk of errors. Also, overemphasis on this type of goal may promote a helpless response in the event of failure.

In achievement situations, it has been found that learners' goals can foster responses to failure situations (Dweck, 2000; Elliott & Dweck, 1988). Two groups of adolescents were given the same tasks to work on in which one group was told that their performance on tasks would measure their abilities (emphasizing performance goals) and the other group was told that tasks will help them learn new things (emphasizing learning goals). Also, among these learners, some were told they had the ability to do very well while others were told their ability was not very high to perform these tasks. It was found that students in the learning goals group showed a mastery-oriented manner when performing difficult tasks, regardless of the ability message they received. This was shown in their choice of tasks, performance on difficult ones and the comments they verbalised while performing such tasks. For the performance goal group, the ability message made a difference in that those who received a high ability message were more oriented toward a mastery-response when facing difficulty and those who thought their ability is lower, showed a helpless response when performing difficult tasks. This indicates the effect achievement goals on promoting a mastery vs. helpless response when encountering difficulties. It also shows the power of having a learning goal where the ultimate aim is to learn and develop one's self and how this can promote challenge seeking a mastery

reaction regardless of perceived ability. This finding was supported in other studies (e.g. Ames & Archer, 1988; Hoyert & D O'Dell, 2009; Robins & Pals, 2002). This finding was supported in other studies (e.g. Ames & Archer, 1988; Robins & Pals, 2002) where learners' achievement goals were found to be related to their responses to failure situations in the analysis of questionnaire items analysis.

Dweck (2000) illustrates how focusing on performance goals promotes a helpless response in the face of challenge, while focusing on learning goals provokes a mastery-oriented response. If the main concern is to show one's abilities, difficult tasks are more likely to be avoided to prevent one looking less competent, whereas these difficult tasks are a good learning opportunity for those concerned more on improving their skills. Likewise, goal orientation has been found to be related to learners' attribution styles (e.g. Ames & Archer, 1988). Those oriented toward performance goals were more likely to attribute success/failure to uncontrollable factors while those oriented toward learning goals were more likely to attribute success/failure to controllable factors like effort.

Most importantly, a strong association has been found between learners' mindsets and achievement goals, in which mindsets were found to direct learners to focus more on performance or learning goals (Dweck, 2000). Many studies have found through questionnaire measures and task choices that students endorsing more of a growth mindset, have more tendency toward learning goals whereas students with a fixed mindset, show more orientation toward performance goals (e.g. Bandura & Dweck, 1981; Blackwell et al., 2007; Cury et al., 2006; Dweck, 2000; Dweck & Leggett, 1988; Robins & Pals, 2002). A similar result was found in a study by Stone (1998) (as cited in Dweck, 2000) who found a strong difference in learners' goal choices based on their mindsets. However, when asked later about the value of these two goal types, growth and fixed mindset learners placed a high value on both types showing similar results. Thus, he explained that this relation between learners' mindset and achievement goals could only be true when the two goals are pitted against

each other (the learner had to choose either one of the types). This means that both types of goals could be favoured by learners regardless of their mindsets, but if given a choice between one of them, fixed mindset learners would not risk making errors and prefer performance goals to show high performance as opposed to growth mindset learners who might prefer a challenging choice. This result is not surprising given that these two goal types were found to be independent of each other (not one is opposite the other), as illustrated above, and thus should be measured separately (using questionnaire items that measure learning goals and other items that measure performance goals) to find out the real link between learners' mindsets and each one of these goals.

Despite the strong link scholars have made between mindsets and achievement goals for a number of decades, inconsistent results have been found among this body of research (Burnette et al., 2013). For instance, this link was not confirmed in some studies in which no significant relation was found between fixed mindset and performance goals or growth mindset and learning goals (e.g. Bråten & Strømsø, 2004; Dupeyrat & Mariné, 2005). Similarly, Hayamizu and Weiner (1991) found no significant relation between fixed mindset and performance goals. Yet, a positive correlation was found between growth mindset and both types of achievement goals. Other studies have reported reverse results of hypothesized relations. For example, Biddle et al. (2003) and Stevenson and Lochbaum (2008) found a positive correlation between growth mindset of athletic ability and performance goals rather than a negative one as hypothesized by the mindset theory. It is important to note that the inconsistency of results on goal orientation could be due to the difference in the way these goals are measured. These studies measured achievement goals separately using different items to measure each type of achievement goals which contradicts Dweck's (2000) approach. In her goals measures scales, goals are measured against each other (using items that pit learning against performance), believing that variations in learners' preferences for these goal types could only emerge when measured against each other.

To summarize, research on mindsets revealed the effect of holding a growth vs. fixed mindset on goal orientation and responses to failure situations. Students who believe their personal traits are malleable, have more tendency to set learning goals and show a mastery-oriented response in the face of challenges. By contrast, students who believe their personal attributes are fixed, are more likely to set performance goals and show a helpless response when encountering difficulties.

2.3.4 Mindset and Attribution Styles

As illustrated in the previous sections, research on mindset beliefs has shown how types of mindset can be distinguished by two different attribution patterns. Growth and fixed mindset beliefs were linked mainly with effort and ability attributions respectively. Failure is perceived differently by learners depending on their mindsets. Those with a fixed view, perceive it as a sign of low ability whereas those with a growth view consider it a chance to try a different way. Effort also has different meanings among these learners. It signifies low ability by fixed mindset individuals. Having to make an effort is perceived by them as they have low ability, believing that learner with high natural ability would not need to exert effort in learning. However, for growth mindset individuals, effort is a way to increase abilities and develop through learning (Dweck, 2000).

Leggett & Dweck (1986) conducted a study on 8th grade students to explore their perception of effort and its relationship to their mindset beliefs and goals. After measuring their mindset and goals via questionnaires, they were asked to agree or disagree on a number of statements about effort. Some statements displayed effort as a negative thing, where exerting effort indicates low ability (e.g. “if you have to work hard on some problems, you’re probably not very good at them”), while other statements displayed it as a positive thing, where exerting effort increases ability (e.g. “when you’re good at something, working hard allows you to really understand it”). They found that students with a fixed-performance goal belief, endorsed a negative view towards effort, perceiving working hard as a sign of low ability. By contrast, students with a growth-learning goal belief, endorsed a positive

view towards effort perceiving it as a tool that enables full use of one's ability and a necessary means of reaching one's potential. Similar results were found in studies conducted to investigate the relationship between mindset beliefs and attributions among college students (e.g. Hong et al., 1998; Dweck, 2000). Students with fixed beliefs agreed on the negative statements about effort which growth students did not agree upon. Thus, for fixed mindset students, facing a difficulty or a hard task put them in a conflict because the need to exert more effort, puts their ability into question. The situation gets even worse when failing after this effort (Dweck, 2000). It can be argued then that learners' mindset beliefs seem to shape their attribution styles which affect the goals they set and the way they response to challenges. Attributing failure to lack of ability is what makes fixed mindset learners escape from challenges and hard tasks and more oriented toward performance goals to protect their self-image and appear as highly competent when achieving easy tasks.

2.3.5 Mindset and Actual Achievement

One of the most substantial areas of mindset research is exploring the link between learners' mindsets and academic achievement in several subjects. It has been found that the mindset of learners has a significant impact on their academic achievement, among both young learners (pre-secondary/high school) (e.g. Blackwell et al., 2007; Good et al., 2003; Henderson & Dweck, 1990; Stipek & Gralinski, 1996) and adult learners (e.g. Aronson et al., 2002).

For instance, Henderson and Dweck (1990) measured students' mindsets using questionnaires as they entered seventh grade and then compared their scores in sixth grade achievement tests and seventh grade scores. They found a noticeable decline in grades of students with a fixed mindset contrasting with those with a growth mindset who showed a marked improvement in their achievement scores. This was further supported by another study (Dweck & Sorich, 1999) which revealed the same pattern among students in their sixth and seventh grades, but also tracked them in

the eighth grade and found a significant outperformance of students endorsing a growth mindset over fixed mindset students.

Similar results were evident in the first study conducted by Blackwell et al. (2007) who measured the relationship between mindsets and achievement. Key motivational variables (implicit theories, goals, beliefs about effort, attributions and helpless versus mastery-oriented responses to failure) were measured and compared with the actual achievement scores in maths. It was revealed that students' mindset was a significant predictor of their achievement in maths as they made the transition to junior high school. Although both groups had similar achievement levels before the challenging seventh grade, their mindsets seem to explain the difference in their grades which appeared in the more difficult stage of their learning as their grades started to diverge in the fall results and continued with the same pattern for two more years with the growth group showing a significant increase in grades compared to the fixed group. So, students' mindsets were found to be significant predictors of their achievement and this effect was more noticeable when learners progressed to a difficult stage of learning.

Furthermore, change of learners' mindsets due to intervention experiments was proven to alter achievement levels (e.g. Aronson et al., 2002; Blackwell et al., 2007, second study; Paunesku et al., 2015). It is important to mention that Teaching students a growth mindset (to think of their personal traits and abilities as malleable rather than fixed) in an intervention study, helped learners endorse more of a growth mindset view of their attributes which had a positive impact on their academic outcomes, showing a significant increase in grades of the intervention groups over the control. Contrary to previous research, Stump et al. (2009) used regression analysis to examine predictors of University learners' performance and found that their mindset belief was not a significant predictor of their achievement, in his case, their engineering course grades.

In sum, the previous studies provided evidence for the proposed model of achievement motivation in that those who believed their intelligence is a malleable trait, had stronger learning goals and were more likely to believe that working hard improves achievement; this in turn reflected positively on their achievement, showing higher grades compared to those with a fixed mindset. They were also more likely to make mastery responses in failure situations rather than attributing failure to lack of ability. As the type of mindset seems to play a significant role in an individual's thoughts and behaviours, it is important to understand how these mindsets emerge.

2.3.6 Origins of Mindset: How Does it All Begin

In an attempt to find out the origins of learners' mindsets and the reason behind the diversity of their responses in setback situations, Dweck (2000) found out that the type of feedback children receive from parents and educators has an effect on their coping patterns and reactions. In a number of studies (e.g. Dweck, 2007; Mueller & Dweck, 1998), it was shown that the kind of criticism or praise can directly develop a helpless or mastery-oriented pattern.

To examine the effect of praising, Mueller & Dweck (1998) conducted 6 experiments using two different kinds of praising in which some students were randomly assigned to be praised for their intelligence/ability (e.g. "you must be smart") while others were praised for their efforts (e.g. "you must have worked hard") after working on a set of activities. When measuring their mindsets afterwards, the former group had more of a fixed view regarding intelligence whereas the latter had a more growth view. Next, when offered the choice to work on either a demanding task that they can learn from or an easy task that they can do well on, most of those praised for intelligence chose the easy task and those praised for effort chose the challenging one. In addition, it was evident how those praised for intelligence lost faith in their confidence and gave up quickly when given difficult tasks. Thus, it was concluded that praising intelligence can lead to a more fixed view of intelligence, less motivation, a tendency towards performance goals and helpless patterns in the face of difficulties.

However, praising effort can create more of a growth mindset that seeks learning opportunities and increase resilience in the face of obstacles. It does seem logical that praising intelligence would create more of a fixed view toward this trait and foster a desire to protect this image and resist any chances that might prove the opposite. However, it seems over simplistic to believe that this effect could occur from a single praising incidence. It is more sensible to suggest that such praising would have a negative effect on learners' mindset after several times.

Many educators have believed that praising students' intelligence would increase their confidence in their abilities, their motivation in learning and their success in school (Dweck, 2007). Conversely, it was found that praising students' basic attributes when performing well on a certain task as they will learn to measure themselves from their performance and thus would judge themselves badly when they fail. In contrast, concentrating on praising effort and strategies when providing feedback, would produce a mastery-oriented pattern (Dweck, 2000). This might be because learners start to appreciate effort and hard work which aid them in learning and help them persist in the face of challenges.

This section points to the importance of teacher practices in providing feedback and how they can have a significant effect on learners' experiences and coping patterns by unconsciously promoting a certain mindset or the other. Thus, teachers should focus on praising learners' efforts, progress, and strategies as this type of feedback is what fosters motivation (Dweck, 2007; Mercer & Ryan, 2010).

2.3.7 Mindset and the Potential to Change

Dweck et al. (1995) has demonstrated that individuals usually have a stable tendency toward either type of mindset beliefs, which was evident in some longitudinal studies that tracked learners' beliefs for many years. For example, Robins and Pals (2002) examined the stability of learners' mindset beliefs from high school toward the end of college and found no significant difference in their beliefs between any of the years, suggesting that learners tend to maintain their beliefs during college. However, these mindset beliefs like other beliefs could fluctuate and change from time to time and

from day to day and according to learning activities or tasks (Burnette et al., 2013). Previous studies have shown that these beliefs could be changed in a few laboratory sessions (e.g. Aronson et al., 2002; Burnette, 2010) as well as longer interventions (e.g. Blackwell et al., 2007; Taylor, 2009) as will be illustrated in the mindset intervention studies section. Thus, it could be argued that mindset beliefs are thought to stay in a stable manner unless affected by an intervention or an external force that could alter these beliefs. Yet, it is still questionable whether this change in beliefs would last for a long period or diminish over time.

Dweck (2012) argues that changing mindsets is not like a surgery where you can remove old beliefs and replace them with new ones, but rather it's about acquiring better beliefs along with the old ones which change the way you feel, think and behave as they become stronger. The aim of mindset change is to alter the internal monologue or the interpretation process from a judging one to a learning one that is growth-oriented (i.e. from fixed mindset to growth mindset) (Dweck, 2012). To illustrate this, the internal monologue of people with a fixed mindset concentrates on judging, which leads the entire interpretation process: "This means I'm stupid." "This means my friend does not like me" and so on. Nonetheless, people with a growth mindset, even though they monitor positive and negative interpretations, they use them for learning and productive actions rather than judgements of self and others: "How can I improve?" "What can I do to make the situation better?". Dweck explained from her research how beliefs could be measured and changed by interventions resulting in a significant impact (Dweck, 2000, 2008). As will be illustrated in the following section, these interventions were effective not only in altering learners' mindset beliefs, but also positively affecting other aspects of learners, such as their motivation, learning behaviour and achievement.

2.3.8 What are Mindset Interventions?

Using social-psychological interventions to assist underachieving students is not a new method, but has received a lot of publicity within the last decade (Yeager & Walton, 2011). One of the

approaches that has gained a considerable attention is mindset intervention. This type of intervention is based on implicit theories or ‘mindsets’ and aims to shift learners’ mindset beliefs from fixed to more growth-oriented ones. This means, to alter their beliefs on personal traits like their abilities and intelligence from being fixed unchangeable traits to flexible ones that can be developed by effort and hard work, and to shift the way they attribute success and failure events from stable factors to unstable ones.

The standard method of initial growth-mindset interventions starts by teaching learners about brain malleability illustrating the development and strength of brain neurons when learning new and challenging materials (Dweck & Yeager, 2019). Interventions following this method have used creative ways to help learners reflect on and endorse this concept by applying it to their own lives, such as writing a letter to struggling students addressing these ideas (e.g. Aronson, 1999; Aronson et al., 2002; Rangel et al., 2020). Face-to-face mindset interventions have provided promising results in improving learners’ academic performance, but the time and expense required to conduct such interventions has limited the opportunities for replicating and scaling up these studies. Thus, researchers have started to apply online mindset interventions which has increased the number of replications in various contexts (Dweck & Yeager, 2019). In 2008, Dweck and Blackwell designed an online intervention program for middle school students called ‘Brainology’ to address cost and scalability of mindset intervention studies. Many researchers have adopted this program and reported its effectiveness (e.g. Donohoe et al., 2012; Yeager & Walton, 2011). Below is an overview of mindset intervention studies with a summary of the interventions most relevant to the current study, explaining their aims, methods and results. Mindset intervention studies conducted specifically in language education will be covered in the next section (Section 3.4).

2.3.9 Overview of Mindset Intervention Studies

A considerable number of mindset intervention studies have been conducted to influence not only learners' mindset beliefs, but also other beliefs and behaviours, such as effort and attribution beliefs and learners' persistence and reaction in challenging situations. A growing amount of research has found that mindset beliefs can be experimentally induced or altered to be more growth-oriented (e.g. Burns & Isbell, 2007; Paunesku et al., 2015) and has shown how these interventions can develop learners' persistence and academic performance (e.g. (Blackwell et al., 2007; Good et al., 2003; Mueller & Dweck, 1998), especially among at-risk learners and during transitional stages.

Intervention studies using mindset principles have been administered in various ways ranging from a single session (e.g. Broda et al., 2018; D. S. Yeager et al., 2016) to extended periods of weeks or months (e.g. Blackwell et al., 2007; Hoyert et al., 2019; Mills & Mills, 2018). Some have used face-to-face classroom interventions with the teacher to deliver or facilitate the materials (e.g. Snyder et al., 2014) while other studies have used online materials accessed by learners via computers (e.g. Broda et al., 2018; Paunesku et al., 2015). The typical message that is delivered to participants in a growth mindset intervention, regardless of the period or method of intervention used, is that development and improvement of self-abilities and traits are possible for everyone. It is used as a persuasive tool to emphasize the message that everyone can achieve success with hard work and effort even in challenging situations.

Although most of Dweck's work has focused on younger learners, other mindset intervention studies have been shown to be effective with university learners resulting in greater academic gains (e.g. Aronson et al., 2002; Smith & Capuzzi, 2019) and higher levels of effort and study skills (e.g. Sriram, 2014). In a comparison between different intervention approaches for university learners, mindset interventions have been identified as among the most effective (Powers, 2015; Yeager et al., 2013).

This section will review mindset intervention studies conducted within the last ten years, between 2010 and 2020. The search was conducted using four databases (Web of Science, ERIC, UoL Catalogue and Google Scholar) and included only peer reviewed articles. Inclusion criteria involved limiting the review to studies in the educational context on post-secondary education level where a mindset intervention is conducted to change mindset beliefs and learning-related variables. Thus, studies that did not include pre- and post-measures of learners' mindset beliefs were excluded. Table 2 below provides a summary of the nine studies that were selected based on the criteria explained above.

Table 2: Summary of main mindset intervention studies published between 2010 and 2020

Study	Population	Research Aims	Method and Nature of the Intervention	Main Findings
Sriram 2014	105 high-risk first year students in a private university in the United States; intervention group (n=60) and control group (n=45).	To examine the effectiveness of a mindset intervention in changing the view of intelligence for high-risk college students, and the effect of this on their academic effort and achievement.	Experimental design with pre- and post-measures. Web-based activities delivered in 4 sessions of 15 minutes (one per week) during a month-period. Participants were randomly allocated to groups. The intervention group was taught the concept of intelligence malleability (using videos, articles and messages on mindset and brain malleability) whilst the control group was taught some study skills.	T-tests revealed a significant increase in growth mindset beliefs for the intervention group only. The intervention group reported significantly higher levels of academic effort and study skills than the control group at post-test. No significant difference in achievement was found between the two groups at post-test.
Mills & Mills 2018	Low achieving college math students, divided almost equally into 8 treatment groups (N = 98) and 4 control groups (N = 57).	To examine if a mindset intervention would increase the possibility of passing a math course among college students	The study was three-semester-long. Pre-intervention mindset beliefs were measured for all participants. The intervention was 30-minute per session 4 times a week during math classes the first month of the semester. It involved explanation of mindsets, intelligence malleability and the capacity to increase brain connections with challenges, emphasizing the idea that ability improves by effort and downplaying the idea of innate math ability. Ideas reinforced by the teachers toward the end of the semester. No intervention for the control group. Math scores and retention rate were measured the following semester.	Correlational analysis revealed a significant correlation between participants' mindset beliefs and final grades. T-tests also revealed a significant difference between the two groups grades with the intervention scoring higher than the control. Similarly, participants with higher mindset beliefs scored significantly higher than those with low mindset beliefs. However, the retention rate between the intervention and control group was not significantly different, nor was it significant between participants with high and low mindset scores.
Beatty, et al. 2019	University students enrolled in algebra and calculus-based courses in three public universities in the US. The study was repeated with three samples each in a	To develop and validate a scalable intervention that promotes STEM self-efficacy by endorsing growth mindset beliefs, and	Large-scale quasi-experimental study with participants from three distinct universities divided into intervention and control groups. The intervention involved introduction of the topic, two videos showing the main ideas and classroom discussion. Online questionnaire	Results revealed a significant effect of the intervention on participants' mindset beliefs which showed a highly significant increase in learners growth mindset beliefs after the intervention compared to before. No significant increase reported in their self-efficacy or perceived academic control.

	different semester (N = 265, developing a sense of control over academic success	201, 387)	was distributed three times: before, a few weeks after the intervention and the following semester. It measured learners' mindset beliefs, STEM self-efficacy and perceived academic control.	
Burnette et al. 2019	Students enrolled in an introductory entrepreneurship course (N = 238) in a large public university. They were randomly allocated to either a mindset intervention group (N=120) or a matching control group (N=118)	To develop and test the effectiveness of a mindset intervention on promoting entrepreneurial self-efficacy and career development which involves includes academic interest, career interest, persistence and performance.	The two groups received different content but were matched in time and style. The intervention consisted of 3 online modules (45 minutes in total). All had an identical structure including an article or video on the malleability of entrepreneurial ability, a video on mindset research, a multiple-choice quiz and a writing activity communicating with a struggling student in entrepreneurship including messages they learned from mindset research. Participants were given pre-intervention survey and a week to complete each module. Post-intervention surveys were completed 2 weeks following the end of the last module.	T-tests revealed a significant effect of the intervention showing greater mindset beliefs, entrepreneurial self-efficacy and task persistence of participants in the intervention group compared to the control. As predicted, the mindset intervention was a significant indirect predictor of academic interest through entrepreneurial self-efficacy. The entrepreneurial self-efficacy was a significant predictor of career interest.
Smith & Capuzzi 2019	75 undergraduate psychology majors taking statistics divided into an intervention group (N=45) and a control group (N=30).	To alter students' mindset beliefs about their ability in statistics to reduce students' statistics anxiety and improve course grades.	The intervention consists of an interactive presentation for 75 minutes introducing the concept of mindset and related variables, how mindsets are formed and how the brain works and responds differently with each mindset, supporting these ideas with previous research results and providing effective study strategies. Students were asked to create a one-page mindset reminder including the information they learned and, in another task, respond to a fictional struggling learner. Student knowledge, anxiety, and mindsets were	Growth mindset beliefs of the intervention group increased significantly post the intervention as well as their performance, with a non-significant decrease in anxiety as opposed to the control group whose change in mindset beliefs was not significant and was associated with an increase in anxiety. Growth mindset beliefs after intervention were negatively correlated with anxiety and positively correlated with academic performance.

			measured before and six months after the intervention.	
Burnette, et al. 2020	Participants (N=491) were collected from 16 introductory computer science classes in 7 universities, 143 women and 348 men	To examine the effectiveness of a growth mindset intervention in improving academic achievement and interest in computer science.	4-sessions online mindset intervention (total time 25 minutes) including: research on mindsets, a message on “You can improve your computer science ability, successful tips by a role model and a writing task adopting the growth mindset message. The control group was matched in length and style but focused on health issues. Pre and post intervention surveys were distributed measuring growth mindset in computer science and career interest.	Students in the intervention group reported significantly stronger growth mindset beliefs and greater career interest than the control group when controlling for pre-test scores. However, there was no significant effect of the intervention on students’ grades and no effect of gender in moderating the relation between the intervention and other outcomes.
Nallapothula et al. 2020	1,208 undergraduate students registered in an introductory biology course	To develop and assess a mindset and locus of control intervention to encourage university students endorse growth mindset and internal locus of control.	The intervention consisted of 5 modules involving videos on growth mindset and internal locus of control, reflective and content questions. Participants rated their mindset and locus of control after each module.	Students reporting a growth mindset after the intervention (81.2%) were more than before (58%). Likewise, those reporting internal locus of control post-intervention (78.4%) were greater than pre-intervention (56.1%), indicating that the intervention was effective in changing learners’ mindset beliefs and internal locus of control regardless of demographic information. A significant correlation was found between learners’ mindset and internal locus of control prior to the intervention and this increased after the intervention.
Ng, et al. 2020	120 first year university students enrolled in a psychology course randomly assigned to either a growth mindset group or a fixed mindset group.	To promote a growth mindset and develop cognitive, academic and behavioural skills of university students through a brief online growth mindset	Participants accessed the introductory online mindset course in which the intervention group was primed with growth mindset beliefs (Presented with information that elicits growth beliefs) while the control group was primed with fixed beliefs. They completed a pre- and post-intervention online survey	There was a positive effect of growth mindset intervention on participants’ mindset beliefs in which they showed a significant increase in their growth beliefs and a significant decrease in fixed beliefs after the intervention. They also showed a significant increase in mastery approach and

	intervention.	consisting of a mindset scale (8 items measuring growth, 8 items fixed), achievement goal and academic resilience.	academic resilience.
Rangel, King and Muldner 2020	47 university students with no programming experience and with no strong mindset beliefs	To examine the effect of mindset intervention on mindset beliefs, programming behaviours and programming achievement.	The intervention emphasized the value of growth beliefs in programming ability by reading an article that persuade adopting a growth mindset while the control received an alternative reading task. Both groups were given programming activities where time on task was measured. The second part of the intervention involved writing what they learned from the article and responding to a struggling learner.
			Between-groups ANOVA revealed a significant difference between the intervention and control groups mindset beliefs. Even when computing the mindset scale as a single collapsed score, only the intervention group showed a significant shift toward the growth mindset. The former group also reported higher value of effort and more time spent on tasks than the latter group, but this difference was not significant. No significant difference between the two groups in programming performance.

Looking at the intervention studies in Table 2, it can be seen that there are many commonalities among these studies. With regards to the length of the study, most of them have adopted short interventions that ranged between 25 minutes and 2 hours, delivered in a single session (Beatty et al., n.d.; Celis Rangel et al., 2020; Ng et al., 2020; Smith & Capuzzi, 2019) or a few sessions (Burnette et al., 2019, 2020; Sriram, 2014). Only the Mills & Mills (2018) study was conducted over three semesters. It is not surprising to see that the majority have chosen to design brief interventions not only for practical reasons, but also because short interventions have proven to be as effective as lengthy ones. It has even been argued by some researchers that long interventions and extensive repetition might have a risk of making learners feel they are in need of real help (Yeager et al., 2013). Focusing on the method for delivering the materials, it is clear that there was more reliance on online materials and modules rather than face-to-face interventions. While some justified the use of an online approach for practical reasons as it enables easy distribution and customisation (Burnette et al., 2019; Sriram, 2014), others have mentioned the importance of avoiding instructors' variability in delivering the intervention (Nallapothula et al., 2020).

These studies indicate that growth mindsets can be taught and trained, resulting in a possible shift or a positive impact on learners' mindset beliefs and achievement. Regardless of variations in the length of the study, the way it is delivered (online vs. classroom) and the sample size, all intervention studies mentioned above were effective in changing the mindset beliefs of the experimental group which was evident in the increase of their beliefs either compared to their beliefs before the intervention or to a control group. These results seem to be promising, providing such a significant effect on students' beliefs and learning experience, but this effect may not be permanent as it is surprising to obtain such results after about 2 hours of incremental intervention. For that reason, Dweck (2008) stressed the importance of following students for longer periods of time to ensure the longer-term effect of interventions.

The results of these mindset intervention studies might sound magical providing such a great impact from brief interventions. The effectiveness of these interventions seem to lie on their focus on learners' psychological aspects, their feelings, thoughts and beliefs (Yeager & Walton, 2011). These beliefs influence self-regulatory and motivational patterns (Dweck, 2008). Despite being brief, they used the psychology of persuasion to maximize the effect of the experience (Yeager & Walton, 2011). These interventions were not simply an appeal to participants' reason, most of them included active participation of students that involved the use of deep processing mechanisms like transferring the content of the growth mindset message to a new setting. This was used as a writing task in most intervention studies asking students to write a letter to a struggling student promoting growth ideas. As evidenced in research on the effect of 'saying-is-believing' (Aronson, 1999), writing a persuasive message to a recipient has a powerful effect on persuasion.

Despite the success of mindset studies in changing learners' mindset beliefs, it is crucial to address the aspect of publication bias. Systematic reviews of cognitive sciences literature have suggested that publication and reporting biases have become widespread in recent years (Ioannidis et al., 2014). Publication bias is about selective reporting where selective studies are published or certain results are reported depending on their nature (Lefebvre et al., 2011). One of the common ways of reporting biases is the tendency to publish significant results and unpublish null results or negatively significant ones (Torgerson, 2006). More journals now are trying to respond to that and minimize this type of error to get a more balanced reporting of interventions. It is important to be aware and recognize that we might only have a partial picture of real outcomes from research on mindsets as many studies that have been conducted might not have been published.

2.4 Language Learning Mindsets

2.4.1 What are Language Mindset Beliefs?

Despite the extensive research of mindset in a number of fields, it received a little attention in the field of applied linguistics, and studies focusing specifically on language learning are still rare (S. Ryan & Mercer, 2012b). Mindset beliefs are domain-specific (Dweck et al., 1995) meaning that a person might have a specific mindset in arts and another one in math. Language learning is a distinctive process (Ellis, 2008) and it seems apparent that language mindsets are distinct from mindsets in other domains (Lou & Noels, 2017). Thus, it is important to look at mindset beliefs on language learning separately from other mindset beliefs. Language mindsets refer to the beliefs on the malleability of language learning ability (Lou & Noels, 2019). In an attempt to utilize the mindsets theory to understand variations in L2 learning, Ryan and Mercer (2011) adapted Dweck's basic division between fixed and growth mindsets to outline two language learning mindsets. A fixed language learning mindset describes people who believe language ability is unchangeable, attributing successful language learning to a natural talent or fixed innate ability, and a growth language learning mindset describes people who believe language ability is malleable, attributing successful language learning to factors that can be changed as a result of dedicated effort and hard work.

Considering the risks of importing psychological constructs into second language acquisition, Mercer and Ryan (2010) carried out an exploratory qualitative study to understand the specific nature of mindsets in the language learning domain and conceptualize the mindsets of foreign language learners. They conducted in-depth interviews with nine first year university students concerning their beliefs about the role of intelligence and efforts in language learning. Characteristics of language mindsets were found to be similar to the ones found in educational psychology. Although some learners' responses suggested either a fixed or a growth mindset, other learners were found to have features of both, with one dominating. The researchers thus concluded that mindsets are better

understood as a continuum, where strong fixed mindsets and growth mindsets are at either extreme while most learners fall in between. Therefore, they argued that it is more appropriate to consider language learners as having a tendency towards a certain mindset in varying degrees. This supports Murphy and Dweck's (2010) claim as they argued that “people find entity and incremental views of intelligence plausible: however, they tend to endorse one theory more chronically than the other” (p.283). In addition, it was found that language learners might have differing mindsets for various language skills, one mindset for writing and another for speaking or pronunciation, for example (Mercer & Ryan, 2010).

In a further small-scale study, Ryan and Mercer (2012) explored language learners' ideas concerning the role of innate ability in language learning as an important mindset-related belief. By writing their opinions in this issue, most learners thought that learning languages is a talent and an ability that cannot be changed which indicates a fixed mindset. Yet, despite considering it a significant factor, none of them believed that ability is the only factor, but other factors such as motivation, personality and support are also important. Learners showed variations in their beliefs that were probably affected by aspects of age, learning context and concerned language skills. The researchers asserted the dynamic nature of mindsets and its potential to change and develop over time which could enhance learners' experiences.

2.4.2 Measuring Language Mindset Beliefs

Some earlier work on mindsets (e.g. Bandura & Dweck, 1981; Dweck, 2000; Hong et al., 1998) have sought to describe it as a dichotomous construct considering individuals as having either type of mindset, fixed or growth, leading some researchers to adopt this oversimplified view of mindsets (Lou, 2019). This view did not receive a lot of support in experimental research as learners were commonly found to have mixed beliefs of both fixed and growth mindsets suggesting that the dichotomy of mindset is not adequate to reflect the actual thoughts of learners (Mercer et al., 2012;

Mercer & Ryan, 2010). On the instrumental level, using two categories for language mindsets has been found to decrease reliability and validity and bias significance level and effect sizes (MacCallum et al., 2002).

Based on previous studies on mindsets, research on language beliefs and the initial work on language learning mindsets (Mercer & Ryan, 2010; Ryan & Mercer, 2012), Lou and Noels proposed a new measure for language mindsets called the Language Mindsets Inventory (LMI) (Lou & Noels, 2017; Lou & Noels, 2018). It consists of 18 items that measure beliefs on the malleability of language mindsets covering three aspects: general language intelligence beliefs, L2 aptitude beliefs and age sensitivity on L2 learning beliefs. The validity and reliability of this measure was examined using correlational and confirmatory factor analysis which showed high internal consistency of items and test-retest reliability suggesting its validity and reliability as a language mindset measure for university learners (Lou & Noels, 2017). Noels & Lou (2015) conducted a study with 180 university students enrolled in language courses. Their language mindsets were measured using the LMI as well as an open-ended question on language intelligence. A strong correlation was found between their LMI scores and written responses, providing evidence for the reliability of the LMI measure in representing learners' mindset beliefs as fixed, growth or in-between.

2.4.3 The Language Mindset and its Relation to other Variables

The “mindsets–goals–responses” model

The “mindsets–goals–responses” model was proposed by Lou and Noels (2017); it combines language mindsets with goal orientation to understand language learners' reactions in situations of challenge or failure. It was based on the socio-cognitive theory of achievement motivation (Dweck & Leggett, 1988) which postulates that mindset beliefs predict goal orientation which in turn predict reactions to failure situations. The model involves four other variables to test their correlation with learners' LMI: goal orientations in the L2 course, the intention to continue L2 studies, fear of failure

in L2 and responses to hypothetical failure situations. The model predicts that growth mindset is related to language learning goals which in turn predict less anxiety, more interest in L2 learning and mastery responses in failure circumstances. Yet, a fixed mindset is related to two types of performance goals depending on L2 competence. Learners with high perceived L2 competence would be more oriented toward showing their performance (performance-approach goals) and those with low perceived competence are more likely to avoid looking dumb, so would avoid making mistakes (performance-avoidance goals). Both types are more likely to adopt a helpless pattern when facing difficulties.

To examine the hypothesized relations proposed in the “mindsets–goals–responses” model, Lou and Noels (2016) conducted an experiment with 150 university students enrolled in language courses to investigate whether priming a growth or fixed language mindset would affect learners' mindset beliefs and related variables. Participants were randomly assigned to either a growth or fixed mindset group in which they were given an article in the form of a magazine that supports either growth or fixed mindset ideas and were asked to summarize the main idea of the article. A pre- and post-intervention questionnaire was distributed to measure mindsets (using the LMI), effort beliefs, achievement goals (learning vs. performance goals), reactions to setbacks (helpless vs. mastery-oriented), fear of failure and intentions to continue L2. Results of one-way between-subjects ANOVA showed no significant difference in pre-intervention mindset scores between the two groups while post-intervention results revealed a significant difference in fixed mindset beliefs showing higher scores of the group receiving fixed ideas. As well, a significant difference was found in mindset beliefs in repeated-measures ANOVAs with fixed beliefs decreasing in the group primed with growth mindset ideas and increasing in the one primed by fixed ideas. Using path analysis, the findings of this study were found to support their proposed model. Growth language learning mindset was found to be a significant predictor of learning goals which in turn was a predictor of mastery responses in challenging situations. Besides, fixed language mindsets significantly predicted

performance goals and helpless responses. Although it was a priming experiment that could have a temporary effect on learners' beliefs, it revealed how mindset beliefs could be influenced and manipulated. I believe that conducting longer intervention studies, with more than a single task, would be expected to have a longer-term effect on the development of the language learning process.

2.4.4 The Language Mindset Meaning System (LMMS)

The LMMS is a framework developed by Lou and Noels (2019a) emphasizing the central role of language mindset beliefs among other language beliefs that were found to be significant for language motivation. It considers language mindset beliefs as cornerstones that affect the L2 experience in a meaning-making system. It argues for a growth and fixed oriented meaning sub-systems that constitutes a set of beliefs and motivational tendencies that guide people's feelings and reactions. Variations between the two subsystems are explained in terms of effort beliefs, attributions, achievement goals, failure beliefs, self-regulatory tendencies and emotional tendencies (Lou & Noels, 2019b). Lou and Noels (2019a) stressed the idea that fixed and growth-oriented subsystems are the extremes of two separate continuums that are related to each other, and which learners are commonly found to have a mix of both systems. This means that people are more likely to adopt both mindset-systems in different degrees and these can change depending on the time, context and domain (Lou, 2019).

2.4.5 Language Mindset as a Complex-Dynamic System

Dynamic System Theory (DST) looks at L2 learning as a complex experience that comprises an uncountable number of interrelated variables that relate to each other in a non-linear fashion and change constantly from time to time. That is, change in one part of the system will have an effect on all other variables in the system (De Bot et al., 2007; Freeman & Cameron, 2008). It was Larsen-Freeman (1997) who questioned the static, linear, cause-and-effect approaches commonly used in SLA and called for the application of the DST. She argued for a complexity theory framework for

illustrating L2 learning as a complex dynamic and non-linear phenomenon (Cameron & Larsen-Freeman, 2008). From a complex dynamic system perspective, Lou and Noels (2019b) argued that “language-mindset systems are not necessarily simple, uni-directional, and/or linear” (p.13). It is complex in a way that each component of its meaning system is related to other components in the system and that any change in one of these components may affect the others (Lou & Noels, 2019a, 2019b). Although mindset beliefs have proven to be relatively stable over long periods of time (e.g. Robins & Pals, 2002), they seem to be dynamic in that they could change from time to time. It was argued that most learners have at least some traces of the fixed and growth beliefs, and activating either mindset can be readily done using situational cues (Lou and Noels, 2019b). It was evident in experimental research that people’s mindset beliefs can be primed and changed at least in a short-term manner through motivational sessions or persuasive articles as shown in the previous section (See Section 2.3.9 on mindset intervention studies). Thus, looking at the language mindset as a complex-dynamic system, it is crucial to address its complexity by measuring the relationship between mindset beliefs and other related variables (e.g. attributions, goal orientation, reactions to failures) and the dynamism of these beliefs by measuring them more than once to examine their stability over a period of time.

2.4.6 Recent Research on Language Mindset

This section presents recent research on language mindset. In a recent study, Bai and Wang (2020) examined the effect of 690 Chinese primary students’ motivational beliefs (growth mindset, self-efficacy and intrinsic value) on self-regulated learning and English language achievement. They found that the use of self-regulated learning (monitoring, effort regulation and goal setting and planning) is determined by motivational beliefs. Learners’ growth mindset was a stronger predictor of self-regulated learning than self-efficacy and intrinsic motivation. Correlation analysis also showed a positive relation between self-regulated learning and language learning achievement.

In a recent UK study, Lanvers (2020) conducted an intervention study using a quasi-experimental design for secondary students aged 13-14 to influence language learning beliefs. It consisted of 6 sessions, half of them delivered by class teachers (whole-class sessions) and half of them by mentors (in small groups by older students in the same school). It consisted of talks on the spread of global languages, research on cognitive benefits of bilingualism and UK language learning progression, and growth mindset visualisation activities. A questionnaire was distributed a week prior to intervention and two weeks after. It measured learners' mindset beliefs, self-efficacy and inclination to choose a foreign language (to study at GCSE) as well as an open-ended question asking participants to comment on their answers. The results showed an overall positive movement toward more growth mindset beliefs among the intervention group while negative beliefs increased in the control group. T-test analysis of gender differences in mindset beliefs and self-efficacy showed no significant difference in mindset beliefs or self-efficacy post-intervention. This intervention did not seem to be very effective in changing learners' beliefs. One of the potential reasons could be the intervention content as the content of some sessions did not seem relevant to change mindset or self-efficacy beliefs, such as session 1, 3 and 4 which covered topics on world languages, languages and language learning in the UK. Further, to measure the effectiveness of the intervention in a clear way, more precise data analysis methods should have been conducted to show the actual difference between the control and treatment groups for the scales as a whole rather than using percentages of pie charts for single items.

Lou and Noels (2020) conducted a study to examine the impact of 581 university students' language mindset on their rejection sensitivity, contact avoidance, willingness to communicate with peers and the time spent using English. a moderate correlation was found between learners' mindset and language-based rejection sensitivity. Fixed language mindset was found to be related to negative perceptions of language-based rejection and contact avoidance. In addition, growth language mindset was found to mitigate future communication only among students with low perceived English

competence. The findings highlighted the role of growth mindset in facilitating resilience for university students with low competence

2.5 Language Mindsets in the Saudi Context

In the Saudi context, only one study tackled the issue of mindsets, and that was not the major aim of the work. In an attempt to explore L2 demotivation among foundation year university Saudi learners of English, Albalawi (2018) found interesting links between learners' language mindsets and demotivation. One of these links is that L2 demotivation has a significant positive correlation with fixed mindsets and a negative one with growth mindsets. Furthermore, results of Structural Equation Modelling (SEM) revealed that a fixed language mindset is a significant direct predictor of L2 demotivation and that learners with a fixed mindset are more likely to feel disappointed when facing setbacks in language learning. Throughout her study, Albalawi (2018) discovered that around 30% of foundation year students in a public Saudi university hold an extreme fixed mindset and about the same percentage (30%) hold traces of fixed mindsets. This means that more than half of the Saudi learners endorse fixed mindset beliefs regarding their abilities and achievement in language learning. This stresses the importance of implementing a new growth-oriented language learning environment in Saudi classes.

2.6 Concluding Remarks

It is apparent that research on mindsets in the field of language learning is still in its infancy and more studies need to be conducted in this field. As a significant relationship was found between learners' mindset beliefs and their motivation in various fields, it can be assumed that there is a potential relationship between language mindsets and L2 motivation which is worth investigating. It

can be seen from the initial studies that implementing the mindsets theoretical framework is applicable to L2 learning and may contribute to the development of better beliefs and behaviours among L2 learners. There is a widespread perception in general populations that language learning needs a special aptitude to be successful, but success of these mindset interventions may contribute in changing this belief and adopting a growth mindset believing that mastering the language is possible for everyone.

Although promising results have been found in mindsets intervention studies providing evidence for a possible significant change in learners' mindsets and an increase in their motivation and achievement, various concerns have been raised regarding the degree to which these findings could be generalized or applied in different contexts (Quihuis et al., 2002; Dale H Schunk, 1995). One of these concerns is the lack of extensive practice in mindset intervention studies. A number of growth mindset interventions have been as limited as reading an article arguing for growth mindset beliefs, which could be predicted to produce only a very minor change, and perhaps a temporary one. The other concern that needs to be considered is the complete reliance on multiple-scale items in measuring learners' mindsets, in which learners are classified into two categories (entity or incremental mindset) based on mainly Likert scale or forced choices. By depending solely on surveys, students' perceptions are being limited to abstract categories which prevent them from expressing what they perceive about their intellectual strengths and weaknesses and thus restricts us as educators and researchers from understanding the larger picture of learners' own beliefs and how they are related to learning behavior. Most of the research approaches in previous mindsets studies have been purely quantitative (e.g. Aronson et al., 2002; Blackwell et al., 2007; Good et al., 2003; Henderson & Dweck, 1990; M. Lou & Noels, 2016; N. M. Lou & Noels, 2017). Collecting data using more than one method is expected to provide a fuller picture of learners' beliefs and learning behaviour.

2.7 Aims of the Current Research

People's implicit theories or acquired beliefs have been found to affect how they react and perform in certain situations (Dweck, 2008). Research showed how those who endorse more of a growth mindset are more interested to learn and more able to face difficulties and overcome failures (Dweck, 2000). Realizing how growth-oriented mindsets play a critical role in developing motivation and increasing achievement, a number of intervention studies have been conducted which showed that mindsets can be deliberately altered, at least temporarily.

In the same context of the current study, Albalawi (2018) found out that more than half of the foundation university learners hold some fixed mindset beliefs regarding their FL learning abilities and achievement. This indicates an urgent need for a growth mindset intervention that I believe will have a positive impact on their motivation and achievement levels. To the best of my knowledge, only one recent intervention study was conducted with secondary students on language mindset beliefs (Lanvers, 2020). However, it was argued previously that this intervention had some limitations that could have affected the results (Section 2.5.4). No intervention study has been conducted focusing explicitly on changing language learning mindset beliefs to improve L2 motivation and improve learners' L2 experience.

The current study aims to fill this gap by conducting a language mindset intervention on university FL learners to examine its effect on changing their language learning beliefs and in turn influence their FL motivation and adaptive behaviors. Believing in the importance of qualitative measures to support quantitative ones, our interest is to explore learners' own perceptions regarding their language mindsets and achievement beliefs by speaking about their own language learning experiences. Therefore, this study will not only explore learners' mindset beliefs through questionnaires, interviews will also be carried out after the intervention to capture a fuller picture of

learners' own beliefs and learning behaviors that could have changed as a matter of the intervention. This study will make a significant contribution to the literature as a first attempt to change language learning mindset beliefs through an intervention study, using materials specifically designed for improving learners' beliefs concerning FL learning and measuring the effect of this on FL motivation. It will also contribute to the literature by using a mixed method approach in collecting data, which is rarely found in previous studies.

Chapter 3: Methodology

This chapter aims at providing a detailed explanation of the design and methodology of the current study. First, the aim and research questions (RQs) are clearly presented. Afterward, the theoretical framework and research design are explained. Then, a detailed description of the instruments used in the current study is provided. Questionnaire design and content are explained followed by a description of interview questions design. Then, the intervention materials are described starting with the purpose of these materials, the design and steps followed in creating these materials. Next, I provide information on the target population and the method used to select the main study sample. I then describe steps taken for piloting of the questionnaires, interviews and intervention materials. Finally, I illustrate the data collection procedures starting with the procedure followed in distributing questionnaires, delivering intervention materials and conducting interviews both in phases one and two. This chapter concludes with an explanation of data analysis procedures used to answer the RQs and ethical considerations.

3.1 Aim and Research Questions

The current study seeks to explore whether a language mindset intervention would promote growth mindset beliefs among language learners and how this would affect their motivational L2 characteristics (i.e. goal orientation, responses in failure situations and fixed-trait attributions). More specifically, it aims to find out whether adopting growth mindset beliefs in language learning would promote a higher level of motivation, more mastery responses in failure situations, orientation towards learning rather than performance goals and process rather than person attributions. The following research questions (RQs) are aimed to be answered upon completion of this study:

1. *To what extent does a classroom mindset intervention change learners' mindset beliefs regarding English learning? Has the intervention had any effect on learners' L2 motivation?*
2. *Does the mindset intervention have a longer-term effect on FL learners' mindset beliefs and L2 motivation?*

3.2 Theoretical Framework

The theoretical framework of this study is Dweck's Implicit Theories (Mindsets). The framework of mindset theory is significant in grasping knowledge about learners' motivational characteristics, reactions to difficulties and achievement (Molden, Daniel & Dweck, 2006) Research on mindset has showed how students with a tendency towards a growth mindset, have more learning goals and are more likely to react in a mastery way. By contrast, those with a tendency towards a fixed mindset, have more performance goals and are more likely to react in a helpless manner.

Within the mindset framework, the current study seeks to teach FL learners a growth mindset to examine its effect on FL motivational characteristics. My particular interest is to measure to what extent growth language mindset beliefs could be acquired by learners and examine how adopting these beliefs could affect their motivation, goal orientation and responses to failure situations.

3.3 Research Design

3.3.1 Research Paradigm

A research paradigm is described as "the basic belief system or worldview that guides the investigator, not only in choices of method, but in ontologically and epistemologically fundamental

ways” (Guba & Lincoln, 1994, p.105). As illustrated in the previous section, the aim of this research is to investigate the effect of a language mindset intervention on learners’ mindset beliefs and motivational characteristics (attitudes towards FL learning, responses to failure situations and fixed trait attributions). Since the main aim is to provide the best possible experience in language learning, this study was oriented by the assumptions of what has been called the ‘pragmatic paradigm’ (Creswell, 2003,). Pragmatism was initiated in the 1870s by Charles Sanders Peirce and in contemporary versions proposes that “knowledge claims arise out of actions, situations and consequences rather than antecedent conditions (as in post-positivism). There is a concern with applications – ‘what works’ – and solutions to problems Instead of methods being important, the problem is most important, and researchers use all approaches to understand the problem” (Creswell, 2003, p.11). In order to provide a full understanding of the research design and the underlying philosophical orientations, the three aspects of research paradigms (Guba & Lincoln, 1994, p.108) will be illustrated below:

A. The Ontological Aspect

Ontology is about answering the question “what is the form and nature of reality and therefore, what is there that can be known about it?” (Guba & Lincoln, 1994, p.108). Pragmatism concentrates on and is oriented by solving real world problems (Feilzer, 2010) instead of assumptions or hypothesis of the nature of knowledge. In a pragmatic perspective, what practically works is more significant than assumptions of philosophy and the consequences are more important than the process (Ivankova et al., 2006; Johnson & Christensen, 2004). Thus, this study is more interested in what works best for the students and less concerned about what their reality is. More specifically, it aims to examine the real-world phenomenon of mindset concepts in language learning among Saudi students and its influence on their motivation and learning behaviour.

B. The Epistemological Aspect

Epistemology is concerned about the question “what is the nature of the relationship between the knower or would-be knower and what can be known?” (Guba & Lincoln, 1994, p.108). It is about the level of influence of the researcher’s values, experiences and interests on the research process and results (i.e. the subjectivity and objectivity). In the current study, and based on the pragmatic paradigm, we could argue that both subjective and objective perspectives were obtained. Objectivity was attained by means of a close-ended questionnaire to collect students’ language mindset perceptions and motivational characteristics which were then analyzed statistically. However, subjectivity was attained by means of semi-structured interviews that were used to add more insights to the objective aspect by gathering participants’ own experiences, view-points and attitudes following the intervention study.

C. The Methodological Aspect

A mixed method approach mixing both quantitative and qualitative methods has been encouraged by the pragmatic paradigm, indicating that mixing methods is fundamental in research (Johnson & Christensen, 2004). Taking a pragmatic view enables me a freedom of choice to select multiple methods that best work for my research. Creswell (2003) illustrates how “pragmatism opens the door to multiple methods, different worldviews, and different assumptions, as well as different forms of data collection and analysis in the mixed methods study” (p. 12). Pragmatism allows me to employ a mixed method of quantitative and qualitative approaches that I believe will best answer my research questions. As pragmatism advocates a mixed method design and various data collection strategies, I believe that by adopting a pragmatic view in the current study, it has benefited from insights gathered through quantitative and qualitative approaches which will build up a more comprehensive view and a higher quality findings.

3.3.2 The Mixed Method Approach

Approaches to data collection are divided into three types: quantitative, qualitative and mixed methods (Creswell, 2013). When a study context is a complex environment like classrooms, Dörnyei (2007) emphasized the importance of using multi-methods approaches saying that “combining several strategies can broaden the scope of the investigation and enrich the researchers’ ability to draw conclusions” (p.186). Thus, in this study a mixed-methods approach was adopted in which both quantitative and qualitative methods were used for collecting data. The reason for selecting this approach was twofold. First, this approach was believed to increase the validity of the research, as Denzin (1978) explained that using multiple methods decrease the possible weakness of adopting a single method and maximize internal and external validity. Miles & Huberman (1994) explained that “Quantitative and qualitative inquiry can support and inform each other. Narratives and variable-driven analyses need to interpenetrate and inform each other” (p. 343). When combining quantitative and qualitative methods, they complement each other resulting in more robust analysis and the study benefits from the advantages of each (Greene et al., 1989; Greene & Caracelli, 1997; Tashakkori et al., 1998). Second, I believe using multi-methods is significant in this study to obtain a fuller understanding of learners’ beliefs and their motivation. Ivankova et al. (2006) state that the mixed methods approach grants depth and breadth to the research that may not be obtained when a single method is used. In addition, Johnson and Christensen (2004) pointed out that conducting interviews in experimental studies, helps in understanding participants’ perspectives and meanings which is considered an extremely fruitful design that increases the internal validity of the study.

3.3.2.1 Questionnaires and Interviews as a Mixed-method

The design of my data collection approach was questionnaire surveys with follow-up interviews (QUAN – qual). The questionnaires were used to explore learners’ language mindset beliefs and its relationship with other motivational characteristics (goal orientation, response to failure situations

and fixed-trait attributions) using statistical procedures. On the other hand, interviews were used to reveal the nature of the relationship between mindset beliefs and motivational characteristics (e.g. the change of goals, reactions and motivation) of learners in the intervention group. Although beliefs regarding the malleability of intelligence and abilities, achievement goals, responses to failure situations and fixed-trait attributions were obtained quantitatively by means of self-report questionnaires, there was little engagement of participants in this method which hinders us from investigating complex meanings (Dörnyei, 2007). I believe interviews provide a fuller picture to understand the effect of the intervention not only on learners' beliefs, but also on their motivational characteristics in which other factors such as contextual and individual differences can be understood by asking learners to elaborate on their perceptions and explain their points of view in more details. This provides a valuable contribution to the mindset literature which, as we have seen (in Chapter 2), lack mixed method approaches in its research.

3.3.2.2 Sequential Explanatory Design

The design of the mixed method approach was determined by the objective of the study and research questions. In my study, an explanatory design was used in which “qualitative findings are used to help explain, refine, clarify, or extend quantitative ones” (Ivankova et al., 2006, p.139), it is what Creswell et al. (2003) referred to as ‘sequential explanatory design’. This design implies collecting and analyzing the quantitative data first followed by another successive phase of qualitative data collection and analysis in a single study (Ivankova et al., 2006). The reason for choosing this design is that the current study followed an ‘extreme case sampling’ procedure in which extreme cases that were identified in quantitative participants responses were selected for the qualitative study (see section 3.5.2 on sampling). Thus, analyzing the quantitative data was essential in this case and important to precede the qualitative phase to determine qualitative data sampling. In addition, this design enabled us to analyze the quantitative data first to get a general explanation through statistical

analysis to answer the research questions was then refined and further explained by exploring participants' views in the quantitative phase.

3.3.2.3 The Experimental Design

As the aim and research questions of the current study was intended to uncover a causal relationship of a language mindset intervention on FL learners' beliefs and L2 motivation, a quasi-experimental design was deemed suitable for meeting this objective. Dörnyei (2007) suggested that an experimental design is the suitable way to answer a cause-effect dilemma and is considered by many researchers "the optimal model for rigorous research" (p.117). However, as the study took place in an educational setting where random sampling was not feasible, it was considered a quasi-experimental design.

An intervention study is considered a typical experimental design in which two groups at least are involved in the study: the experimental and control group (Dörnyei, 2007). Johnson and Christensen (2004) stated that experimental designs have a common feature in that the target variables are altered while others remain constant in a controlled environment. The current study is a mindset intervention study in which the experimental group is taught motivational sessions on language mindset beliefs and compared to an equivalent control group that attends normal English classes.

3.4 Instruments

Below is an explanation of the instruments used in this study: questionnaires, interviews and intervention materials as illustrated in the diagram below (Figure 1).

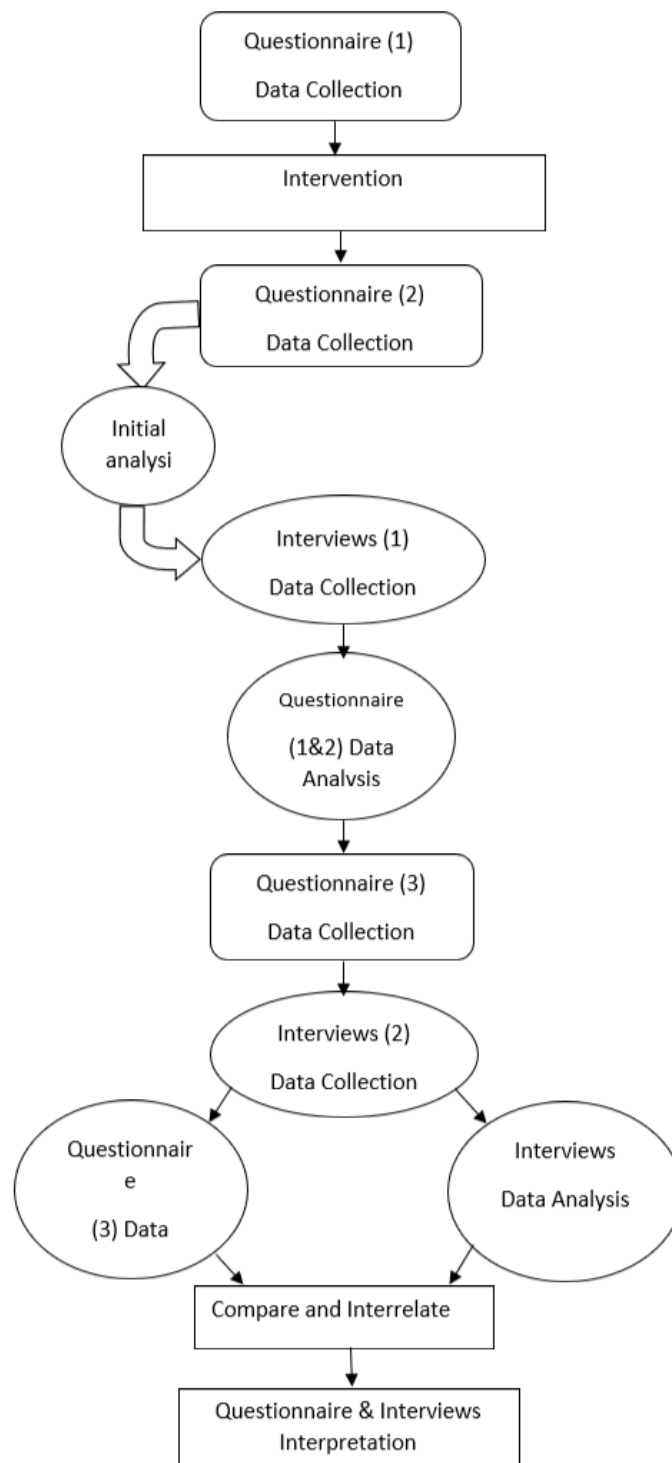


Figure 1: Mixed-method Design

3.4.1 Questionnaires

3.4.1.1 Questionnaire Design

Brown (2001) defined questionnaires as “any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers” (p. 6). Questionnaires have been widely used in Second Language Acquisition studies to inform us about language learners’ perceptions regarding the language learning process, intended behavior and feelings as well as background information (Dörnyei & Csizér, 2012).

The purpose of using questionnaires in this study was to measure students’ perceptions regarding their language mindset beliefs, attitudes towards learning English, L2 motivation, their responses in failure situations and their fixed trait attributions. Thus, a 6-point Likert scale was deemed the most appropriate way to measure these beliefs because Likert scale has “a degree of sensitivity and differentiation of response, whilst still generating numbers” (Cohen et al., 2013, p.386). The scale and its labels were consistent in all versions of the questionnaire (Pre-Questionnaire: Time 1, Post-Questionnaire: Time 2 and Delayed Post: Time 3) to avoid respondents’ confusion and facilitate data analysis. The labels in the first part of the questionnaire measured the level of agreement with each item as follows: 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree. However, labels in the second part measured the likelihood of thinking or reacting in a certain way. So, labels in this case range from 1- 6 in which 1 is very unlikely and 6 is very likely.

3.4.1.2 Questionnaire Content

The selection of questionnaire items was based on previous research on language mindsets (e.g. Albalawi, 2018; Lou, 2014; Lou & Noels, 2016; Lou & Noels, 2017). The questionnaire consisted of

seven multi-item scales: Language Mindset Beliefs (LMB), L2 Motivation measured by 4 scales: Motivational Intensity (MI), Attitudes Towards Learning English (ATLE), Learning Goals (LGs) and Performance Goals (PGs), and the last two scales were Responses to Failure Situations (RFS) and Fixed Trait Attributions (FTA). The first five scales were measured by 30 items where participants chose their state of agreement on each item. Some items were adopted while others were adapted from recent well-known questionnaires in the field. The LMB scale was adapted from Albalawi (2018) and the Language Mindset Inventory (LMI) created by Lou and Noels (2016, 2017). The Goal Orientation scale that was originally developed by Elliot and Church (1997) was used to measure LGs and PGs with minor modifications made in previous studies (Lou, 2014; Lou & Noels, 2016; Lou & Noels, 2017) to suit language learning. The second part of the questionnaire measured the last two scales (RFS and FTA) by presenting 6 situations that could happen to learners and two reactions or thoughts that participants need to select from by rating their likelihood of doing each of them. The three RFS questions were adapted from Lou (2014) to suit the context of study. However, in the FTA scale, only one item was adopted from Yeager, et al. (2017) and two similar items were created to measure this scale (See Appendix B for Questionnaire items).

Modifications of items used in previous studies were made for one or more of the following reasons:

1. To make the items more precise for the context of study, referring to *language learning* was replaced with *English learning* in all scales, except for the Language Mindset Beliefs scale in which *foreign language learning* was used as this scale measured learners' beliefs in learning languages in general rather than a specific language.
2. To avoid ambiguity, vague words and phrases were rephrased and double-barreled items (i.e. compound statements) were shortened to simpler ones.
3. To avoid misresponding, reverse oriented items (i.e. using negative particles like 'not') were replaced by reverse worded items (i.e. using words or phrases with an opposite meaning) (Swain,

Weathers & Niedrich, 2008). Dörnyei and Csizér (2012) recommend avoiding items with negative constructions as they are considered deceptive, especially when a negative response is given.

4. To make the items more linguistically appropriate, changes in some phrases were made due to translation, to make the items match their Arabic equivalences.

3.4.1.3 Description of Scales and Measures

The following scales/variables were used in the questionnaire to compare between the treatment and control groups. Following is a brief description of these scales explaining what each variable represents and the way it was measured. See Table 3 below for questionnaire scales and sample items.

1. *Language Mindset Beliefs (LMB)*: this scale measures the tendency towards either a growth or a fixed mindset. The former describes people believing that intellectual abilities can be changed and developed while the later describes those believing that abilities are innate and cannot be changed. A high score in this scale represents a more tendency towards fixed mindset beliefs.

2. *Motivational Intensity (MI)*: this scale measures the level of motivation in learning a second language (English). A high score in this scale represents a higher motivational intensity.

3. *Attitudes towards learning English (ATLE)*: this scale measures participants' attitudes towards learning English. A high score in this scale represents more positive attitudes towards learning this language.

4. *Learning Goals (LGs)*: this scale measures participants' goal orientation focusing on their tendency towards learning goals. This means their interest in mastering new skills and understanding new things. A high score in this scale represents a more propensity towards learning goals.

5. Performance Goals (PGs): this scale also measures participants' goal orientation but focusing on their tendency towards performance goal (i.e. showing one's abilities and intelligence to win positive judgments and look smart).

6. Responses to Failure Situations (RFS): this scale measures participants' reaction in failure situations, their tendency towards either a helpless or a mastery response. A high score in this scale represents a more helpless-oriented pattern (i.e. feeling vulnerable in the face of difficulties) and a lower score represents more mastery-oriented pattern (i.e. feeling determined in the face of difficulties, focusing on learning from the experience to improve it).

7. Fixed-Trait Attributions, Person-focused (FTA_Pn): this scale measures participants' attribution of negative situations to personal traits. A high score in this scale means adopting a more person-focused attribution (e.g. attributing failure in an exam to lack of innate abilities).

8. Fixed-Trait Attributions, Process-focused (FTA_Pc): this scale measures participants' attribution of negative situations to the process and level of effort. A high score in this scale means adopting a more process-focused attribution (e.g. attributing failure in an exam to lack of effort).

9. Field of study: this variable is about foundation year students' field of interest, either art or science.

10. Proficiency level: this is a self-evaluation of participants' own level of proficiency in English based on a simple description presented in the questionnaire.

Table 3: Questionnaire Scales and Sample Items

Scales	No. of items	Sample items
Language Mindset Beliefs	10	I have a certain fixed amount of ability to learn foreign languages
L2 Motivation	5	I would like to spend lots of time studying English
Attitudes towards Learning English	5	I find learning English really interesting.
Performance Goals	2	It is important to me to do better than the other students in my English class.
Learning Goals	4	I want to learn as much as possible from this English class.
Responses to failure situations	6	See Appendix B
Fixed-Trait Attributions (Person-focused)	3	See Appendix B
Fixed-Trait Attributions (Process-focused)	3	See Appendix B

3.4.1.4 Questionnaire Implementation Plan

Collecting data via Questionnaires was conducted three times, before the intervention (Time 1), after the intervention (Time 2) and 2 months later (Time 3). Using these two post-treatment assessments were for different reasons. Time 2 questionnaires were used to measure the immediate effect of the intervention (i.e. measuring the extent to which learners' mindset beliefs, motivational characteristics have changed). However, Time 3 questionnaires were used to measure the long-term effect of the intervention to examine whether this treatment was effective enough to last for a longer period of time. In other words, it measured if any changes that occurred in Time 2 have been maintained 2 months later. Thyer (2012) explained that the only way to determine the strength of an intervention effect in quasi-experimental designs is to conduct several post-treatment assessments. Using one or

more of these assessments is important to examine the sustainability of initial improvements and the existence of new changes.

Time 1 and 2 questionnaires were distributed to answer the first research question and Time 3 questionnaire was used to answer the second research question. The interviews were conducted in 2 phases, Phase 1 after analyzing Time 2 questionnaires and Phase 2 after Time 3 questionnaires. These interviews were used to explore and interpret the statistical results providing deeper understanding for the research questions. More specifically, the first interview was aimed to explore the immediate effect of the intervention and obtain participants feedback and experience, thus provide further analysis for RQ1. The second interview was carried out to obtain learners perceptions and explore their learning experience and longer-term effect of the intervention, thus answering RQ2.

3.4.1.5 Overcoming Weaknesses of Surveys

Surveys benefit from a number of advantages which make them commonly used in the literature, such as easy collection of data from a large sample, straightforward analysis of data, and more privacy protection. However, it should be noted that questionnaire surveys suffer from a number of limitations that need to be considered. One of these limitations is vague content design. The actual wording of items might cause variation in participants answers because minor differences in how an item is worded might lead to wide variations on the level of agreement as they could be perceived differently especially when assessing abstract concepts like attitudes and beliefs (Gillham, 2008). For this reason, it is important to avoid measuring concepts by a single item and use multi-item scales in order to measure the reliability of questionnaire items. Dörnyei & Csizér (2012) explained the fallibility of single items and emphasized the importance of using more than one item to address each concept or area of investigation in which the target item is questioned several times with slightly

different aspects. Other limitations include missing or inaccurate data and the difficulty to ensure honesty or seriousness of responses (Gillham, 2008).

The above limitations were addressed in the current study by taking the following measure to help improve data quality collected from questionnaires and minimize biases:

- The purpose of the questionnaire was explained clearly to participants stressing out the importance of accurate responses that reflect their own thoughts and beliefs and ensuring a high level of security for the information provided.
- An online web survey (Bristol Online Surveys) was used rather than a paper-based one, for two main reasons. First, the control tools in online surveys help increase response rates (Scornavacca et al., 2004). Specific filters or requirements can be set, such as entering numbers/ letters for open-ended questions or setting a question to be optional or required, which maximizes response rates and avoid missing data as participants cannot proceed to the next page if a required question is not answered. Another benefit of web surveys is automated data entry that is not only time saving but also result in better data accuracy (Bryman, 2016).
- Questionnaire items were translated to the learners' first language (Arabic) to avoid any misunderstanding that might be caused by lack of English proficiency. To increase validity, they were also back-translated by 2 professional colleagues. Dörnyei and Csizér (2012) believe that presenting questionnaires in the participants' first language, improves the quality of data gathered. To ensure the effectiveness of translation, Brislin (1970) argues that questionnaires should be reviewed by other external bilinguals or back-translated by an independent translator from the target language to the original version language.

- Written responses were used (agree, disagree) instead of numbers to avoid misresponding (i.e. selecting a response that is opposite to ones' belief) as described by (Swain, Weathers & Niedrich, 2008).
- Reverse worded items were used in measuring some constructs to avoid acquiescent bias (i.e. the tendency to agree with all questions) and check reliability of responses (Watson, 1992).
- To ensure that all items were clearly understood, and answers were selected accurately, multi-items scales were used to measure the reliability of questionnaire items.
- The order of time 2 and 3 questionnaire items was altered to avoid automated responses (i.e. remembering and replicating their previous responses in time 1) that might affect the quality of data gathered.

3.4.2 Interviews

The current study used an explanatory design in mixing methods where the main purpose for interviews was to expand and further investigate extreme cases revealed in the analysis of quantitative measures (questionnaires). As questionnaires can only provide an overall picture of students' beliefs and attitudes, interviews were used to enable students to express their own thoughts, perceptions and views on their language learning experiences. Thus, they were used to provide more clarification and interpretation of questionnaire data. As Holloway (2005) points out:

Interviewing, as a qualitative data collection tool, has many strengths including: the participants' own words can be captured; the interview can focus on issues salient to the participants, rather than being driven by the researcher's agenda; clarification can be sought; they allow opportunities to probe and explore in depth; [and] non-verbal behaviours can be noted and recorded. (p. 52)

In fact, the qualitative data collected through semi-structured interviews provided a wider insight into the individual experiences of students regarding their own language learning beliefs and personal influence of the intervention on their motivation and learning attitudes. Rossman and Rallis (2012) and Patton (2015) consider interviewing an effective way to obtain a full picture of people's views, beliefs and experiences.

Semi-structured interviews were used with an interview guide where the topics of interview questions and a list of open ended questions were pre-prepared, but the interviewer had the flexibility to develop more questions and elicit other unexpected questions that might arise during the interview in an exploratory manner (Dörnyei, 2007; Richards, 2009). Thus, using semi-structured interviews was intended to make sure that the same areas of investigation are obtained from each interviewee, but at the same time giving more freedom to collect other information from interviewees by using follow-up questions or probes to seek clarification and obtain a rich insight on certain aspects of interest (Gillham, 2007). Conducting this type of interviews also assisted in comparing participants responses on the same areas of investigation, but still investigate some unforeseen issues of interest which was the most appropriate way to collect the qualitative data needed to answer the RQs.

The interviews were conducted in 2 phases, Phase 1 after analyzing Time 2 questionnaires and Phase 2 after Time 3 questionnaires. These interviews were used to further explain and interpret the statistical results providing deeper understanding for the research questions. More specifically, the first interview was aimed to explore the immediate effect of the intervention and obtain participants feedback and experience, thus provide further analysis for RQ1. The second interview was carried out to obtain learners' perceptions and explore their learning experience and longer-term effect of the intervention, thus answering RQ2. The set of prepared interview questions in the first phase covered 4 main themes: beliefs about the nature of language learning, goal orientation, responses to failure situation, and effect of intervention. See Appendix C for interview questions in Phase 1. The

questions were developed based on the research questions and after extensive reading on the literature. Some questions were drawn from Dweck's online Mindset Maker professional development course (Q4, Q7, Q8 & Q9) and other questions related to the nature of language learning beliefs were derived from Mercer and Ryan's (2010) study. The rest of the questions were designed by the researcher to elaborate more on questionnaire items and based on the data required to answer the RQs.

The first section on language learning beliefs started with a general question on the main factors for successful language learning. This was followed by two questions on the innate ability for languages and whether this could be developed and why. The next question concentrated on intelligence to examine how they perceive smartness. The last question on this section was about their efforts in learning and how it might play a role in successful language learning. The second part of the interview was on goal orientation to examine whether the interviewee has more tendency towards learning goals or performance goals. It started by questioning the main purpose of learning English. This was followed by a scenario explained to the interviewee to decide on choosing one of two assignments: a challenging one that she could learn from or an easy one that she can get a high score one with nothing to learn. The following part of the interview focused on their responses in failure situations. While the first question in this part was about mentioning a helpless reaction they had ever experienced before in doing something, the next question was about a mastery reaction in which they were asked to recall a time when they have tried hard until they succeeded in learning something difficult. The last question in this part was more focused on learning English by asking the interviewee to mention any difficulties or challenges they have faced in learning this language and what their reaction was or will be in times of failure. The last section of the interview was concerning the effect of the intervention on their language learning experience. The questions included the effect on their beliefs about language abilities, motivation and studying habits.

The second phase of interviews was conducted during the hardest level of the English course by the end of the foundation year. It covered mainly the same areas of investigation in the first interview and focused more on the challenges and difficulties to examine whether their language mindset beliefs, motivation and attitudes have changed or remained the same on the longer-term. In other words, it aimed to find out if the mindset intervention has made a positive impact on learners' beliefs and motivation that lasted for a longer time even in the most difficult stage of their English course. It started by questioning the relation between abilities and success and how they perceive the possibility of changing the language learning ability. After that, L2 motivation was questioned by comparing the level of motivation from the beginning of the foundation year until now. They were then asked about their current experience in the last module including the difficulties they faced and if these challenges are upsetting or motivating, their reaction in failure situations and the effect of effort in improving abilities. The effect of intervention has also been tackled by asking about any changes they have experienced in their studying habits and thoughts after the intervention. To examine the long-lasting effect of information delivered in the intervention, interviewees were also asked to recall any information they have learned from the intervention that have made an effect.

3.4.3 The Intervention Materials

3.4.3.1 Purpose

The mindset intervention studies are not meant to deliver academic content to learners, but rather enable them to make better use of their learning opportunities to create long-lasting effects (Yeager & Walton, 2011). Thus, the growth mindset intervention materials in this study were designed to develop growth mindset concepts and attitudes regarding FL learning among Saudi university students to increase their motivation and enhance their achievement. Students learn scientific evidence of the malleability of the brain showing how intellectual abilities can be increased and how

certain behaviours can rewire the brain over time. Students also learn the benefits of struggle and difficulties and the importance of effective study strategies. The intervention program consisted of two sessions, around an hour each. The first session focused on growth mindset concepts and learning in general while the second focused on language learning mindset ideas, concentrating more on learning English. Below is a description of material design and content.

3.4.3.2 Design and Session Plan

Research in educational psychology has demonstrated in recent years that students' learning experiences could be altered resulting in lasting improvements in their achievement by conducting self-administered psychological interventions (Yeager et al., 2016; Yeager & Walton, 2011). The focus of these intervention studies is on how students perceive their abilities, relationships and skills in the learning context. After reviewing some recommendations and characteristics that have been raised by many researchers in educational psychology (e.g. Walton, 2014; Yeager et al., 2013; Yeager et al., 2013; Yeager & Walton, 2011) to increase the effectiveness of social-psychological intervention, some issues have been considered in designing the intervention study:

- One of the important aspects of intervention studies is to provide precise and brief sessions rather than long extensive ones. It has been evident in previous studies that very short interventions can result in long-term effects on students' mindsets and performance. The risk of extensive repetition is to stigmatize students as needing help (Yeager et al., 2013). Thus, I decreased the time of the intervention sessions from 4 to 2 hours of instruction administered within 2 weeks.
- Another characteristic of psychological interventions that showed effectiveness is to use a certain mechanism that change how students feel or think about themselves or the learning experience. Yeager and Walton (2011) stated that a psychological intervention is useless if it fails to make such a change. Involving students actively in the intervention where deep processing is induced may maximize the impact of the experience for students. One of the delivery mechanisms

that make the intervention message stick is to involve learners in generating the intervention instead of just presenting an appeal to them (Yeager et al., 2013). This was utilized in a number of mindset intervention studies (e.g. Aronson et al., 2002; Paunesku et al., 2015), for example, by asking students to write advice or a message to a recipient advocating the intervention message in their own words. Walton (2014) considered this a powerful method as it makes learners in the position of controlling the intervention message and relating it to their experiences without feeling controlled or stigmatized. This is referred to as the “saying is believing effect” (Higgins & Rholes, 1978) in which the effect of a message is increased by advocating it to another. Thinking about the message and rewriting it in a person’s own words increase the acceptance of the message and the chance of the attitude to be persistent especially when including a previous personal experience that supports the message (Aronson et al., 2002). Fazio and Williams (1986) argued that changing attitudes in this way, most probably affects actions. Therefore, I included two writing tasks, the first was a group task to share ideas and get to know how to do the task. It was in the form of writing a piece of advice to a sister who is struggling with math. The second writing task was an individual one to have more concentration in writing the message and involve personal experience. It was a reply to a friend’s text message who feels hopeless in learning English and thinks she would fail the course. To view the writing task sheets, see Appendix D.

Below is a brief outline for the two intervention sessions with estimated time for each part of the session.

Session 1:

Total estimated time: 60 mins

- Pre-Questionnaire (Time 1) (15-20 mins)
- Introduction/ discussion questions (5 mins)

- Students are presented with a video showing how the brain is malleable followed by examples for scientific evidence (5 mins)
- Short discussion (5 mins)
- Students are presented with another video explaining brain neuroplasticity and how learning happens in the brain (5 mins)
- Presentation on brain growth (5 mins)
- Group discussion (5 mins)
- Writing task (10 mins)

Session 2:

Total estimated time: 60 mins

- Students are presented with a video illustrating:
 - Scientific evidence for brain growth due to language learning
 - Strategies for effective learning
 - The value of challenges and hard work
 (5 mins)
- Discussion on video content (10 mins)
- Presentation and discussion on Abo Omar story (10 mins)
- The researcher shares a personal story on her own previous language struggle and ways to overcome it (5 mins)
- Students complete a writing exercise where they are asked to explain the concept of mindset to advise a struggling student (10 mins)
- Post-Questionnaire (Time 2) (15-20 mins)

3.4.3.3 Procedure for Creating the Materials

The process of creating intervention materials consisted of three main steps: Preparing content, selecting methods of presentation and creating the materials, trial of the material and piloting. The content of the materials was mainly derived from online resources on mindset. Video 1 content was adapted from a video called “Growing your mind” by Khan Academy (<https://www.khanacademy.org/youcanlearnanything>) with the addition of some experimental evidence of brain growth from the Mindset Kit website. Another video called “Neuroplasticity” by Sentis (<http://www.sentis.com.au/brain-animations-make-big-impact/>) was presented to learners after adding the Arabic voice translation of the video. A transcription of video content is available in Appendix E. The content of Video 2 was designed using some information from Alban (2017) to discuss the benefits of learning a second language. It also contained experimental evidence of brain change when learning a new language by illustrating a research study. In addition, the video summarized a few strategies and principles in learning which were adapted, along with other explanations, from Dweck’s Mindsetworks website and Trevor Ragan’s inspiring videos (the founder of Train Ugly website and a popular speaker on growth mindset). Furthermore, brief presentation slides were used to further explain some points. For example, pictures showing the effect of an enriched environment on brain neurons growth were adopted from Mindset works Curriculum guide for teachers. Also, as a motivator for learners, an inspiring story of a Saudi man called Abu Omar who excelled in learning English was written by the researcher after reading through his website (English Academy) and presented in slides. Finally, the idea of the writing task was elicited from previous research on mindsets and modified from a task created by Khan Academy and PERTS (Stanford University’s Applied Research Centre).

Three different methods were used in administering the intervention materials: animated videos, presentations and written tasks. Animated videos were used to illustrate growth mindset concepts for

a number of reasons. Firstly, to grab students' attention and ensure their concentration as this generation is used to receiving information in a video, either through YouTube or other form of multimedia. Secondly, to facilitate comprehension of the material content and account for students' various learning styles (e.g. visual, audio). Thirdly, presenting the materials in an appealing manner could add excitement to the session. Considering these reasons, the videos were created by the researcher using Raw Shorts software where animated pictures, short phrases and simple diagrams were used. Audio translated tracks were also added to explain the content of the videos. See Appendix F for sample of video illustrations.

In designing the overall presentation of classroom sessions, Microsoft PowerPoint was used. This was deemed suitable for organizing presentation slides, inserting videos, adding simple illustrations of key points and displaying pictures. The writing tasks were created in paper sheets and handed to students in the last part of each session. Choosing paper-based tasks was for practicality purposes. They are easy to distribute and collect, suitable for both individual and group work, and more familiar for students to write on.

Some considerations have been taken in designing the materials to increase the effectiveness in delivering the content and motivating learners.

- All material content was translated by a professional translation company from English to Arabic to ensure full understanding of the content.
- As most of this content was in the form of audio recording presented along with videos, a professional voice commentator was appointed to record the content in a special recording studio. That is to ensure clarity of the sound and present the content with special intonation that suits each part of the video. The audio was requested to be recorded for motivation purposes and therefore it

was prepared in a motivating tone with exciting intonation to draw students' attention and boost their motivation.

- The video time was meant to be short (5 minutes) to avoid boredom caused by lengthy explanations.

After preparing the content, translating it and creating the tools for delivering the materials (videos, presentations and worksheets), it was time for trying out these materials and piloting them before actual implementation. Videos were first presented to 3 colleagues for general feedback on video clarity and design. Accordingly, some changes were made in background colors and animated pictures. See section 3.4.1.2 for a description of the piloting procedure of intervention materials.

3.5 Sampling and Participants

3.5.1 The Quantitative Phase

This is a quasi-experimental study in an educational setting where the choice of sample is not randomized. Rather, it is selective based on a number of reasons explained below. The target population of the current study is foundation year university students who study general English at a public university in the western region of Saudi Arabia. They are all Saudi female students who speak Arabic as their mother tongue. This context of study was selected mainly for feasibility purposes. As the researcher is a lecturer at the same university, there is easy access to a wide number of students and this university is considered has the largest intake of applicants in the region. The reason for choosing only female participants is because students in Saudi universities are segregated into two campuses where males and females are based in different places and there is no easy access for the researcher to male students.

A number of considerations have been made to decide on sample size. Dörnyei (2007) mentioned that the number of participants in a quantitative study depends on the type of study. With the use of surveys, it is recommended to have a minimum size of 100 participants to enable inferential statistical analysis. Several scholars have agreed that in experimental procedures at least 15 participants in each group should take part. However, leaving a safety margin is recommended when deciding on the sample size “to provide for unseen or unplanned circumstances” (Dörnyei, 2007). p.100). Taking into account the above considerations, a number of 216 participants (103 treatment and 113 control) participated in the study. See Table 4 for demographic information for both groups. Allocation of learners in the two groups (experimental/control) naturally followed the allocation of participating teachers which depended on teachers’ flexibility and ability to take part. Classes of teachers who were willing to spare more time for the intervention were selected to be in the experimental group while the rest of the classes were selected for the control group.

Table 4: Frequencies and Percentages of Demographic Information for Treatment (n=103) and Control participants (n=113)

Variables	Treatment		Control	
	n	%	n	%
Age				
17-19	83	80.6	97	85.8
20-23	15	14.6	14	12.4
More than 23	5	4.9	2	1.8
Field of Study				
Science	47	45.6	62	54.9
Art	56	54.4	51	45.1
Level of English Course				
2	89	86.4	111	98.2
3	14	13.6	2	1.8
English Proficiency (Self-				
Beginner	3	2.9	3	2.7
Elementary	20	19.4	13	11.5
Low intermediate	16	15.5	17	15
Intermediate	55	53.4	66	58.4
Upper intermediate	9	8.7	14	12.4

During foundation year, students study a compulsory general English language course for 18 hours per week at the university. Upon entering university, they are placed in different levels (from level 1 to 4) during this year based on an initial placement test that determines the level of entry each student should start with. All students are required to complete level 4 during this year no matter what level they have started with based on the placement test. Mercer and Ryan (2010) found that learners' mindsets were affected by their linguistic proficiency level and thus suggested considering this factor in language learning mindsets research. Therefore, the sample of the current study was intended to be from the same level of the English course. Participants of this study were all selected from level 2 for two reasons. Firstly, students with low levels of proficiency are the most in need of a motivational booster and previous research on mindset intervention studies have shown that these are more effective with students who suffer from low levels of achievement as they are in need to change their beliefs regarding learning and increase their motivation. Secondly, by choosing this level, there was more chance to examine the longer-term effect of the intervention by tracking learners' progress until they reached level 4.

3.5.2 The Qualitative Phase

The semi-structured interviews were conducted to see how effective the intervention was in changing learners' beliefs and motivation was and to receive a more elaborated feedback from participants. The selection of participants in this phase was based on their interest in the first place. Upon completing the questionnaire, students were invited to take part in a further interview and write their contact details if interested. Around 20 participants registered their information to be contacted for an interview. After analyzing the participants results, 8 Saudi university foundation-year learners were selected for interviews. The selection of these students was based on 'extreme case sampling' procedure as explained by Dörnyei (2007), in which the most extreme cases were selected. In my

study, students that show a marked change in their mindset beliefs or motivation and those who did not change at all based on their questionnaire responses prior and after intervention were interviewed. The reason for choosing this sampling procedure is to explore the limits of the experience and find out if there are any commonalities between these cases which could be regarded as core elements of the experience. Another interview was carried out as learners reached level 4, which is considered by staff and students to be the most challenging stage in learning English during the Foundation year. It is intended to examine the degree of change in their beliefs as they face a difficult transition to a more challenging stage, a significant time to show traces of mindsets. Also, it aims to show a longer-term effect of the mindset intervention.

3.6 Procedures

3.6.1 Piloting

Prior to collecting data of the main study, a pilot study was carried out to examine the appropriateness of the measures and materials to be used in the study in terms of content clarity, layout and procedures. The importance of piloting has been widely emphasized in the literature as a crucial step to check the clarity of wording, the validity and reliability of items, the time and method specified for collecting data (e.g. Creswell, 2003; Dörnyei, 2003; Loewen & Plonsky, 2015). Based on these considerations, piloting was administered to the instruments of the current study (questionnaires and interviews) and intervention materials.

3.6.1.1 Questionnaire Piloting

Following Dörnyei's (2003, 2007) recommendations, two stages of piloting were undertaken: initial piloting and final piloting.

Initial Piloting

Initial piloting of questionnaire items is done by asking 3-4 people to review the items and give feedback (Dörnyei, 2003) which provides an initial insight into the clarity and usability of questionnaire items and interview questions. Even though most scale items in my questionnaire were adopted from previous studies and have showed good reliability, initial checking was significant as all items were translated to the learners' first language (Arabic). All questionnaire items were translated by a qualified academic translator from English to Arabic which were then reviewed by 3 colleagues who are proficient Arabic-English bilinguals. The link of the questionnaire (Arabic version) was sent to them and they were asked to complete it while thinking aloud. Each of them has reviewed it separately while I was there to ask for any confusion or misunderstanding. They were also asked to comment on the questionnaire format and layout. Although most of the questions were clear and easy to understand, valuable comments were provided to modify some items that were somewhat ambiguous or lengthy and complex. Based on their recommendations and comments, a few items were rephrased, and some phrases were omitted making the items shorter and easier to understand. Also, more details were added to clarify the example used in explaining the second part of the questionnaire. In terms of layout, choices were placed in a vertical rather than a horizontal order which was easier to follow and more compatible with the mobile version.

In addition, pilot testing of interview questions was undertaken with the same individuals. They were asked to give feedback on the clarity and sensitivity of questions and provide any further suggestions they might think I have overlooked. All individuals thought that questions are comprehensive and bias-free, but suggested a modification in some questions, such as changing closed or yes/no questions into open questions (e.g. what is your purpose for learning English? Why? Instead of Do you learn English to acquire better language or just to fulfil the university requirement?).

Final Piloting

Sample and Procedure

During the first semester of the academic year 2017/2018, the final electronic version was distributed to a sample of participants that share very similar characteristics with the target population. Dörnyei (2003) suggests that the typical number of participants for piloting should be around 50 (+/- 20). Therefore, the questionnaire was distributed to 3 random classes of female students who study English in the foundation year and the total number of participants who completed the questionnaire was 67 (see Table 5 for participants' demographic information). It took around 12-20 minutes to complete the questionnaire and students were informed that their answers will be treated confidentially and used solely for research purposes.

Table 5: Frequencies and Percentages of Demographic Information for Piloting participants (N=67)

Variables	n	%
Age		
17-19	54	80.6
20-23	12	17.9
More than 23	1	1.5
Field of Study		
Science	38	56.7
Art	29	43.3
Level of English Course		
2	58	86.6
3	3	4.5
4	6	9
English Proficiency (Self-		
Beginner	7	10.4
Elementary	9	13.4
Low intermediate	12	17.9
Intermediate	26	38.8
Upper intermediate	13	19.4

In order to pilot interview questions with students similar to the target group, 2 participants from the pilot group were asked to answer some interview questions. Interviews were conducted in Arabic (students' native language) to prevent any misunderstanding of questions and to help students express their thoughts clearly. I found that the answers to some questions were very brief and therefore decided to add some follow-up questions to elicit richer data for my study to ensure the question is clearly understandable. For example, another question was added for Q3 to clarify it more and elicit more elaborated responses (Q3: Do you think there is natural ability for languages? In other words, do you believe that some people are innately more capable or talented in learning English than others? Explain. Accordingly, interview questions were modified and prepared for the main study.

Reliability of Items

One of the ways to assess the reliability of a questionnaire is to measure the internal consistency of its scale items (i.e. the consistency of items responses across scales) (Creswell, 2003). Therefore, Cronbach's alpha internal consistency reliability coefficients were computed using SPSS version 24.0 to examine the reliability coefficients for the various multi-item scales. Table 6 below shows the Cronbach Alpha reliability coefficient of the questionnaire's scales and a sample item from each scale. For the majority of the scales in the questionnaire, the reliability was between 0.6 and 0.8. This suggests that there is a display of homogeneity among most of the items of the composite variables. The only scale that showed very low reliability (0.3) was the performance avoidance scale. The 2 items in this scale were: 'My goal for this English class is to avoid performing poorly' and 'My fear of performing poorly in this English class is often what motivates me'. These two items seemed to be

a bit problematic or ambiguous for learners. It might be hard to imagine how a goal could be to avoid doing something rather than to achieve something. The other item also seemed to be difficult to understand for students as some of them had asked for clarification of this item while answering the questionnaire. Thus, this scale was deleted in the final version.

Table 6: Cronbach’s Alpha Reliability of Multi-Item Scales

Scales	No. of items	Cronbach’s Alpha
Language Mindset Beliefs	10	.83
L2 Motivation	5	0.68
Attitudes towards Learning English	5	.74
Performance Goals (<i>Approach</i>)	3	0.67
	2	0.3
Performance Goals (<i>Avoidance</i>)		
Learning Goals	4	0.61
Responses to failure situations	6	0.57

3.6.1.2 Intervention Materials Piloting

The aim of piloting intervention materials is to obtain a practical insight into the suitability and usability of materials in terms of learners’ proficiency level, clarity of instructions and content, the time allocated for each task and expected learning outcomes. 6 foundation year university students from the target population were invited to take part in a trial session of the materials performed by the researcher. Students were asked to attend the session involving presentation slides and videos and provide feedback on content clarity, ideas and general presentation. All students thought that the

materials were very interesting and clear to understand. There was only a technical issue during piloting. The classroom PC did not support the video program and so, the videos were presented for the group in a laptop. This was an important point to consider before actual implementation of intervention materials. All classroom PCs of the sections involved in the study were checked by a technician to update the Microsoft video player to the latest version, making sure that the volume is loud enough to be heard in the whole class.

3.6.2 Data Collection Procedures for the Main Study

Below is a detailed description of the data collection procedure divided into two main phases: phase one covers Time 1 and 2 questionnaires and first interviews conducted, and phase two covers Time 3 questionnaires and the second part of the interviews.

3.6.2.1 Phase 1: Procedure for Distributing Questionnaires

As the researcher is a lecturer at the university, an information sheet outlining the aim of the study, the sample required, the procedure and a time plan was sent to the required department at the university to seek acceptance for data collection. A confirmation letter of acceptance was received from the Head of Postgraduate Studies and Scholarships, Head of Educational Affairs and the Vice Dean of the faculty. Upon arrival in Saudi Arabia, relevant forms to conduct the research in the institution were completed and all necessary procedures were explained to the researcher. Coordinators in the institute assisted in choosing sections and teachers were contacted to decide on dates and times to conduct the study. Consequently, a schedule was created including selected sections and time slots to collect data in the following 3 weeks. 12 classes were selected from level 2 to conduct the study, half of which were in the control group.

Table 7 clarifies the data collection plan distributed in weeks.

Table 7: Data Collection Plan

	Intervention	Control
Week 1	Arranging sections, contacting teachers and technical checks	
Week 2	Questionnaire Time 1 + Session 1	Questionnaire Time 1
Week 3	Session 2 + Questionnaire Time 2	Questionnaire Time 2
Week 4	Interviews	

The main study was carried out in the second module of the first semester of the academic year 2017/18. All questionnaires and intervention materials were explained and administered by the researcher. Students in all selected sections were told that they are invited to take part in a research study that is part of a PhD project which aims at exploring Saudi learners' beliefs in learning English; and that this will take around 20 minutes during their regular English classes. In the intervention classes, the objectives, procedure and ethical issues were explained to participants prior to acceptance of participation. Students were informed that they will attend 2 sessions involving materials that could foster a better language learning experience. The maximum total time of these sessions is around 2 hours during regular English classes. All participants in both groups (control and experimental) were informed that participation in this study is voluntary and all data obtained will be treated confidentially and used for research purposes only. They were all given consent forms with information on study details and ethical issues to sign (See Appendix G).

The questionnaire was distributed electronically for all participants in both Time 1 and 2. As each class has a WhatsApp group and an allocated leader, the link was easily sent to all students in class to be completed on their smartphones, for which free internet access is available for all university students. Two extra iPad devices were available in class to cover for any disruption that might occur in students' devices (e.g. low battery, loss of internet access). The types of questions and way of answering were explained to students prior receiving the link. As part 2 question types seemed

unfamiliar for students, an illustrative example for the second part of the questionnaire was explained thoroughly to ensure clarity of question items in this part. Participants were monitored by the researcher to assist in any technical issues or answer any questions that might arise while completing the questionnaire. Participants were asked to show confirmation of questionnaire submission before leaving the class to ensure that students have completed all sections and submitted their answers. The same procedure was followed in distributing time 2 questionnaires after completing the intervention study for the experimental group.

Procedure for Delivering the Materials

Intervention sessions were designed to be completed within 2 weeks, with a total time of around 2 hours. Table 8 below illustrates the time frame for each session.

Table 8: Intervention Sessions Plan and Time Frame

Sessions	Time	Task
Session 1	5 mins	Introduction + consent forms
	10-20 mins	Questionnaire Time 1
	5 mins	warming-up discussion questions
	5 mins	Video presentation: the malleability of the brain
	10 mins	Examples of scientific evidence for brain growth: discussion and
	5 mins	Video presentation: neuroplasticity
	5 mins	Group discussion and explanation on video content
	10 mins	Writing task (group work)
	5 mins	Whole class discussion on written answers
Session 2	5 mins	Introduction
	5 mins	Video presentation: The secret behind a better language learning
	10 mins	Illustration of video content and more examples
	7 mins	An inspiring story presentation for English language learning:
	10 mins	A personal experience shared by the researcher
	7 mins	Individual writing task
	5 mins	Final thoughts and discussion

	10-20 mins	Questionnaire Time 2
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With reference to Table 8, students were first introduced to the aim of the research study and an overview of the sessions. Upon interest to participate, students were given consent forms to sign and were thanked for their valuable contribution in the study.

The first session started with a warming-up discussion led by the researcher on intelligence and abilities. Students were then presented with a video illustrating the idea of brain malleability. This was followed by an illustration of brain neuron connections comparing a brain image of a born child with a 6-year-old and another slide showing the effect of enriched environments on animals' brains. Students were asked to discuss why they think this change in neuron connections has occurred, which led to further explanation of important ideas mentioned in the video. Next, students were presented with the 'Neuroplasticity' video showing how the brain works help us learn better and more examples were explained by the researcher afterwards. After that, students were divided into groups of 4 and asked to complete a writing task involving answering 3 questions related to the session content and writing some advice for a frustrated sibling. Answers were then discussed with the whole group.

In the second session, a short discussion was led by the researcher on language learning abilities followed by a video focusing on growth mindset in language learning. The video showed scientific evidence for brain growth due to language learning, strategies for effective learning stressing on the value of challenges and hard work. This was further explained by the researcher providing real-life examples from the context of study. The story of Abu Omar and his success in language learning was then presented to students in an exciting way to inspire them in learning English. After that, the researcher shared her person experience in learning English as a motivation for students. The last part of this session was an individual writing task in which students were given task sheets to write

an advice for a struggling language learner. Students' ideas and thoughts were then shared with the whole class.

Procedure for Conducting Interviews

As the aim of interviews is to further explain and expand quantitative data to understand the effect of the intervention, they were conducted with the experimental group only. After completing the questionnaire, students were invited to participate in a further interview regarding the study and a form was passed to students to write their contact details if interested to take part. They were assured that participation in interviews is completely voluntary and they can withdraw anytime if they want. 8 participants were contacted to arrange interviews and dates were scheduled to fit students' timetables, not to disrupt their regular classes.

All interviews were conducted on a one-to-one basis in a separate quiet office in the university. Students were first thanked for their interest in participation. After explaining the purpose and procedure of the interviews, participants were informed about the issue of confidentiality and asked to sign a consent form (See Appendix H). In order to express themselves freely and fluently and to avoid any misunderstanding, the interviews were conducted in Arabic, their first language. To break the ice and promote a friendly atmosphere, the interview started with general warming up questions about participants' experience in learning English during the foundation year. According to Seidman (2006), "the interviewing relationship must be marked by respect, interest, attention, and good manners on the part of the interviewer" (p. 97). Pre-prepared interview questions were used as a guide and other questions were asked during the interview based on students' responses. Interviews were audio-recorded, and notes were taken to avoid any unseen problems in recording. Students were thanked again at the end of the interview and reminded of the second phase of the interview that would take place in the second semester.

3.6.2.2 Phase 2: Data Collection Procedure

Procedure for Distributing Questionnaires

The second phase of data collection was carried out in the fourth module of the academic year 2017/18. It was aimed to generate data about learners' mindset beliefs, L2 motivation, goal orientation, responses to failure situations and fixed-trait attributions, to examine whether the intervention had a long-term effect on these aspects. As the questionnaire was designed and distributed electronically using Bristol Online Surveys (BOS), participants' contact details were stored in a secured database to be sent Time 3 questionnaire two months later. All participants ($N=216$) in both groups (control and experimental) were thanked for their previous participation in the study and informed that they are invited to take part in the last part of the research study by answering a questionnaire that will take around 20 minutes. They were reassured that participation in this study is voluntary and all data obtained will be treated confidentially and used for research purposes only.

Procedure for Conducting Interviews

The same 8 participants were contacted to arrange the second interviews. Dates and times were scheduled to fit students' timetables, not to disrupt their regular classes. All interviews were conducted on a one-to-one basis in a separate quiet office in the university. They were also conducted in Arabic to enable them to express their ideas fluently without restrictions. To promote a welcoming atmosphere, students were thanked for their participation and commitment and the interview started with general questions about participants' academic progress in learning English during the current module. Pre-prepared interview questions were used as a guide and other questions were asked during the interview based on students' responses. Questions were about mindset beliefs, motivation, intervention effect and effect of first interview. Students were thanked again at the end of the interview.

3.6.3 Data Analysis Procedure

3.6.3.1 Quantitative Data Analysis

The selection of data analysis procedure is determined by the research questions and type of data gathered (Dörnyei, 2007; Ivankova et al., 2006). In my study, data collected from questionnaires was coded and analyzed using SPSS. As mentioned earlier, the research questions of the current study aimed at examining the effect of language mindset intervention on language learners' mindset beliefs, L2 motivation, goal orientation, responses to failure situations and fixed-trait attributions. In fact, it seeks to find out whether there is a significant difference between the control and treatment groups regarding these aspects. Thus, analysis of variance (ANOVA) was deemed suitable to meet the objective of my study and answer my research questions.

To answer the first RQ and find out if the intervention has made any changes in learners' mindset beliefs, analysis of variance (ANOVA) was used to find out if there is a statistically significant difference between post-intervention responses (Time 2) of the control and intervention groups. To further answer the same question, within group differences were measured using repeated-measure ANOVA to find out whether the change in mindset beliefs before (Time 1) and after the intervention (Time 2) was significant in the intervention group compared to the control. Following the same procedure, ANOVA was used to measure the differences between the control and treatment groups responses in Time 2 regarding their motivation and learning behaviour. That is to see if these differences are true enough to be generalized and thus answer the second RQ. In addition, to examine whether there is a significant change between Time 1 and 2 responses of the intervention group compared to the control, repeated-measure ANOVA was computed.

Moreover, to claim a longer-term effect of the mindset intervention, repeated measure ANOVA was used to examine whether there was a significant variation between Time 2 and 3 responses of the intervention group in terms of language mindset beliefs and L2 motivational characteristics, and thus answer the third RQ. To answer RQ4, the longer-term effect of the intervention was measured by comparing learners' time 3 responses in the experimental with those in the control using ANOVA, to find out whether the two groups show marked variation in mindset beliefs and motivation. Table 9 below illustrates the method used for data collection and analysis to answer each RQ.

Table 9: RQs and Method for Data Collection and Analysis to Answer Them

	Research Question	Method of Data Collection	Method of Data analysis
1	To what extent does a classroom mindset intervention change learners' mindset beliefs regarding English learning? Has the intervention had any effect on learners' L2 motivation?		
	A) <i>Is there a significant difference between the treatment and control groups in terms of language mindset beliefs, l2 motivational characteristics after the intervention?</i>	Questionnaire (Time 2)	ANCOVA comparing between mindset beliefs and motivational characteristics of the intervention and control groups in Time 2
	B) <i>Do learners in the intervention group report significant changes in their language mindset beliefs and l2 motivational characteristics?</i>	Questionnaire (Time 1 & 2)	Repeated-measures ANOVA comparing between Time 1 and 2 mindset beliefs, and motivational characteristics of the intervention group and comparing it to the change in the control group.

		Interviews (phase 1)	Thematic analysis
2	Does the mindset intervention have a longer-term effect on learners' mindset beliefs and motivational characteristics? A) <i>How do language mindset beliefs and L2 motivational characteristics of the intervention group differ from the control group as they progress to the last level?</i> B) <i>Have changes in learners' language mindsets and L2 motivational characteristics lasted for a long period in the experimental group?</i>	Questionnaire (Time 3) Questionnaire (Time 1 & 3)	A) ANOVA comparing between mindset beliefs and L2 motivational characteristics of the intervention and control groups in Time 3. B) Repeated measures ANOVA comparing between Time 1 and 3 mindset beliefs and L2 motivational characteristics of the intervention group and comparing it with the control group.
		Interviews (phase 2)	Thematic analysis

3.6.3.2 Qualitative Data Analysis

General principles of thematic analysis were followed in analyzing my qualitative data. Thematic analysis is the process of analyzing data by themes (Dawson, 2006). This method is defined by Braun & Clarke (2006) as identifying themes from data sets, then analyzing, organizing, reporting and describing those themes. They explained six stages for inductive thematic analysis. It starts by understanding the data sets, and then coding the data by assigning initial codes. This is followed by creating relevant themes from the data. After that, a data map is designed to review the themes. Then, themes are given names and definitions. The final step is producing the report.

In order to analyze my data inductively, thematic analysis was data-driven. Coding and identifying themes was done vertically (looking at the whole sample) and horizontally (looking at individual cases) (Gaudet & Robert, 2018). See Appendix I and J for horizontal and vertical coding of data, respectively. This way of analysis was followed to capture across cases commonalities of the experience and understand the individual uniqueness of the experience within cases. After looking deeply at the data and reading it several times, initial codes were assigned to the interview transcripts and interpretive comments were written. After this coding phase, analysis was done at the broader level of themes. These codes were then sorted into potential themes and coded data extracts were collated together based on key themes. These extracts were sorted in a table based on the identified themes. Then, conceptual broader themes were developed which consisted of the developed subthemes. It was an iterative process of revisiting the data and the emergent findings by systematically going back and forth among the transcripts. After creating a set of themes and subthemes, it was then the stage of reviewing these themes and looking at the relationship between codes, themes and subthemes where some themes were merged together, and other codes were moved to form main themes. After creating a satisfactory representation of data, names of themes were reviewed and refined making sure that collated data extracts were coherent and internally consistent. After modifying and finalizing the set of worked themes, a report was written analyzing the whole set of data under these themes. I eventually identified six recurring broader conceptual themes that are related to research question 3 (a): mindset beliefs, L2 motivation, attributional styles, goal orientation, reactions toward failures and attitudes towards the intervention.

3.7 Ethical Considerations

A number of ethical considerations have been addressed in the current research. First of all, ethical forms were completed and submitted to the ethics committee at the University of Leeds to obtain their permission to conduct the study. Upon receiving their approval (See Appendix K for ethical

approval), a letter of permission was sent to the ELI at King Abdulaziz University to seek acceptance for data collection and approval was granted.

Before administering the questionnaires to both experimental and control groups, a consent form was distributed to obtain participants' agreement to take part in the study (See Appendix G). It included the aim of the study clarifying that participation in this study is voluntary and withdrawal is accepted at any time with no risks. It also ensures confidentiality of data, stating that it will be used for research purposes only. The experimental group were also given more details about expected tasks involved in the study and anticipated time to complete the intervention. All these points were explained orally in the participants' first language to ensure complete understanding of the information and avoid any confusion. Participants were also given the chance to ask any questions. No risks were anticipated from participating in this study and participants were assured that withdrawal from the study will have no effect on their grades or academic performance. It is crucial to make this clear to participants for the reasons Oliver (2010) gives:

Even when participants give their informed consent, they cannot necessarily be expected to anticipate their feelings about participation. It is important that as part of the induction and informed consent process, participants are reassured that they may withdraw from the research at any time. They should not have to give any notice about withdrawal, and they should not have to provide any explanation. (p. 47)

To ensure confidentiality and privacy of data, participants were informed that their names were not be requested and information provided will be dealt with anonymously. and stored confidentially in a password protected laptop and only used by the researcher and shared with supervisors.

Similarly, participants in the interviews were given enough details about taking part in these interviews including the purpose, topics, anticipated time and number of interviews. Again, they were given an Informed consent form to sign upon agreement to participate in the interviews involving the same points covered above (See Appendix H). They were further assured that they have the freedom not to answer any question they might find sensitive or embarrassing.

Chapter 4: Quantitative Results

4.1 Introduction

Based on Dweck's (2000) mindset theory, learners' mindsets or beliefs about their abilities shape the way they approach achievement situations. That is, endorsing a more growth or fixed mindset affects their level of motivation, their goal orientation towards learning or performance goals, attribution patterns and the way they react to failures. Thus, the intervention sessions were focused on teaching growth mindset beliefs as it has been found to be linked with higher motivation, positive attitudes, learning goals, mastery responses in failure situations and process-focused rather than person-focused attributions. All these variables were measured prior to (Time1), post the intervention (Time 2) and delayed-post the intervention (Time 3). The first part of the study (RQ1) explored the effectiveness of a language mindset intervention on changing Saudi university learners' mindset beliefs, L2 motivation, attitudes, attributions and responses in failure situations, focusing specifically on the immediate effect of the intervention. The second part of the study examined the longer-term effect of the intervention on the same variables. This chapter presents the results of quantitative data collected at Time 1, 2 and 3 to answer RQ1 and RQ2.

In this chapter, a description of data screening and cleaning followed by results of scales reliability using Cronbach Alpha reliability coefficient are presented first. Then, descriptive statistics of the whole sample and preliminary analyses of normality and sample characteristics are explained. After that, results of the quantitative part are explained to answer RQ1 and RQ2. The last section of this chapter presents correlational analysis and predictive relations between the language mindset and other variables.

4.2 Data Screening and Cleaning

Before running any statistical analysis, data was screened for errors or missing responses. This was done by running frequency and descriptive analysis, checking the minimum and maximum values in categorical variables as well as the mean and response rate (number of responses for each item) in continuous variables. Fortunately, all responses ranged between 1 and 6 in the continuous variables and were within the limited answer frame in the categorical variables; no other errors were detected as the electronic online questionnaire had been designed to prevent errors and missing values by setting all questions to be required and with certain responses.

4.3 Internal Consistency Reliability

To measure the internal consistency reliability of multi-item scales, Cronbach's Alpha coefficient was calculated using SPSS version 24. Table 10 below shows the Cronbach Alpha reliability coefficient for the questionnaire's 8 multi-item scales, presenting the number of items in each scale and a sample question. We can see that the majority of the scales have acceptable reliability above or close to 0.7 with the lowest reliability of 0.61 for Fixed-trait attribution (Process-focused). This suggests that there is a display of homogeneity among most of the items of the composite variables.

Table 10: Internal Reliability of Multi-Item Scales

Scales	No. of items	Cronbach's Alpha	Sample Item
Language mindset beliefs	10	0.81	<i>I have a certain fixed amount of ability to learn foreign languages</i>
Motivational intensity	5	0.78	<i>I would like to spend lots of time studying English</i>
Attitudes towards learning English	6	0.77	<i>I find learning English really interesting.</i>
Performance goals	3	0.76	<i>It is important to me to do better than the other students in my English class.</i>
Learning goals	4	0.73	<i>I want to learn as much as possible from this English class.</i>
Responses to failure situations	6	0.73	
Fixed-trait attributions (Person)	3	0.68	
Fixed-trait attributions (Process)	3	0.61	

4.4 Sample Characteristics

4.4.1 Normality

Normality was checked using histograms and values of skewness and Kurtosis. Visual inspection of histograms and normal Q-Q plots show that scores on the 8 scales are approximately normally distributed for both the treatment and control groups in all scales except for two scales in the control group that show a slight deviation from normal distribution. See Appendix L for histograms of all scales. Figure 1 and 2 for Language Mindset Beliefs (LMB), Figures 3 and 4 for Motivational Intensity (MI), Figures 5 and 6 for Attitudes Towards Learning English (ATLE), Figures 7 and 8 for Learning Goals (LG), Figures 9 and 10 for Performance Goals (PG), Figures 11 and 12 for

Responses to Failure Situations (RFS), Figures 13 and 14 for Fixed-Trait Attributions person focused and Figures 15 and 16 for Fixed-Trait Attributions process focused.

Although the histograms in Figure 7 and 15 show high skewness toward the right, figures of skewness for all scales of the treatment group are between $-.7$ and $.5$ which indicates a normal distribution. Nevertheless, figures of skewness and kurtosis of the control group show a normal distribution of 6 scales with 2 scales showing slight skewness. The histograms in Figure 6 and 16 show moderate skewness of the ATLE scale ($S=-1.30$; $K=2.20$) and the FTA_Pc scale ($S=-1.20$; $K=2.02$) toward the right. However, the values for asymmetry and kurtosis between -2 and $+2$ are considered acceptable in large samples in order to prove normal univariate distribution (See e.g. Field, 2000 & 2009; George & Mallery, 2010; Gravetter & Wallnau, 2014; Trochim & Donnelly, 2006).

4.4.2 Descriptive Statistics

Table 11 below displays the mean, standard deviation, minimum and maximum scores in all scales. It should be pointed out that scores in this questionnaire were obtained using a 6-point Likert scale that included the following options: 1 (strongly disagree), 2 (disagree), 3 (slightly disagree), 4 (slightly agree), 5 (agree) and 6 (strongly agree), as described in Section 3.4.1.1. Based on the scales and measures explained previously (see section 3.4.1.2 in Chapter 3), the mean score of participants' language mindset beliefs is 2.50 indicating that participants have growth mindset beliefs and some fixed mindset beliefs. The language mindset component was treated as a single index in which the mean score is measured by combining the fixed items with the reversed growth items. As the rating scale ranged between 1 and 6, scoring higher would indicate more orientation toward the fixed mindset. However, having a lower mean score would indicate more orientation toward the growth mindset.

Their mean scores in motivation (4.47) and attitudes (4.51) suggest a moderate level of motivation and a reasonably positive attitude towards learning English. In terms of goal orientation, they demonstrate both types of goals with learning goals being slightly more. With regards to their responses to failure situations, the mean score (2.7) is slightly below the middle of the scale which suggests that participants are less likely to react in a helpless manner and more likely to have characteristics of a mastery response. Looking at their attribution patterns, participants exhibited both patterns with process-focused showing a higher mean than person-focused.

Table 11: Descriptive Statistics of the Whole Sample Scores

Scale	Mean	Std. Deviation	Min	Max
Language Mindset Beliefs (fixed)	2.50	0.69	1	5.30
Motivational Intensity	4.47	0.83	2.20	6
Attitudes towards Learning English (positive)	4.51	0.90	1.50	6
Performance Goals	4.58	0.94	1.67	6
Learning Goals	5	0.71	2.25	6
Responses to failure situations (helpless)	2.70	0.84	1	4.83
Fixed-trait Attributions (Person)	3.76	1.06	1	6
Fixed-trait Attributions (Process)	5.11	0.73	2	6

Were there any pre-existing differences between the study groups before experimental treatment?

One-way Analysis of Covariance (ANCOVA)

As proficiency level in language learning could have an effect on learners' mindset and motivation, it is important to control for this factor when comparing between the mean scores of the treatment and experimental groups, as this allows us to assess the effect of experimental manipulation more accurately and increase the precision in detecting the effect of the treatment. This was controlled

along with age as covariates that might have an effect on the results. This section illustrates the difference in the means of the dependent variables between the two groups when controlling for age and proficiency.

Before conducting Analysis of Covariance (ANCOVA), a number of assumptions need to be met. Homogeneity of variance was first examined to ensure that the variances of covariates (age, and proficiency) are equal in the two groups. Test of between-subject effects show a non-significant value of $p = .07$ and $.09$ for age and proficiency respectively. This meets the homogeneity of variance assumption as there is no statistically significant differences in age and proficiency between the two groups. To meet the homogeneity of regression assumption, no interaction should be found between the covariates (age and proficiency) and the treatment or experimental manipulation (grouping variable) (Pallant, 2013). Tests of between-subject effects was found to be non-significant ($P = .06$ and 0.74 for Group*age and Group* proficiency). So, we accept the null hypothesis which meets the homogeneity of regression assumption.

As these two assumptions were met, one-way between groups analysis of covariance was conducted to compare between the treatment and control groups before the intervention (Time 1). That is to find out whether the two groups are almost equal in their mean scores on the dependent variables presented in Table 12 (LMB, MI, ATLE, LG, PG, RFS, FTA_Pn and FTA_Pc) while controlling for age and proficiency. Looking at the Levene's test in the table, it can be noted that the value is not significant ($p > .05$) in all dependent variables. This means the equality of variance assumption is not violated and the variances are equal in both groups. Results of the ANCOVA test were found to be non-significant as well in all scales at a value of $p > .05$ except for FTA_Pc, which shows a significant score of $p = .05$. This means, there is no statistically significant difference between the two groups in terms of their mindset beliefs, L2 motivation, goal orientation, responses to failure situations and fixed trait attributions (person-focused) except for process-focused attributions. Thus,

it can be concluded that the treatment and control groups are equivalent at Time 1 as there are no pre-existing differences between the two groups in almost all dependent variables.

Table 12: ANCOVA for Time 1 results of all scales between the Treatment (n=103) and Control (n=113) groups with age and proficiency as covariates

<i>Covariate</i>	<i>Scale</i>	<i>M. (Std. Deviation)</i>		Levene's test	<i>F</i>	<i>Sig.</i>
		<i>Treatment (n= 103)</i>	<i>Control (n= 113)</i>			
Age	1. Language mindset beliefs	2.51 (.65)	2.42 (.63)	.89	.76	.38
	2. L2 motivation	4.45 (.85)	4.62 (.75)	.14	2.63	.11
	3. Attitudes towards learning	4.57 (.84)	4.60 (.87)	.98	.10	.75
	4. Learning goals	5.18 (.62)	5.02 (.73)	.23	2.75	.10
	5. Performance goals	4.57 (.94)	4.74 (.85)	.21	2.35	.13
	6. Responses to failure situations	2.72 (.86)	2.61 (.80)	.52	.90	.35
	7. Fixed-trait attributions (Person)	3.60 (1.08)	3.74 (1.04)	.30	1.20	.28
	8. Fixed-trait attributions (Process)	5.05 (.78)	5.12 (.68)	.05	.43	.51
Proficiency	1. Language mindset beliefs	2.51 (.65)	2.42 (.63)	.98	.96	.33
	2. L2 motivation	4.45 (.85)	4.62 (.75)	.20	1.90	.17
	3. Attitudes towards learning	4.57 (.84)	4.60 (.87)	.50	.01	.92
	4. Learning goals	5.18 (.62)	5.02 (.73)	.15	3.24	.07
	5. Performance goals	4.57 (.94)	4.74 (.85)	.59	1.34	.25
	6. Responses to failure situations	2.72 (.86)	2.61 (.80)	.80	.62	.43
	7. Fixed-trait attributions (Person)	3.60 (1.08)	3.74 (1.04)	.33	1.12	.29
	8. Fixed-trait attributions (Process)	5.05 (.78)	5.12 (.68)	.05	.43	.51

4.5 Research Question 1: Immediate Effect of the Language Mindset Intervention

Before analyzing the results, it is important to emphasize the flaws of relying heavily on statistical significance testing and recognize the importance of providing more informative analysis considering descriptive statistics (e.g. effect sizes (ESs) and confidence intervals) (Plonsky, 2015). Depending only on significant values, often overlooks or ignores the rich information provided by descriptive statistics and the magnitude of effects. The Task Force on Statistical Inference of the American Psychological Association (APA) recommended that researchers “should provide some ES estimate when reporting a p value” (Wilkinson, 1999, p. 599) and further emphasized that “... reporting and interpreting ESs in the context of previously reported effects is essential to good research” (p. 599). The fifth edition of the APA (2001) Publication Manual also stressed the importance of ESs by stating “For the reader to fully understand the importance of your findings, it is almost always necessary to include some index of ES or strength of relationship in your Results section” (p. 25).

ESs are used to assess the amount of difference between groups or the strength of the relationship between variables. In other words, they assess the magnitude or strength of the findings that occur in research studies which cannot be obtained solely by focusing on a particular p -value (Thompson, 2006; Volker, 2006). In order to assess the importance of the findings, it is crucial to measure the size of the effect we are testing in a standardized way (Field, 2000). Standardized ESs assist in comparisons over studies (Cumming, 2014). Cohen d and partial eta squared are the most commonly used effect size measures when comparing between groups (Pallant, 2007). These two effect size measures are suitable to be used with ANCOVA, but they provide different types of effect size. Cohen d presents the difference between groups in terms of standard deviation units whereas partial eta squared indicates the proportion of variance of the dependent variable that is explained by the independent variable.

In the analysis of my results, Cohen d is used as an effect size measure to reveal the strength of the difference between the mean scores of the treatment and control groups as well as the strength of within group differences in repeated measures ANOVA. One of the main reasons for choosing the standard Cohen d measure for effect size is that it suits different ANCOVA designs and is not affected by experimental designs, unlike other effect size measures that could change by the number of responses, design of the study and other factors (Durlak, 2009, Westfall, 2015). Precisely because of this, it is difficult to make meaningful comparisons of these effect sizes across different experimental designs. However, effect sizes across designs can be meaningfully compared using classical Cohen's d as it deliberately ignores design information. It was calculated the standard way explained by Cohen by dividing the mean difference between the two groups (the results of subtracting the mean scores of the two groups) by the pooled standard deviation, that is, the square root of the average variance in each condition. Partial eta squared is also interpreted in repeated measures ANOVA to indicate the amount of variance in the dependent variables attributable to the independent variable (the intervention).

RQ1 (A): Do learners in the intervention group report significant changes in their language mindset beliefs and L2 motivational characteristics compared to the control group?

One-way between groups analysis of covariance (ANCOVA) was conducted to explore the effectiveness of the language mindset intervention in changing learners' *mindset beliefs, L2 motivation, goal orientation, reactions to failure situations and fixed-trait attributions*, while controlling for age and proficiency. That is, to find out whether the treatment group which received the intervention has significantly different scores in all 8 scales compared to the control group at Time 2 (after the intervention). Looking at Table 13, it was found that there was a statistically significant difference at $p < .05$ in language mindset beliefs, attitudes towards learning English,

learning goals, performance goals and responses to failure situations, with age and proficiency as covariates.

In terms of language mindset beliefs, it can be noted that the treatment group has significantly lower fixed mindset beliefs after intervention compared to the control group and the magnitude of this difference is medium ($d=.51$) based on Cohen (1988). With regards to their attitudes towards learning English, the treatment group also has significantly more positive attitudes than the control group, but Cohen's effect size value ($d = .44$) suggested low to medium practical significance. Regarding goal orientation, the mean scores of the treatment group was found to be significantly greater than the control group in both learning and performance goals. However, the magnitude of this difference was medium to large in the former ($d= .56$) and small to medium in the latter ($d= .42$), with more orientation towards learning goals than performance goals in both groups. Looking at their scores in responses to failure situations, both groups show tendency towards mastery rather than helpless response having a mean score of 2.21 and 2.52 for the treatment and control respectively, with the former group showing a significantly higher mastery response than the latter with small to medium effect size ($d= .37$). That is because lower scores in this scale represents a decrease in helpless response and more orientation toward a mastery reaction. As with the rest of the scales, no statistical significant difference was found between the two groups post the intervention (T2).

Table 13: ANCOVA for Time 2 results of all scales between the Treatment (n=103) and Control (n=113) groups with age and proficiency as covariates

Covariate	Scale	M. (Std. Deviation)		Levene's test	F	Sig.	Effect size ^a	D	r
		Treatment (n= 103)	Control (n= 113)						
Age	1. Language mindset beliefs	2.02 (.72)	2.38 (.69)	.74	15.94	.00*	.070	-.511	-.248
	2. Motivational intensity	4.65 (.78)	4.59 (.68)	.05	.33	.57	.002	.082	.041
	3. Attitudes towards learning	4.81 (.70)	4.49 (.76)	.96	10.24	.00*	.046	.437	.214
	4. Learning goals	5.33 (.64)	4.94 (.74)	.03	17.35	.00*	.075	.562	.271
	5. Performance goals	4.89 (.96)	4.50 (.90)	.59	9.15	.00*	.041	.420	.205
	6. Responses to failure situations	2.21 (.80)	2.52 (.89)	.36	6.73	.01*	.031	-.365	-.180
	7. Fixed-trait attributions (Person)	3.29 (1.23)	3.55 (.96)	.01	3.29	.07	.015	-.237	-.118
	8. Fixed-trait attributions (Process)	5.17 (.89)	5.13 (.64)	.00	.15	.70	.001	.052	.026
Proficiency	1. Language mindset beliefs	2.02 (.72)	2.38 (.69)	.98	13.63	.00*	.060	-.511	-.248
	2. Motivational intensity	4.65 (.78)	4.59 (.68)	.09	.56	.46	.003	.082	.041
	3. Attitudes towards learning	4.81 (.70)	4.49 (.76)	.80	11.65	.00*	.052	.437	.214
	4. Learning goals	5.33 (.64)	4.94 (.74)	.03	18.15	.00*	.079	.562	.271
	5. Performance goals	4.89 (.96)	4.50 (.90)	.82	10.39	.00*	.047	.420	.205
	6. Responses to failure situations	2.21 (.80)	2.52 (.89)	.36	7.28	.01*	.033	-.365	-.180
	7. Fixed-trait attributions (Person)	3.29 (1.23)	3.55 (.96)	.36	3.07	.081	.014	-.237	-.118
	8. Fixed-trait attributions (Process)	5.17(.89)	5.13 (.64)	.14	.01	.83	.000	.052	.026

* $P < .05$

^aPartial eta squared

In order to obtain more precise results for the immediate effect of the intervention, it is important to control for initial group differences (Time 1 responses) when comparing between the treatment and control groups in Time 2. Although one-way between groups analysis showed that the two groups are considered equivalent, using Time 1 responses as a covariate adjusts any difference in their initial responses before intervention. Eliminating the effect of differences in Time 1 is believed to provide more accurate results since any differences in the treatment group can be attributed to the intervention rather than pre-intervention differences. Thus, ANCOVA was conducted to examine the effect of the intervention on the dependent variables (LMB, MI, ATLE, LG, PG, RFS, FTA_Pn and FTA_P) by comparing the mean scores of post intervention scores while controlling for effects of pre-intervention scores. Table 14 presents results of this analysis and reveals that the treatment group differ significantly from the control group at $p < .05$ in all variables except fixed-trait attributions. That is, participants in the treatment group are shown to endorse more growth mindset beliefs, have higher motivational intensity, more positive attitudes towards learning English, more learning and performance goals and more tendency towards mastery responses in failure situations.

Table 14: ANCOVA for Time 2 results of all scales between the Treatment (n=103) and Control (n=113) groups with Time 1 as covariate

Scale	<i>M. (Std. Deviation)</i>		<i>F</i>	<i>Sig.</i>	<i>Effect size^a</i>	<i>d</i>	<i>r</i>
	<i>Treatment</i>	<i>Control</i>					
1. Language Mindset Beliefs	2.02 (.72)	2.37 (.69)	33.49	.00*	.136	-.497	-.241
2. Motivational Intensity	4.65 (.78)	4.59 (.68)	3.93	.04*	.002	.082	.041
3. Attitudes towards Learning English	4.81 (.70)	4.49 (.76)	23.25	.00*	.099	.437	.214
4. Learning Goals	5.33 (.64)	4.94 (.74)	13.07	.00*	.058	.562	.271
5. Performance Goals	4.89 (.96)	4.50 (.91)	27.63	.00*	.115	.473	.230
6. Responses to Failure Situations	2.21 (.80)	2.51 (.89)	17.58	.00*	.077	-.354	-.174
7. Fixed-trait Attributions (Person)	3.29 (1.23)	3.54 (.95)	1.78	.18	.008	-.229	-.114
8. Fixed-trait Attributions (Process)	5.17 (.89)	5.13 (.64)	.30	.58	.001	.052	.026

* $P < .05$

^aPartial eta squared

Comparing between results of ANOVA and ANCOVA when controlling for pre-intervention differences in participants' beliefs on the 8 variables (T1), Table 15 shows that the L2 motivational intensity scale was the only one that changed when controlling for Time 1 differences. The difference between the two groups changed from a non-significant value of $p = .54$ in ANOVA to a significant value of $p = .04$ in ANCOVA with Time 1 as a covariate. This means the motivational intensity in L2 among the treatment group was found to be significantly higher than the control group when pre-intervention motivation was controlled for, but the magnitude of this difference is still low. However, no noticeable differences have been found in the p value of other scales when controlling for initial variance in the scales prior to the intervention. This means even when controlling for T1 responses using ANCOVA, all other scales (language mindset beliefs, goal orientation, responses to failure situations and fixed-trait attributions) showed the same results obtained using ANOVA, indicating that pre-existing variances between the two groups in these scales do not seem to affect the ANOVA results.

Table 15: Comparison between ANOVA and ANCOVA (covariate: Time 1) of Time 2 results between the Treatment (n=103) and Control (n=113)

Scale	ANOVA			ANCOVA		
	<i>F</i>	<i>Sig.</i>	<i>Eta squared</i>	<i>F</i>	<i>Sig.</i>	<i>Partial eta squared</i>
1. Language Mindset Beliefs	13.88	.00*	.061	33.49	.00*	.136
2. Motivational intensity	.37	.54	.002	3.93	.04*	.002
3. Attitudes towards Learning English	10.54	.00*	.047	23.25	.00*	.099
4. Learning Goals	17.00	.00*	.074	13.07	.00*	.058
5. Performance Goals	9.21	.00*	.041	27.63	.00*	.115
6. Responses to Failure Situations	6.80	.01*	.031	17.58	.00*	.077
7. Fixed-trait Attributions (Person)	2.76	.10	.013	1.78	.18	.008
8. Fixed-trait Attributions (Process)	.13	.72	.0006	.30	.58	.001

RQ1 (B): Do learners in the intervention group report significant changes in their language mindsets and motivational characteristics compared to the control group?

A two time (T1, T2) within groups repeated-measure ANOVA was performed separately among the experimental and control groups to examine whether any significant differences occurred over time in the dependent variables in each group and whether these changes were larger in the experimental vs. the control group. This comparison was between T1 and T2 mean scores of the experimental vs control groups separately using time as the repeated measure factor for each of the variables: language mindset beliefs, motivational intensity, attitudes towards learning English, learning goals, performance goals, responses to failure situations, and fixed-trait attributions.

Figures in Table 16 confirm that the time factor has significantly impacted all variables in the experimental condition with the exception of fixed-trait attribution (process-focused). So, this variable did not reach statistical significance in the between group difference nor did it change significantly in the within group differences in both groups, indicating that neither the experimental intervention nor the time factor affected the process-focused attributional patterns among participants in both conditions (treatment and control).

It can be noted from the results in Table 18 that the largest change in the experimental group over time occurred in the *language mindset beliefs* scale ($p = .000$) and *responses to failure situations* scale ($p = .000$) with a medium to large effect size on both scales ($d = .7$ and $.6$ respectively). Also, there is a large effect of (time or intervention) on both the *language mindset beliefs* scale (partial $\eta^2 = .39$) and *responses to failure situations* scale ($\eta^2 = .29$). A significant decrease in the *language mindset* scale indicates a decline in the fixed beliefs or rather a tendency towards growth mindset beliefs. This was expected to affect their responses in failure situations, showing a tendency towards

a mastery rather than a helpless manner and this was confirmed in the results of the *responses to failure situations* scale. As this scale measures helpless reactions, a mean score of 2.20 at T2 represents a greater orientation towards mastery reactions.

The least significant change in the treatment group was in the *learning goals* scale and *L2 motivational intensity* scale with an increase of only .15 in the mean score between T1 and T2 of the former and .20 of the latter. It can be noted that between group differences in motivation was statistically significant at T2 only when controlling for T1, but the fact that motivational intensity has increased significantly within the experimental group between T1 and T2 (despite having a small magnitude) confirms the effect of the intervention in increasing the level of motivation within this group .

However, looking at the effect of time on the dependent variables of the control group, only three variables changed significantly (*attitudes towards learning English, performance goals and fixed-trait attribution, person focused*), but in a different direction compared to the experimental group and with a small effect size ($d = .1, .3$ and $.2$ respectively). For instance, the level of positive attitudes towards learning was inversely proportional (the mean value increased in the experimental group and decreased in the control group). This indicates that the intervention has positively influenced learners' attitudes regarding learning the language, by contrast to the control group.

Although the performance goals variable was expected to decrease in the experimental group, it shows a significant increase in both experimental and control groups with a small effect size in both groups ($d=.3$). the effect of time was also high in both conditions showing a medium to large effect size of $\eta^2 = .13$ in the treatment and $\eta^2 = .12$ in the control. In addition, attributing failures and difficulties to personal abilities is a concept that was expected to decrease in the experimental condition. Values of the fixed-attribution traits (person-focused) of experimental group confirm this result as the mean score has decreased significantly after intervention. This was also the case with

the control group, but with the treatment showing a higher significant value ($p=.003$) and larger effect size ($d=.3$) compared to the control group ($p=.013$, $d=.2$)

Table 16: One-way repeated measures ANOVA of Time 1 and 2 on each variable for the treatment (n=103) and control (n=113) groups

* $P < .05$

Scale	Time	Treatment					Control				
		M.	SD	Sig.	Effect size ^a	d	M.	SD	Sig.	Effect size ^a	d
1. Language Mindset Beliefs	T1	2.51	.65	.000*	.391	.714	2.42	.63	.339	.008	.076
	T2	2.02	.72				2.37	.69			
2. Motivational intensity	T1	4.45	.85	.024*	.049	.245	4.62	.75	.333	.008	.042
	T2	4.65	.78				4.59	.68			
3. Attitudes towards Learning English	T1	4.57	.84	.001*	.096	.310	4.60	.88	.017*	.050	.134
	T2	4.81	.70				4.49	.76			
4. Learning Goals	T1	5.18	.62	.037*	.042	.238	5.02	.73	.125	.021	.109
	T2	5.33	.64				4.94	.74			
5. Performance Goals	T1	4.57	.94	.000*	.127	.337	4.74	.86	.000*	.117	.271
	T2	4.89	.96				4.50	.91			
6. Responses to Failure Situations	T1	2.72	.86	.000*	.285	.614	2.61	.81	.077	.028	.118
	T2	2.21	.80				2.51	.89			
7. Fixed-trait Attributions (Person)	T1	3.60	1.08	.003*	.086	.268	3.74	1.04	.013*	.054	.201
	T2	3.29	1.23				3.54	.95			
8. Fixed-trait Attributions (Process)	T1	5.05	.78	.234	.014	.143	5.11	.68	.779	.001	.030
	T2	5.17	.89				5.13	.64			

^a Partial eta squared

4.6 Research Question 2: Longer-term Effect of the Language Mindset Intervention

RQ2: Does the mindset intervention have a long-term effect on FL learners' mindset beliefs and motivational characteristics?

This research question sought to examine the effectiveness of the language mindset intervention in terms of its long-term influence on foreign language learners', *language mindset beliefs*, *L2 motivational intensity*, *attitudes towards learning English*, *goal orientation*, *responses to failure situations* and *fixed-trait attributions*. It aims to find out whether significant changes in these variables will last for a longer period of time, proving the success of the intervention in making longer-term differences among learners regarding these variables. This was obtained by means of a questionnaire distributed to the same participants two months after the intervention (Time 3). However, the response rate decreased to 85 participants in the treatment group and 68 in the control. To answer the third RQ, between groups differences of mean scores in these scales were compared first to find out whether the treatment group show significant improvement compared to the control group. Then, within group differences were examined to compare mean scores of each group between Time 1 and 3.

One-way Between Groups ANOVA

A one-way between groups analysis of variance was conducted to compare between the experimental and control groups responses at Time 3 to explore the longer-term effect of the intervention on learners' *language mindset beliefs*, *L2 motivation*, *attitudes towards learning English*, *learning goals*, *performance goals*, *responses to failure situations*, and *fixed-trait attributions*. Figures in Table 17 shows that the mean scores of the treatment group did not differ significantly from the control group in any of the scales. Although they were found to have more growth mindset beliefs, more motivation and more learning goals, the difference was not large enough to be statistically significant. This was also the case in terms of fixed-trait attribution, the treatment group have a tendency towards a process-focused attributional pattern rather than person-focused attributions compared to the control, but this difference was not significant as well. Moreover, the two groups show the same level of positive attitudes towards learning English and similar responses in failure

situations showing more tendency towards mastery reactions. This suggests that the intervention did not seem to have a long-term influence on the treatment group as their beliefs did not differ significantly from the control group. The same results were obtained when controlling for T1 results and also when controlling for age and proficiency. This indicates that these factors did not interfere with the Time 3 results and have no effects on between-groups differences.

Table 17: One-way ANOVA for Time 3 results of all 8 scales between the Treatment (n=85) and Control (n=68) groups

Scale	<i>M. (Std. Deviation)</i>		<i>Levene's test</i>	<i>F</i>	<i>Sig.</i>	<i>Effect size d</i>
	<i>Treatment</i>	<i>Control</i>				
1. Language Mindset Beliefs	2.41(.839)	2.45 (.795)	.489	.095	.785	-.049
2. Motivational intensity	4.40 (.604)	4.39 (.551)	.335	.006	.941	.017
3. Attitudes towards Learning English	4.36 (.915)	4.36 (.819)	.231	.001	.978	.000
4. Learning Goals	5.04 (.595)	4.92 (.650)	.633	1.326	.251	.194
5. Performance Goals	4.48 (1.09)	4.46 (1.01)	.605	.011	.918	.019
6. Responses to Failure Situations	2.73 (.830)	2.73 (.956)	.391	.000	1	.000
7. Fixed-trait Attributions (Person)	3.83 (1.06)	3.87 (1.10)	.661	.053	.819	-.037
8. Fixed-trait Attributions (Process)	5.15 (.744)	5.13 (.674)	.607	.034	.853	.028

One-way Repeated Measures ANOVA (Long-term within group differences)

To examine within-group long term effects of the intervention, a one way repeated measures ANOVA was conducted to compare scores of the two groups separately at T1 (prior to the intervention), T2 (following the intervention) and T3 (two-month follow-up) regarding their *language mindset beliefs, L2 motivational intensity, attitudes towards learning English, learning goals, performance goals, responses to failure situations, and fixed-trait attributions*. That is, to find out whether the treatment group have reported significant changes in these variables at the three times and compare it with the control group. Table 18 shows that there was a significant effect of

time on the dependent variables of the treatment group, showing significant changes in all but one variable (*fixed-trait attribution, Process focused*) during the three times while the control group showed a significant change only in the *Performance goals* scale. Below is a description of these changes in each scale.

Table 18: One-way Repeated-measures ANOVA for the Treatment (n=85) and Control (n=68) groups in T1, T2 & T3

Scale	Time	Treatment				Control			
		M.	SD	Sig.	Effect size ^a	M.	SD	Sig.	Effect size ^a
1. Language Mindset Beliefs	T1	2.51	.641	.000*	.444	2.40	.627	.488	.021
	T2	1.99	.675			2.37	.684		
	T3	2.41	.839			2.45	.795		
2. Motivational intensity	T1	4.48	.831	.019*	.091	4.67	.762	.071	.077
	T2	4.64	.737			4.64	.656		
	T3	4.40	.604			4.39	.551		
3. Attitudes towards Learning English	T1	4.58	.787	.000*	.271	4.65	.849	.030*	.101
	T2	4.81	.650			4.51	.716		
	T3	4.36	.915			4.36	.819		
4. Learning Goals	T1	5.16	.603	.003*	.128	5.04	.714	.204	.047
	T2	5.28	.556			4.94	.757		
	T3	5.04	.595			4.92	.650		
5. Performance Goals	T1	4.53	.933	.002*	.140	4.72	.910	.002*	.173
	T2	4.83	.999			4.45	.930		
	T3	4.48	1.09			4.46	1.007		
6. Responses to Failure Situations	T1	2.75	.849	.000*	.414	2.57	.837	.229	.044
	T2	2.23	.791			2.47	.830		
	T3	2.73	.830			2.73	.956		
7. Fixed-trait Attributions (Person)	T1	3.58	1.039	.000*	.197	3.65	1.05	.074	.076
	T2	3.31	1.185			3.50	.998		
	T3	3.83	1.062			3.87	1.096		
8. Fixed-trait Attributions (Process)	T1	5.04	.761	.319	.027	5.05	.665	.680	.012
	T2	5.18	.852			5.13	.708		
	T3	5.15	.744			5.13	.674		

Language Mindset Beliefs (LMB)

As lower scores in this scale indicates a tendency towards growth mindset beliefs, Figure 2 shows that the treatment group has made a significant improvement in this variable right after the intervention (T2) reporting a significant change in their growth mindset beliefs at $p=.00$, but this did not

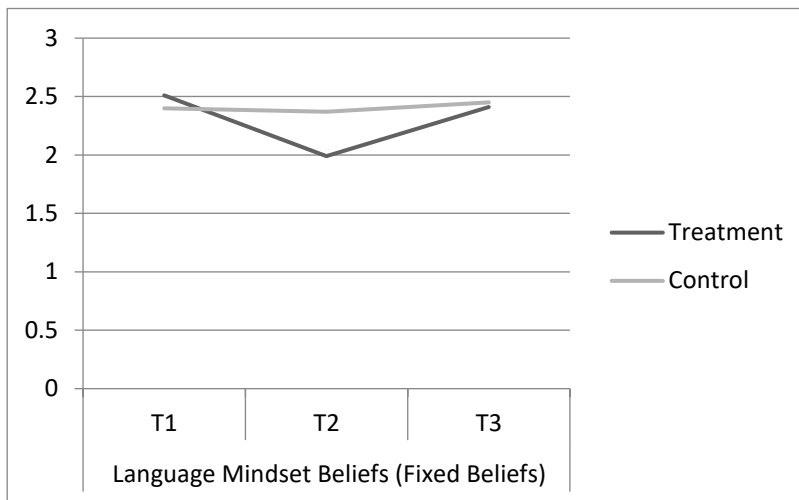


Figure 2: Change in LMB during the three times in the treatment & control groups

last until T3 when growth beliefs decreased significantly with a small magnitude ($d=.2$). The control group on the other hand did not report any significant changes in their beliefs regarding their language mindsets from T1 to T3, showing a similar starting and endpoint to the treatment group. (T1-T3: $P=.00$, $d=.238$)

Motivational Intensity (MI)

The line graph in Figure 3 shows the change of motivation for learning L2 among the treatment and control groups from T1 to T3. It is apparent that although the motivation of the treatment group has increased significantly after the intervention (T2) compared to their motivation before (T1), it

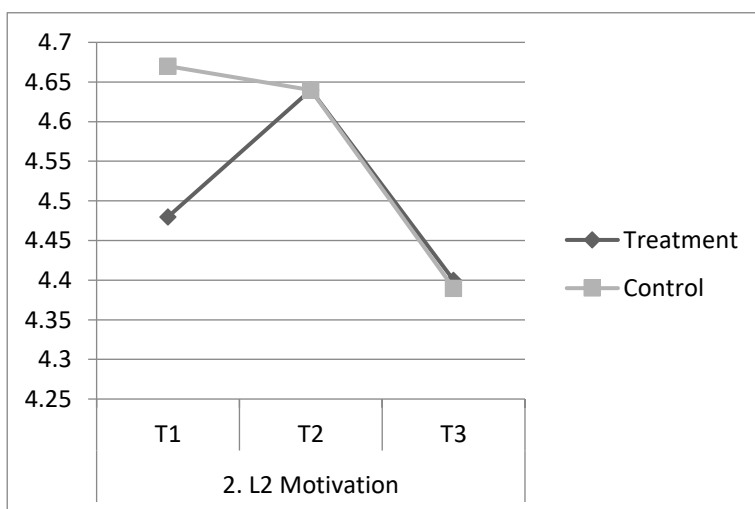


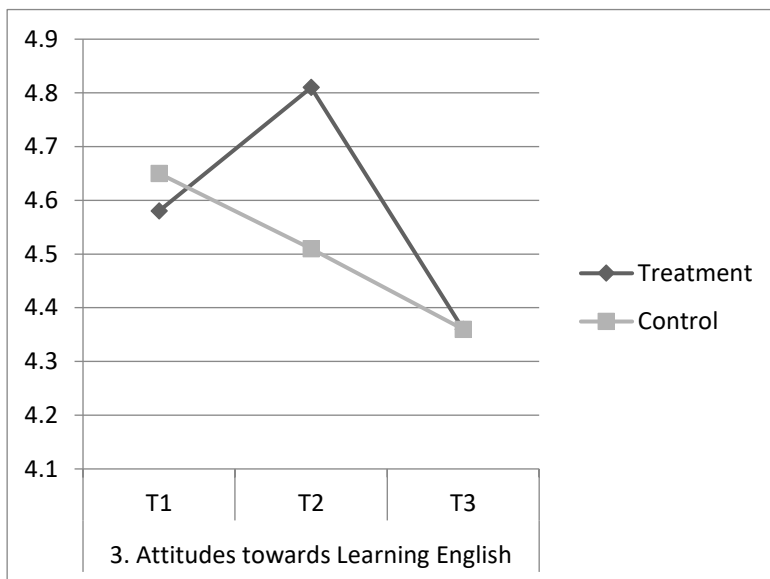
Figure 3: Change in MI during the three times in the treatment & control groups

dropped significantly at $p=.018$ with a small to

medium effect size ($d=.4$) and a mean difference of .245. On the other hand, the control group continued to decrease from T1 to T3 following a very similar pattern to the former group between T2 and T3. Thus, the intervention seems to have influenced the treatment group temporarily making a significant increase in their motivation which did not occur in the control group, but this improvement did not last for a long period. (T2-T3: $P=.02$, $d=.356$)

Attitudes towards learning English (ATLE)

The line graph in Figure 4 shows a clear drop in participants' attitudes towards learning English between T1 and T3 in both groups. While the control group decreased steadily during the whole period,



the treatment group showed a significant increase at T2 at $p=.001$ with a mean

Figure 4: Change in ATLE during the three times in the treatment & control groups

difference of $M= .227$ between those times. This suggests that the intervention has positively influenced learners' attitudes in the treatment group increasing their interest in learning the language. However, this effect had worn off before they reached T3 as it dropped significantly at $p=.00$ with a medium effect size ($d=.6$).

Goal Orientation (Learning Goals vs. Performance Goals)

As students endorse more growth mindset beliefs, learning goals are expected to improve and performance goals to decline among the treatment group. However, the line graphs of the two goal orientation patterns in Figure 5 and 6 show a similar trend in both groups. There was a significant effect of time on the two goal orientations for the treatment group in which they increased in T2 and

then decreased significantly in T3, but with a small effect size in both learning ($p=.002$, $d=.4$) and performance goals ($p=.01$, $d=.3$). Nevertheless, both types of goals were less favored by the control group, decreasing between T1 and T3, but this decline was not significant.

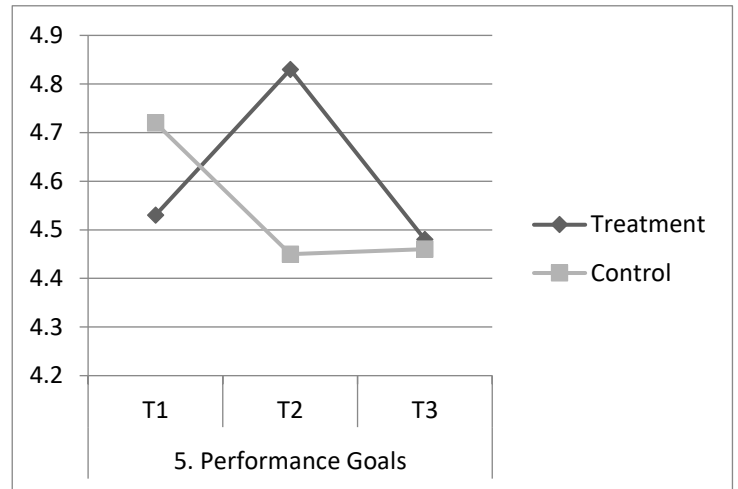
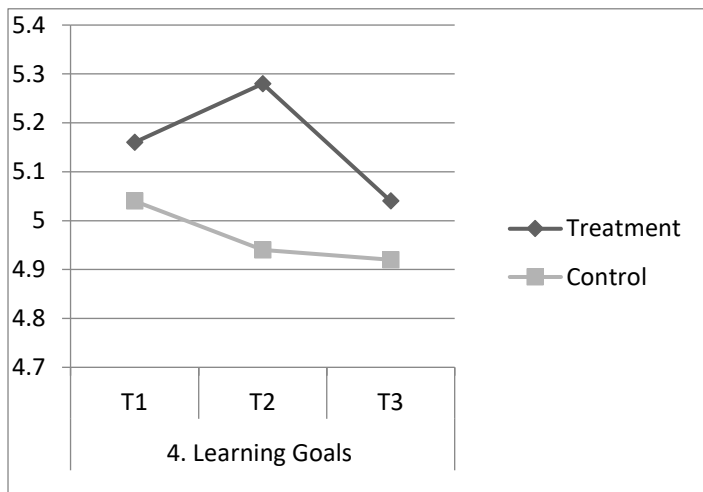


Figure 5: Change in LG during the three times in the treatment & control groups

Figure 6: Change in PG during the three times in the treatment & control groups

Responses to Failure Situations (RFS)

As this scale measures helpless responses towards failure situations, a lower score in this scale indicates a tendency towards mastery responses. Figures in Table 19 indicate that there was a significant effect of time on this scale only for the treatment group. The mean score dropped significantly at T2, indicating a clear improvement in participants' mastery responses after the intervention which then increased significantly until T3 at ($p=.00$, $d=.6$) (see Figure 7). Nonetheless, there was no significant effect of time on the control group and their mastery responses have even decreased slightly with a mean difference of $M= .159$ between T1 and T3.

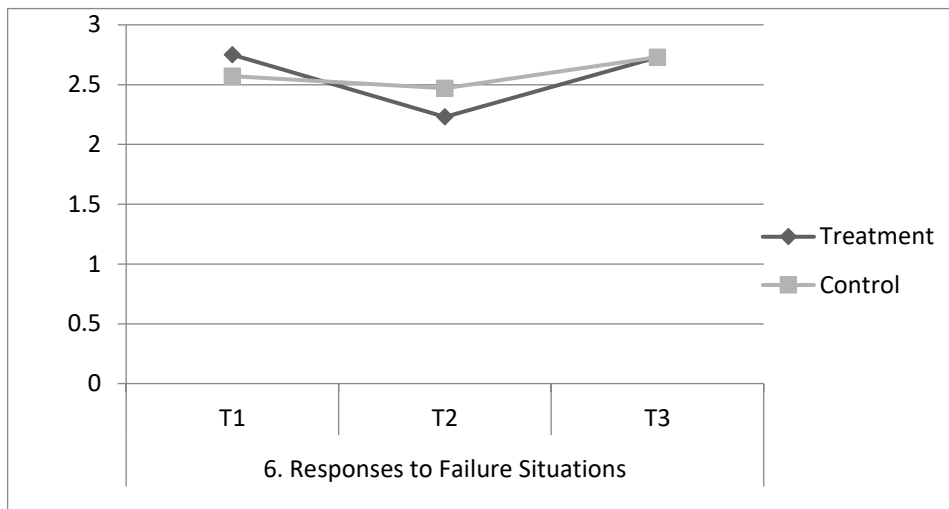


Figure 7: Change in RFS during the three times in the treatment & control groups

Fixed-trait Attributions (FTA)

The Fixed-trait attributions scale is about attributing failures to either personal abilities or process and effort. The intervention was aimed to increase learners' process attributions and decrease their personal attribution patterns. The line graphs in Figures 8 and 9 reveal that the two groups have more tendency towards process attributions than personal ones. Both groups show a decrease in personal attributions at T2 followed by an increase of this scale at T3, but the effect of time was only significant in the treatment condition at $p=.033$. As for the process-focused scale, the mean scores of the two groups were high at T1, increased in both groups in T2 and decreased again in T3 reaching very similar values (see Table 119). Although the treatment group show a clear increase in process-

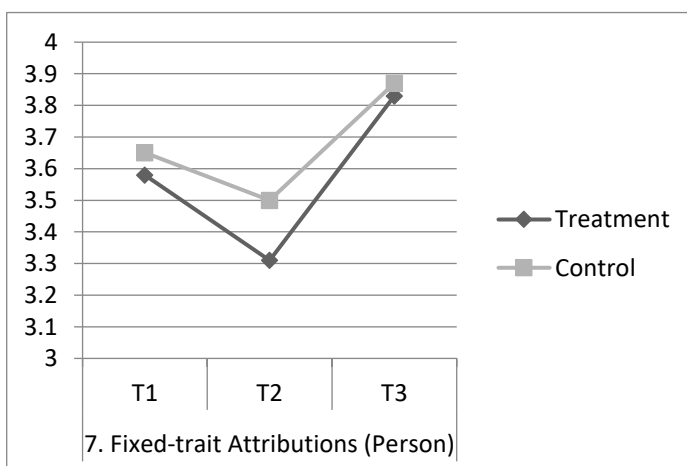


Figure 8: Change in FTA (Pn) during the three times in the treatment & control groups

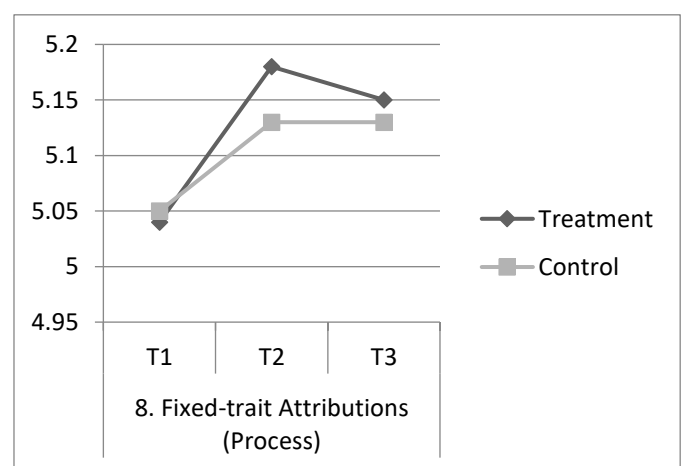


Figure 9: Change in FTA (Pc) during the three times in the treatment & control groups

focused attributions at T2, there was no significant effect for the intervention.

4.7 Correlational analysis and predictive relations between language mindset and other variables

4.7.1 Examining Associations between Variables

Previous research has suggested that learners' language mindset is an indicator of their L2 motivation, attitudes, goal orientation and reactions in various situations (Blackwell, Trzesniewski & Dweck, 2007; Dweck, 2000; Dweck & Leggett, 1988; Lou, 2014; Lou and Noels 2016; Lou and Noels 2017). It was noticed in the results of the repeated measures ANOVA that when learners' mindset beliefs were changed, a change also occurred in their motivational intensity, attitudes towards learning, learning goals, performance goals, responses to failure situations and fixed trait attributions (see Chapter 5). This indicates a potential relationship between learners' language mindset and their motivation, but also suggests that there may be relationships between learners' language mindset and other variables. This is especially interesting because some associations between language mindset and other independent variables were found in the literature. So, based on previous research and proposed models (Albalawi, 2018; Dweck, 2000; Lou, 2014 Lou & Noels, 2016, 2017), the following hypothetical relations were investigated.

Hypothesis number	Hypothesis Statements
Research hypothesis 1 (H1):	Fixed language mindset will correlate negatively with L2 motivation.
Research hypothesis 2 (H2):	Fixed language mindset will correlate negatively with attitudes towards learning English.
Research hypothesis 3 (H3):	Fixed language mindset will correlate positively with performance goals.
Research hypothesis 4 (H4):	Fixed language mindset will correlate negatively with learning goals.
Research hypothesis 5 (H5):	Fixed language mindset will correlate positively with helpless responses to failure situations.

Research hypothesis 6 (H6):	Fixed language mindset will correlate positively with person focused fixed-trait attributions.
Research hypothesis 7 (H7):	Fixed language mindset will correlate negatively with process focused fixed-trait attributions.
Research hypothesis 8 (H8):	Helpless responses to failure situations will correlate positively with person focused fixed-trait attributions.
Research hypothesis 9 (H9):	Helpless responses to failure situations will correlate negatively with process focused fixed-trait attributions.

In order to examine the level of association between variables and how this could have been changed due to the intervention, a Pearson correlation coefficient was computed before (T1) and after the intervention (T2). Table 19 below shows that although some significant correlations were present before the intervention, these correlations have increased, and new correlations have emerged after the intervention. For instance, two other scales were found to be significantly correlated with *fixed mindset beliefs* only after the intervention: learning goals and responses to failure situations. In addition, the strength of the correlation between *fixed mindset beliefs* and *fixed trait attributions (person-focused)* has changed from small to medium correlation after the treatment. This type of personal attribution was also significantly correlated with *L2 motivation* and *responses to failure situations* only post intervention. Moreover, all the variables that were significantly correlated with *L2 motivation (attitudes towards learning English, learning goals, performance goals and responses to failure situations)* prior to intervention have shown an increase in this association afterwards. Furthermore, *learning goals* significantly correlated with *fixed trait attributions (process-focused)*.

Below is a detailed explanation of the correlations between variables based on the hypothetical statements mentioned above.

Table 19: The Correlation between variables in T1 and T2 in the treatment group (n= 103)

Scales	T1								T2							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1. Language Mindset Beliefs (Fixed)	—								—							
2. Motivational intensity	-.071	—							-.158	—						
3. Attitudes towards Learning (Positive)	-.201*	.639**	—						-.214*	.669**	—					
4. Learning Goals	-.060	.360**	.462**	—					-.323**	.480**	.540**	—				
5. Performance Goals	.035	.427**	.406**	.247*	—				-.093	.435**	.351**	.449**	—			
6. Responses to failure situations (Helpless)	.030	-.386**	-.389**	-.233*	-.275**	—			.251*	-.389**	-.437**	-.382**	-.458**	—		
7. Fixed-trait Attributions (Person)	.242*	-.145	-.186	-.014	.050	.185	—		.336**	-.216*	-.158	-.077	.086	.245*	—	
8. Fixed-trait Attributions (Process)	-.057	-.040	-.017	.152	-.083	.031	.327**	—	-.110	-.036	.114	.294**	.131	-.025	.243*	—

** $p < .001$ (2-tailed)

* $p < .05$ (2-tailed)

4.7.1.1 The Relationship between Language Mindset and both L2 Motivation and Attitudes towards Learning

Research hypothesis 1 (H1): Fixed language mindset will correlate negatively with L2 motivation.

Research hypothesis 2 (H2): Fixed language mindset will correlate negatively with attitudes towards learning English.

The relationship between language mindset and both motivational intensity and attitudes towards learning English was investigated using Pearson correlation coefficient. Values in Table 20 show that high levels of fixed mindset beliefs is associated with lower levels of motivation, but this relation was small and not statistically significant. However, a small negative correlation was found between fixed mindset and attitudes towards learning English, $r = -.214$, $n=103$, $p < .05$, with more fixed beliefs found to be associated significantly with less positive attitudes. On the other hand, a strong positive correlation was found between learners' motivational intensity in learning and their attitudes towards learning English with 44.8 % of the variance in their attitudes explained by their motivation.

Table 20: Correlation between students' language mindset beliefs and both motivation and attitudes towards learning

Scale	1	2	3
1. <i>Language Mindset (fixed)</i>	-		
2. Motivational intensity	-.158	-	
3. Attitudes Towards Learning	-.214*	.669**	-

** $p < .001$ (2-tailed)

* $p < .05$ (2-tailed)

4.7.1.2 The Relationship between Language Mindset and Goal Orientation

Research hypothesis 3 (H3): Fixed language mindset will correlate positively with performance goals.

Research hypothesis 4 (H4): Fixed language mindset will correlate negatively with learning goals.

The relation between these two goals was expected to be negative in that an increase of one of them indicates a decrease in the other. However, Table 21 reveals an opposite result in which the two goal types has been found to be significantly correlated in a positive way with 20.2% of the variance in learning goals associated with performance goals. This means there is a large relationship between the two goals in which an increase in one of them could indicate an increase in the other. Yet, fixed mindset beliefs correlate with these two goal types in a different way. Despite having a negative relation with both goal types, the mindset variable shows very different correlation results with each of them. Results of Pearson correlation coefficient show a significant medium-strength correlation between fixed mindset beliefs and learning goals, with 10.4% of variance in learning goals explained by their mindsets. On the other hand, the correlation between mindset beliefs and performance goals was small and did not reach statistical significance ($r = -.09$, $n=103$, $p>.001$). These results suggest that endorsing more growth mindset beliefs (rather than fixed) could be associated with having a tendency towards setting learning goals. However, performance goals do not seem to be related to learners' mindset beliefs.

Table 21: Correlation between students' language mindset beliefs and goal orientation

<i>Scale</i>	<i>1</i>	<i>2</i>	<i>3</i>
1. <i>Language Mindset (fixed)</i>	-		
2. <i>Learning Goals</i>	-.323**	-	
3. <i>Performance Goals</i>	-.093	.449**	-

** $p < .001$ (2-tailed)

* $p < .05$ (2-tailed)

4.7.1.3 The Link between Language Mindset and Other Independent Variables (responses to failure situations and fixed-trait attributions)

Research hypothesis 5 (H5): Fixed language mindset will correlate positively with helpless responses to failure situations.

Research hypothesis 6 (H6): Fixed language mindset will correlate positively with person focused fixed-trait attributions.

Research hypothesis 7 (H7): Fixed language mindset will correlate negatively with process focused fixed-trait attributions.

The correlation between language mindset and each of the two variables (responses to failure situations and fixed-trait attributions) was computed using Pearson correlation coefficient. Table 22 show a significant positive relation between fixed-mindset beliefs and helpless responses in failure situations, but this correlation is small with 6.3% of the variance in these responses explained by their mindset. This means there is a small relationship between endorsing fixed mindset beliefs and reacting in a helpless manner when facing difficulties and failures.

With regards to fixed trait attributions, the relationship between mindset and both person and process focused attributions is as expected, correlating positively with the former and negatively with the later. However, the level of significance and strength of the correlation with these two scales are quite different. There is a positive medium correlation between fixed mindset and person-focused attributions and this relation is significant at $p < .001$. Nevertheless, the negative correlation between mindset and process-focused attributions is small and non-significant. This means having more fixed mindset beliefs is related to attributing failure to personal abilities but having more growth beliefs does not seem to be truly linked with attributing failures to lack of proper process or effort.

Table 22: Correlation between students' language mindset beliefs, responses to failure situations and fixed trait attributions

<i>Scale</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1. <i>Language Mindset</i>	-			
2. <i>Responses to Failure Situations</i>	.251**	-		
3. Fixed-trait attributions (Person)	.336**	.245*	-	
4. Fixed-trait attributions (Process)	-.110	-.025	.243**	-

** $p < .001$ (2-tailed)

* $p < .05$ (2-tailed)

Research hypothesis 8 (H8): Helpless responses to failure situations will correlate positively with person focused fixed-trait attributions.

Research hypothesis 9 (H9): Helpless responses to failure situations will correlate negatively with process focused fixed-trait attributions.

The hypothetical research statements of the relationship between responses to failure situations and both types of fixed-trait attributions were confirmed. Helpless reactions in failure situations was found to be correlated positively with person-focused attributions and negatively with process-focused attributions. Yet, only the former correlation was statistically significant with 6% shared variance in which high levels of helpless responses are associated with higher levels of personal attributions.

Table 23 below presents the hypothetical statements and a summary of the confirmed correlation direction, strength and significance.

Table 23: Summary of Hypothetical Statements and Correlational Analysis Outcomes

Hypothesis Statements	Direction of relation	Strength	Sig.
H1: Fixed language mindset will correlate negatively with motivational intensity.	--	--	no
H2: Fixed language mindset will correlate negatively with attitudes towards learning English.	confirmed	small	yes
H3: Fixed language mindset will correlate positively with performance goals.	--	--	no
H4: Fixed language mindset will correlate negatively with learning goals.	confirmed	medium	yes
H5: Fixed language mindset will correlate positively with helpless responses to failure situations.	confirmed	small	yes
H6: Fixed language mindset will correlate positively with person focused fixed-trait attributions.	confirmed	medium	yes
H7: Fixed language mindset will correlate negatively with process focused fixed-trait attributions.	--	--	no
H8: Helpless responses to failure situations will correlate positively with person focused fixed-trait attributions.	confirmed	small	yes
H9: Helpless responses to failure situations will correlate negatively with process focused fixed-trait attributions.	--	--	no

4.7.2 Predictive Relationships between Variables

How well can the language mindset of learners predict their motivation and learning behaviour?

A simple linear regression was performed to examine whether learners' *language mindset* could predict their motivational intensity and learning behaviour (goal orientation, responses to failure situations and fixed-trait attributions). The results of regression show that learners' mindset beliefs can be an indicator of their L2 motivation, responses to failure situations and fixed-trait attributions.

First, regression analysis was calculated to predict *L2 motivation* based on language mindset. The results revealed a significant negative regression equation $F(1,214)= 9.747, p<.05$ with an R_2 of .044. This indicates that 4.4% of learners' motivational intensity could be predicted by their mindsets and that the more fixed beliefs they have, the less their motivation could be.

After that, regression analysis was calculated to examine the impact of learners' *language mindset* on their *responses to failure situations*. The results revealed a significant regression equation $F(1,151)= 13.817, p<.05$ with an R_2 of .084. This means 8.4% of learners' responses are predicted by their mindset and that the more fixed beliefs they endorse, the more helpless manner is expected from them when facing difficulties.

Finally, to measure the effect of learners' *language mindset* on their *fixed-trait attributions*, simple linear regression was performed firstly to examine mindset as a predictor of person-focused attributions and secondly as a predictor of process-focused attributions. The results showed a significant regression equation of mindset with person-focused attributions $F(1,151)=$

16.683, $p < .05$ with an R^2 of .099, whereas with process-focused attributions, mindsets has not been found as a significant predictor $F(1,151) = 1.742, p > .05$. Therefore, it can be said that 9.9% of learners' personal attributions could be explained by their fixed mindset beliefs.

Chapter 5: Qualitative Results

The qualitative part of the study aimed at gathering a fuller picture of participants' language mindset beliefs, L2 motivation and learning behavior post intervention. This includes explanations of their beliefs about language learning and its relation to other constructs like abilities, intelligence and effort. It also involves information on motivation, attributional styles, goal orientation, reactions to challenges and setbacks after the intervention, as well as attitudes toward the intervention materials. The focus of this chapter is to provide an explanation for the quantitative results that showed a significant short-term effect of the intervention on students' language mindset beliefs and motivation, but disappeared in the long-term. Figure (1) below illustrates the sequence of data collection.

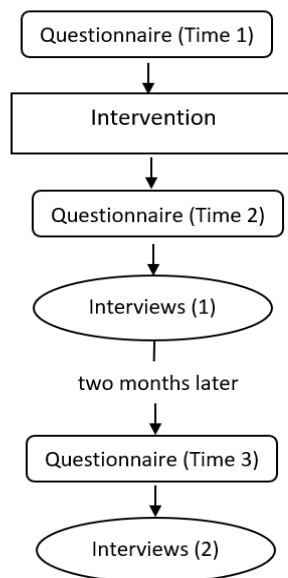


Figure 10: Data Collection Plan

This chapter includes analysis of qualitative data gathered from interviewing 8 participants after the intervention (interview 1) and two months later (interview 2). The analysis of this section was not meant to give an exhaustive account of every interview, but rather highlight interesting individual features that can throw light on the group results reported in Chapter 4. Results and interpretation of qualitative data are presented in this chapter as individual cases to provide a wealth of person-specific experience with contextual richness of each case. This way of presentation provides a clearer picture of how each person's language mindset beliefs are related to her motivational characteristics. It also shows the stability or change of each person's beliefs and motivation between the first and second interviews accounting for individual experiences.

Prior data analysis, transcription of audio-recorded interviews was typed in word document indicating pauses, filler words and repetitions (See Appendix M for sample of an interview transcription). After coding and creating themes (as illustrated in Section 3.6.3.2), relevant extracts were translated from Arabic to English for data presentation (See Appendix I and J). To ensure anonymity of the data, codes were assigned to participants by means of an ID number that includes two letters and a number (e.g. SJ01). The two letters were created from participants' initial letters and another random letter from their names followed by a number to indicate the phase of the interview (01=phase one, 02=phase two).

5.1 Participant AA

5.1.1 Attitudes toward the Intervention

This participant revealed a positive attitude toward the intervention, which she illustrated as follows:

Everything was really good. The videos really helped me to understand the topic....It changed my beliefs, like when you said it does not depend on experience. I can develop myself, I mean it's something learnable.. aah...I felt that... I will learn English. Its' not impossible. I used to feel it's difficult, but not anymore now (AA01)

She explained how the intervention has made her perceive learning English as an achievable task that she can improve in. She seemed to believe more in herself and sounded interested to learn the language. However, she did declare two months later that the effect of the intervention was “*decreased or diminished with the study pressure*” (AA02). With the increased amount of study load, she felt that the intervention influence was no longer effective.

5.1.2 Mindset Beliefs

Responses to the first phase of the interview showed an endorsement of growth mindset beliefs. When talking about learning abilities, she said:

If he has a motive to learn something, he can learn it. All people can if they think about it and say I can. Why others can, and I can't. we all have the same mind” (AA01).

It is clear from the example how this learner insisted on the idea of controllability over the learning ability (i.e. all people have the control to change their learning abilities) as she thinks that it is a matter of belief in oneself that enables us to do anything. This is especially clear in her explanation that ‘we all have the same mind’ and that we just need to encourage ourselves that we can change. It indicates a growth mindset belief in which all learners are equal in mental abilities and that believing in themselves is what makes the difference.

Her responses also revealed a growth mindset belief regarding language learning, believing that language development and learning is possible for everyone.

*I feel that I can learn English as long as others have learned it. If I work harder,
I will be able to become excellent in English....if I just practice and learn
(AA01)*

She linked her ability to learn the language with others' ability to do that, explaining others' success in learning English as an evidence of her own ability to do so. This is a growth mindset characteristic as she believed in her full ability to accomplish whatever others have done because she believes that she has the same ability as others and that success is a matter of practice and effort rather than intelligence. She also attributed successful language learning to process-related factors (like effort) rather than person related factors (like intelligence).

She also seemed to have the same growth mindset beliefs about abilities two months later as she further explained that *"I don't feel that abilities make a difference. As long as the learner can understand the teachers, abilities don't matter"* (AA02). This is consistent with her questionnaire results as she showed an increase in growth mindset beliefs after the intervention compared to her beliefs before, and the mean score of these beliefs remained exactly the same two months later.

5.1.3 L2 Motivation

When asked about her motivation before the intervention compared to after, she expressed that *"it was not at all like my motivation now. Now I became so eager to learn. I was interested to learn, but I wasn't... I wasn't sure if I could learn or not"* (AA01). The participant clearly explained how her motivation increased particularly after the intervention. Her limited

motivation before, seemed to be affected by the doubts she had about her ability to learn. It seems that becoming aware of her ability to develop her capacity in learning English during the intervention, contributed to her increase in motivation. However, when asked about her motivation in the second interview, she explained it as *“the same motivation or maybe less... maybe because I am experiencing more difficulty”* (AA02). As she reached the hardest course in the foundation year, she seemed aware that the struggle she was going through was affecting her motivation. This provides a potential explanation for the initial increase (Time 2) then later decrease (Time 3) in this participant’s scores on the motivation component of the questionnaire.

5.1.4 Goal Orientation

A great interest in learning the English language was evident in this participant’s responses in both interviews (Phase 1 and 2). Understanding the importance of this language, she explained the reason for this goal saying that *“I want to learn it. I do not want this year to end until I’ve learned it because it will be useful for me in my whole life”* (AA01). It was not surprising to see that the mean score of her learning goals component of the questionnaire was increased to 6/6 at Time 2, but decreased slightly again at Time 3.

5.1.5 Reaction to Failure Situations

The way she explained her reaction to challenges in the first interview, revealed a mastery-response manner showing a great deal of persistence, trying harder when facing difficulties. She explained it as follows:

First, I feel upset and then I try I try and try until I can do it well. Umm...like the math this year, when I started studying it, I did not understand anything.

Then, I tried and tried until I understood it well. I thought that I won’t be able to

understand, but then I felt it's impossible that I cannot understand, I will try to concentrate and understand with the teacher and I will be able. I have to understand I have to (AA01)

She showed a similar attitude towards difficulties even two months later saying that “*sometimes I feel upset but feeling upset does not help me. If I feel very upset, I won't benefit. I have to overcome it to improve it*” (AA02). Despite admitting that failures could be upsetting for her sometimes; her focus was on finding a solution and solving the problem. This was also clear in her questionnaire responses which suggested a more mastery-type response toward failure situations at Time 2 compared to Time 1 and her average score in this component of the questionnaire decreased minimally at Time 3.

Although the increase in this participant's mindset beliefs was maintained over the longer-term, other variables like motivation, learning goals and mastery-responses that increased after the intervention showed a small decrease over the long-term. The reason for this seemed to be the difficulty the learner was encountering during the last phase of her foundation year due to the pressure of work.

5.2 Participant AM

5.2.1 Attitudes toward the Intervention

This participant talked about the intervention as having a positive influence on herself and her academic experience in both phases of the interview. In the first interview she stated that:

I liked the explanation, was simple and clear... it added that I have to concentrate

more on my goal and try to achieve it in different ways, practice more, work harder, my self-confidence has increased more than before (AM01)

She explained how the intervention had made her think more positively about effort and practice. She started to value effort and hard work more than before as she believed in its important role for language development. However, when expressing her beliefs about effort later on during the interview, she seemed to link it with a learners' proficiency level perceiving it as a need for weak students only. She illustrated this by saying *"it depends on the student's level, if her level is good, she doesn't need to study a lot, but if she is weak, she has to study hard to be in the same level"* (AM01). This could indicate a fixed mindset belief that devalues effort and hard work. It could also result in avoiding effort because it is considered a sign of low ability. That is why she explained how the intervention has changed her concept about effort and she started to perceive it as a valuable aspect for learning and development. She clearly talked about effort as a positive thing she learned from the intervention, where she thought that exerting effort activates her ability and allows her to use it to the fullest. That could explain why she felt more confident in herself by believing in the effect of effort and its impact on improving her ability in language learning.

When talking about the intervention effect two months later, she illustrated how she had positively changed after the intervention. See the following extract:

Surly I have changed when I saw things and discovered things, it made an effect on me and I learned new things.. not only my grades have increased, my psychological status and everything. I realized that the way I studied at the beginning was not giving me the result I wanted. Now I don't pressure myself, but at the same time I changed my

studying method, so it had a positive effect on me and I got higher grades (AM02)

It is clear from her explanation how she considered changing the way she used to study and putting in more effort, a factor that contributed in improving her not only academically but also psychologically.

5.2.2 Mindset Beliefs

With regards to her mindset beliefs, there seemed to be an improvement in the way she perceived abilities and its effect on learning. Although she stated that “*abilities could be an obstacle*” (AM01) in the first interview, she later explained how difficulties can be a chance to improve her abilities “*The harder the better for me so I can improve my abilities*” (AM02). This goes in line with her questionnaire results as her growth mindset beliefs increased by double the mean score after the intervention.

5.2.3 L2 Motivation

She also explained that her motivation in learning English has increased in both interviews. She illustrates this in her second interview saying:

At the beginning, I was honestly a bit worried about the English course, but now it's the opposite. I am ambitious to learn it more and more because I feel it's something important, everything is in English now (AM02)

She stated clearly how ambitious and motivated she became to learn English which was shown in her questionnaire results of motivation. It increased slightly after the intervention but remained the same two months later. Interestingly, when asked whether her interview with me the first

time had had any influence on her, she said *“Definitely, you made me rethink again and again, my motivation had increased”* (AM02).

5.2.4 Goal Orientation

When asked about what makes her feel intelligent, her response revealed more of a performance orientation by saying *“when I excel in something others couldn’t do”* (AM01). Feeling smarter when achieving higher level of performance could be because of the feeling that she improved through effort. This does not necessary indicate a fixed mindset belief unless she believes her ability is fixed when compared to others. She clearly expressed an interest in learning as well saying *“I am interested to learn, to improve my language”* (AM01).

5.2.5 Reaction to Failure Situations

With regards to her reaction to setbacks, she explained a failure situation she experienced before saying *“There was an incident happened last year. I could not get an acceptable GPA and decided to withdraw from the whole foundation year situation that happened last year where she struggled to a achieve an acceptable GPA and decided to withdraw from the whole foundation year”*(AM01). It is clear from the way she handled such a situation that she had a helpless manner in the face of failures. She did not seem to accept struggles as a normal step in learning and found it hard to overcome it and continue on the same path. So, she decided to escape the whole situation and start all over again. However, the way she explained her reaction two months after the intervention showed an improvement in the way she reacted to difficulties. She stated that *“Sometimes I feel I am going to cry, but I try not to. I convince myself that I can do it and my abilities enable me to practice more”* (AM02). She illustrated how she was trying to resist her negative feelings and react in a mastery-response to improve her situation by believing in herself

and exerting more effort. Her questionnaire results show that that the increase her mastery reactions after the intervention has decreased slightly two months later but was still higher than before the intervention.

5.2.6 Attributional Styles

When talking about her struggles, she attributed her failures to process-related factors in both interviews by saying *“I felt that I did not put much effort, I felt guilty that I did not study”* (AM02) and *“I felt that the way I studied before was not effective, it was the wrong way and I changed it, for example I used other resources...AM02)*. Instead of blaming her abilities, she blamed her way of studying which she considered to change to improve her situation. Such process-focused attributions are a sign of more growth mindset beliefs.

5.3 Participant MA

5.3.1 Mindset Beliefs

The data of this participant revealed that she expressed more of growth mindset beliefs with regards to learning. When asked about the main influence on learning, she attributed successful learning to malleable traits that a learner is in control of like persistence and trust in oneself. Consider her extract below:

Trust in God and then trust in herself and her abilities and what she can do. Even if she does not have background or knowledge, she should persist to achieve what she desires, what she loves and what she feels comfortable about (MA01)

She has also made it clear that other factors such as lack of knowledge or experience are not obstacles for learning and that persistence along with the desire to learn something is all what a learner needs to achieve her learning goals.

When expressing her beliefs on ability and self-efficacy, she explained a change that occurred in her beliefs after the intervention. She mentioned the intervention as a turning point that increased her belief in herself and her ability to learn English. She was trying to encourage herself but was still reluctant and needed an outside source to prove that she is able to succeed. Consider the following extract:

Before, I was... trying to encourage myself and say that I can and everything, but after your study, it was like God wants to let me know for sure that what I was telling myself was correct...I was hesitant, but now I am much better. I now believe in myself and abilities that I can do more (MA01)

Her growth beliefs seemed to be maintained two months later when she explained again how meeting the researcher on the first interview has made her believe more in herself. She said:

My personality was strong as I told you, but there was something with the English... there was hesitance, fear that I cannot. But when we met in the first interview, I felt that I can, and I am confident, I just need time to work and concentrate on English (MA02)

This was depicted in her questionnaire responses where the mindset beliefs showed a continuous increase from Time 1 to 3.

5.3.2 L2 Motivation

This participant's motivation to learn English seemed to be influenced more by the first interview rather than the intervention. When asked about her motivation in the second interview, she talked again about her motivation as a result of the previous interview saying, "*my motivation has increased, I still remember when you told me that one day the English will be a piece of cake for you*" (MA02)

It was noticed in her quantitative results that her motivation had decreased slightly after the intervention (Time 2) but then increased again at Time 3. Although she did not explain the reason she was less motivated after the intervention, it could be that the increase in motivation afterwards had occurred after interviewing the participant rather than the intervention. She did express this effect clearly saying that "*the interview has affected me more than the intervention*" (MA02).

5.3.3 Goal Orientation

Her goal orientation evident in both interviews revealed her interest to learn the language and develop herself. However, she did mention the difficulty of the last two levels of English and how they could have affected her learning goals. During her level 4, she mentioned that "*I still want to learn the language despite the fact that this level and the previous one, are stressing me out*" (MA01). This was reflected in her questionnaire results where the mean score of her learning goals was very high (5.76/6) from the beginning but decreased slightly afterwards which could be due to the difficulty of the last two courses as she explained.

5.3.4 Reaction to Failures

It is interesting how this participant looked at failure situations as a chance of learning that she benefited from and was able to remain positive in the face of struggles. Consider the way she reflected on her previous failure:

I did not feel sad about it. On the contrary, I learned from it. I feel that if this struggle did not happen last year, I wouldn't be the person I am today who overcome everything. What happened to me was an important thing (MA01).

The positive feeling this participant had was apparent in the way she talked about her failure the year before. She felt glad about the situation and explained it as an important stage she went through during her academic life. She felt stronger now that she was able to overcome her difficult situation and she was grateful for this opportunity that changed her for the better.

She further explained how she had changed her reaction towards failures in the second interview. Consider the following extract:

I used to feel so sad and frustrated when I come across difficult things or get a low grade, but now, not only in English but also in other subjects, when I don't study hard and get low grades, I don't feel sad about it, I believe I can do better next time. When I didn't understand things in Level2, I tried to explain for myself in different ways. Instead of escaping the situation, I learn from it. I followed step by step YouTube explanations and I made it at the end (MA02).

She clearly depicted a mastery-response in the face of difficulties where she felt that struggles should not put us down, but rather push us to do better next time. However, her responses to the

questionnaire did show a decrease in her mastery-responses in the last phase of the study (Time 3) compared to the second (Time 2), but still representing a clear orientation toward the mastery rather than the helpless manner within the scale of responses to failure situations.

As a summary, participant MA showed an increase in her growth mindset beliefs regarding language learning. She also showed an interest in learning goals and a mastery response in the face of difficulties. Despite a slight decrease in her motivation after the intervention, it showed an increase afterwards which could be attributed to the first interview.

5.4 Participant RB

5.4.1 Attitudes toward the Intervention

This participant's attitudes toward the intervention were generally positive in her first interview, but her beliefs and attitudes showed an opposite reaction two months later. Immediately after the intervention she explained it as follows:

It was generally good, especially that everything you told us was in the form of a story or a person's experience. I have changed, my optimism increased... and that I don't need to like something in order to learn it. I can learn things that I don't like. I mean life sometimes forces me to learn things that I don't like (RB01)

The way she explained the intervention and its effect on her seemed to indicate a positive change in her beliefs. She seemed more motivated to learn and believed that learning could occur without even a desire to learn something. However, this attitude had all changed two months

later where she explained how the positive influence of the intervention was temporary. Consider her following extract:

At that time, it affected me, but now in level 4 everything disappeared. I feel that I forgot everything. I mean I need someone to encourage me every now and then. At that time, I felt that I had to learn English and so, but after I have seen reality, it is not important at all (RB02)

She illustrated how the effect of the intervention has faded away on the long-term. This could provide a potential explanation for her questionnaire results and the reason why her mindset beliefs, L2 motivation, attitudes towards learning English, goal orientation and mastery reactions toward failure situation have all increased right after the intervention and then decreased remarkably two months later. Below is an illustration of how these constructs have changed from the first to the second interview by highlighting the most important aspects of her data.

5.4.2 Mindset

With regards to her mindset beliefs towards learning ability, she did depict more of a growth mindset in her first interview by saying “*ability is not an excuse, because if you like something you will do anything to learn it. There are abilities, but it’s not a real obstacle*” (RB01). She seemed to believe that abilities can be developed and do not prevent learning. This was also the case when she talked about the language learning ability in the following extract:

It is true that some people might comprehend faster than others. But I don’t feel it is innate, it is all developed. It depends, if she likes it, she will learn fast, if she hates it will not. (RB01)

She commented on the speed of learning and how it is influenced by a controllable factor which is the desire to learn. This is still a growth mindset belief confirming that language learning ability is not an innate trait and that any person who has the desire to learn something will learn it faster than others.

Surprisingly, she showed an opposite fixed belief toward language learning when explaining her own experience in the second interview. Consider the following example:

I do feel sometimes that I can't change my abilities. I was just telling my mom a few days ago, that if a person is to learn language from movies, I would have been a fluent speaker now. I watch a lot of movies but couldn't get anything. At the same time, my sister since she was young, she liked English. Although we both studied at the same public school, she became an English teacher now, but I couldn't learn it. My level in English is always lower. (RB02)

It is apparent how this participant reached a stage where she felt unable to develop herself in learning English. She seemed to believe in individual differences when it comes to language learning expressing more of a fixed language mindset belief. This was interestingly apparent in her questionnaire answers where her mindset beliefs showed a decrease in her fixed beliefs (more orientation towards the growth mindset) in her Time 2 results and how these have increased again with more orientation toward the fixed mindset at Time 3.

5.4.3 L2 Motivation

Despite the increase she explained in her motivation to learn English after the intervention, this was minimized again after a two-months period. Consider how she talked about her motivation in both interviews:

“My motivation started to increase. sometimes I think never mind, I will specialize in law anyway and it will require no English, I feel that I will finish this year in any way and I won’t need it” (RB01)

“My motivation is decreasing, with pressure and difficulty increasing every time”
(RB02)

Although in the first interview she stated that her motivation has increased, which could be due to the intervention effect, she did explain how there was no real motive for her to learn English as it is not a requirement for her major of study. Thus, it was not surprising that with the increased difficulty she experienced in the last level of the course, she lost her motivation to learn, as she explained in her second interview. This clearly is consistent with her questionnaire results where her motivation dropped by half the mean score from Time 2 to 3 to reach a lower level than her motivation even before the intervention. The fact that she had no external goals for learning English and that she felt unable to develop herself seemed to affect her goal orientation as she explained that *“I just want to pass. Here, in this period, I just want to pass”* (RB02).

5.4.4 Reaction to Failure Situations

On explaining her reaction towards difficulties, she said *“although sometimes you might see me upset, but deep inside I take it as a challenge”* (RB01). She admitted that she might feel somewhat upset when struggling, but it is not long until she persists to overcome this difficult situation and take it as a challenge that motivate her to go on. She followed this by explaining what she would do to improve the situation by saying *“I will sure spend more hours studying, I will try to download explanations and things that help me understand, at the end I will pass them”* (RB01). Although she seemed confident in the way she would deal with difficult

materials, explaining that it will certainly enable her to pass the course, this was not the case when she went through the real struggle two months later. She showed a helpless manner in a way that she did not care about failure in English and talked about it with sarcasm. Consider her reaction as follows:

At the beginning I used to feel upset, but now it's fine. It's okay for me, I am not that good in English, but good in other things (laughing).. When I receive a bad grade in English I laugh at my performance. I used to feel upset, but now nooo especially in English. Because I tried before, but didn't get anything (RB02)

For Participant RB, the intervention seemed to have had a positive effect on her mindset beliefs, motivation and reaction to failure situations, but this effect was not strong enough to last for long, or when encountering more difficulties and struggles.

5.5 Participant RH

5.5.1 Attitudes toward the Intervention

On her attitudes toward the intervention, she expressed her excitement with the intervention and confirmed that she understood the message learned saying: “*what I liked is that it is something new for me, nothing is impossible, anything you want to learn, you can learn it with persistence*” (RH01). She further added “*the intervention was very effective. It was very influential. The way of explanation and everything was beautiful*” (RH02).

5.5.2 Mindset

Looking at her mindset beliefs, data collected from this participant show that she had a combination of both growth and fixed mindset beliefs with regard to learning abilities. When asked about the main factors for learning, she said “*Determination, if you insist on something, you can do it*” (RH01). She stated that this is one of the things she learned from the intervention “*I learned determination, nothing is impossible*” (RH01). However, she illustrated how abilities can make a difference in the speed of learning stating that “*Abilities may affect learning...if you have high abilities, you can learn fast. If not, there are limits for you*” (RH02). The fact that she attributed learning to abilities and that this could restrict learning indicates a fixed mindset belief. Her mindset beliefs, based on the questionnaire results, did not show any development after the intervention. Although they show more orientation towards the growth end of the continuum, they remained the same even afterwards.

5.5.3 L2 Motivation and Goal Orientation

When explaining her motivation in learning English, she said “*It changed a lot. We were motivated at the beginning because it was easy. Now, it’s hard, we just want to finish this course and this foundation year*” (RH02). This participant linked motivation with task difficulty explaining how easy tasks increase her motivation while hard ones decrease it. She seemed to express some fixed mindset beliefs with regards to abilities where she seemed interested in easy tasks that prove her current ability in English and escape hard ones that might indicate her low ability or failure. It also revealed her goal orientation towards performance rather than learning goals which was illustrated in her responses about her goals for learning English “*I just want to pass. Now, in this period, I just want to pass. I will be able to study English but because it’s*

stressful with other subjects” (RH01). Although she explained that her ultimate goal was to pass the course at the moment, she did show an interest to learn English later on, attributing her choice to the stress she was going through in studying such a number of other courses. This was also apparent in her attitudes toward learning English where she said, “*when we started studying it, we loved it, but you know the time limit is what prevent us*” (RH01). Her questionnaire results did show a slight increase in both learning and performance goals after the intervention which both decreased in Time 3. This could be due to the difficulty of the last course she was studying that decreased her interest to set any goals for English learning.

5.5.4 Reaction to Failures and Attributions

Her attitudes towards the intervention revealed how it helped her change the way she perceived difficulties. Consider the following extract:

the sessions have affected me a lot...I mean, for example, if I fail in something, it does not mean that it's impossible to achieve it. I started to feel that when I struggle or fail in something, I will learn from it. (RH01)

She clearly explained how she started to think of challenges as a positive situation after the intervention sessions. She started to believe that failure is not an indication of inability, but an opportunity for learning and an experience to benefit from.

She also explained her procedure for overcoming difficulties and dealing with failures in learning English; namely, by persistence, investing more effort and trying several times. Consider her fooling reaction:

If fail in something, it does not mean that it's impossible to achieve it. I started to feel that when I struggle or fail in something, I will learn from it I go back and try again. I like to go back and check, maybe I have done something wrong. After trying and practicing and understanding exercises, everything became good” (RH01).

She stated how failure could be due to using the wrong method. Using process attributions to failure made her willing to go back and try other ways and learn from her mistakes. She also stressed the importance of exerting more effort and how it resulted in a satisfying outcome. Nevertheless, she did explain how she might have negative feelings when performing badly by saying *“If I don't understand something or struggle in it, I feel I am not that good”* (RH01). This could indicate a personal attribution pattern as she perceived difficulty as a sign of low ability.

Two months later, her responses to failure situations seemed to be more mastery-oriented. She explained her reaction to difficulties as follows: *“I have changed, I would try try try as much as I can. If it is hard, we don't just give up. We try to understand as much as we can. Try to find explanations, we look for things...”* (RH02). This was clearly reflected in her questionnaire responses where it showed a steady increase in her mastery-responses scale from Time 1 to Time 3. Although both attributional styles have shown an increase after the intervention, her mean score of her process attributions was higher than her personal ones.

The influence of the intervention on this participant seemed to be in certain areas only. She seemed to develop her thoughts about certain aspects of learning ability and the way she perceived difficulties, but this effect was not strong enough to make a real difference in her perceptions and reactions in the long-term.

5.6 Participant SM

5.6.1 Attitudes toward the Intervention

This participant's attitudes toward the intervention effect was positive. Despite the fact that she failed level 3, its positive influence on her motivation, her goal orientation and her reaction in failure situations remained the same. Below is a detailed description of her beliefs and analysis of her data.

5.6.2 Mindset Beliefs

The effect of the intervention in changing her mindset beliefs regarding learning ability was apparent in her responses. When expressing her beliefs about learning ability, she kept referring to the information she learned from the intervention. For example, she said:

There is something you said, that there is no difference between you and others, no one is smarter than you, it all depends on how much you practice. In statistics, for example, every time I remember your words that all other girls are just like you. If they get higher scores, I feel can achieve the same" (SM01).

She started to look at others' high performance as an indicator of what she could achieve because she believes that she has all the capability to reach what they have done and what she desires.

On her beliefs about language learning ability she stated that "anyone can improve himself if he wants. Didn't you say, a person can practice and learn anything" (SM01) attributing success in learning to "the desire" (SM01) as the main factor for successful learning. She expressed more

growth mindset beliefs, agreeing on the idea of the malleability of language ability and attributing successful learning to a controllable trait like desire. These beliefs were maintained two months later where she stated that “*it is true that each one has different abilities, but that is fine as long as a person wants to do something, he can do it*” (SM02). She added here that individual differences in abilities do occur between people, but this is not a problem as we all have the ability to develop them. This reflects her questionnaire responses as it revealed an orientation toward growth mindset beliefs, which remained high even two months later.

5.6.3 L2 Motivation

When talking about her motivation to learn English, she expressed her interest to learn despite the failure she experienced in level 3. Two months after the intervention, when she was repeating level 3, she stated that “*My motivation has not decreased, it’s fine. Not because of one subject I failed in, it’s over*” (SM02). This was apparent in her questionnaire responses where her motivation increased by double after the intervention and was maintained two months later. Although she failed the course between Time 2 and 3, her responses showed that her motivation did not seem to be affected by this.

5.6.4 Goal Orientation

With regards to her goal orientation, this participant expressed her interest to learn the language. When talking about her learning goals, she mentioned two things that could have affected her goal to learn. Consider her first explanation:

at the beginning, when I first started level 1, I thought I will start with a good basis from the beginning. I used to download programs and practice some sentences with my siblings. But later with the stress of studies, I couldn’t. now

I just want to pass because they stressed us out (SM01)

This participant explained how interested she was to practice the language in her own time. She further clarified that the stress of studies is what prevented her from carrying on with the same effort, and that her most concern now was just to pass the course *“I wanted to learn, but I felt it’s useless. I did not find the result I wanted so, I stopped putting in much effort”* (SM02)

This participant seemed to have developed learned helplessness that made her feel that the action she does, is detached from the outcome. No matter how hard she worked, she started to feel that the situation is out of her control. She followed up saying:

“I am convinced of what you told us, but when I saw my grades in front of me, that was it. I tried, I didn’t stop studying, but at the end I was judged by grades. So, what could I do after that, I might fail or might not. I have tried, but is there anything else I could do? I can’t do anything. I am judged by grades. Until now, I still download programs and review vocabulary and so. I will tell you something, failing the course does not mean that I will have a negative reaction toward it” (SM02)

Her helplessness feeling did not seem to stem from her low self-efficacy, but rather from the fact that the grades she got did not reflect her effort and she had no explanation for that or control over it. She did believe that she could develop herself and improve her performance and that what made her continue trying. However, counting her grades and realizing that the chance of success is low has made her somewhat disappointed.

5.6.5 Reaction towards Failure

On her reactions to failure situations, her beliefs demonstrated a mastery response in most difficult situations. She mentioned an aspect of the intervention materials that helped her change the way she looks at hard tasks saying: *“when you told us that learning hard stuff increases our intelligence, this made me like learning hard things”* (SM01). Understanding the positive effect of challenging tasks on our brains and how this could increase our intelligence has made this participant enjoy challenging tasks. She started to look at difficult tasks in a positive manner as a source of developing cognitive abilities. This was evident in the way she perceived her failure two months later saying *“It’s not a problem. No one succeeds in everything. On the contrary, I feel it’s something good. I am now excited, I feel it’s good that I am repeating the course”* (SM02). This was reflected in her questionnaire responses as her mastery responses increased after the intervention and remained the same even after she failed the course.

When asked about the effect of the first interview on her and whether it made any changes in her motivation or attitudes, she said *“the effect of the intervention was more. The interview was just questions and answers, but I was affected so much by the intervention”*

To sum up, this participant has expressed the positive influence of the intervention on her especially in terms of motivation and responses to failure situations. Despite failing the course, she remained motivated with a mastery response toward her failure, trying to improve her situation.

5.7 Participant SJ

5.7.1 Attitudes toward the Intervention

This participant's attitude toward the intervention was different. She did not feel that it made a huge difference on her as most of the information she already knew before, but she stressed the effect of the teacher/researcher as a presenter of the material, saying that it is not the information that made an effect on her, but the fact that it was presented by a trustworthy person. She explained how this made her believe more in the information she already knew. Consider her explanation below:

It's true that some of the ideas I already know them before, but when a professional person like you studying her PhD and has passed through many stages in her life, when a person like you talks to us about this topic, I feel this is really true because you are trustworthy. I became more confident of the ideas, it reaffirmed my previous ideas (SJ01)

5.7.2 Mindset Beliefs

With regards to her mindset beliefs, she expressed the view that ability could hinder learning. She thought that abilities are fixed and can hinder the progress of some learners stating that *"there are abilities because some people study, but have limited abilities, they cannot achieve a high level. There is a limit no matter how hard they work"* (SJ01). This participant expressed some fixed mindset beliefs in that ability is a fixed trait that has a limit which cannot be

developed even with hard work. This is clear in her expressions that such learners are not capable of attaining a high level of performance no matter how much effort they put.

On language learning ability, she did not seem to be in favor of the idea of innate abilities, but still believed in the matter of individual differences, saying:

it's not an innate ability, but as much as a person practice something and work hard, he will get used to it. Two people might understand something, they both understand it, but one might understand it from the first time while the other might need more than one time to grasp the idea. So, there are variations, some people can change their abilities with effort, while others can't (SJ02).

It is apparent from her explanation of learning abilities that she was still not sure of the malleability of these abilities for each and every person. She thought that this concept varies among people as some could change the limit of their abilities while others can't. Although she showed an orientation towards the growth mindset in her questionnaire results, these growth beliefs did not show any increase, but rather decreased slightly afterwards.

5.7.3 L2 Motivation

On explaining her motivation to learn English, she illustrated how motivated she was at the beginning of the year and after the intervention saying “*When I started, my motivation was really high, it continues until now and I like it*” (SJ01). However, this has completely changed two

months later as she talked about how this motivation has declined and the reasons for that.

Consider the following extract:

My motivation was good, but now it decreased, it became the opposite, I started to think of just finishing the course. Aah...the motivation has decreased. Why? Because it became stressful, exams and lots of pressure...many things affect. Maybe also feeling homesick because I am away from my family...amm...lots of reasons. They do affect, affect so much..I mean being lonely here..trying to cope with others, but....amm..there's no chemistry.. all this affects the student's academic performance (SJ02).

It is clear from the extract how her motivation to learn English seemed lower this time for some reasons. The first is a contextual reason due to the stress of studies and pressure of exams. And the other reason is a psychological one due to feeling homesick and lonely as she struggled to cope with other friends at the university. Other reasons include disappointment due to high expectancy of performance that she was struggling to achieve. This will be explained in more details below in her goal orientation and responses to failure situations. Her decrease in motivation was clearly reflected in her questionnaire responses as it showed a steady decline from Time 1 to 3.

5.7.4 Goal Orientation

In terms of her goal orientation, she explained her desire to learn English due to her perception of English as an important language that needs to be acquired *"I am not forced to learn it because*

of the curriculum, but because it's a mother tongue, it's a main language and I wish to learn it" (SJ01). The example below illustrates how she continued to have the same interest in learning English even two months later:

I still want to learn. It's true that motivation is less because the effort needed is double, but it does not mean I gave up or I don't want to learn it any more. No, learning this language is a must, sooner or later. It's true that I just want to finish the course now, not because I don't want to learn, but you know a person needs a break. No studying, no exams, nothing, just a looong break...I don't want anything, anything (SJ02)

She explained in this extract how her interest in learning English is affected by the pressure of studies and the difficulty of the course. She did not seem to appreciate the benefits of hard tasks and perceived it as a demotivating factor. She still had the desire to learn English believing this language is a must, but just felt overwhelmed by the amount of work needed and wished to have a break from everything. This may explain why her learning goals showed an increase in her questionnaire results after intervention (Time 2), which then decreased later in Time 3 when the course started to get harder.

Although this participant showed an orientation toward learning goals (both during the interview and in her questionnaire results), she also showed a high orientation toward performance goals. In many instances during the interview, she mentioned her high concern for getting high grades and her disappointment when she failed to achieve that. Consider her following extract:

I will be honest with you. In school days, when I used to lose few marks only, I would

feel very sad and annoyed and study harder. Now at the university, I was more motivated at the beginning, trying to recover my low marks, trying and trying, but now that only one month is left, I felt that nothing will make a difference or change my marks after a whole year of trying, that's why my motivation is decreasing (SJ02)

Her great interest in obtaining high grades and full marks is clear from her explanation in her responses to different questions. She seemed so concerned about high performance and the way she would react in disappointment when losing just a few marks which will be explained in more details in the reactions to failure situations section. It was not surprising to see that her performance goals in the questionnaire were the maximum (6 out of 6), which despite decreasing slightly in Time 2, had increased again to reach the same level in Time 3.

5.7.5 Reactions toward Failure Situations

This participant showed a helpless manner in the face of difficulties in both interviews. Consider her explanation in the first interview when asked about her reaction toward a failure situation:

Honestly, I feel annoyed. When do I get annoyed? When I study hard and hard and I don't get a full mark, or I lose marks in things I shouldn't lose marks for, I feel annoyed and cry because I have done a lot of effort and did not get what I expected (SJ01)

In this example, she explained her frustration when an expected result is not achieved. She seemed to have high expectancy and a strong relation between effort and the outcome result to the extent that she does not accept receiving any result that deviates from her expectations when exerting a lot of effort. It is apparent how she finds it difficult to accept failures and setbacks

which could cause her to cry. This shows a helpless-response manner where failure situations have a dramatic negative effect on her emotions making her feel hopeless and broken.

She also revealed a similar reaction in the second interview, saying that *“My reaction is bad when I get a bad mark because I worked hard, and I should get a good grade, but it did not happen, so I feel down”* (SJ02)

Again, she stressed the fact of disappointment due to her expectations. As the effort she tried to put in did not bring out the expected result, she felt upset. The direct link she had between effort and the outcome result, did not allow her to accept failures. She felt that success is a must when great effort is exerted.

To summarize, participant SJ revealed how the intervention did not influence her that much as she seemed aware of the content of the materials beforehand. However, she tended to struggle to put her beliefs? into action when it comes to reality. Feeling homesick and working under pressure were some of the factors that could have affected her development. Her motivation and learning goals decreased after the intervention and no progress was seen in her mindset beliefs, showing a helpless manner in the face of difficulties.

5.8 Participant AH

5.8.1 Attitudes toward the Intervention

This participant expressed her excitement about the intervention and the positive influence she felt after attending those sessions saying:

Honestly, this is the best session, you know. A huge amount of positivity. I really felt that I can do everything, I just need to practice it and learn it. the words are very motivating that I keep smiling until I go back home, there is something you said 'the sky is your limit' this makes me feel that everything is available for me, I am able to do anything I want. I felt that everything is easy if we try to focus a bit and study (AH01)

She expressed how positive she felt after leaving the sessions and how motivated she was by knowing that she is in control of everything, there is no obstacle that can stop her from achieving what she wants. Even two months later, she could still remember the words she learned saying:

I can still remember when you said the sky is your limit, I even wrote it in my notebook to see it every time...I mean, I might for example get a low grade or something like that, but it's not over. I can always continue (AH02)

This extract showed the long-term positive effect of some motivating statements.

5.8.2 Mindset Beliefs

In terms of her mindset beliefs, she seemed to endorse more of a growth mindset believing in her own and anyone else's ability to learn anything "*I can learn anything I like*" (AH01). This also involved the language ability stating that "*anyone can develop himself in learning English*" (AH01). She also showed awareness of the importance of practice and effort in developing oneself in English using different methods:

*Practice the language, speak a lot in English. Listen a lot to English programs.
Anyone who wants to learn the language will learn it, but if he doesn't like it, he*

won't be able. Effort does bring about good results and I learned many new words, but you know distractors. (AH01)

She explained how developing oneself in English is a matter of personal choice and desire that has nothing to do with abilities. These growth mindset beliefs were reflected in her questionnaire results as she showed a clear orientation toward the growth mindset and these beliefs showed an increase after the intervention (Time 2), which despite decreasing slightly two months later (Time 3), still remained higher than before the intervention (Time 1).

5.8.3 L2 Motivation

Her motivation to learn English seemed high after the intervention which was clear in her expression above under 'attitudes toward the intervention', but this motivation did not remain for a long term. She did explain a reason that used to motivate her, saying:

Some teachers are really motivating. I used to have a teacher who was always smiling. It was motivating during the lecture, but not when studying. It was easy at the beginning, so I used to study and get grades, but now.....even the explanation itself is not comprehensive, no exercises or revisions. Just a lot of work together, do writing, do this and that" (AH02)

When talking about her motivation in learning the language, she attributed it to contextual factors rather than internalized factors. This included the teacher role in maintaining students' motivation, the teaching method and level of difficulty. She seemed to relate motivation with the easiness of tasks, perceiving hard work and pressure as a reason for her low motivation. Despite showing a high mean score of motivation after intervention, it declined two months later.

5.8.4 Goal Orientation

When asked about her goal for learning English, she explained her internal motive to learn it as a matter of need for her major of study rather than a personal interest. This was the case in both interviews. Consider her extracts from the first and second interviews respectively: “*when I specialize, I need this language*” (ID_AH01) “*I want to learn it because of the major I will specialize in, nothing else really*” (ID_AH02). The fact that her learning goal is not due to a personal interest, but rather an instrument that can facilitate her further studies, could have influenced her real desire to master it. It was not surprising to see that her responses in the questionnaire indicated a decline in her learning goals from Time 1 to 3.

5.8.5 Reaction to Failure Situations

In terms of her reaction to failure situations, Participant AH expressed a slightly negative feeling but with more of a mastery response reaction. She stated that she would use several ways as adaptive coping mechanisms to improve the situation. Consider how she explained her feeling followed by the way she would perform in such situations:

“Honestly, I feel a bit upset”

I try to understand it, I ask more than one. I tried to find explanations and use the support service, I concentrate with the teacher and try to understand. I would say to myself, even if I don't pass, it's ok, I will continue, nothing can stop me, and I will get better next time (AH01)

She showed a great persistence to continue trying even after failure, stating that nothing can be an obstacle in her way to success and expressing her confidence that, with persistence and continuous trials, future experiences will surely be better. This was depicted in her questionnaire

responses where she showed a high orientation toward the mastery response, which increased after the intervention and was maintained two months later.

To summarize, participant AH has shown a development in her growth mindset beliefs and responses to failure situations. On the other hand, her motivation and learning goals have shown a decline, apparently due to the difficulty of the course and studying pressure.

Summary of Qualitative Results

Table 24 below summarizes participants' responses during interviews including both phase 1 data that was collected immediately after the intervention and phase 2 data that was collected two months later. It is important to note that the terms used to refer to a participant's mindset, motivation, goals or reactions are an estimation of what was inferred from participants' answers. So, the aim of this summary is to provide a visual presentation of participants' answers as an orientation toward one or the other characteristics rather than a dichotomous classification of their characteristics. For example, referring to a participant's mindset as growth indicates more orientation toward growth beliefs and referring to it as fixed indicates an orientation toward fixed beliefs. The same applies to other scales. Looking at the table, it is clear that participants' views in the first interview have shown more orientation toward growth mindset beliefs and motivation. Most of them have also demonstrated learning goals and mastery responses in the face of failures. However, on the longer term, half of them have shown some fixed beliefs, less motivation, performance goals and a few of them have demonstrated helpless responses.

Table 24: Summary of main qualitative data analysis

Participant	Interview	Language Mindset (growth/fixed)	Motivational Intensity (motivated/demotivated)	Goal Orientation (learning/performance)	Reaction to Failure (mastery/helpless)
AA	1	growth	motivated	learning	mastery
	2	growth	motivated	learning	mastery
AM	1	growth	motivated	learning & performance	mixed reaction
	2	growth	motivated	learning & performance	more mastery
MA	1	growth	motivated	learning	mastery
	2	growth	motivated	learning	mastery
RB	1	growth	motivated	performance	mastery
	2	mixed beliefs	demotivated	performance	helpless
RH	1	growth	motivated	performance	mastery
	2	mixed beliefs	demotivated	performance	mastery
SM	1	growth	demotivated	learning & performance	mixed reaction
	2	growth	demotivated	learning	mixed reaction
SJ	1	mixed beliefs	motivated	learning	helpless
	2	mixed beliefs	demotivated	performance	helpless
AH	1	growth	motivated	learning	mastery
	2	mixed beliefs	less motivated	learning	mastery

Chapter 6: Discussion

This chapter involves a discussion of the major findings from the analysis of quantitative and qualitative data presented in Chapters 4 and 5. The significance of these results will be considered by returning to the research questions that guided this study. The purpose of the study was to examine the effectiveness of a language mindset intervention on 7 motivational characteristics of university foreign language learners. These are their 1) language mindset beliefs, 2) L2 motivational intensity, 3) attitudes towards language learning, 4) learning goals, 5) performance goals, 6) responses to failure situations and 7) fixed-trait attributions. These were examined twice, to measure the immediate effect of the intervention on them to answer the first research question, and the second time was to measure the longer-term effect, thus answering the second research question. The discussion of results will be organized based on these two research questions.

6.1 Research Question One

To what extent does a classroom mindset intervention change learners' mindset beliefs regarding English learning? Has the intervention had any effect on learners L2 motivation?

6.1.1 Effect of the Intervention on Language Mindset Beliefs

Results from the questionnaire confirmed a significant effect of the intervention in changing learners' mindset beliefs. This was statistically significant in within-group differences of the experimental group when comparing Time 1 and 2 scores (pre and post intervention) as well as the between group differences when comparing scores of the experiment and control groups at

Time 2 (immediately after the intervention). This change happened despite the fact that both groups had a tendency toward the growth end of the mindset continuum before the intervention (in Time 1). However, the significant increase in growth mindset beliefs occurred in the experimental group only and not in the control group when comparing their before and after scores in language mindset. This result is consistent with other studies which have found a significant change in mindset beliefs due to interventions (Burnette et al., 2013; Lou & Noels, 2016). However, many of these studies primed mindsets and changed them temporarily. This change in language mindset beliefs supports the premise that such beliefs are dynamic and situated, and can be changed and manipulated in intervention studies (e.g. Kalaja et al., 2015).

Findings from participants' responses during the interviews that were conducted the week following the intervention (phase 1), showed that most of them (n=6) expressed growth mindset beliefs regarding language learning, believing that ability in learning a second language is a malleable trait that can be developed. More significantly, five of the participants mentioned the intervention explicitly as a turning point that increased their belief in themselves and their abilities to learn. However, the other two participants (AM and SJ) expressed some fixed beliefs regarding learning, believing that language ability could be an obstacle that hinders some learners (see Sections 5.2.2 and 5.7.2). This indicates that even when the intervention was effective for the majority of learners, there were a few who still held some fixed beliefs and may need longer time to change them. This confirms Dweck's (2000) argument about mindset belief change, in that it is not a surgery where we can replace one mindset with another, but rather a gradual shift where some beliefs are acquired while others might take time to change. Those learners' who thought ability could be an obstacle, seemed to still be hesitant about the concept

of ability change. Only by obtaining qualitative data were we able to see these small differences in beliefs that were not apparent in quantitative results.

The increase in growth mindset beliefs among the experimental participants is an interesting result given that the intervention was conducted in a short period of 2 weeks. This suggests that it is the message and the method rather than the period that could be more effective in changing learners' beliefs. For instance, presenting evidence from other peoples' experiences of how they developed their abilities by effort despite lack of previous experience and knowledge, and supporting this with scientific evidence of the brain's malleability when exerting effort, seemed effective in convincing learners of their capability to develop their foreign language skills. In addition, involving learners actively in the intervention by giving them a task where deep processing was necessary, has been suggested as a way to maximize the effectiveness of psychological interventions (Yeager & Walton, 2011). Asking students to write advice for a struggling learner, not only ensured that participants got the growth mindset message right but also helped to consolidate such beliefs, as evidenced in research on the 'saying-is-believing' effect (Aronson, 1999).

This result is even more interesting given the fact that the experimental group had already expressed growth mindset beliefs before the intervention and an increase these beliefs was still noticeable and significant. As students in the foundation year are divided into sections based on their achievement level, the reason why they showed more orientation towards growth beliefs before intervention, could be because they seemed to be among the intermediate/high achievers in the English course, which might have increased the positiveness of their beliefs. It could be that participants were already receptive to the growth mindset message and the intervention confirmed and supported their existing beliefs, which resulted in them being strengthened. It has

been argued that mindset interventions are mostly effective with fixed-oriented mindset students (Dweck, 2000) and low achievers or at risk students (Burgoyne et al., 2018). However, the intervention in my study was successful in increasing growth beliefs within such a sample (more-growth oriented, high achievers), and it could perhaps bring about more effective results if conducted with a sample of learners who have more fixed mindset beliefs.

6.1.2 Effect of the Intervention on L2 Motivation

It was found that the intervention has played a role in increasing participants' motivation to learn English. This was evident in the between group differences after the intervention (Time 2) as the experimental group was found to be significantly more motivated than the control group. Furthermore, the experimental group showed a significant increase in motivation after the intervention (Time 2) compared to their motivation before (Time 1). By contrast, the control group had shown a decrease in their motivation from Time 1 to Time 2. Participants' responses in the first phase of the interviews following the intervention supported the questionnaire result. Despite variations in the level of motivation to learn English, the majority of them seemed interested to learn the language. Three participants clearly expressed their increase of motivation due to the intervention. For example, participant AA explained how the intervention has made her believe more in herself and her ability to improve her level of learning, which made her more interested to learn English (See section 5.1.3). In addition, participant AH expressed a similar view (See section 5.8.1) by explaining the motivation and positivity she felt after the intervention which made her feel that anything she wants is attainable. However, two participants (RH & RB) seemed to have slightly less motivation to learn than others and explained some factors that

could have affected their interest such as the time limit or irrelevance of the English language course to their major of studies. Thus, focusing on other subjects related to their interest or major of study seemed to be more important for them at this stage of their studies (See sections 5.5.3 and 5.4.3).

It is not surprising to see that learners' motivation has been affected by a mindset intervention and the change in their language mindset beliefs. After a long history of research on mindsets, Dweck (2006) argued that mindset beliefs are fundamental to motivation as they guide peoples' thoughts, feelings and behaviors. It was found in previous research that learners endorsing growth mindset were more able to maintain their motivation (e.g. Blackwell et al., 2007; Burnette et al., 2013; Dweck, 2008). In addition, Lou and Noels (2019a) emphasized the central role of language mindset beliefs in increasing L2 motivation in their LMMS. Believing that language ability is changeable due to stimulating factors like effort, motivate them to develop their competence by working harder. However, learners believing their abilities are fixed would obviously feel less motivated as they think hard work and effort will have no effect on improving their abilities. This was confirmed in Albalawi's (2018) study when investigating Saudi L2 demotivation. Learners' fixed language mindset was a significant predictor of their demotivation and correlated positively with it as opposed to growth language mindset beliefs, which were found to be negatively correlated with L2 demotivation. This indicates the great effect of changing language mindset beliefs by means of an intervention on learners' L2 motivation

Further, the intervention materials were designed carefully to promote the idea of language learning malleability, encouraging participants that it can be developed by practice and effort. It was backed up with scientific evidence of brain growth due to learning harder things and

struggling with more difficult tasks. Making learners aware of this, seemed to open a new window of hope for those with low belief in their abilities.

Although the descriptive statistics of the whole sample of study showed a general positive attitude towards learning English even before the intervention, results of the quantitative study confirm a significant effect of the intervention in increasing this attitude among the experimental group only. Both groups (control and experiment) showed a very similar attitude before the intervention (Time 1), but post-intervention results revealed a significant difference between them in this component with a significant increase between Time 1 and Time 2 only in the experimental group.

Participants' positive attitudes toward learning English was evident in the way they talked about their experience and interest in acquiring this language during the interviews after the intervention (Phase 1). All participants seemed to like the idea of learning the language. As they explained, this attitude was due to several aspects, such as perceiving English as an important language they need to acquire to serve them in many ways or just simply having an inner desire to speak this international language that is spoken worldwide. During this phase of the interviews, none of the participants expressed negative attitudes toward English. It is possible that these positive attitudes toward learning the language were not solely due to the intervention since the sample was already positive in this regard, but it is interesting to see a significant improvement in their attitudes after the intervention.

During the interviews, some contextual aspects were mentioned that could have also contributed in improving their attitudes. For example, some participants mentioned the fact that the English

materials they were studying were easy to learn and get high scores on, which helped them feel more positive about the course. Another participant mentioned the English teacher's role in changing her attitudes toward English. She explained how the method of teaching and encouraging stories her teacher brought into class have helped her look at English as an easy course that she would love to learn. Despite being mentioned by only one participant, the major effect of the teacher role on learners' attitudes in any learning experience cannot be ignored. Results of Albalawi's (2018) study with Saudi university learners revealed how teachers could have a long-term negative effect on learners' motivation. All participants considered the teacher role as an important factor for positive language learning which could play a role in changing their attitudes toward learning English. Although the positive increase in participants' attitudes toward learning English was only in the experimental group, it is possible that the change could have been affected by their teachers. Thus, it is worth considering the teacher role in future mindset studies to measure its effect on learners' motivational factors.

The effect of the intervention on increasing participants' learning goals was evident in their quantitative results. It was found that the experimental group had significantly exceeded the control group in the learning goals component post the intervention (Time 2). Not only that, but also it showed a significant increase in their learning goals after the intervention (Time 2) compared to before (Time 1). This was contrary to the control group who showed a decrease in their learning goals in their Time 2 results when comparing them with Time 1. This result is in accordance with previous studies on language mindsets in which priming for growth beliefs was associated with an increase in learning goals (Lou, 2014; Lou & Noels, 2016). It also supports the relationship between language mindset and goal orientation in the mindsets-goals-responses

model (Lou & Noels, 2017), confirming the result of Lou & Noels (2016) that the growth language mindset is a direct predictor of learning goals.

During the interviews, the majority of participants expressed their great interest to master the English language for different reasons, such as their need to use it in their future lives, their perception of English as an important language they want to speak, or just due to their personal interest to develop themselves in this language. Regardless of the motives behind learning, either for internal or external factors, they seemed to indicate a real desire from the learners to acquire the language. The two other participants (RB & RH) did not show any real desire in learning English at this stage. They thought that it is something they might work on in the future, but it was not their goal now to master it as it was stressful to concentrate on it with other subjects. Although these participants did not show a great desire to learn the language at that moment, they seem to have the intention to learn it later on, but just felt overwhelmed by the requirements of the course and the limited time in the foundation year, which made them less concerned about missing any learning opportunities as their main focus was to fulfill the course requirement rather than learn and develop their language . These reasons seemed to affect their real goal orientations. Thus, learners' goal orientation could be affected by current situational or contextual factors, such as the need to learn just to pass a course or lack of the need to learn it because it is not a requirement.

The effect of the intervention in increasing participants' learning goals and challenge-seeking desires is unsurprising given that the intervention seemed successful in increasing their mindset beliefs regarding language learning and this was found to have a direct effect on learning goals (e.g. Burnette et al., 2013; Lou & Noels, 2016, 2017). It was also supported by the statistically significant correlation found between mindsets and learning goals (See Chapter 4, Section

4.7.1.2). It makes sense that those who believe language ability to be malleable, would be more inspired to learn and set higher learning goals to develop their abilities, but those who believe their ability is fixed would be less likely to set learning goals as they believe effort will not change their ability. This was evident in participants' responses during interviews when talking about the effect of the intervention. They explained the positiveness they felt due to the belief that they can attain all what they want if they just work harder and believed in themselves (See for example, participant AH, section 5.8.1). Explaining how the brain increases in size after repeated work on difficult tasks, seemed to have encouraged participants to set more learning goals and give themselves challenges. When students believe they have chances to increase their abilities and the harder they work, the better they get, it certainly encourages them to set more learning goals.

The idea of performance goals was explained by Carol Dweck (2000) as an interest in winning positive judgments of one's competence and avoiding negative ones. Learners with such a goal, consider performance as a measuring tool for their abilities. Thus, it is connected with a concern for looking smart and an avoidance of looking dumb. She further explained that having such a goal is not a problem unless it becomes more important than learning goals. On the basis of this, and of Lou and Noels' (2017) Mindsets-Goals-Responses Model for Language Learning, we would expect the intervention to foster more learning and reduce performance goals. In the model it was illustrated that individuals with growth mindset beliefs would adopt learning goals and those with fixed beliefs would adopt performance goals.

Unexpectedly, results of the questionnaire showed a significant increase in performance goals among the experimental group and a decrease of this type of goal in the control group. It was also found that the experimental group had more performance goals than the control group after the intervention (Time 2). That is, they followed the same trend of learning goals, increased in the experimental group and decreased in the control group. However, the learning goals were still more common than the performance goals before and after the intervention in the experimental group. Thus, the two goal types seem to be related to each other, and this was confirmed in the correlational analysis, showing a large positive relationship between these two components (See Chapter 4, Table 20). This means, endorsing more growth mindset beliefs was associated not only with an increase in learning goals but also in performance goals. A consistent result was found in Hayamizu & Weiner's (1991) study in which growth mindset was positively related to both learning and performance goals. However, it contradicts results of previous studies (e.g. Bandura & Dweck, 1981; Blackwell et al., 2007; Cury et al., 2006; Dweck, 2000; Dweck & Leggett, 1988; Robins & Pals, 2002) that found a stronger tendency toward learning goals by learners with more growth mindset beliefs whereas more orientation toward performance goals was found among those with a fixed mindset. It also challenges the Mindsets-Goals-Responses model for second language learning by Lou and Noels (2017), which illustrated that learning and performance goals are two distinctive goal types that are related in which language learning goals are related to growth language mindset beliefs and performance goals are related to fixed language mindset beliefs. The reason for the variation between the current study and Lou and Noels (2017) could be the way language mindset beliefs are measured. As opposed to our measure of mindset as a continuum, they measured language mindset as two separate constructs (separate items for growth and separate ones for fixed mindset) and this could

have made the results an artefact of their method. It does not seem sensible to treat mindsets as two separate constructs and relate each one with a different goal type. People are thought to have a mix of mindset beliefs which tend to be more growth or fixed oriented as evidenced by Ryan & Mercer (2012).

These results indicate that both types of goals could be favored by learners regardless of their mindsets, confirming what has been found in previous research (e.g. Ames & Archer, 1988; Debacker Roedel & Schraw, 1995) where low or high orientations toward both types of goals could occur simultaneously. Although Dweck explained the interest behind performance goals as a desire to show current ability and an interest to outperform fellow students, explaining this as an indicator of fixed mindset beliefs, this does not always seem to be the case. Having a performance goal and avoiding challenges and mistakes to look smart, could be a sign of perfectionism. A learner's interest to outperform their friends could be a motivating point for them to prove that they are improving, rather than to show that their (fixed) ability is better than others. Some learners could use competition with others to improve themselves (Daniels et al., 2008; Nicholls, 1989). Another reason for learners' interest in performance goals could be the contextual effect. Learners in Saudi Arabia are mainly judged by their grades, they are categorized into sections by grades and are given better chances to choose their majors by their grades. Participant SM mentioned this when talking about her goals saying, "*I am judged by grades*" and she has no control over the situation, but to care about her performance to pass the course. So, it is expected to see an interest in this type of goal specially during their foundation year. Learning and performance goals can go hand in hand, as Dweck (2000) explained, and many students can have a learning goal to improve themselves and learn new skills and at the same time care about their performance and how well they do. This should not be worrying as

long as the concern of high performance does not outweigh learning, so it does not prevent learners from missing valuable learning opportunities for the sake of looking smart. Thus, the intervention effect on goal orientation seemed positive, as despite causing an increase in both types of goals, the learning goals component remained higher than the performance one.

The relationship between mindset and goal orientation was inconsistent in previous studies (Burnette et al., 2013). One reason for this variation could be the way goal orientation was measured, as illustrated in Section 2.3.3. Some studies, like the current one, measured them separately using different items for each type of achievement goal, considering them two separate scales) which contradicts Dweck's (2000) approach which measured them against each other (using items that pit learning against performance), believing that variations in learners' preferences for these goal types could only emerge when measured against each other. Further, participants' L2 competence could be a factor that contributed to this discrepancy. Lou (2014) has found that L2 learners' perceived competence is a moderator of the relation between mindsets and performance goals. Thus, ignoring the moderating effect of L2 competence could be a reason for the inconsistency of results. It is recommended for future work focusing on language mindset and goal orientation, to consider learners' L2 competence and measure achievement goals separately (using questionnaire items that measure learning goals and other items that measure performance goals) to find out the real link between learners' mindsets and each type of these goals.

6.1.3 Effect of the Intervention on Responses to Failure Situations

Two different reactions to failure situations were described by (Dweck, 1975, 2000), the helpless and mastery-oriented response. Learners with a helpless pattern consider failure as an

uncontrollable situation and react in a helpless manner, blame their lack of ability, are less likely to exert more effort or persevere in the face of setbacks. However, those with a mastery pattern view failure as an opportunity for learning and persist on achieving mastery despite their failure. As learners with this type of response blame effort for their failures, they are more likely to work harder when facing setbacks to improve the situation. The intervention sessions on this study were expected to foster more mastery and less helpless manners in the face of difficulties among participants in the experimental group.

Participants' responses to failure situations in the questionnaire revealed a significant difference between the two groups after the intervention with the experimental showing a more mastery orientated pattern than the control. Within-group differences also showed a significant increase toward the mastery-pattern only in the experimental group. This result is consistent with other studies on language mindset (Lou, 2014; Lou & Noels, 2016; Lou & Noels, 2017) confirming the hypothesized relation between language mindset and responses to failure situations in the mindsets-goals-responses model and the result of Lou & Noels (2016) in that the growth language mindset predicts mastery responses and the fixed language mindset predicts helpless responses. It also supports a consistent finding in the psychology literature of mindset research that illustrates how students' mindsets partly determine how they react in difficult situations (e.g. Diener & Dweck, 1980; Robins & Pals, 2002; David Scott Yeager & Dweck, 2012). This result indicates an effective role of the intervention in increasing the mastery-oriented pattern among participants. However, it was still based on hypothetical scenarios rather than real incidents and it was crucial to hear from the participants during interviews expressing their personal reactions and feelings when facing difficulties to support this result.

Participants responses during the interviews revealed a mastery-pattern in most cases (7 out of 8). This was clear in the way they explained how they would react when facing a difficulty by putting in more effort and trying several times. Two of them were explaining this in more details showing the first negative feelings of being upset or sad of the situation when experiencing failure and how they would try to overcome it to improve the situation. Some aspects of the intervention materials were mentioned as well in their explanations of how it helped them look at setbacks and challenges in a different way. For example, participant RH and MA mentioned how they started to look at struggles as an opportunity for learning (See sections 5.5.4 and 5.3.4) and participant SM expressed how she started to like learning hard stuff after knowing that challenging ourselves increases our intelligence (See sections 5.6.5). In Dweck's framework, she explained how a person's core beliefs create these different patterns when facing challenges and difficulties (Dweck, 2000; Dweck & Leggett, 1988). Thus, those who were convinced that abilities are malleable did not seem to worry about failures because they started to feel that with effort and hard work, success is attainable, but the problem is with those who think their abilities are fixed because for them, failure indicates their low ability which they believe is unchangeable.

It was noticed from some participants' responses that despite being convinced to react in a mastery-oriented manner when facing difficulties, they would still have some negative feelings about it (See for example, section 5.1.5). This conflict between the feelings and reactions seems normal as it is hard to change the way we feel about something straight away. Gross (1998) argues that negative emotions can be changed by using a certain way of cognition through changing the interpretation or appraisal of a situation, such as looking at the situation from a different perspective or concentrating on the positive side of it. Using such self-protecting cognitions when encountering failures, not only help individuals feel better but also learn from

their experience (Roese, 1994). Thus, when learners change the way they look at and interpret failures, negative feelings could probably change and consequently by trying to act in a mastery pattern several times, they could achieve better outcomes. The initial result seems promising in that the participants perceived the correct way to respond to difficulties and were able to express the way they would react in different circumstances. This was clear in the strategies they said they would follow to overcome failure situations and the way they started to interpret challenges as chances of learning.

6.1.4 Effect of the Intervention on Fixed-trait Attributions

Attributions are the different meanings people give to certain incidents that happen to them. There seems to be a clear interaction between individuals' attributions and their responses in failure situations because their reactions depend on the way they perceive this failure and the reasons behind it. Believing that lack of effort, for instance, is the reason for failure, makes them put more effort to avoid it, whereas believing that lack of ability is what causes this failure, might make them upset and frustrated if they believe this ability is uncontrollable. Ascribing difficulties and challenges to stable factors impedes motivation while ascribing them to unstable factors elevates hope and motivation (Weiner, 2010). In this study, students' fixed trait attributions were measured based on two types: personal and process-focused attributions. It was hypothesized that the intervention would orient learners to have more process and less personal attributions and that fostering more growth mindset beliefs is related to having more process attributions. That is because believing in the ability to develop any skill, is based on the idea that it is the process and the effort that makes this change and not personal traits.

Results of the questionnaire after the intervention showed that the experimental group had more process attributions than the control whereas the control group had more personal attributions, but the difference was very small and did not reach statistical significance. However, comparing the types of attributions in each group, it was noticed that both groups had more process attributions than personal ones. Although both groups showed a significant decrease in their personal attributions when comparing pre and post intervention results, the experimental difference was with a larger effect size compared to the control. Also, within group differences showed an increase in process attributions in the two groups, but when comparing Time 1 and 2, the difference was much larger in the experimental group despite not being significant. Results of correlational analysis in the current research match the results of previous research (Robins & Pals, 2002; Yeager et al., 2016) revealing a significant positive correlation between fixed mindset and personal attributions. Believing abilities are fixed is associated with the thinking of difficulties and struggles as signs of lack of intelligence.

Although attribution styles were not questioned directly during interviews, they were looked at in participants' interpretations of their experiences and failure situations. The reason mentioned by most participants for their low performance was mainly their lack of effort which some linked it to time limit due to course load and requirements. Most of them blamed themselves for not working harder and believed that it is the process rather than personal traits that play a role in their success, confirming the quantitative results (See for example, 5.2.5, 5.1.2 and 5.8.2).

The fact that the change happened significantly in both groups only in the personal attributions (and not in the process) raises the possibility of another factor that could have contributed in making this change. For example, this could be the teacher's influence, a training course or classroom materials. Weiner (1972) argues that people differ in their achievement outcome

attributions to ability and effort illustrating that various environmental factors could alter these attributions, such as the amount of previous success and failure, performance patterns, time on task, among many other factors that, with personal predispositions, could generate what is called an attributional conflict where causes of success and failure are not clear. Thus, inferences about causality of incidents are affected by a variety of environmental as well as personal factors which stem from a long history of experiences and could be hard for the individuals themselves to determine them clearly.

Another aspect that could have affected the results of the attribution scales is the type of questionnaire items used to measure them. Participants' attributions were measured by their responses to only 3 items in the form of hypothetical incidents in which they rate the likelihood of a certain personal attribution and another process attribution under each scenario. The use of such scenarios in measuring attributions may not be valid for all respondents as it requires vivid imagination of the incident and it is doubtful that some participants will be able to experience the real feeling of affective reactions and choose the one that reflects their attribution of a similar realistic incident (Hau & Salili, 1993). Also, restricting participants to rate the likelihood of a certain attribution, does not seem sufficient in measuring their real attributions. Random answers could be selected if real attributions are not listed. Another aspect is that most of these items were negated using the phrase (this means I *am not very* smart at) which could be confusing when rating the likelihood of such attributions. Dörnyei & Taguchi (2009) argue that using negative construction in questionnaire items is potentially misleading and answering them could be problematic. A better way to measure attributions is to ask participants to give their own attributions to some hypothetical incidents rather than restrict them to rate the likelihood of

a certain attribution style. An even superior method is to use natural events like exam scores or evaluation outcomes and ask participants to make their own attributions (Hau & Salili, 1993).

6.2 Research Question Two

Does the mindset intervention have a longer-term effect on FL learners' mindset beliefs and L2 motivation?

6.2.1 Language Mindset Beliefs

Results of the Time 3 questionnaire did not confirm a long-term effect of the intervention on learners' mindset beliefs. Within group differences among the treatment group showed an decrease in learners' growth beliefs two months post the intervention, indicating that the influence of the intervention may have diminished on the long term. This was also supported by the analysis of between group differences, between the treatment and control groups, which revealed no statistically significant difference between the mean scores of the two groups at Time 3. Taken together these findings suggest that there does not seem to be a long-term effect of the intervention on learners' mindset beliefs. A consistent result was found in previous mindset interventions (Dommett et al., 2013; Donohoe et al., 2012; Orosz et al., 2017) who found that the short-term positive effect of the intervention was no longer evident in the long-term. Thus, it was argued that the shift in mindset beliefs due to priming effects is likely to return back to its chronic mindset when situational cues disappear (Lou & Noels, 2016; Plaks et al., 2005).

Findings from participants' responses given in the second interviews (phase 2) conducted after Time 3 questionnaire, revealed that most participants (n=5) expressed growth mindset beliefs regarding language learning and only 3 participants (RB, RH and SJ) expressed some fixed beliefs. Although qualitative results revealed that the majority showed more growth mindset beliefs, this does not contradict the quantitative results. Despite the mean score showing a decrease in growth mindset beliefs between Time 2 and 3, it is still more oriented toward the growth mindset in Time 3 ($M= 2.41$), being less than 3. The language mindset component was treated as a single index in which the mean score is measured by combining the fixed items with the reversed growth items. As the rating scale ranged between 1 and 6, scoring higher (from 4-6) would indicate more orientation toward the fixed mindset. However, having a lower mean score (from 1-3) would indicate more orientation toward the growth mindset. Mean scores between 3 and 4 would indicate a mixed mindset belief.

One of the potential explanations for the decrease of growth mindset beliefs toward the end of the year could be that learners have experienced some setbacks, failures or challenges that made them doubt their abilities. Looking deeply at the qualitative data, it was found that some have expressed their helplessness feeling when their trials to improve their English were useless (See section 5.4.2 and 5.6.4). Others explained that language ability has a limit where it cannot develop any further (See section 5.5.2). Another aspect of fixed beliefs that was mentioned is individual differences. A few participants mentioned that learner' variations in speed and ability of learning, are innate (See section 5.7.2). It was evident in the results that the intervention did contribute positively in changing their mindset beliefs, but it seems that the experiences they have been through during this time and the feeling that they were unable to attain what they had expected, made them uncertain about their ability to develop themselves in learning English. Lou

and Noels (2019) argue that learners' individual/intrapersonal system including their cognitive/affective traits and their personal experiences as well as the learning context can interactively influence their mindsets. Leith et al., (2014) also stress the importance of considering the temporal nature of mindsets suggesting that learners' mindset could change over time as they move to a new context (e.g. educational level) or experience new challenges. When low aptitude learners in a less supportive context experience several failures, this may reinforce fixed mindset beliefs. In the same way, a positive early experience, such as being bilingual, could contribute to the belief that the ability of language learning is not innate (Byers-Heinlein & Garcia, 2015). The results of this study and previous studies on mindset interventions suggest that mindset beliefs could be changed temporarily but may need positive reinforcement through experience to show longer-term effects.

6.2.2 L2 Motivation

The L2 motivation component at Time 3 did not differ significantly between the control and treatment groups in between-group ANOVA analysis, both groups showed almost the same level of motivation two months after the intervention. This was confirmed in within-group analysis of variance as the mean score of motivation dropped in both groups reaching a lower level than before the intervention scores (Time 1). This indicates that the intervention did not have a long-term effect on L2 motivation. This could be explained from a dynamic systems approach, considering the salience of L2 motivation change over time (Waninge et al., 2014). The finding confirms the results of another study that measured long-term motivation, which found a decline in L2 motivation over time, suggesting that the change was influenced in some cases by key transitional periods like leaving school or moving to a new country (Waninge et al., 2014).

The qualitative results from the second phase of interviews confirmed this result and provided more details and explanations for the reason behind the decrease in learners' L2 motivation. The majority of participants described the low motivation they were experiencing toward the end of the foundation year when they were in level 4. All participants mentioned the stress of work and difficulty of the course as the main cause of their decreased motivation (see for example, sections 5.4.3 and 5.7.3). They felt overwhelmed and expressed their concern about obtaining a high GPA to specialize in their major of interest. Some participants also felt disappointed when scoring lower than their expectations no matter how hard they tried. Leith et al. (2014) mention that students' motivation can change, just as their mindsets, due to contextual changes like the transition to a different educational level, studying abroad or facing challenges. Time 3 questionnaire and following interviews took place on the last (most advanced) level of the English course and it could be that the intensive nature of the course and setbacks learners encountered during that period had affected the level of their motivation. Other potential reasons for low motivation included feeling that English had no relevance to future studies; this was expressed by a learner who explained how she had no motives to learn English as it was not a requirement for her major of study. Emotional factors also have affected another participant (SJ) who expressed her homesickness due to studying away from family and friends (See section 5.7.3). So, it seems possible that the decrease in motivation was affected by some contextual and personal factors. This is not to say that the intervention was not effective in motivating learners, as it did make a change at the beginning, but with all these other factors affecting their motivation, the mindset beliefs needs to be reinforced regularly during class to encourage learners as they encounter difficulties and help keep their motivation stable.

Although learners' attitudes toward learning English remained somewhat positive at Time 3, they showed a significant decrease in both groups compared to their attitudes before the intervention (Time 1). This means despite holding a positive attitude toward learning the language, it was not as high as previously, indicating no significant long-term effect of the intervention on participants' attitudes. When interviewing participants in the second phase, they revealed some aspects that could have contributed in changing their attitudes. Some participants expressed their disappointment as they were not improving much or not scoring as much as they had expected. Failure to succeed in certain language tasks could influence their attitudes toward L2 learning. (Dornyei & Ottó, 1998) illustrate how language tasks are embedded in different contexts with various levels including the course, L2 class, language learning in general, learning in general and achievement behavior in general, and that appraisal of one level could be easily generalized to a wider level such that negative attitudes established from failure in doing a certain task can be transferred to the whole language course or even the whole L2 learning experience. Other participants expressed their interest in acquiring the language but felt overwhelmed by the course requirements and thought they might learn it later when there is no concern of grades or GPA. Feeling disappointed or exhausted from studying the course could have led some participants to have a less positive attitude toward learning English at this time.

Data from Time 3 questionnaire showed no significant difference in between group analysis of variance regarding learning goals and performance goals. Within group analysis showed a decrease in learning goals at Time 3 compared to Time 1 in both groups despite being slightly higher in the treatment group. Also, performance goals decreased at Time 3 with both groups reaching a similar value. This means that the effect of the intervention on learners' goal

orientation does not seem to be lasting for a long time. Responses to the interviews in phase 2 also revealed a decrease and hesitance in learners' interest to learn English. Although half of the participants still showed an interest in learning English, the rest were hesitant and not sure about it at this stage. Two participants stated clearly that they just aim to pass the course at this time (See sections 5.4.3 and 5.5.3), while the two others felt exhausted and less enthusiastic due to the pressure of workload, difficulty of the course and unsatisfactory results (See sections 5.6.4 & 5.7.4). Looking deeply at participants' goal orientations, it seems that psychological factors have affected their determination to learn. Feeling worried about their performance and disappointment in their results seemed to affect their willingness to learn or even to achieve a high score in this course.

Performance goals followed the same trend as learning goals, increased at Time 2 and dropped again at Time 3 in both groups. This supports my previous finding in the short-term effect of the intervention on goal orientation (See illustration in section 6.1.5) and my belief that both goal types are related to each other rather than being opposed to each other. It does contradict the Mindsets-Goals-Responses model for second language learning by Lou and Noels (2017), which considers performance and learning goals as opposite constructs, suggesting that learning goals are set by growth mindset learners and performance goals are set by fixed mindset learners.

6.2.3 Responses to Failure Situations

Despite the statistically significant difference found between the two groups in their responses to failure situations immediately after the intervention (at Time 2), this difference was no longer present at Time 3. Both the treatment and control groups showed the same mean scores in their

responses to failure situations two months following the intervention, indicating that there was no long-term effect of the intervention on this component. Their mastery responses decreased in the long-term moving slightly toward the mid of the continuum between the mastery and helpless response.

Participants' responses in their second interviews showed a mastery-oriented manner for most of them with the existence of some helpless reactions. Despite feeling upset, most of them (n=5) stated different ways to improve the situation and try harder, showing a good level of control over their reactions and feelings. Some expressed how reacting negatively will not benefit them and that trying to overcome the situation is what they plan to do. They had more belief in themselves that their low scores could get higher next time with more effort (See for example participants AA, AM and MA). This is consistent with a long-term effect of a previous mindset intervention (Paunesku et al., 2012), that increased the resilience of the treatment group by cutting more than half the withdrawal rate compared to the control. Although the intervention was brief and online, this effect occurred several months post the intervention with no reinforcement during this period. Yeager & Dweck (2012) argue that the strength of mindset interventions is in its ability to change the meaning of challenges perceiving it as a way to become smarter, which is important for promoting resilience.

Nevertheless, two participants showed a clear helpless response when expressing their reaction to failure. SJ declared her disappointment when she failed to meet her expected performance (See section 5.7.5) while RB reached a worse stage expressing her lack of disappointment and carelessness showing no concerns over her failures and declaring that she is not good at English but at other subjects (See section 5.4.4). This psychological state of learned helplessness is developed from exposure to repeated failures and setbacks where an individual perceives events

as uncontrollable and stop reacting to change it, believing that action is detached from the outcome (Seligman & Maier, 1967). When failures are perceived as uncontrollable, individuals act helplessly (Abramson et al., 1978; Miller & Seligman, 1975). It is important to note that learners' responses during the interviews support the relationship between language mindset beliefs and reactions to failures. The two participants who showed a helpless manner during the interview were doubting the concept of brain malleability during the same interview, which could suggest that their fixed beliefs have contributed to their feeling of helplessness. Conversely, participant SM, for instance, was reacting in a mastery-oriented manner during the interview despite failing the course, and she showed growth mindset beliefs during the same interview. Believing in the potential to change has motivated her to try harder and show a resilient response in the face of failure.

It is true that no statistical significance was found in the current study for a longer-term effect of the intervention on learners' responses to failures, but interview results showed that more than half of the participants were mastery-oriented in this respect and only two showed a helpless response. It could be that the intervention was effective for some but not all the sample which could have affected the overall statistical result.

6.2.4 Fixed-trait Attributions

The intervention aimed to foster more process and less personal attributions among the treatment group. The long-term effect of the intervention revealed no statistically significant differences between the treatment and control groups in both attributional styles (personal and process attributions) at Time 3. Both groups showed an increase in personal attributions and a decrease in process attributions between Time 2 and Time 3. However, when comparing the mean scores in

the two attributional styles at Time 3, it was found that both groups had more process-oriented attributions than personal ones.

Participants' responses to the interview questions also revealed more process-oriented attributional styles among the treatment group. Most participants (n=5) believed that effort and practice are the key to improvement and that abilities are not an obstacle to learning and development. Only one participant mentioned ability affecting learning. The process attributions were explained by some participants by stressing on the importance of practice and exerting more effort and time in studying (See for example, 5.1.2 and 5.8.5). Other participants attributed their low performance to the wrong method of studying they used and illustrated how changing the way of studying has helped them perform better (See sections 5.2.1 and 5.2.5). In their illustrations, there were many links between believing in oneself and working hard which they thought will enable the development in language learning. This seems to partially support the relationship between learner's mindset beliefs and attributional styles confirming the finding that mindsets is a strong predictor of learners' attributions (Leith et al., 2014). Although the qualitative results of the treatment group seem to provide a good level of support for the effectiveness of the intervention in the fixed-trait attributions component showing more process attributions than personal ones, it would be hard to claim that these attribution styles among the treatment group were due to the intervention. That is because no interviews were conducted before the intervention to compare pre and post changes and no interviews were conducted with the control group post the intervention to see between group differences.

Changes in attribution styles could have been due to other factors regardless of the intervention study. For instance, a potential reason for the decrease in process attributions could be the increase in course difficulty and learners' negative experience as the result of exerting effort that

was pointless for some participants. For instance, SM (who failed level 3) attributed learning to effort, but felt it was useless when she did not find the expected result (See section 5.6.4). Those who believed in themselves and achieved high grades in level 2 would easily lose faith in themselves after several trials and failures in level 3, which could have led them to believe that putting in effort is no longer helping and that their abilities (personal attributions) is what is preventing them from progressing any higher. Two other participants blamed contextual and psychological factors for their success or failure. The teacher role was an aspect mentioned affecting their learning experience. Also, psychological factors like feeling lonely or homesick was clearly mentioned as a reason affecting one of the participants' performance and learning experience in general (See section 5.7.3). Although these factors could not be clearly classified as being process or personal-oriented attributions, they indicate a fixed view in that learners ascribe their failures to an external factor they have no control of and cannot change. Our main concern here should not be to fit causal attributions under these two categories (personal vs. process), but rather to understand whether these are perceived as changeable or non-changeable factors by learners. When relating attributional styles to learners' mindset, Dweck (2000) mentioned that attributing failures to personal traits like intelligence or ability should not be a problem if learners believe that these are not fixed and could be changed. Those with more growth mindset beliefs are more likely to believe in the potential to change traits and those with more fixed beliefs attribute their failures to factors that could not be changed (or they believe they are not changeable). Therefore, I would suggest that it would be more sensible to classify attribution styles into Changeable and Non-changeable attributions when relating them to mindsets rather than personal and process attributions.

Overall, it is clear from both the quantitative and qualitative results that the language mindset intervention was successful in changing learners' mindset beliefs and motivation, at least temporarily. Participants' attitudes toward the intervention specially in phase 1 confirm that they have grasped the concept of a growth mindset and reflected positively on the sessions. Some participants liked the clarity and way of explanation, confirming how it helped them change their beliefs and increased their interest in learning English (See sections 5.1.1, 5.2.1 and 5.4.1). Other participants stressed the motivated feeling they experienced after the sessions (See for example section 5.8.1). However, the quantitative results showed that this positive effect of the intervention has declined over the long-term. Nonetheless, finding no statistically significant effect of the intervention does not indicate that the effect has disappeared completely. Qualitative data have shown how the majority of participants were still growth oriented, motivated, held positive attitudes and reacted in a mastery manner. It is true that they have shown a clear decline, but it is also possible that the positive effect was still there and the impact has lasted, at least for some participants. This was evident in participant AM and AH's attitudes toward the intervention two months later where they recalled some messages that still had an impact on their learning experience (See sections 5.2.1 and 5.8.1).

This chapter discussed the results of both quantitative and qualitative results. It provided a description of important results found in this study in relation to previous research, casting a critical eye on some important aspects of language mindset research. The following chapter will provide a conclusion to the current research, summarising the main results and contribution of this study as well as its limitations, and suggesting some implications for both pedagogy and future research.

Chapter 7: Conclusion

7.1 Summary

The main aim of this study was to find out whether positive language mindset beliefs can be taught to Saudi university learners by means of a short intervention using pedagogic materials, and if they could, to consider how would these beliefs impact their L2 motivation, attitudes, goal orientation and responses to setbacks and challenges. It also sought to examine the extent to which changes in mindset beliefs maintained after completion of the intervention. In order to obtain a rich data set to explore impact thoroughly, both questionnaires and interviews were used and collectively these were able to provide interesting insights into the effects of the intervention on L2 learners. Data from the questionnaires has revealed the big picture effects of how motivational characteristics have changed among the whole sample. Data from interviews has provided insights from learners' experiences to explain potential reasons for changes and enabled a closer look at the ways in which the intervention influence them, information which was not apparent in the quantitative analysis. Below is a summary of the main results.

- With regards short-term impact, a positive effect of the intervention on L2 learners' language mindset beliefs, attitudes toward learning English, L2 motivation and goal orientation was found. The interview data were consistent with the quantitative results, supporting the positive influence of the intervention in the short-term.
- The positive effects of the intervention did not last in the longer-term (two months later). However, the absence of statistically significant effects at long-term follow-up does not

necessarily mean that the impacts had disappeared completely. Phase 2 of the qualitative data revealed that the majority of interview respondents had retained new beliefs, remained growth oriented and motivated, held positive attitudes, and reacted in a mastery manner.

- The interview data revealed potential reasons for the decline in intervention effectiveness in the longer-term. These included: going through repeated experiences of failure, encountering difficulties in understanding the English course and feeling pressured due to the requirements (e.g. assignments, exams) of English and other courses. These factors were linked to their L2 motivation, goal orientation and reactions to failure situations.
- The two types of goal orientation (learning and performance goals) were found to be positively correlated, and this relationship was evident at all time points.

This is the first intervention study designed to change learners' beliefs in language learning, testing the claim that this change can influence other motivational characteristics, it provides a valuable contribution to the language learning literature by demonstrating that language mindset beliefs can be changed through growth language mindset intervention. This finding supports the concept of mindset dynamism and its potential to develop and change over time (Mercer et al., 2012; Mercer & Ryan, 2010). It is also consistent with the argument that language beliefs are dynamic and can be changed due to contextual factors. (Kalaja et al., 2015; Paunesku et al., 2015; David S Yeager et al., 2016). This study also provides a contribution to the L2 motivation research being the first attempt to use the mindset theory to promote L2 motivation by means of an intervention. Further, it contributes to the mindset research by using a mixed methods approach in measuring mindsets, something which is lacking in the mindset literature. The

results have important pedagogical implications for language practitioners and educators as they suggest that a growth language mindset can be taught, and that language learners' motivation can consequently be developed. Despite these successes, this study has some limitations which will be discussed in the following section.

7.2 Limitations

One of the limitations of this study is that the intervention was examined only with female participants. In Saudi universities males and females study in segregated faculties and buildings where there is no access to male participants by the researcher. Conducting the same intervention with both genders will enable further investigations into possible differences in language mindset beliefs between males and females. Due to the small sample size and the use of a single gender in a specific context, it might be difficult to say that the results would be transferable or generalized to other contexts. However, this does not undermine the importance of this study. It would be interesting to replicate this intervention in other contexts or with a bigger sample including both males and females.

Further, the use of hypothetical scenarios in measuring attributions may not be valid for all respondents. This type of question requires a vivid imagination to visualize the incident and it is possible that some participants will not be able to experience the real feeling of affective reactions and choose the one that reflects their attribution in a similar real-life incident (Hau & Salili, 1993). Also, restricting participants to rate the likelihood of a certain attribution, may be insufficient for measuring their real attributions. Random answers could be selected if real

attributions are not listed. Another limitation of this question is the inclusion of negated items (e.g. this means I *am not very* smart at) which could be confusing when rating the likelihood of such attributions. Dörnyei & Taguchi (2009) argue that using negative construction in questionnaire items is potentially misleading and answering them could be problematic. In fact, the use of negated items here was to avoid using sensitive terms that refer to the participants and might have a negative effect on them. For example, the negated phrase ‘not very smart’ was used instead of its negative word to avoid the use of impolite terms.

The use of interviews in this study has provided interesting insights from participants about the impact of the intervention. However, another limitation of this work is that no interviews were conducted with the control group, which means the whole picture cannot be viewed. Thus, data from interviews can only explain the quantitative data of the experimental group, but without a control group to compare with, it cannot be assumed that any changes in participants’ views are due to the intervention rather than other contextual or situational factors.

Another limitation could be the potential influence of the researcher on participants. As a researcher and collector of data, I tried to minimise my effect on participants’ responses. But as Lamb (2018) stated, the possibility of this effect becomes greater in qualitative research as building warm and friendly relationship is something the researcher would seek, to encourage disclosure of information and experiences by participants. Given that interviews are based on human interaction, it seemed undeniable to eliminate the impact of the researcher on participants. However, I am aware of the need to detach myself from the research process to prevent

influencing participants' responses or views. The effect of the interviewer on participants' motivation is possible to occur even if the interviewer is not the researcher (e.g. the teacher). What is crucial here is being aware of the importance to reach a balance between considering an insider's prospective and maintaining a level of sensitivity as a researcher.

Despite these limitations, interesting implications for pedagogy and future research will be illustrated in the following sections.

7.3 Implications for Pedagogy

Results of the current study have important pedagogical implications for language educators and practitioners. By understanding the crucial role of language learning mindsets, teachers may try to find ways to promote more growth language mindset beliefs among their learners and improve their learning experience. An important finding of this research is that language mindset beliefs can be altered to be more growth oriented and this in turn could increase L2 motivation of learners as well as their responses to setbacks and challenges. Noels and Lou (2015) clarify that this change in language mindset beliefs not only happens due to explicit interventions/workshops but also implicitly through everyday contacts with learners, teachers' practices can affect learners' mindset and learning outcomes. Embedding mindset awareness practices in everyday teaching is believed to even have a more sustained effect on learners' motivation and mindset beliefs in L2 learning. That is because emphasizing mindset related beliefs recurrently during classes is expected to maintain learners' awareness and ensure a more lasting effect for those beliefs.

Focusing on performance and competition by advantaging high achievers and distinguishing students based on their performance, could guide learners to develop more performance goals. Park et al. (2016) illustrated how emphasizing performance over learning in classroom instruction, can affect learners' mindset beliefs. As seen in the Saudi context, there is an emphasis on performance goals; teachers and policy makers need to be aware that this emphasis may influence the development fixed mindset beliefs. Teachers can foster more growth-oriented classes by encouraging learners to set learning goals, attribute their development and success to learning processes (such as exerting effort or using effective studying skills), and providing a safe space in which to make mistakes.

The feedback teachers provide for learners is another aspect of language classroom instruction that educators need to pay careful attention to (Rattan et al., 2012). Many teachers may make the mistake of praising learners' personal traits like abilities by saying for example "you are smart" in successful situations. This type of praise may teach learners to judge themselves by their performance and attribute outcomes to personal traits (Dweck, 2000). It does sound encouraging in successful situations, but the problem is when facing difficulties, as these learners may start to judge themselves as not smart. It was also found that the type of feedback learners receive from educators has an effect on their mindset, motivation and coping patterns (Rattan et al., 2012) . In a number of studies (e.g. Dweck, 2007; Mueller & Dweck, 1998), it was shown that the kind of criticism or praise given can directly develop a helpless or mastery-oriented pattern (See Section 3.1.4). Whilst the present intervention did not include a direct emphasis on feedback or praising, it did involve encouraging statements that were process-oriented focusing on the importance of effort and practice. This has affected learners who mentioned how motivated they were because they felt that they could achieve anything with no limits. This sheds light on the importance of

providing strategic feedback to learners. Teachers should focus on the process of learning when providing feedback (e.g. You have done a great job, your reading is improving, continue practicing to improve your pronunciation). This kind of praise helps learners internalize growth mindsets (Pomerantz & Kempner, 2013).

Previous research has emphasized the importance of teachers' beliefs and practices on learners' mindsets (Cimpian et al., 2007; Noels & Lou, 2015; Peacock, 2001; Rattan et al., 2012). The extent to which they believe their students can develop their language learning abilities, can have a significant impact on their teaching and the way they react to learners' success and failures. Teachers with a fixed-view of language learning are expected to have a negative influence on learners' motivation and achievement because they are more likely to be less motivating, less supporting and to directly or indirectly promote those fixed beliefs among their students (Rattan et al., 2012; David Scott Yeager & Dweck, 2012). This indicates the importance of ensuring that language teachers themselves have growth mindset beliefs with regards to language learning before asking them to apply any growth mindset strategies in class. Growth mindset beliefs could be also spontaneously embedded in many teachers practices and feedback, but we need to make sure all teachers are aware of this concept and how to implement it and promote it in the language classrooms. It was found that even in teachers who are aware of growth mindset and believe in its importance, only 20% reported they were confident they could promote these beliefs among their students (Yettick et al., 2016). Results of the current study indicates the possibility to change learners' language mindset beliefs, and that teachers could have the most impact on changing or promoting these beliefs, not necessarily through explicit workshops but in everyday communication with learners. They also imply the need for Saudi learners to endorse growth beliefs to maintain their learners' L2 motivation and help them adopt mastery-responses

in the face of difficulties. Therefore, there is an urgent need to raise awareness among Saudi English language teachers concerning language mindset beliefs and train them to apply certain strategies that promote growth language mindset atmospheres, for example, welcoming mistakes and emphasizing the aspect of learning over performance, using feedback phrases that focus on development (e.g. you are improving) rather than judgments (e.g. you are smart). A practical way could be to provide teachers with a manual of dos and don'ts to minimize fixed oriented manners and increase growth ones. For instance, a list of certain phrases to use in written and oral feedback and another list of words/phrases to avoid would be very helpful for teachers.

Successful language learning requires an emphasis on mastery and development. In Saudi language classrooms, less attention is given to students' learning and growth and many practices and evaluations are based on performance and competition. It was apparent in the interviews how university students in the foundation year were overwhelmed by the requirements of the course and concerned of grades which made them less concerned about missing any learning opportunities. Their learning goals were affected by meeting course expectations and requirements where some have lost their interest to learn and aimed just to pass the course. If the extensive English program was designed to increase learners' proficiency in English, which is crucial as a foundation basis for their major studies in the following years, considerable attention should be given to boost learners' interest in the subject and create an atmosphere that focuses more on development and growth. So, to encourage learning-oriented atmospheres, teachers themselves need to be growth oriented, and this can be emphasized through faculty workshops illustrating how to reinforce growth concepts and feedback as explained above. This would be very useful to be implemented in the ELI, given that hundreds of English teachers are teaching in this Institute and thousands of students every year are attending the foundation year. It is

especially important for teachers of higher levels (levels 3 and 4) where learners struggle to pass the course. These teacher awareness sessions could be in the form of formal presentations providing a summary of the intervention results implemented on our students, or a workshop where teachers are given a chance to implement what they have learned (e.g. by evaluating a video of a language teacher as being more growth or fixed oriented, or sorting a set of phrases as to use or avoid in class).

7.4 Future Work

The results of the current study call for future research on language mindset interventions to contribute to the wider body of research on language learning mindsets. Below are recommendations for future work:

- The current study compared the changes in motivational characteristics three times. Considering when the Time 3 questionnaire was distributed, it was anticipated that the difficult course that students had reached by the end of the year could have negatively affected their motivational characteristics. Considering the dynamism of L2 motivation, it is recommended for future research to measure these motivational characteristics several times during the year to clearly observe fluctuations of these constructs and determine potential reasons. This is expected to provide a clearer idea of the times when motivation decreases and increases, which could help in determining potential reasons for this fluctuation.
- This study adopted a mixed methods approach in collecting data using a sequential explanatory design in which interviews were conducted to explain the quantitative results adding more depth and breadth to the analysis. This provided a valuable contribution to the

mindset research which lacks mixed methods approaches in collecting data. Interestingly, the interviews provided many insights into learners' specific experiences that were not apparent in quantitative results. Qualitative data was useful in explaining the reasons for learner's decline in motivational characteristics in the longer-term. Only by obtaining qualitative data could small differences in mindset beliefs be observed. For example, despite showing a significant effect of the mindset intervention on changing language mindset beliefs in the short-term, two participants showed some fixed beliefs (See discussion section 7.1.1). Future research on language mindsets should consider qualitative case study approaches to obtain deeper insights into the effect of mindset interventions. This could then be used to further develop the intervention materials. New themes also might occur from deep analysis of case studies, which could be further investigated in larger scale quantitative research.

- It has been argued that mindset interventions are mostly effective with fixed-oriented mindset students (Dweck, 2000) and low achievers or at risk students (Burgoyne et al., 2018). However, the intervention in my study was successful despite the sample being growth-oriented and intermediate/high achievers. Considering that a large number of Saudi students fail the course during the foundation year, it is worth conducting a language mindset intervention for repeaters of the course to examine its impact on their motivation and achievement. This would be expected to make a greater change in Saudi learners' language mindset beliefs and L2 motivation.
- The relationship between mindset and goal orientation is inconsistent in previous studies (Burnette et al., 2013). A potential reason for this variation is the way goal orientation has been measured, as illustrated in Section 2.3.3. Ignoring the moderating effect of L2 competence was also proposed as a possible reason for the inconsistency of results. Lou

(2014) has found that L2 learners' perceived competence is a moderator of the relationship between mindsets and goals. It is therefore recommended that future work focusing on language mindset and goal orientation, considers measuring learners' L2 competence to find out whether it has any effect on learners' mindset beliefs and goal orientation.

- Given the undeniable effect of teachers practices and feedback on learners, future research should measure teachers' mindsets and examine the effect of teachers' mindset interventions/workshops in promoting growth language mindset among language educators. Teachers should be empowered by clearly designed strategies to develop growth language mindsets alongside their regular instruction work in classrooms. Farrington et al. (2012) stated that the problem is that, "the research does not directly translate into classroom strategies that teachers can use to support positive mindsets in their students." (p.35). There is a great need to develop clear actionable strategies that could be applied in language classrooms. This could include articulating/presenting certain growth mindset phrases to help learners acquire such beliefs on daily basis (e.g. 'I can achieve whatever I aim for', 'my ability grows with practice and effort, my limit is the sky'). An alternative practical approach is to design an online brief intervention/material where such phrases/short videos are displayed for learners recurrently during the course.
- Results of the current study and previous mindset research suggest a great positive impact of promoting a growth mindset among learners, but the crucial issue is how best to apply research to improve language learners' experiences. The fact that the intervention has made a significant improvement on learners' mindset and motivation which was diminished in the longer term, emphasizes the importance of recurrent application of intervention sessions in order to make this effect more sustainable. Future research should consider conducting

recurrent sessions of mindset awareness for a longer period to examine its effect on sustaining learners' L2 motivation.

7.5 Conclusion

This study has provided a valuable contribution to the mindset and L2 motivation research indicating that language mindset beliefs can be changed at least temporarily, affecting other motivational characteristics positively among L2 learners. It would be interesting to apply the same intervention on other groups of Saudi learners, such as on L2 male students, young learners or low achievers. Mindsets theory has gained significance in education and the results of the current study will open the door for new innovations with the potential for considerable implications in ELT. I believe this study has provided a great contribution to ELT and mindsets research being the first language mindset intervention that was designed to promote language mindset beliefs and L2 motivation. It provided many insights into how language mindset interventions could be improved to achieve the desired goals. One of the significant findings of this study is the importance of sustainability and the need to nurture language mindset beliefs recurrently in order to maintain a longer effect on learners' beliefs and motivation.

Finally, as stated in the introduction to this thesis, my aim was to work on Saudi learners' internal thoughts, to encourage them to change their beliefs about language learning and consequently start perceiving difficulties and failures as chances of development and learning. My goal was to encourage them to feel that they are always in control of their thoughts, feelings and reactions and that once they decide to think in a growth mindset way, the whole learning experience will change. The results of this study showed me that Saudi university learners are

willing to change and motivated to improve their language learning experience. Their positive reactions toward the intervention materials have confirmed its usefulness and appropriateness to the context. With this positive impact on learners' motivation and attitudes, I look forward to applying the intervention to different groups of university learners and to develop the materials so as to bring about better results in the future.

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Appendices

Appendix A: Searching Saudi L2 Motivational Studies

<i>Database</i>	<i>Search Strategy/ key words</i>	<i>Search within</i>	<i>Filters</i>	<i>Total number of results</i>
SDL	L2 motivation	all text, title, abstract, subject terms, ISSN and ISBN.	-all search terms -Date: 2000-2019 Language: English	52,706
SDL	L2 motivation	all text, title, abstract, subject terms, ISSN and ISBN.	-all search terms -Date: 2000-2019 Language: English -Peer reviewed journals	32,254
SDL	L2 <u>AND</u> motivation <u>AND</u> Saudi	all text, title, abstract, subject terms, ISSN and ISBN.	-all search terms -Date: 2000-2019 Language: English -Peer reviewed journals	838
SDL	L2 or second language or efl or esl or ell <u>AND</u> motivation <u>AND</u> Saudi	all text, title, abstract, subject terms, ISSN and ISBN.	-all search terms -Date: 2000-2019 Language: English	49,739
SDL	L2 or second language or efl or esl or ell <u>AND</u> motivation <u>AND</u>	all text, title, abstract, subject terms, ISSN and ISBN.	all search terms -Date: 2000-2019 Language: English	8,664

	Saudi		<i>-Peer reviewed journals</i>	
SDL	L2 or second language or efl or esl or ell <u>AND</u> motivation <u>AND</u> Saudi University	all text, title, abstract, subject terms, ISSN and ISBN.	all search terms -Date: 2000-2019 Language: English <i>-Peer reviewed journals</i>	8,441
SDL	L2 or second language or efl or esl or ell <u>AND</u> motivation <u>AND</u> Saudi	title	all search terms -Date: 2000-2019 Language: English <i>-Peer reviewed journals</i>	7
SDL	L2 or second language or efl or esl or ell <u>AND</u> motivation <u>AND</u> Saudi	abstract	all search terms -Date: 2000-2019 Language: English <i>-Peer reviewed journals</i>	55
SDL	L2 or second language or efl or esl or ell <u>AND</u> motivation* <u>AND</u> Saudi	abstract	all search terms -Date: 2000-2019 Language: English <i>-Peer reviewed journals</i>	57 (added 3 to the list)
UoL Library	L2 or second language or foreign language or efl or esl or ell <u>AND</u> motivation* <u>AND</u> Saudi	L2 or second language or foreign language or efl or esl or ell =Title Motivation=title	Date: 2000-2019 Language: English <i>-Peer reviewed journals</i>	29 (added 3 to the list)

		Saudi = all fields		
Web of Science	L2 or second language or foreign language or efl or esl or ell <u>AND</u> motivation* <u>AND</u> Saudi	topic		43 (added 4 to the list)
ProQuest theses	L2 or second language or foreign language or efl or esl or ell <u>AND</u> motivation* <u>AND</u> Saudi	abstract		49 (added 4 to the list)
ProQuest	L2 or second language or foreign language or efl or esl or ell <u>AND</u> motivation* <u>AND</u> Saudi	Abstract	Date: 2000-2019 Language: English Saudi → anywhere <i>-Peer reviewed</i>	115 (added 6 to the list)
ProQuest	L2 or second language or foreign language or efl or esl or ell <u>AND</u> motivation* <u>AND</u> Saudi	Abstract	Date: 2000-2019 Language: English Saudi → abstract <i>-Peer reviewed</i>	53

Appendix B: Questionnaire Items by Scale Groups

- **Language Learning Mindset Beliefs (LMB)**

1. I have a certain fixed amount of ability to learn foreign languages
2. My natural ability to learn foreign languages will always remain the same.
3. I believe that the ability to learn foreign languages is a natural innate talent that is out of a person's control to change.
4. Each person's ability to learn foreign languages is stable and cannot be changed
5. I can improve my ability to learn foreign languages (R).
6. Some people can learn foreign languages very easily because they have a special natural ability.
7. People who try hard and spend very long hours to study English lack the natural ability to learn other languages.
8. People can't really learn a new language well after they reach adulthood.
9. Everyone could do well in foreign language if they try hard, whether they are young or old.
(R)
10. How well a person learns a foreign language does not depend on age; anyone who works hard can be a fluent speaker in that language. (R)

- **Performance Approach Goals (PApG):**

11. It is important to me to do better than the other students in my English class.

12. I am striving to demonstrate my ability relative to others in this English class.
13. I want to do well in this English class to show my ability to my family, friends, advisors, or others.

- **Performance Avoidance Goals (PAvG):**

14. My fear of performing poorly in this English course is often what motivates me to study it.
15. My goal for this English class is to avoid performing poorly.

- **Learning Goals (LG)**

16. I want to learn as much as possible from this English class.
17. It is important for me to understand the content of this English course as thoroughly as possible.
18. In an English class like this, I prefer course material that arouses my curiosity, even if it is difficult to learn.
19. In an English class like this, I prefer course material that really challenges me so I can learn new things.

- **Motivational Intensity (MI)**

20. I really try hard to learn English.
21. I think that I am doing my best to learn English.
22. I would like to spend lots of time studying English
23. I study English hard.
24. I put little effort into learning English (R)

- **Attitudes towards learning English (ATLE)**

25. I look forward to my English classes.
26. I find learning English really interesting.
27. I try to find opportunities to learn English.
28. I usually find my English lessons enjoyable.
29. It's fascinating to study English in class.
30. To be honest, I don't enjoy learning English in the classroom

- **Responses to Failure Situations scenarios**

31. Imagine you are in an English classroom with your native English teacher. You just hear an important announcement, but you are not very clear what the teacher said.

What is the likelihood that you will react in the following ways?

1. Ignore the announcement.

1_ *Very likely*, 2_ *likely*, 3_ *slightly likely*, 4_ *slightly unlikely*, 5_ *unlikely*, 6_ *very unlikely*

2. Raise your hand and ask the teacher for clarification

3. 1_ *Very likely*, 2_ *likely*, 3_ *slightly likely*, 4_ *slightly unlikely*, 5_ *unlikely*, 6_ *very unlikely*

32. Imagine that you are in an English class and your professor intends to choose only excellent students to answer her questions and you have not been chosen for several times.

What is the likelihood that you will react in the following ways?

1. Stop participating in class
2. 1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*
3. Get more prepared so she chooses you next time
1_ *Not at all likely*, 2 _ *slightly likely*, 3 _ *somewhat likely*, 4 _ *Very likely*, 5 _ *extremely likely*

33. Imagine that the English class that you are in is having a voluntary activity where students exchange their writing and provide comments. The first time, you receive a comment from your classmate which has the sentence, “your writing is hard to understand”.

What is the likelihood that you will react in the following ways?

1. Stop taking part in this voluntary exchange writing activity.
1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*
2. Seek outside help and practice before the next class
1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*

- **Fixed-trait attributions**

34. ***“Pretend that, later today or tomorrow, you got a bad grade on a very important English assignment”.***

Honestly, if that happened, how likely would you be to think these thoughts?

- “This means I’m probably not very smart at learning English”

1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*

- “I can get a higher score next time if I find a better way to study”

1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*

35. ***“Pretend that, your native English speaker is explaining the exam questions and you can’t quite understand what she is saying while everyone else seems to understand her explanation and started answering the questions”***

Honestly, if that happened, how likely would you be to think these thoughts?

- “This means I’m probably not very smart at listening to foreign languages”

1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*

“This means I’m not practicing English listening enough and need to practice more”

1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*

36. “Pretend that the teacher gave you an English text to read and you could not finish half of the text in the specified time”

Honestly, if that happened, how likely would you be to think these thoughts?

- “This means I’m probably not very smart at reading in a foreign language”
1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*.
- “I can get better in reading if I practice more reading”
- 1_ *Very likely*, 2 _ *likely*, 3 _ *slightly likely*, 4 _ *slightly unlikely*, 5 _ *unlikely*, 6_ *very unlikely*

Appendix C: Interview Questions

Language learning mindset beliefs

Beliefs about the nature of language learning

1. What do you think is the main factor in successful English learning?
2. Do you think any learner can improve his level of English proficiency? Why or why not?
3. Do you think there is natural ability for languages? In other words, do you believe that some people are innately more capable or talented in learning English than others?
4. What makes you feel smart in school?
5. How much effort do you put into studying English in class and outside class? Why?

Goal Orientation

6. What is your main purpose in learning English? Why?
7. Let's say that you have a choice of two assignments to do and one of them is going to be difficult and you're going to have to work at it pretty hard but you probably will learn more by doing it. And with the other one you might not learn as much but it'll be easier to do. Which one do you think you would choose, and why?

Responses to failure situations

8. Did you ever feel like you wanted to just give up on something? What was it, and why did you feel like giving up?
9. Can you think of something you learned to do that was really hard to learn? Tell me about it, and what you did to learn it.
10. Have you ever faced difficulties, challenges or failures in learning English? If yes, what was your reaction? How did you feel?
If no, how would you react or feel if you fail in learning English? How would that affect the way you learn?

Intervention Effect

11. How has the intervention changed your beliefs (regarding abilities)?
12. Do you do anything different now (after the intervention)? Did the intervention make any difference in your motivation? Did it make any difference in your studying habits?

Appendix D: Writing Task

Imagine you woke up tomorrow to find a text message from your best friend saying:

I am really struggling with my English course. I feel that it is very hard for me and I am not a language person. I am feeling so bad coz I think I will not pass the English exam no matter what I do 😞

Write a short

advice for your friend who thinks she cannot pass her final English exam. Tell her about what you have learned today regarding brain growth and how can she improve her abilities. Provide an example of a time when you overcame a struggle to learn something in English. It could be anything - from learning a grammatical rule, to reading a text or writing an introduction for a difficult essay. Reflect on the times when you failed at first but through persevering your brain created new neural connections and you eventually became better at the task at hand. Write at least 5 sentences telling her what she should do next time she encounters an obstacle when learning something new.

Appendix E: Video Transcription

Video 1: Growing Your Mind

“What determines our intelligence?”

Is it in our genes? Is it the way we are raised or educated? Or other factors can affect our intelligence?

There has been a lot of research on this in the last few decades and the answer is pretty clear, that your intelligence can actually be changed. What we’ve learned is that our brains are a lot like a muscle. And scientists have been able to show how the brain grows and gets stronger when you learn.

We know that you can grow your muscles by going to the gym and doing exercises which build your muscles. You don’t just work on things that are easy for your muscles to do, you do things that your muscles have to struggle with, that your muscles have to strain with and then they rebuild themselves and they become back stronger. Through struggling, it signals to or it is a signal for your body to devote more resources to that part of the body.” A person who can’t lift 10 kg when he starts exercising, can get strong enough to lift 50 kg after working out for a long time. That’s because the muscles become larger and stronger with exercise. And when you stop exercising the muscles shrink and you get weaker.

But most people don’t know that when they practice and learn new things, parts of their brain change and gets larger a lot like muscles do when they exercise.

Scientists have found that the brains of animals that lived in challenging environments are different from those who lived alone in bare cages. While the animals that lived alone just ate and slept, the other animals were active all the time. They spent a lot of time figuring out how to use the toys and how to get along with other animals. These animals had more connections between the nerve cells in their brains. The connections were bigger and stronger. In fact, their whole brains were 10% heavier than those who lived alone. Those who were exercising their brains by playing with toys were also better at solving problems and learning new things.

Examples for scientific evidence

- In a study with rats, researchers put some rats in empty cages and others in stimulating cages with puzzles and other rats. The rats in the stimulating environments were smarter, and their brains even weighed more!
- London taxi drivers have to give their brains a workout when they navigate the complicated streets of London. Research suggests this has an impact on the brain. The part of the brain responsible for spatial awareness is bigger in taxi drivers compared to other Londoners. And the longer a person has been a taxi driver, the bigger that part of the brain.

Video 2: Neuroplasticity

Not so long ago, many scientists believed that the brain did not change after childhood. That it was hard-wired and fixed by the time we became adults, but recent advances in only the last decade now simply tell us that this is not true. The brain can and does change throughout our lives: it is adaptable, like plastic. Hence neuroscientists call this ‘neuroplasticity’.

How does neuroplasticity work?

If you think of your brain as a dynamic, connected power grid, there are billions of pathways or roads lighting up every time you think, feel or do something. Some of these roads are well travelled: these are our habits, our established ways of thinking, feeling and doing. Every time we think in a certain way, practice a particular task or feel a specific emotion, we strengthen this road. It becomes easier for our brains to travel this pathway. Say we think about something differently, learn a new task or choose a different emotion; we start carving out a new road. If we keep travelling that road, our brains begin to use this pathway more and this new way of thinking, feeling doing becomes second nature. The old pathway gets used less and less and weakens. This process of rewiring your brain by forming new connections and weakening old ones is called neuroplasticity in action. The good news is that we all have the ability to learn and change by rewiring our brains. If you have ever changed a bad habit, or thought about something differently, you have carved a new pathway in your brain and experienced neuroplasticity

firsthand. With repeated and directed attention towards your desired change, you can rewire your brain.

Video 3:

Understanding language is one of the hardest things your brain does. Because language is complex, speaking or learning a foreign language gives your brain a good workout. It's good brain exercise that makes the brain stronger. It's now known that learning another language is one of the most effective and practical ways to increase intelligence, keep your mind sharp, and protect your brain against aging. Learning a foreign language can increase the size of the brain's language centre and the hippocampus — the area of the brain responsible for forming, storing and retrieving memories. When you study languages, the work you do could even change the structure of your brain!

In one Swedish study, some young military recruits were taught new languages. The researchers studied two groups of scholars – one studied languages, and the other didn't. By measuring their brains using MRI scans before and after the language training, researchers found that the brains of the scholars who had studied languages were larger, while the brains of the other group were regular-sized. The growth was mostly based in the parts of the brain related to language skills. Students who had to put more effort into their learning, had greater growth in an area of the motor region of the cerebral cortex (middle frontal gyrus).

Johan Mårtensson, a researcher in psychology at Lund University, said "We were surprised that different parts of the brain developed to different degrees depending on how well the students performed and how much effort they had had to put in to keep up with the course,".

Studying a new language can also increase the number of neural pathways between parts of the brain. In another study, English speakers' brains were monitored as they learned Chinese vocabulary. MRIs revealed that they developed better connectivity between different regions of their brains. Besides changes in brain function, there were also detectable changes in brain structure after six weeks.

"Learning and practicing something, for instance a second language, strengthens the brain," said Ping Li, professor of psychology, linguistics and information sciences and technology. "Like

physical exercise, the more you use specific areas of your brain, the more it grows and gets stronger."

If you don't already know a second language, it's never too late to learn. Whether you learn a new language as a child or later in adulthood doesn't seem to matter when it comes to staying mentally sharp for life (23). Using an additional language you already know boosts your brain power, and so does the process of learning a new language.

You may feel that learning a language now is going to be too hard or hardly worth the effort. But you don't have to be fluent to experience brain benefits or be culturally enriched. Even minimal knowledge of a second language can help. And the more you practice that language, the stronger you become in using it and the smarter you become.

Strategies to increase your Intelligence and ability in learning English

People who are better than you in writing, reading or speaking are better because they have done it more than you. This reality might be a bit unsettling for some of us because we lose our excuses. You can't say "I am not a language person" anymore, you can just say I have not practiced enough. If we understand how learning works, we can truly get better at anything we invest the time and effort into.

How can I get smarter?

The way you make yourself smarter is by exercising your brain. To exercise your muscles you might do pushups or situps. To exercise your brain, you study and practice. When you study you are giving your brain a workout, and it will get stronger and smarter!

What's the best way to exercise my brain?

Your brain gets exercise when you give it challenges and when you practice. First, you need to do something that's a little hard, so your brain has to work a bit. Then, you need to repeat and practice what you're learning, and keep increasing the challenge. Practice is the key to learning.

So how can I learn English better?

Get out of your comfort zone when it comes to learning. Don't just do things that are easy for you to get right. Try harder things and make mistakes, this is how you learn. If you want to speak fluently start speaking in class and celebrate your mistakes; repeat new language again and again until you master it; find ways of practising the language outside the classroom. People who are good speakers are better because they practiced it more than you and all of us have the ability to do the same.

If you want to get better at reading English for example, start reading harder texts that are interesting for you, don't just read texts that are easy for you to understand, but the ones that are a bit harder to improve your reading skills. Then practice reading again and again to boost your ability and get stronger at it. This is how you stretch your abilities in reading.

Brain Boosters

When you practice something, you “fire up” the nerve cells in your brain so that they actually start growing and making new connections with other cells. Your cells send out messages through these connections—that's what thinking is! So when your brain cells grow new connections, you can think better and faster—you become smarter!

So what is the formula for effective learning?

1. Believe in yourself
2. Be engaged
3. Stretch outside of your comfort zone
4. Do it a lot
5. Make a lot of mistakes
6. Do it again and again

Remember the most important 3 principles about learning

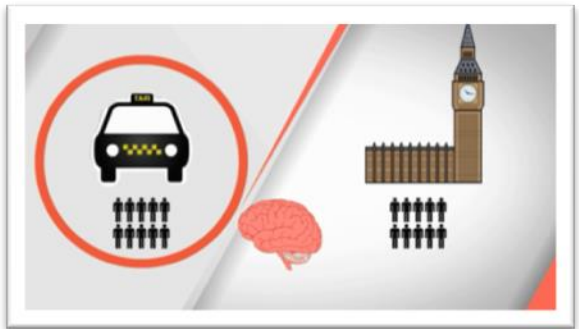
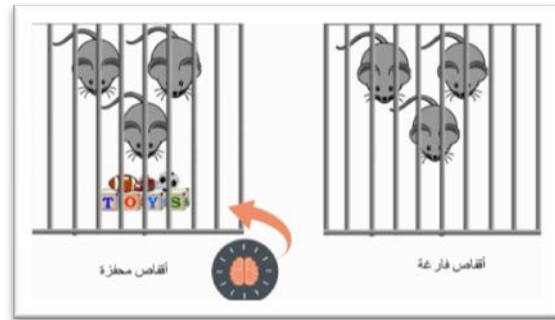
1. You can learn and get better at anything
2. You learn skills by doing them, especially when you are stretched and challenged
3. Skills are built not born

4. Rather than being created to learn /do well in just certain things, our brains are designed to learn what we do the most.

So the big take away from this whole area of research is that you absolutely can change your intelligence/ ability to learn a foreign language, that your brain is like a muscle, the more you use it, the stronger it gets. And that the best way to grow it, isn't to do things that are easy for you, that might help a little bit, but what really helps your brain is when you struggle with things. This is not something that I'm just saying, these are the things the research tells us. Mangels and her colleagues (2006) have conducted a study using EEG caps to compare brain functions of two groups when receiving positive and negative feedback. They found that our brains grow more not when we get a question right, but when we get a question wrong. When you get something wrong, when you challenge your brain, when you review why you got it wrong and process that feedback that's when your brain grows the most and that if you keep doing that you are well on your way to having a stronger more able and smarter brain.

This is incredibly exciting because at least we know that when we are going through times of adversity and facing frustration, we can feel good about the fact that these are the times we are growing the most.

Appendix F: Sample of video captions



Appendix G: Consent form _questionnaire

Information Sheet and Consent Form



Questionnaires Participants

Dear Student,

You are invited to participate in a research study. It is part of a PhD project that aims at exploring Saudi learners' motivation and achievement in English learning. This will be done by asking you to answer a questionnaire for 3 phases, 1 before and 2 after attending 2 sessions. Each questionnaire will take around 12 minutes to be completed.

Upon participating in the study, you will receive motivational sessions that foster a better language learning experience. The maximum total time of these sessions will be around 2 hours that will take place during your regular English classes. You will be expected to take part in discussions and activities during these sessions. Also, your English language grades will be collected to monitor your progress in learning English for research purposes only. This will have no effect on your grades.

Please read the following information and tick the appropriate answer:

- | | | |
|---|-----|----|
| I confirm that the purpose of the study has been explained and that I have understood it. | Yes | No |
| I have had the opportunity to ask questions and they have been successfully answered. | Yes | No |
| I understand that my participation in this study is voluntary and that I am free to withdraw from the study at any time, without giving a reason and without consequence. | Yes | No |
| I understand that all data are anonymous and will not be used for purposes other than this research | Yes | No |
| I understand that there are no known risks or hazards associated with participating in this study. | Yes | No |
| I confirm that I have read and understood the above information and that I agree to participate in this study. | Yes | No |
| I consent to my data being used and referred to anonymously. | Yes | No |

Participant's signature: _____ Date: _____

Participant's Name (in block capitals): _____

Researcher's signature: _____ Date: _____

Thank you for your invaluable time and collaboration,

Researcher: Haifa Al-Ghamdi, (*Lecturer at KAU and PhD Student at University of Leeds, UK*)

Supervisors: Dr. Martin Lamb, Dr. Paula Clarke (*University of Leeds, UK*)

For more information please contact the researcher at edhaag@leeds.ac.uk

Appendix H: Consent form _interviews

Information Sheet and Consent Form



Interview Participants

Dear Student,

Thank you for your interest to take part in my research study that is part of a PhD project that aims at exploring Saudi learners' motivation and learning behaviors in English learning. As you participated in a previous questionnaire, I would like to hear more details from you by answering some interview questions. This will involve two interview sessions; each will take between 30 - 60 minutes.

Please read the following information and tick the appropriate answer:

I confirm that the purpose of the study has been explained and that I have understood it. Yes No

I have had the opportunity to ask questions and they have been successfully answered. Yes No

I understand that my participation in this study is voluntary and that I am free to withdraw from the study at any time, without giving a reason and without consequence. Yes No

I understand that all data are anonymous and will not be used for purposes other than this research. Yes No

I understand that there are no known risks or hazards associated with participating in this study except the use of my time. Yes No

I confirm that I have read and understood the above information and that I agree to participate in this study. Yes No

I consent to my data being transcribed and wish to be referred to anonymously. Yes No

I consent to the interview being audio recorded Yes No

I consent to an audio file of my participation to be used

Participant's signature: _____ Date: _____

Participant's Name (in block capitals): _____

Researcher's signature: _____ Date: _____

Thank you for your invaluable time and collaboration,

Researcher: Haifa Al-Ghamdi, (*Lecturer at KAU and PhD Student at University of Leeds, UK*)

Supervisors: Dr. Martin Lamb, Dr. Paula Clarke (*University of Leeds, UK*)

For more information please contact the researcher at edhaag@leeds.ac.uk

Appendix I: Horizontal Coding sample

Theme	subtheme	Extract	Participant code	
Mindset Beliefs	Main factor for learning	“the desire”	AA	
		“to love what you are learning”	AH	
		“to specify a certain goal”	AM	
		“to have a certain goal, to be able to achieve it”		
		“the main factor...is the real desire to learn, to love the thing he wants to learn”	RB	
		“Determination”	RH	
		“aah... the desire”	SM	
		“Trust in God and then trust in himself and his abilities and what he can do. Even if he does not have background or knowledge, he should persist to achieve what he desires, what he loves and what he feels comfortable about	MA	
	Beliefs about Ability		“Yes, he can, why he can’t. if he has a motive to learn something, he can learn it. All people can if they think about it and say I can. Why others can, and I can’t. we all have the same mind” Growth	AA
			“I can learn anything I like” Growth	AH
			“abilities can be an obstacle” Fixed	AM
			“ability is not an excuse, because if you like something you will do anything to learn it” Growth	RB
			“there are abilities, but it’s not a real obstacle” Fixed	RB
			“if you insist on something, you can do it” Growth	RH
			“there are abilities because some people study, but have limited abilities, they cannot achieve a high limit. There is a limit no matter how hard they work” Fixed	SJ
			“it’s not an innate ability, but as much as a person practice something and work hard, he will get used to it. Two people might understand something, they both understand it, but one might understand it from the first time while the other might need more than one time to grasp the idea”. Growth	SJ
			“I learned determination, nothing is impossible” Growth	RH
			“what I liked is that it is something new for me, noting is impossible, anything you want to learn, you can learn it with persistence” Growth	RH
		“...there is something you said, that there is no difference between you and others, no one is smarter than you, it all depends on how much you practice. In statistics, for example, every time I remember your words that all other girls are just like you, even if they get higher scores, I can achieve the same” Growth	SM	
	Changes in Self-efficacy		“I feel that I can learn English as long as others have learned it. If I work harder, I will be able to become excellent in English....if I just practice and learn” Growth	AA
			“honestly, this is the best session, you know. A huge amount of positivity. I really felt that I can do everything, I just need to practice it and learn it. I am planning to make use of the holiday to learn English as much as possible” Growth	AH
			“I felt that everything is easy if we try to focus a bit and study” Growth	AH
			“a huge amount of positivity, the words are very motivating that I keep smiling until I go back home, there is something you said ‘the sky is your limit’ this makes me feel that everything is available for me, I am able to do anything I want” Growth	AH
			“I have changed, optimism increased... and that I don’t need to like something in order to learn it. I can learn things that I don’t like. I mean life sometimes force me to learn things that I don’t like” Growth	RB
			“before I was... trying to encourage myself and say that I can and everything, but after your study, it was like God wants to let me know that what I was telling myself was correct, I have to continue, and I have more, I can do everything to myself, my family and my country. I felt that I could but thought why I was doing it and might not be useful. I was hesitant, but now I am much better. I now believe in myself and abilities that I can do more” Growth	MA

		...there is something you said, that there is no difference between you and others, no one is smarter than you, it all depends on how much you practice. In statistics, for example, every time I remember your words that all other girls are just like you, even if they get higher scores, I can achieve the same” Growth	SM
		“what I liked is that it is something new for me, noting is impossible, anything you want to learn, you can learn it with persistence” Growth	RH
		“I learned determination, nothing is impossible” Growth	RH
Language Learning Mindset	Beliefs about language ability	“sure, anyone can develop himself in learning English” Growth	AH
		“it depends, if he likes it, he will learn fast, if he hates it no”	RB
		“any person can learn English” Growth	RH
		“anyone can improve himself if he wants. Didn’t you say, a person can practice and learn anything” Growth	SM
		“Sure, any person can develop himself. He thinks about what he needs. So he should think if he needs this or not first” Growth	MA
		“I did not have a passion for learning even though my teachers believed that I was capable of that, I did not believe in myself that I could achieve anything in English. But now when I entered the university, I loved it very much and I wanted to use it like my Arabic language. Because I have started to see it as something easy that just needs more effort and practice” Growth	MA
		“I feel that I can learn English as long as others have learned it. If I work harder, I will be able to become excellent in English....if I just practice and learn” Growth	AA
	Innate language ability	“may be some people, but mostly no” Growth	AH
		“I do not feel it’s innate. It’s all acquired... But it is true that some people might comprehend faster while others don’t” Growth	RB
		“I don’t think so” Growth	SM
		“some people are born with higher abilities to learn the language than other. Some people are blessed by God “ Fixed	MA
	language learning practice methods (could go under effort)	“practice the language, speak a lot in English. Listen a lot to English programs. Anyone who wants to learn the language will learn it, but if he doesn’t like it, he won’t be able”	AH
		“in the holiday I tried to learn, I downloaded some programs and used them to practice, but at the end I stopped. I will do that again in the holiday”	AH
		“when I watch a movie, I try to re-play the scenes several times to concentrate”	RB
		“if he thinks he needs it, he has to work hard, study and practice. He should also communicate with experts who has stories in English like professors”	MA
	Motivation	Nature of motivation (post-intervention)	“When I started, my motivation was really high, it continues until now and I like it”
“aah...almost not like my motivation now. Now I became so eager to learn. I was interested to learn, but I wasn’t... I wasn’t sure if I could learn or not”			AA
“my motivation has increased”			AM
“my motivation started to increase”			RB
Factors affecting motivation		“you know distractors and so, is what makes me hesitant”	AH
		“sometimes I think never mind, I will specialize in law anyway and it will require no English, I feel that I will finish this year in any way and I won’t need it” could be	RB
		“when we started studying it, we loved it, but you know the time limit is what prevent us”	RH
		“I did not have a passion for learning even though my teachers believed that I was capable of that, I did not believe in myself that I could achieve anything in English”	MA
		“a huge amount of positivity, the words are very motivating that I keep smiling until I go back home, there is something you said ‘the sky is your limit’ this makes me feel that everything is available for me, I am able to do anything I want” Growth	AH
		“I have changed now, I’m not like before. I wanted to learn, but I felt it’s useless. I did not find the result I wanted so I stopped putting effort”	SM

		“because I worked hard, and I should get a good grade, but it did not happen, so I feel down”	SJ
Attitudes toward intervention materials		“for me, everything was really good. The videos really helped us to understand the topic”	AA
		“I liked the explanation, was simple and clear”	AM
		“I honestly don’t remember a lot, but it was generally good, especially that everything you told us was in the form of a story or a person’s experience”	RB
		“there is nothing that I do not like, I like it because it’s something new”	RH
		“aah.....I feel that this topic cannot be applied practically, you cannot bring someone’s mind and change it. I feel it would make a difference if there’s something practical”	SM
		“the sessions were lovely and everything, but I feel there needs to be something that prove it, like similar students’ experience to prove that what you are saying is correct and they have to follow it to be good”	MA
		“honestly, this is the best session, you know. A huge amount of positivity. I really felt that I can do everything, I just need to practice it and learn it. I am p	AH
		“a huge amount of positivity, the words are very motivating that I keep smiling until I go back home, there is something you said ‘the sky is your limit’ this makes me feel that everything is available for me, I am able to do anything I want”	AH
		“it’s true that some of the ideas I already know them before, but when a professional person like you studying her PhD and has passed through many stages in her life, when a person like you talks to us about this topic, I feel this is really true because you are trustworthy. I became more confident of the ideas, it reassured my previous ideas”	SJ
		“what I liked is that it is something new for me, noting is impossible, anything you want to learn, you can learn it with persistence”	RH
Beliefs about intelligence (judging one’s intelligence)		“when I become creative in something. When I say something that others don’t know, but I know it. If I know something others don’t know”	AA
		“when I answer everything correctly, I feel unique. This doesn’t mean if I answer wrong I’m stupid...but I feel I am not that..	AH
		“when I excel in something others couldn’t do”	AM
		“honestly, I feel that if any person talks to me about a problem, I can solve it, although sometimes I can’t deal with my own problems, but I like to talk to people. I am known for my philosophy at home”	RB
		“for example, when I solve my problems by myself”	SM
		“I did not believe that I am smart or anything, but people around me, family, friends and at home think that I do strange things that are above my age and I have abilities of older people. The way they look at me and talk to me gave me another view of myself and that I have abilities that can be developed, and I can acquire much more things in the future”	MA
Effort	Beliefs about effort	“on exam day I make a great effort, but the effort is average if there are no exams because I want to learn it, it will be useful for me”	AA
		If I work harder, I will be able to become excellent in English....if I just practice and learn”	AA
		“for example, if I like drawing I will be creative in it.. I used to like drawing, for instance, but I didn’t know how to draw very well, so I practiced it a lot until I knew how to draw. Now that I stopped practicing a lot, I became not that good”	AA
		“practice the language, speak a lot in English. Listen a lot to English programs. Anyone who wants to learn the language will learn it, but if he doesn’t like it, he won’t be able”	AH
		“effort does bring about good results and I learned many new words, but you know distractors”	AH
		“it depends on the student’s level, if his level is good, he doesn’t need to study a lot, but if he is weak, he has to study hard to be in the same level”	AM
		“just try... and its easy”	RH

			"I know that there is something like that, but you confirmed it, ok. That a person has to practice, desire is not enough"	SM
			"it added that I have to concentrate more on my goal and try to achieve it in different ways, practice more, work harder, my self-confidence has increased more than before"	AM
			"I used to study other subjects more than English, but now I try to give it more time, I study it like other subjects on regular basis"	MA
	Factors affecting effort		"I feel that I can learn English as long as others have learned it. If I work harder, I will be able to become excellent in English....if I just practice and learn" Growth	AA
		Time limit	"we did not have a lot of time because of our lectures and periodic exams"	MA
		Helplessness	"I have changed now, I'm not like before. I wanted to learn, but I felt it's useless. I did not find the result I wanted so I stopped putting effort"	SM
		Distractors	"you know distractors and so, is what makes me hesitant"	AH
		Expectancy	"because I worked hard, and I should get a good grade, but it did not happen, so I feel down"	SJ
	Goal type	"if he thinks he needs it, he has to work hard, study and practice. He should also communicate with experts who has stories in English like professors"	MA	
	Goal Orientation	Learning goals	Useful/important	"I want to learn it. I do not want this year to end until I learn it because it will be useful for me in my whole life"
"aah, to become very good in English"				AA
"when I specialize, I need this language"				AH
"I am not forced to learn it because of the curriculum, but because it's a mother tongue, it's a main language and I wish to learn it"				SJ
Learn/develop			"I am interested to learn, to improve my language"	AM
			"yes, I wanted to learn. I wanted to learn, but I felt useless"	SM
		"yes, to acquire the language"	MA	
		"I want to learn"	SJ	
Pass exam/score higher		"I just want to pass. Here, in this period, I just want to pass"	RB	
		"I just want to pass. Now, in this period, I just want to pass. I will be able to study English but because it's stressful with other subjects"	RH	
		"now, just to get a high GPA"	RH	
		"at the beginning, when I first started level 1, I thought I will start with a good basis from the beginning. I used to download programs and practice some sentences with my siblings. But later with the stress of studies, I couldn't. now I just want to pass because they stressed us out"	SM	
Seeking challenges		"I already know the easy one, but the hard one is good to learn from, I benefit from it more than what I already know"	AA	
		"I will choose the hard one as I can benefit from if I am free, but if I am busy I will choose the easy"	AH	
		"If I was given a task that I like and needs determination, I will do it. If you say no one will do it, I will fight to do it"	SM	
		"I will choose the hard one because hard things are the things that continue and make us stronger, they give us more consideration"	MA	
Factors changing goals		Time limit	"no, I will choose the easy, it depends specially on the time given. Like today because we have a final exam in math tomorrow, no one studied English. There was no time to study"	RB
		Study pressure	"Now, in this period, I just want to pass. I will be able to study English but because it's stressful with other subjects"	RH
	. I used to download programs and practice some sentences with my siblings. But later with the stress of studies, I couldn't. now I just want to pass because they stressed us out"		SM	

		Learned helplessness	I wanted to learn, but I felt it's useless. I did not find the result I wanted so I stopped putting effort"	SM
			"like last year, I chose the scientific field when I entered the foundation year, but it was very hard and I tried a month, 2 months, 3 months, 4, 5 and 6, but found that I was struggling for nothing, I had no specific field in mind to specialize in so I continue struggling for. So I thought to switch to the art field where I can make use of the books I have and give more time for English"	MA
Reactions to challenges	Perceiving difficulty as a learning opportunity		"when you told us that learning hard stuff increases our intelligence, this made me like learning hard things" Growth	SM
			"the sessions have affected me a lot...I mean, for example, if I fail in something, it does not mean that it's impossible to achieve it. I started to feel that when I struggle or fail in something, I will learn from it" Growth	RH
	Feelings	negative	"I feel a bit frustrated. First I feel upset and then I try"	AA
			"Honestly, I feel a bit upset"	AH
			"I will surely be sad from myself if I get a bad mark"	AM
			"If I don't understand something or struggle in it, I feel I am not that good"	RH
			"I feel a bit annoyed"	SM
			"Honestly, I feel annoyed. When do I get annoyed? When I study hard and hard and I don't get a full mark or I loose marks in things I shouldn't loose marks for, I feel annoyed and cry"	SJ
			"my reaction is bad when I get a bad mark because I worked hard, and I should get a good grade, but I didn't so I feel down"	SJ
		positive	"I did not feel sad about it, on the contrary, I learned from it. I feel that if this struggle did not happen last year, I wouldn't be the person I am today who overcome everything. What happened to me was an important thing"	MA
			"although sometimes you might see me upset, but deep inside I take it as a challenge"	RB
		Coping mechanisms	adaptive	"I try and try until I can do it well"
	"Umm...like the math this year, when I started studying it I did not understand anything. Then, I tried and tried until I understood it well and I felt that I achieved something"			AA
	"I thought that I won't be able to understand, but then I felt its impossible that I cannot understand, I will try to concentrate and understand with the teacher and I will be able. I have to understand I have to"			AA
	"I try to understand it, I ask more than one. I tried to find explanations and use the support service, I highlight with the teacher and try to understand"			AH
	"I said, even if I don't pass, it's ok, I will continue, nothing can stop me, and I will get better next time"			AH
	"I will sure spend more hours studying, I will try to download explanations and things that help me understand, at the end I will pass them"			RB
	"I often handle it, just because I am stubborn"			RB
	"I go back and try again, it might. I like to go back and check, maybe I have done something wrong"			RH
	"maybe math, I used to feel that it was a really hard subject. But, the teacher was really good. After trying and practicing and understanding exercises, everything became good"			RH
"if someone tells me I am not good at something, I feel more persistent to accomplish it"	SM			
	"my problem is that I forget, so I try to practice what I have learned alone, I speak to myself and it sticks more in my mind".		MA	
maladaptive	"I was in the foundation year last year, but got a bad GPA, I went through some circumstances and I withdraw"		AM	
	"if I am struggling and feel pressured from the beginning, I have a chance withdraw"	RB		

Attributional Styles	Internal	Process-focused	Effort attributions	and do better rather than staying pressured all the way”	
				“If I am under pressure and I am still at the beginning, I would withdraw to face other pressures, but if it is the only struggle in my life, I will go on and continue”	RB
				“I honestly, didn’t overcome it, I changed it. For example, when I was in the science field, I used to like math, but did not pass it so I hated it”	SM
				“though they tried not to let me change from science, I felt that I don’t want it anymore. Then I felt I did something wrong”	SM
				“I have changed now, I’m not like before. I wanted to learn, but I felt it’s useless. I did not find the result I wanted so I stopped putting effort”	SM
				“like last year, I chose the scientific field when I entered the foundation year, but it was very hard and I tried a month, 2 months, 3 months, 4, 5 and 6, but found that I was struggling for nothing, I had no specific field in mind to specialize in so I continue struggling for. So I thought to switch to the art field where I can make use of the books I have and give more time for English”	MA
	External	Person-focused	Wrong method	“in one of the subjects, not English, I struggled in and couldn’t study very well, so I got a bad grade”	AH
				“I was in the foundation year last year, but got a bad GPA, I went through some circumstances and I withdraw.....I felt that I did not put much effort, I felt guilty that I did not study”	AM
			“After trying and practicing and understanding exercises, everything became good”	RH	
			“I go back and try again, it might work. I like to go back and check, maybe I have done something wrong”	RH	
		Teacher / Teaching method	Person-focused	“if I don’t understand something or struggle in it, I feel that I am not that good”	RH
				“in school days, when the English teacher used to explain things, I had no idea what she was saying, I feel my brain was a blank white page, even if I translate even if....I don’t feel I could get anything”	MA
Teacher / Teaching method	Person-focused	“in school days, when the English teacher used to explain things, I had no idea what she was saying, I feel my brain was a blank white page, even if I translate even if....I don’t feel I could get anything.....When I entered the university, I started to see it as something easy, the teachers who taught me, the first teacher teaching style was strong, you understand the subject with her no matter what. This what made me feel that it was easy. English teachers always have incidents to share about English and how it changed”	MA		
		“it depends on teachers and so, he can learn”	RH		
		“first thing, the teacher was really good. After trying and practicing and understanding exercises, everything became good”	RH		
		“because she was using English terms, and we used to study math in Arabic, so I really did not know”	AA		
Teacher / Teaching method	Person-focused	“I was not disappointed, I did not have good basics and I was not looking for it, I was considering it a subject to memorize and take exams in”	MA		

Appendix J: Vertical Coding

- Participant ID_AA

General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for learning	“the desire”	
	Beliefs about ability	Yes, he can, why he can't. if he has a motive to learn something, he can learn it. All people can if they think about it and say I can. Why others can, and I can't. we all have the same mind”	“I don't feel that abilities affect. If the learner can understand the teachers, it doesn't make a big difference”
Language Mindset	Beliefs about language ability	“I feel that I can learn English as long as others have learned it. If I work harder, I will be able to become excellent in English....if I just practice and learn”	
Motivation	Nature of motivation	“aah...it was not at all like my motivation now. Now I became so eager to learn. I was interested to learn, but I wasn't... I wasn't sure if I could learn or not”	“the same motivation or maybe less”
	Factors affecting motivation		“maybe because I am experiencing more difficulty”
Intelligence	Beliefs about intelligence	“when I become creative in something. When I say something that others don't know, but I know it. If I know something others don't know”	
Effort	Beliefs about effort	“on exam day I make a great effort, but the effort is average if there are no exams because I want to learn it, it will be useful for me”	“effort make a difference, if you study well and understand the explanation, that's it. It's not a matter of abilities”
		If I work harder, I will be able to become excellent in English....if I just practice and learn”	
		“for example, if I like drawing I will be creative in it.. I used to like drawing, for instance, but I didn't know how to draw very well, so I practiced it a lot until I knew how to draw. Now that I stopped practicing a lot, I became not that good”	
		“I feel that I can learn English as long as others have learned it. If I work harder, I will be able to become excellent in English....if I just practice and learn”	
Goal Orientation	Learning goals	“I want to learn it. I do not want this year to end until I learn it because it will be useful for me in my whole life”	“I still want to learn it”
		“aah, to become very good in	

		English”	
Reactions to challenges	Mastery response (adaptive coping mechanism)	“I try and try until I can do it well”	
		“Umm...like the math this year, when I started studying it I did not understand anything. Then, I tried and tried until I understood it well and I felt that I achieved something”	
		“I thought that I won’t be able to understand, but then I felt it’s impossible that I cannot understand, I will try to concentrate and understand with the teacher and I will be able. I have to understand I have to”	
	Helpless response (negative feelings)	“I feel a bit frustrated. First I feel upset and then I try”	“sometimes I feel upset but feeling upset does not help me. If I feel very upset, I won’t benefit. I have to overcome it to improve it” “I must feel upset, but I have to do something”
Attributional styles	External non-controllable attributions	“because she was using English terms, and we used to study math in Arabic, so I really did not know”	
Attitudes toward the intervention	Intervention materials	“for me, everything was really good. The videos really helped us to understand the topic”	
	Intervention effect		“maybe the effect is decreased or diminished with the study pressure”
	Things to remember		“I will try to learn it, it will be useful for other subjects, I feel that it will be very useful for me”
		“yes, it changed my beliefs. Like when you said it does not depend on experience. I can develop myself, I mean it’s something learnable”	
			“aah...I felt that... I will learn English. Its’ not impossible. I used to feel it’s difficult, but not anymore now”

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General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for learning	“to specify a certain goal” “to have a certain goal, to be able to	

		achieve it”	
	Beliefs about ability	“abilities can be an obstacle”	لا احس بالعكس كل ما زادت الصعوبة أفضل ليا عشان اطلع قدرات اكثر The harder the better for me so I can improve my abilities
Language Mindset	Beliefs about language ability		
Motivation	Nature of motivation	“my motivation has increased”	في البداية الصراخه كنت متخوفه منه، بس الان بالعكس طموحي اتعلمه اكثر و اكثر لاني احسه شي مهم، الان كل شي بالانجليزي At the beginning, I was honestly a bit worried about the English course, but now it’s the opposite. I am ambitious to learn it more and more because I feel it’s something important, everything is in English now.
	Factors affecting motivation		
Intelligence	Beliefs about intelligence	“when I excel in something others couldn’t do”	
Effort	Beliefs about effort	“it depends on the student’s level, if his level is good, he doesn’t need to study a lot, but if he is weak, he has to study hard to be in the same level”	
Goal Orientation	Learning goals	“I am interested to learn, to improve my language”	
Reactions to challenges	Mastery response (adaptive coping mechanism)	There was an incident happened last year. I could not get an acceptable GPA and decided to withdraw from the whole foundation year	احيانا احس كذا حابكي بس احاول لا انو انا قادرة ان شاء الله و مهاراتي تقدر تخليني اتدرب اكثر حاجه. Sometimes I feel I am going to cry, but I try not to. I convince myself that I can do it and my abilities enable me to practice more
			حسيت طريقة الاولى ما جابت نتيجة فحسيت طريقي غلط و غيرتها، مثلا استخدمت مصادر من برا I felt that the way I studied before was not affective, it was the wrong way and I changed it, for example I used other resources...
	Helpless response (negative feelings)	“I will surely be sad from myself if I get a bad mark”	“I was in the foundation year last year, but got a bad GPA, I went through some circumstances and I withdraw”

Attributional styles	Internal controllable attributionsI felt that I did not put much effort, I felt guilty that I did not study”	حسبت طريقة الأولى ما جابت نتيجة فحسبت طريقي غلط و غيرتها، مثلا استخدمت مصادر من برا I felt that the way I studied before was not affective, it was the wrong way and I changed it, for example I used other resources...
	External non-controllable attributions		
Attitudes toward the intervention	Intervention materials	“I liked the explanation, was simple and clear”	
	Intervention effect	“it added that I have to concentrate more on my goal and try to achieve it in different ways, practice more, work harder, my self-confidence has increased more than before”	ايوا، اكيد اتغيرت لما شفت اشياء و اكتشفت اشياء، أثر يعني زادني في نفس الوقت اتعلمت اشياء جديدة منك. Yes surly I have changed when I saw things and discovered things, it made an effect on me and I learned new things
	Things to remember		ايوا. في البداية لاحظت مذاكرتي كانت ما تجيب النتيجة الي ابغاها مع اني كنت اذاكر بعدين...كيف اذاكر ٣:١٣ يعني ما اضغط على نفسي في نفس الوقت اغير طريقة مذاكرتي. فاثرت عليا جيت درجات عالية. I realized that the way I studied at the beginning was not giving the result I wanted. I don't pressure myself, but at the same time I change my studying method, so it had a positive effect on me and got higher results.
Effect of first interview			طبعاً، يعني خليتيني اعيد و افكر ازيد كمان والحماس زاد Definitely, you made me rethink again and again, my motivation increased

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- Participant ID_MA

General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for learning	Trust in God and then trust in himself and his abilities and what he can do. Even if he does not have background	

		or knowledge, he should persist to achieve what he desires, what he loves and what he feels comfortable about	
	Beliefs about ability	“before I was... trying to encourage myself and say that I can and everything, but after your study, it was like God wants to let me know that what I was telling myself was correct, I have to continue, and I have more, I can do everything to myself, my family and my country. I felt that I could but thought why I was doing it and might not be useful. I was hesitant, but now I am much better. I now believe in myself and abilities that I can do more” Growth	إذا ابغى شي أقدر و باوصل للي ابغاه ان شاء الله.
Language Mindset	Beliefs about language ability	“Sure, any person can develop himself. He thinks about what he needs. So he should think if he needs this or not first” Growth	شخصيتي بداية السنة.. طبعاً قناتك عن العام لما دخلت علمي و زي كذا، هيا كانت قوية، بس في الانجليزي كان فيه شي.. فيه تردد، فيه خوف انو انا ما أقدر. بس لما سويينا المقابلة، حسيت انو انا أقدر و انا قد كلامي بس بيغالي وقت اشتغل و وقت يكون تركيزي كلو عالانجليزي. منها اتعمق فيه، وقت الدراسة دحين ما يمديني كذا.. ركزت عليه اليفيل الي راح و سبت المواد الثانية فمرا زعلت من نفسي اني كذا. فخلاص دحين اديه حقه العادي و ان شاء الله في الاجازة اشتغل على نفسي <i>My personality was strong as I told you, but there was something with the English...there was hesitance, fear that I cannot. But when we met in the first interview, I felt that I can, and I am confident, I just need time to work and concentrate on English</i>
	Innate ability	“some people are born with higher abilities to learn the language than other. Some people are blessed by God “ Fixed	
Motivation	Nature of motivation		زي ما اول جلسنا و اتكلمنا زي ماهوا الحماس بس ايش، مو بذي الفترة حقت الدارسة لانو جالسة اذاكر و اخذ في الانجليزي وقت كبير.. صح انو باتعلم اشياء و كل شي بس انو لما اجي اختبر، اشياء بتضيع كئيبير. فقلت خلاص انا احتفظ بالاربعة ليفيلات عندي و ان شاء الله في الاجازة ابدأ عليها من اول ليفيل
			زاد الحماس و لحد الان باتذكر الكلام الي اتكلمته معاك و قلتيلياه لما الانجليزي يسير عندك شي (عادي!؟)
	Factors affecting motivation	“I did not have a passion for learning even though my teachers believed that I was capable of that, I did not believe in myself that I could achieve anything in English”	
Intelligence	Beliefs about intelligence	“I did not believe that I am smart or anything, but people around me,	

		family, friends and at home think that I do strange things that are above my age and I have abilities of older people. The way they look at me and talk to me gave me another view of myself and that I have abilities that can be developed, and I can acquire much more things in the future”	
Effort	Beliefs about effort	“I used to study other subjects more than English, but now I try to give it more time, I study it like other subjects on regular basis”	بدون مجهود محد حيوصل لحاجة أبدا
Goal Orientation	Learning goals	“yes, to acquire the language”	ايوا لسا هدفي أتعلم. مع انو مرا قعد يضغط علينا الليفيل الي راح و الي دحين بس عادي.
	Seeking challenges	I will choose the hard one because hard things are the things that continue and make us stronger, they give us more consideration”	
	Factors affecting goals	“like last year, I chose the scientific field when I entred the foundation year, but it was very hard and I tried a month, 2 months, 3 months, 4, 5 and 6, but found that I was struggling for nothing, I had no specific field in mind to specialize in so I continue struggling for. So I thought to switch to the art field where I can make use of the books I have and give more time for English”	
Reactions to challenges	Mastery response (adaptive coping mechanism)	“I did not feel sad a bout it, on the contrary, I learned from it. I feel that if this struggle did not happen last year, I wouldn’t be the person I am today who overcome everything. What happened to me was an important thing”	في ليفيل ٢.. سرت اشرح لنفسي اروح للاشياء الي مو فاهمتها مو اهرب منها، لا اتعلم منها و أسأل ناس فاهمين. و اليفيل الي بعده صح كان صعب صراحة، سرت ادخل للأستاذة، تينشر في اليوتيوب مشيت معاها خطوة بخطوة و الحمدلله قدرت اجيب فيه شي
		my problem is that I forget, so I try to practice what I have learned alone, I speak to myself and it sticks more in my mind”.	عادي. الترم الاول، كنت اذا جاني شي صعب او تعبت و حصلت درجة نازلة، كنت ازعل مرا ازعل، ازعل و انقهر. دحين، مو بس في الانجليزي في كمان مواد ثانية.. يعني تقريبا اهملتها شويه، فجبت فيها اشياء نازلة بس ما زعلت ولا شي قلت انا قدها في الي جاي.
	Helpless response (negative feelings)		
Attributional styles	Internal controllable attributions		
	External non-controllable	“in school days, when the English teacher used to explain things, I had no idea what she was saying, I feel	

	attributions	my brain was a blank white page, even if I translate even if....I don't feel I could get anything.....When I entered the university, I started to see it as something easy, the teachers who taught me, the first teacher teaching style was strong, you understand the subject with her no matter what. This what made me feel that it was easy. English teachers always have incidents to share about English and how it changed”	
		“I was not disappointed, I did not have good basics and I was not looking for it, I was considering it a subject to memorize and take exams in”	
Attitudes toward the intervention	Intervention materials	the sessions were lovely and everything, but I feel there needs to be something that prove it, like similar students' experience to prove that what you are saying is correct and they have to follow it to be good”	
	Intervention effect		في ليفيل ٢.. سرت اشرح لنفسى اروح للاشياء الي مو فاهمتها مو اهرب منها، لا اتعلم منها و أسأل ناس فاهمين. و اليفيل الي بعده صح كان صعب صراحة، سرت ادخل للأستاذة، تبتشر في اليوتيوب مشيت معاها خطوة بخطوة و الحمد لله قدرت اجيب فيه شي
	Things to remember		انو محد حيوصل لشى بدون يتعب و يدخل في قراراته حفر و كل شي يخوف، فالواحد اذا واجه و قال انا أقدر يقدر يعدي هالأشياء الصعبة
Effect of first interview			المقابلة اثرت فيا اكثر شخصيتي بداية السنة.. طبعا قلناك عن العام لما دخلت علمي و زي كذا، هيا كانت قوية، بس في الانجليزي كان فيه شي.. فيه ترد، فيه خوف انو انا ما أقدر. بس لما سويينا المقابلة، حسيت انو انا أقدر و انا قد كلامي بس بيغالي وقت اشتغل و وقت يكون تركيزي كلو عالانجليزي. منها اتعمق فيه، وقت الدراسة دحين ما يمديني كذا.. ركزت عليه اليفيل الي راح و سبت المواد الثانية فمرا زعلت من نفسي اني كذا. فخلاص دحين اديه حقه العادي و ان شاء الله في الاجازة اشتغل على نفسي

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- Participant ID_RB

General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for learning	“the main factor...is the real desire to learn, to love the thing he wants to learn”	
	Beliefs about ability	“ability is not an excuse, because if you like something you will do anything to learn it” Growth	ايوا طبعا تفرق القدرات
		“there are abilities, but it’s not a real obstacle”	
Language Mindset	Beliefs about language ability	“it depends, if she likes it, she will learn fast, if she hates it she will not”	ايوا أحس احيانا قدراتي مو قادرة أغيرها، قبل كم يوم اقول لماما انا لو يقولو الواحد يتعلم لغة من الأفلام كان انا دحين بلبل يعني، انا مرا اشوف افلام كثير بس ماني قادرة القط حاجة
		“I do not feel it’s innate. It’s all acquired... But it is true that some people might comprehend faster while others don’t” Growth	ايوا في نفس الوقت اختي ماشاءالله من وقت هيا صغيرة تحب الانجليزي ، يعني انا و هيا درسنا سوا كلنا حكومي بس هيا الان مدرسة انجليزي و انا باقي ماني قادرة
			ايوا مستويا دايم في الانجليزي اقل
Motivation	Nature of motivation	“my motivation started to increase”	حماسي جالس يقل
	Factors affecting motivation	“sometimes I think never mind, I will specialize in law anyway and it will require no English, I feel that I will finish this year in any way and I won’t need it”	مع التعب و الضغط و الصعوبة تزيد كل مره لاني حاولت قبل بس ما لقيت شي، يعني في المواد الباقية او كي ناقص درجة، اما الانجليزي....
Intelligence	Beliefs about intelligence	“honestly, I feel that if any person talks to me about a problem, I can solve it, although sometimes I can’t deal with my own problems, but I like to talk to people. I am known for my philosophy at home”	
Effort	Beliefs about effort		اذا كنتي تحبي الشئ يعني مو شرط المذاكرة، ؟؟.. يعني و تجيبي درجات فيه كويسه. بس الانجليزي مو بس المذاكرة، يبغاله كمان خارج المذاكرة في الحياة العامة بشكل عام
Goal Orientation	Learning goals		
	Performance goals	“I just want to pass. Here, in this period, I just want to pass”	
		“no, I will choose the easy, it depends specially on the time given. Like today because we have a final exam in math tomorrow, no one studied English. There was no time to study”	
Reactions to challenges	Mastery response (adaptive coping mechanism)	“although sometimes you might see me upset, but deep inside I take it as a challenge”	
		“I will sure spend more hours	

		studying, I will try to download explanations and things that help me understand, at the end I will pass them”	
		“I often handle it, just because I am stubborn”	
	Helpless response (negative feelings)	“if I am struggling and feel pressured from the beginning, I have a chance withdraw and do better rather than staying pressured all the way”	في البداية كنت اتحطم بس دحين عادي يعني خلاص إيش فيها لا سار عادي هههه، يعني انا مو قدها في الانجليزي بس قدها في اشيء ثانيه هههههه
		“If I am under pressure and I am still at the beginning, I would withdraw to face other pressures, but if it is the only struggle in my life, I will go on and continue”	هههه اجلس اضحك ههههه احس إيش هذا الي جبته هههههههه لا والله كنت كنت، بس دحين لا بالذات في الانجليزي يعني. في المواد الباقية لا بالعكس ازعل والله. لاني حاولت قبل بس ما لقيت شي، يعني في المواد الباقية او كي ناقص درجة، اما الانجليزي....
Attributional styles	Internal controllable attributions		
	External non-controllable attributions		
Attitudes toward the intervention	Intervention materials	“I honestly don’t remember a lot, but it was generally good, especially that everything you told us was in the form of a story or a person’s experience”	
	Intervention effect	“I have changed, optimism increased... and that I don’t need to like something in order to learn it. I can learn things that I don’t like. I mean life sometimes force me to learn things that I don’t like” Growth	وقتها أثر الان لما وصلت ليفيل 4 انتهى كل شي احس اني نسيتته، يعني انا بيغالي كل بعد فترة أحد يشجعني لا، انا في المستويات الي قبل، كنت اسمع وحده في اليوتيوب تشرح و كان شرحها مرا كويس و كنت اسمعلها. وقفت في ليفيل 4، فتلاقي المستوى نازل بزيادة و ماني عارفة إيش اسوي لانو خلاص ما سرت عارفة مين ينزلها.
	Things to remember		لا صراحة، يعني وقتها من جد حسيت لازم نتعلم و الانجليزي مهم و مدري ايه، بس لما شفت الواقع لا مرا مو مهم هههههه
Effect of first interview			ايوا وقتها برضو وقتها. انا تقريبا إلى ليفيل 3 و انا باقي متفائلة باقي فيني امل شوية بس 4 خلاص

- Participant ID_RH

General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for	“Determination”	يمكن قدرات الشخص.. كمان مجهوده كلها الاثنين.

	learning		
	Beliefs about ability	“if you insist on something, you can do it” Growth	<i>Abilities may affect learning...if you have high abilities, you can learn fast. If not, there are limits for you</i>
		“I learned determination, nothing is impossible” Growth	
Language Mindset	Beliefs about language ability	“any person can learn English” Growth	
Motivation	Nature of motivation		اتغير مرا. اول كنا متحمسين كان مرا سهل، دحين مرا صعب نبغي نخلص بس عشان نخلص التحضيرى
	Factors affecting motivation	“when we started studying it, we loved it, but you know the time limit is what prevent us”	
Intelligence	Beliefs about intelligence		
Effort	Beliefs about effort	“just try... and its easy”	ايوا ممكن مع المجهود، زي في الاختبار لو لو بذلتى مجهود في المذاكرة تجيبى درجات احسن، اذا ما قدرتى تكون اقل درجاتك
Goal Orientation	Learning goals		
	Performance goals	“I just want to pass. Now, in this period, I just want to pass. I will be able to study English but because it’s stressful with other subjects”	اهم شي عدينا امم يعني اوقات كثيرة احس ابغى اخلص بسرعة
		now, just to get a high GPA”	
Reactions to challenges	Mastery response (adaptive coping mechanism)	the sessions have affected me a lot...I mean, for example, if I fail in something, it does not mean that it’s impossible to achieve it. I started to feel that when I struggle or fail in something, I will learn from it” Growth	يمكن سرت احوال احوال احوال قد ما اقدر، يعني مو صعيه خلاص نستسلم، نحاول نفهمها قد ما نقدر، نفتح شروحات، ندور.. <i>I have changed, I would try try try as much as I can. If it is hard, we don’t just give up. We try to understand as much as we can. Try to find explanations, we look for things ...</i>
		“I go back and try again, it might. I like to go back and check, maybe I have done something wrong”	
		“maybe math, I used to feel that it was a really hard subject. But, the teacher was really good. After trying and practicing and understanding exercises, everything became good”	
	Helpless response	“If I don’t understand something or struggle in it, I feel I am not that	نقول الحمد لله خلاص نستسلم اذا اقدر بعدين اعدله اعدله، نحاول قد ما نقدر

	(negative feelings)	good”	نحاول نحاول قد ما نقدر
			يعني اكون (محبطه!؟) و زي كذا، مثلا اكون متأكدة انو حاجيب الفل مارك بعدين اجيب درجة... يعني فين الغلط فين هذا.. يمكن فيه اغلاط مثلا في الكمبيوتر
Attributional styles	Internal controllable attributions	If I don't understand something or struggle in it, I feel I am not that good	
	External non-controllable attributions		
Attitudes toward the intervention	Intervention materials	“there is nothing that I did not like, I like it because it's something new”	“ <i>the intervention was very effective. It was very influential. The way of explanation and everything was beautiful</i> ”
	Intervention effect	the sessions have affected me a lot...I mean, for example, if I fail in something, it does not mean that it's impossible to achieve it. I started to feel that when I struggle or fail in something, I will learn from it” Growth	يمكن سرت احاول احاول احاول قد ما اقدر، يعني مو صعيه خلاص نستسلم، نحاول نفهمها قد ما نقدر، نفتح شروحات، ندور..
	Things to remember	“what I liked is that it is something new for me, noting is impossible, anything you want to learn, you can learn it with persistence” Growth	امم .. مافي شي مستحيل، اذا نبغى شي لازم نحاول الين نوصله فيه اشياء، لانو احنا استخدمناها عالذاكرة عال مواد فائرت في درجاتنا أثرت في بعض الأشياء
Effect of first interview			يعني اكثر شي الدورة، الدورة كانت مرة مؤثرة، يعني طريقة الشروح و كل شي كانت مرا حلوة

- Participant ID_SM

- Note: haven't passed level 3 and was studying it again in interview 2

General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for learning	“aah... the desire”	
	Beliefs about ability	there is something you said, that there is no difference between you and others, no one is smarter than you, it all depends on how much you practice. In statistics, for example, every time I remember your words that all other girls are just like you, even if they get higher scores, I can achieve the same” Growth	
Language	Beliefs about	anyone can improve himself if he wants. Didn't you say, a person can	صح هوا كل واحد له قدرات بس انو عادي الواحد يقدر دام يبغى بيقدر عادي.

Mindset	language ability	practice and learn anything” Growth	
		I don’t think so” innate	اول حاجه لما تقولي انو دحين مثلا شي صعب زي مثلا ممكن وحده تفهم وحده ما تفهم. لا.. يعني مثلا الانجليزي فيه ناس اشوفهم في الكلاس ماشاء الله بلابل في اللغة، بس مو معناته انا و لا شي، لا انا أقدر أسير زيهم.
Motivation	Nature of motivation		ايوا ليفيل ٢ كان فيه هاه اتحسنا و زي كذا، الين لما دخلنا ليفيل ٣ انصدمننا. مرا كان صعب
	Factors affecting motivation		ما نزل حماسي عادي. شوفي في ليفيل ٣.. حاولت كمان قلت مو معناته عشان مادة وحده خلاص يعني.
		“I have changed now, I’m not like before. I wanted to learn, but I felt it’s useless. I did not find the result I wanted so I stopped putting effort”	شوفي باكون صادق، اول ما بدأت ليفيل ٣ اوكي كانت البداية كويسه، بس بعدين والله لما شفت الاختبارات زي كذا خلاص اتحطمت، و سرت عارفة انو انا راح احملها راح احملها. مافي جرة حماس ولا غيره. يوم كذا يعني حمسوني قالو ممكن تتغير، جلست احسب درجاتي يعني ممكن ارفع هذي بس بعدين انصدمت.
Intelligence	Beliefs about intelligence	“for example, when I solve my problems by myself”	
Effort	Beliefs about effort		المجهود ايوا طبعا يعطي نتيجته
Goal Orientation	Learning goals	“yes, I wanted to learn. I wanted to learn, but I felt useless” I wanted to learn, but I felt it’s useless. I did not find the result I wanted so I stopped putting effort”	الى الآن احمل بر امج و أراجع مفردات و احل و كذا باقولك حاجه. مو معناته اني احمل مادة يعني خلاص اتعقد من الموضوع و كذا
	Performance goals	If I was given a task that I like and needs determination, I will do it. If you say no one will do it, I will fight to do it”	
		“at the beginning, when I first started level 1, I thought I will start with a good basis from the beginning. I used to download programs and practice some sentences with my siblings. But later with the stress of studies, I couldn’t. now I just want to pass because they stressed us out”	
Reactions to challenges	Mastery response (adaptive coping mechanism)	“when you told us that learning hard stuff increases our intelligence, this made me like learning herd things” Growth	شوفي في ليفيل ٣.. حاولت كمان قلت مو معناته عشان مادة وحده خلاص يعني.
		“if someone tells me I am not good at	عشان انا من البداية حاسة كذا فكان عادي الوضع

		something, I feel more persistent to accomplish it”	
			<p>هوا مو مشكلة، حتى الي قالولي كلموني صحباتي و كذا قالولي ابدأ مو مشكلة. يعني مافي احد ينجح في كل شي مستحيل باقولك حاجه. مو معناته اني احمل مادة يعني خلاص اتعقد من الموضوع و كذا بالعكس شي حلو، انا دحين متحمسه. احس ايشسمو.. احس كويس اني حملتها.</p>
	Helpless response (negative feelings)	“I feel a bit annoyed”	شوفي باكون صادق، اول ما بدأت ليفيل 3 اوكي كانت البداية كويسه، بس بعدين والله لما شفت الاختبارات زي كذا خلاص اتحطمت، و سرت عارفة انو انا راح احملها راح احملها. مافي جرعة حماس ولا غيره. خلاص عارفة محا أمشي
		I honestly, didn’t overcome it, I changed it. For example, when I was in the science field, I used to like math, but did not pass it so I hated it”	
		“though they tried not to let me change from science, I felt that I don’t want it anymore. Then I felt I did something wrong”	
		“I have changed now, I’m not like before. I wanted to learn, but I felt it’s useless. I did not find the result I wanted so I stopped putting effort”	
Attributional styles	Internal controllable attributions		
	External non-controllable attributions		
Attitudes toward the intervention	Intervention materials		
	Intervention effect		
	Things to remember		<p>اكثر حاجه أتذكرها. لما تقولي انو دحين مثلا شي صعب زي مثلا ممكن وحده تفهم وحده ما تفهم. لا..يعني مثلا الانجليزي فيه ناس اشوفهم في الكلاس ماشاءالله بلايل في اللغة، بس مو معناته انا و لا شي، لا انا أقدر أسير زيهم</p>
Effect of first interview			تأثير الدورة كان اكثر. المقابلة كانت اسأله و اجوبه اما الدورة اتاثرت بزيادة

- Participant ID_SJ

General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for learning		
	Beliefs about ability	“there are abilities because some people study, but have limited abilities, they cannot achieve a high limit. There is a limit no matter how hard they work” Fixed	
Language Mindset	Beliefs about language ability	“it’s not an innate ability, but as much as a person practice something and work hard, he will get used to it. Two people might understand something, they both understand it, but one might understand it from the first time while the other might need more than one time to grasp the idea. So there are variations, some people can change their abilities with effort, while others can’t”. Growth	
Motivation	Nature of motivation	“When I started, my motivation was really high, it continues until now and I like it”	My motivation was good, but now it decreased, it became the opposite, I started to think of just finishing the course
	Factors affecting motivation		<p>Aaah...the motivation has decreased. Why? Because it became stressful, exams and lots of pressure...many things affect. Maybe also feeling homesick because I am away from my family...amm...lots of reasons.</p> <p>They do affect, affect so much..I mean being lonely here..trying to cope with others, but....amm..there’s no chemistry.. all this affect the student academic performance.</p> <p>because I worked hard, and I should get a good grade, but it did not happen, so I feel down”</p>

			motivation is decreasing
Intelligence	Beliefs about intelligence		
Effort	Beliefs about effort		
Goal Orientation	Learning goals	“I want to learn”. I am not forced to learn it because of the curriculum, but because it’s a mother tongue, it’s a main language and I wish to learn it”	“I still want to learn. its true that motivation is less because the effort needed is double, but it does not mean I gave up or I don’t want to learn it any more. No, learning this language is a must, sooner or later. It’s true that I just want to finish the course, not because I don’t want to learn, but you know a person needs a break. No studying, no exams, nothing, just a loong break...I don’t want anything, anything””
	Performance goals		I will be honest with you. In school days, when I used to lose few marks only, I would feel very sad and annoyed and study harder. Now at the university, I was more motivated at the beginning, trying to recover my low marks, trying and trying, but now that only one month is left, I felt that nothing will make a difference or change my marks after a whole year of trying, that’s why my motivation is decreasing
Reactions to challenges	Mastery response (adaptive coping mechanism)		
Helpless response (negative feelings)		“Honestly, I feel annoyed. When do I get annoyed? When I study hard and hard and I don’t get a full mark or I loose marks in things I shouldn’t loose marks for, I feel annoyed and cry because I have done a lot of effort and did not get what I expected”	“my reaction is bad when I get a bad mark because I worked hard, and I should get a good grade, but it did not happen, so I feel down”
			I will be honest with you. In school days, when I used to lose few marks only, I would feel very sad and annoyed and study harder. Now at the university, I was more motivated at the beginning, trying to recover my low marks, trying and trying,

			but now that only one month is left, I felt that nothing will make a difference or change my marks after a whole year of trying, that's why my motivation is decreasing
Attributional styles	Internal controllable attributions		
	External non-controllable attributions		
Attitudes toward the intervention	Intervention materials		
	Intervention effect	“it's true that some of the ideas I already know them before, but when a professional person like you studying her PhD and has passed through many stages in her life, when a person like you talks to us about this topic, I feel this is really true because you are trustworthy. I became more confident of the ideas, it reassured my previous ideas”	
	Things to remember		
Effect of first interview			

- Participant ID_SJ

General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for learning		
	Beliefs about ability	“there are abilities because some people study, but have limited abilities, they cannot achieve a high limit. There is a limit no matter how hard they work” Fixed	
Language Mindset	Beliefs about language ability	“it's not an innate ability, but as much as a person practice something and work hard, he will get used to it. Two people might understand something, they both understand it, but one might understand it from the first time while the other might need more than one time to grasp the idea. So there are variations, some people can change their abilities with effort,	

		while others can't". Growth	
Motivation	Nature of motivation	"When I started, my motivation was really high, it continues until now and I like it"	My motivation was good, but now it decreased, it became the opposite, I started to think of just finishing the course
	Factors affecting motivation		<p>Aaah...the motivation has decreased. Why? Because it became stressful, exams and lots of pressure...many things affect. Maybe also feeling homesick because I am away from my family...amm...lots of reasons.</p> <p>They do affect, affect so much..I mean being lonely here..trying to cope with others, but....amm..there's no chemistry.. all this affect the student academic performance.</p> <p>because I worked hard, and I should get a good grade, but it did not happen, so I feel down"</p>
Intelligence	Beliefs about intelligence		
Effort	Beliefs about effort		
Goal Orientation	Learning goals	"I want to learn". I am not forced to learn it because of the curriculum, but because it's a mother tongue, it's a main language and I wish to learn it"	"I still want to learn. its true that motivation is less because the effort needed is double, but it does not mean I gave up or I don't want to learn it any more. No, learning this language is a must, sooner or later. It's true that I just want to finish the course, not because I don't want to learn, but you know a person needs a break. No studying, no exams, nothing, just a loong break...I don't want anything, anything""
	Performance goals		I will be honest with you. In school days, when I used to lose few marks only, I would feel very sad and annoyed and study harder. Now at the university, I was more

			<p>motivated at the beginning, trying to recover my low marks, trying and trying, but now that only one month is left, I felt that nothing will make a difference or change my marks after a whole year of trying, that's why my motivation is decreasing</p>
Reactions to challenges	Mastery response (adaptive coping mechanism)		
	Helpless response (negative feelings)	<p>"Honestly, I feel annoyed. When do I get annoyed? When I study hard and hard and I don't get a full mark or I loose marks in things I shouldn't loose marks for, I feel annoyed and cry because I have done a lot of effort and did not get what I expected"</p>	<p>"my reaction is bad when I get a bad mark because I worked hard, and I should get a good grade, but it did not happen, so I feel down"</p>
			<p>I will be honest with you. In school days, when I used to lose few marks only, I would feel very sad and annoyed and study harder. Now at the university, I was more motivated at the beginning, trying to recover my low marks, trying and trying, but now that only one month is left, I felt that nothing will make a difference or change my marks after a whole year of trying, that's why my motivation is decreasing</p>
Attributional styles	Internal controllable attributions		
	External non-controllable attributions		
Attitudes toward the	Intervention materials		

intervention	Intervention effect	“it’s true that some of the ideas I already know them before, but when a professional person like you studying her PhD and has passed through many stages in her life, when a person like you talks to us about this topic, I feel this is really true because you are trustworthy. I became more confident of the ideas, it reassured my previous ideas”	
	Things to remember		
Effect of first interview			

- Participant ID_AH

General Code	Specific Code	Interview 1	Interview 2
Mindset	Main factor for learning	“to love what you are learning”	
	Beliefs about ability	“I can learn anything I like”	
Language Mindset	Beliefs about language ability	“sure, anyone can develop himself in learning English” Growth	انا لو ذاكرت حاجيب ان شاء الله، بس مع الضغوط هذي احس ما ...
Motivation	Nature of motivation		حماس وقت المحاضرة بس وقت المذاكرة مافي
	Factors affecting motivation	“you know distractors and so, is what makes me hesitant”	فيه ماشاء الله استاذات يحمسون، كان عندي أستاذة الله يسعدنا تحمس دائما مبتسمة. في البداية كان سهل فكننت اذاكر و اجيب درجات. لكن دحين... ابوا يعني كانوا كلوو سار في مخنا، يعني كمان الشرح نفسه ما يفهمني مرا، مافي نشاط و زي كذا ..مراجعته. كلو ورا بعض يلا جيبو رابتيق، سوو كذا..
Intelligence	Beliefs about intelligence	“when I answer everything correctly, I feel unique. This doesn’t mean if I answer wrong I’m stupid...but I feel	

		I am not that..	
Effort	Beliefs about effort	“practice the language, speak a lot in English. Listen a lot to English programs. Anyone who wants to learn the language will learn it, but if he doesn’t like it, he won’t be able”	ممکن وحده تكون عارفة الانجليزي من قبل فسهل عليها الاختبار، لكن بعضهم على حسب مثلا ممكن مجهودها، تحاول انها تفهم مثلا ذي المعلومه فتحل. بعضهم ممكن ما تكون فاهمتها و ما تبذل مجهود فتجيب العيد
		“effort does bring about good results and I learned many new words, but you know distractors”	ايوا تحسي مع كثر الضغوط، الأسبوع الجاي اختبار يلا ذاكرو، ما يمدينا يعني، عشان كذا
Goal Orientation	Learning goals	“when I specialize, I need this language”	شوي كذا و شوي كذا، ابغى اتعلمه عشان التخصص، بس مافي مرا..
	Performance goals		
Reactions to challenges	Mastery response (adaptive coping mechanism)	“I try to understand it, I ask more than one. I tried to find explanations and use the support service, I concentrate with the teacher and try to understand”	
		“I said, even if I don’t pass, it’s ok, I will continue, nothing can stop me, and I will get better next time”	
	Helpless response (negative feelings)	"Honestly, I feel a bit upset”	اتحطم صراحة شوية، اجيب العيد يعني كفايه جايبه العيد هههه. ان شاء الله ان شاءالله الجاي احسن.
Attributional styles	Internal controllable attributions	“in one of the subjects, not English, I struggled in and couldn’t study very well, so I got a bad grade”	
	External non-controllable attributions		
Attitudes toward the intervention	Intervention materials		
	Intervention effect	“honestly, this is the best session, you know. A huge amount of positivity. I really felt that I can do everything, I just need to practice it and learn it. I am planning to make use of the holiday to learn English as much as possible”	يووا لما قلتي حدودك السماء، حتى كتبتتها في الكتاب عشان دايماً اشوفها .. انو صح ممكن مثلا ما اجيب درجات و زي كذا، مو معناته خلاص، اقدر اكمل بنفسي.
		“I felt that everything is easy if we try to focus a bit and study”	

		“a huge amount of positivity, the words are very motivating that I keep smiling until I go back home, there is something you said ‘the sky is your limit’ this makes me feel that everything is available for me, I am able to do anything I want”	
	Things to remember		
Effect of first interview		<p>اثر الكلاس زي ما تقولي كان معنوي شوي. بعدين في المقابلة حسيت لازم لازم انجح، لازم اجيب درجة. الحمد لله جيت درجات و زي كذا. بس دحين في ليفيل ٤ .. احس .. يعني زي... حاجز.. فاهمه فيه صعوبات شوية</p>	

Appendix K: Ethical Approval



UNIVERSITY OF LEEDS The Secretariat

University of Leeds
Leeds, LS2 9JT
Tel: 0113 343 4873
Email: ResearchEthics@leeds.ac.uk
Haifa Al-Ghamdi
School of Education
University of Leeds
Leeds, LS2 9JT

ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee University of Leeds

6 September 2017

Dear Haifa

Title of study: The effect of a mindset intervention on Saudi students' language mindset beliefs, motivation and achievement in foreign language (FL) learning

Ethics reference: AREA 16-129

I am pleased to inform you that the above research application has been reviewed by the ESSL, Environment and LUBS (AREA) Faculty Research Ethics Committee and following receipt of your response to the Committee's initial comments, I can confirm a favourable ethical opinion as of the date of this letter. The following documentation was considered:

Document	Version	Date
AREA 16-129 Haifa_Ethics form_edited_	1	29/03/2017
AREA 16-129 Haifa_data collection request and information letter	1	29/03/2017
AREA 16-129 Haifa_Fieldwork-Assessment-Form-MED-risk-V4-Aug-16--ESSL	1	29/03/2017
AREA 16-129 Haifa_Informed Consent_(5 forms)	1	29/03/2017
AREA 16-129 Haifa_Ethics form_edited_.docx	1	28/07/2017
AREA 16-129 Haifa_Informed Consent_(6 forms).docx	1	28/07/2017

Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval as all changes must receive ethical approval prior to implementation. The amendment form is available at <http://ris.leeds.ac.uk/EthicsAmendment>.

Please note: You are expected to keep a record of all your approved documentation and other documents relating to the study, including any risk assessments. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited. There is a checklist listing examples of documents to be kept which is available at <http://ris.leeds.ac.uk/EthicsAudits>.

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to ResearchEthics@leeds.ac.uk.

Yours sincerely

Jennifer Blaikie
Senior Research Ethics Administrator, the Secretariat
On behalf of Dr Kahryn Hughes, Chair, [AREA Faculty Research Ethics Committee](#)

CC: Student's supervisor(s)

Information Sheet and Consent Form



Questionnaires Participants

Dear Student,

You are invited to participate in a research study. It is part of a PhD project that aims at exploring Saudi learners' motivation and achievement in English learning. This will be done by asking you to answer a questionnaire for 3 phases, 1 before and 2 after attending 2 sessions. Each questionnaire will take around 12 minutes to be completed.

Upon participating in the study, you will receive motivational sessions that foster a better language learning experience. The maximum total time of these sessions will be around 2 hours that will take place during your regular English classes. You will be expected to take part in discussions and activities during these sessions. Also, your English language grades will be collected to monitor your progress in learning English for research purposes only. This will have no effect on your grades.

Please read the following information and tick the appropriate answer:

I confirm that the purpose of the study has been explained and that I have understood it. Yes No

I have had the opportunity to ask questions and they have been successfully answered. Yes No
|

I understand that my participation in this study is voluntary and that I am free to withdraw from the study at any time, without giving a reason and without consequence. Yes No

I understand that all data are anonymous and will not be used for purposes other than this research Yes No

I understand that there are no known risks or hazards associated with participating in this study. Yes No

I confirm that I have read and understood the above information and that I agree to participate in this study. Yes No

I consent to my data being used and referred to anonymously. Yes No

Participant's signature: _____ Date: _____

Participant's Name (in block capitals): _____

Researcher's signature: _____ Date: _____

Thank you for your invaluable time and collaboration,

Researcher: Haifa Al-Ghamdi, (*Lecturer at KAU and PhD Student at University of Leeds, UK*)

Supervisors: Dr. Martin Lamb, Dr. Paula Clarke (*University of Leeds, UK*)

For more information please contact the researcher at edhaag@leeds.ac.uk

Appendix L: Histograms for all questionnaire scales

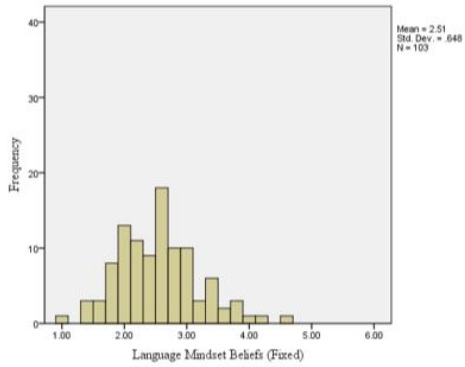


Figure 1. Histogram of LMB for the Treatment Group (N=103)

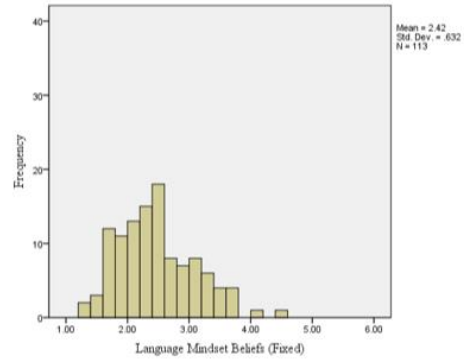


Figure 2. Histogram of LMB for the Control Group (N=113)

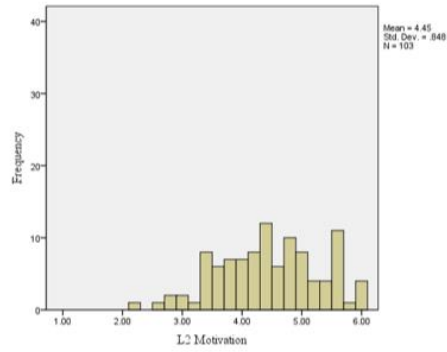


Figure 3. Histogram of L2M for the Treatment Group (N=103)

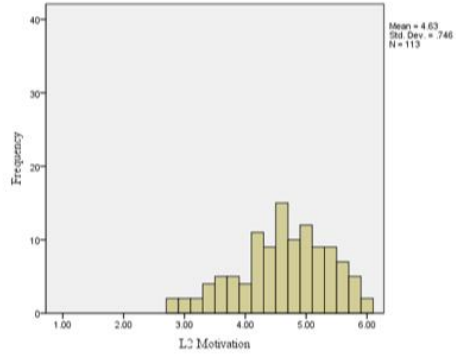


Figure 4. Histogram of L2M for the Control Group (N=113)

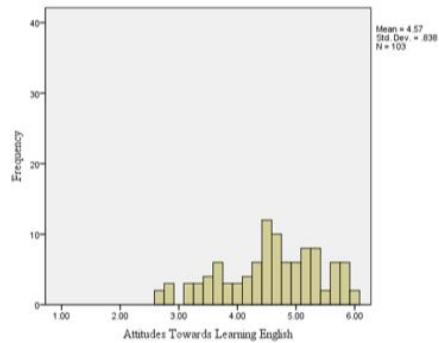


Figure 5. Histogram of ATLE for the Treatment Group (N=103)

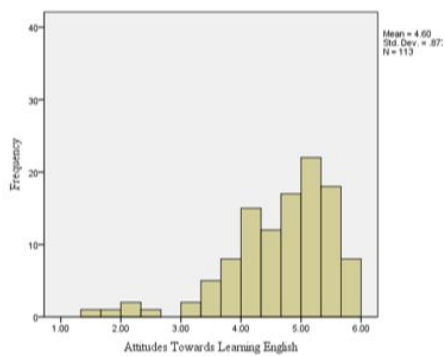


Figure 6. Histogram of ATLE for the Control Group (N=113)

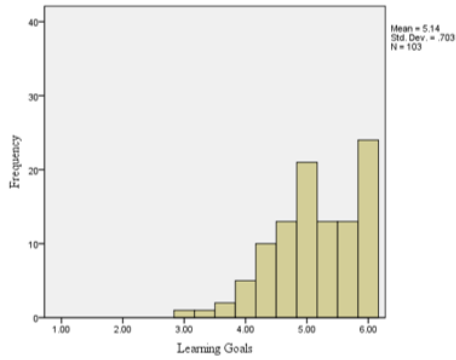


Figure 7. Histogram of LG for the Treatment Group (N=103)

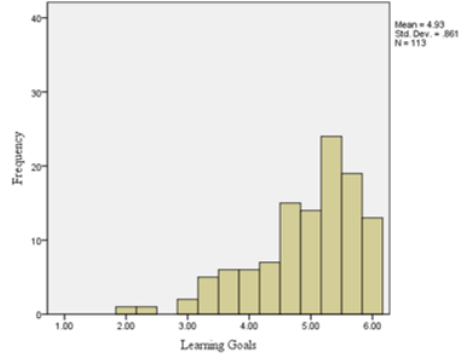


Figure 8. Histogram of LG for the Control Group (N=113)

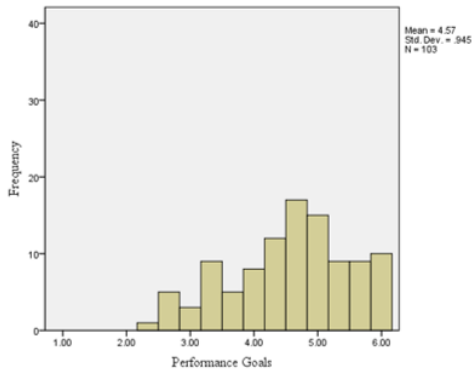


Figure 9. Histogram of PG for the Treatment Group (N=103)

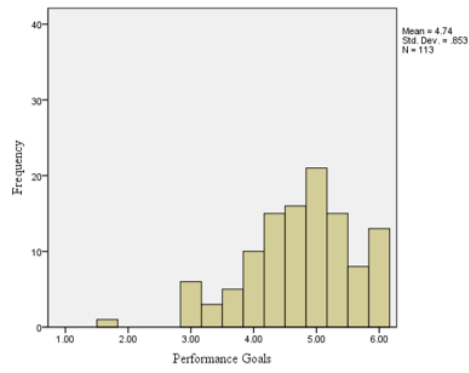


Figure 10. Histogram of PG for the Control Group (N=113)

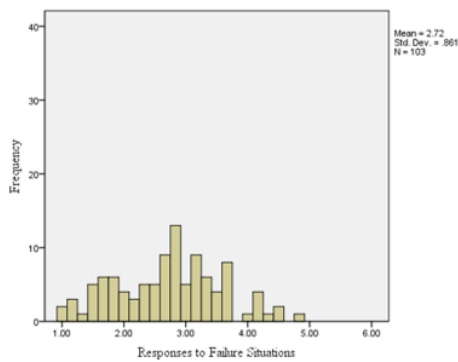


Figure 11. Histogram of RFS for the Treatment Group (N=103)

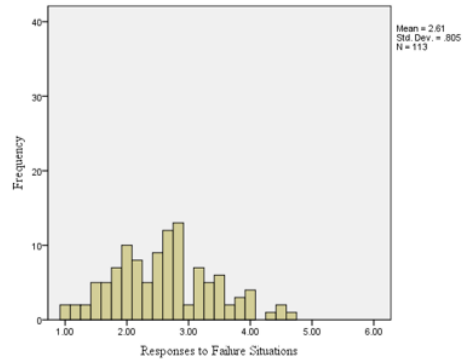


Figure 12. Histogram of RFS for the Control Group (N=113)

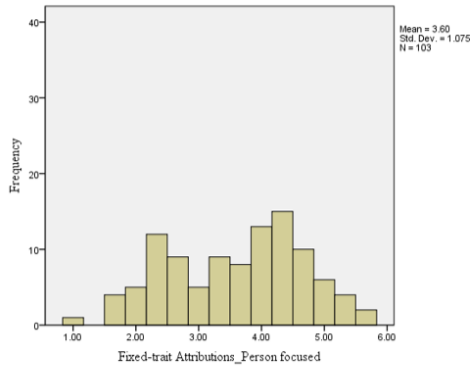


Figure 13. Histogram of FTA_Pn for the Treatment Group (N=103)

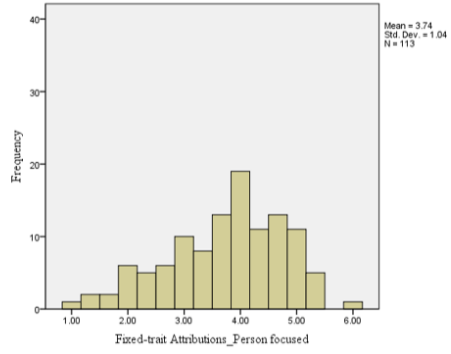


Figure 14. Histogram of FTA_Pn for the Control Group (N=113)

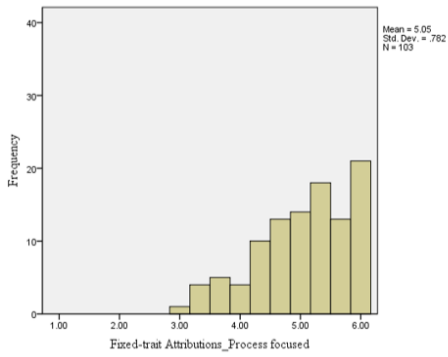


Figure 15. Histogram of FTA_Pc for the Treatment Group (N=103)

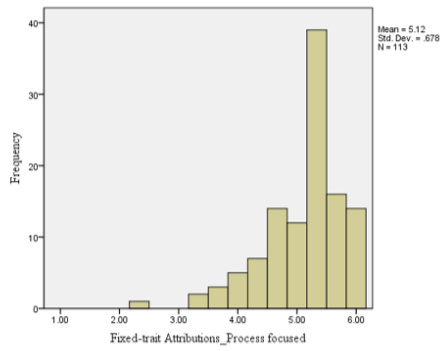


Figure 16. Histogram of FTA_Pc for the Control Group (N=113)

Appendix M: Sample of Qualitative Data Transcription

Interview 1 Transcription

ايش اهم عامل عشان الواحد يتعلم أي حاجة؟
الرغبة.

يبغى يتعلم حاجة يقدر يتعلمها؟ هل تعتقد أي شخص
ايوا يقدر ليش ما يقدر، اذا عنده دافع بيغى شي يتعلمه يقدر
يعني يكفي يكون عنده رغبة؟ طيب فيه أشخاص يقولو بيغو يتعلمو بس مو قادرين؟
كل الناس تقدر بس يشغل مخه و يقول أنا أقدر، ليش غيري يقدر و أنا لا. كلنا عندنا نفس العقل
هل تفكيرك هذا الان اتغير بعد دراستي ولا من أول انتي معتقده فيه؟
تقريبا من قبل الدراسة بس دحين أتأكدت منه و سرت و واقه
ما الذي يجعلك تشعرين أنك ذكية؟
لما أبدع في شي

طيب كيف تقيسي ابداعك؟ كيف تحسي انو انتي انسانة قدراتك عالية؟
يمكن لما أقول شي محد يعرفه، أنا أعرفه. اذا عرفت شي غيري ما يعرفه
قدية تعطي مجهود لتعلم الانجليزي؟ تبدلي مجهود كبير ولا عادي ما يحتاج؟
لأنها بتفيدني أنا بس لو مافي اختبارات حيكون متوسط لأنني أنا أبغى أتعلمها متوسط. أما ايام الاختبارات طبعاً أبذل مجهود كبير
طيب اذا بتعطي مجهود ايام الاختبارات معناته تذاكري بس عشان تتجحي؟
لأنها بتفيدني في حياتي كلها لا أنا أبغى اتعلمها. ما أبغى أخلص السنة هذي الا و أنا متعلمتها
طيب دام تبغي تتعلمي ليش ما تعطي مجهود كبير دائماً؟ ليش المجهود بس ايام الاختبارات أكثر؟
في الاختبار أبغى أركز لو ركزت في الاختبارات حافهم منها أتعلم و منها أستفيد
يعني هدفك الأساسي تتعلمي انجليزي؟
ااه، انو أكون مرا كويسة في الانجليزي
يعني يهكم هذا الشيء؟

مرا
لو أعطتك الأستاذة خيارين: عملي واحد من واجبين عليهم نفس الدرجة: واجب سهل ما تتعلمي منه شي أو واجب صعب تستفيدي
منه؟

الي أتعلم منه
عادي كوني صريحة ما ابغي منك اجابات مثالية
اكتر من الي عارفته استفيد منه السهل قدي عارفته بس الصعب حلو انو أتعلم منه
هل قد مر عليك انو اخفقتي في حاجة معينة كنتي تبغي تتعلميها و ما قدرتي؟ ايش كانت ردة فعلك؟ ايش تحسي لما تخفقي؟
شوية كذا يجيني احباط

طيب و بعدين بعد الاحباط؟ تحسي انك تكرهي الشيء معد تبغي تتعلميه؟ ولا ايش عملي؟ يجيكي احباط
أحاول و احاول

تحاولي تحاولي الي متى؟

ازبطه خلاص أسير الين

يعني ما تياسي؟ أو تنسحبي؟

لا

تقدري تذكري مثال لشي صعب و كيف قدرتي تتعلميه؟
بس حاولت حاولت الين الحمد لله، هذي السنة عرفتي كيف، مثلا الرياضيات لما بدأت أدرسها ما فهمت ولا شي يعني تقريبا..... اممم
و حسيت اني أنجزت كويس فهمت
لما حسيتي في الأول انك مو فاهمة شي هل فكرتي تنسحبي؟
حسيت اني خلاص ما راح أقدر أفهم، بس بعدين قلت مستحيل ما أفهم باركز شوي و افهمي معاها و ان شاء الله حاقدر، لازم أفهم. لا لا
ما فهمت ولا شي في البداية لازم، لأنو كان بالانجليزي و كذا
كنا ماخذينه بالعربي فمرا ما كنت عارفة لأنو جالسه تقول مصطلحات بالانجليزي و رياضيات
تحاولي تقاومي تتغلب عليها يعني تعتبري ردة فعلك عموماً في الفشل في التحديات في الأشياء الصعبة
أول شي احباط بعدين احاول

طيب بالنسبة للدراسة الي سويت لكم هيا قديه تحسي الان انها غيرت في طريقة دراستك و نظرتك للأمور عموم؟ هل فيه شي أتغير الان؟
ايوا حسيت اني حاقدر بإذن الله اتعلم انجليزي دام الكل اتعلم و لو ثابت و اجتهدت حاقدر ان شاءالله أسير مرا ممتازة في الانجليزي...
مجرد بس اني أدرب عقلي و اتعلم
يعني أول ممكن ما كان عندك هذا الحماس؟
دحين. دحين سار مرا أبغى أتعلم. كان عندي حماس انو أبغى بس ما كنت.. ما كنت عارفة هل حاقدر اه تقريبا مرا ما كان زيماسي لو اشتغلت أو ما راح أقدر. دحين أتأكدت خلاص أقدر ان شاءالله
ايش فيه اقتراحات تقترحها عشان أحسن الدراسة حقتي؟ بالنسبة للمادة العلمية المعروضة, هل فيه ملاحظات او أجزاء تقترحي تغيير؟
تقريبا لا. بالنسبة لي كل شي مرا كان كويس. فيه أشياء زي الفيديوهات مرا ساعدتنا نفهم الموضوع

Interview 2 Transcription

قديه حماسك دحين لتعلم الانجليزي مقارنة بلما بداتي؟
نفس الحماس يمكن ولا اقل بعد (ضحك)

٢. طيب ليش تحسي قل الحماس؟
يمكن لأنك عايشه في صعوبه اكثر، مع انو كانوا يقولو هذا اسهل من الي قبل بس احس الي قبل الي هو اصعب شي بالنسبة لهم حسيته اسهل بالنسبة لي.

٣. ايت الي كان اصعب؟
ليفيل ٣ كانوا يقولو انو اصصعب شي، بس الأغلبية و انا معاهم حسيت انو هذا اسهل الي قبل

٤. اكيد اتوقع ليفيل ٤ اصعب.
لا هما كانوا يقولو حتى الدكتاترة انو ليفيل ٤ اسهل من ٣. ٣ دايمًا البنات يحملو فيه و فعلا حملو فيه بنات كثير.

٥. يمكن لانو الفرق كبير بين ٢ و ٣ ايوا ممكن.

٦. طيب هل أثر فيك الكلام الي قلته لما جيتي للمستوى الصعب او بداتي تنسي؟
يمكن يخف الأثر او تنسينه مع كثر الضغوطات

٧. طيب هل فيه اشياء تتذكرها و بقيت في بالك او أثرت فيك إلى الآن.
تقريبًا. زي انو احاول انو ان شاءالله باتعلم ذي و بتفيدني في باقي المواد الثانيه. يعني احس انو مرا حيفيدني

٨. يعني حاسه انو هدفك لسا تتعلمي ايوا

٩. طيب مفهومك في القدرات هل اتغير الان لما جيتي مرحلة اصعب. مثلا انو الي ما عندها قدرات عالية ما راح تقدر تعدي.
لا ما احس كذا لا. على حسب اذا من النوع الي تفهم مع الدكتاترة عادي ما ياتر كثير

١٠. يعني المسألة قدرات شخصية او مجهود.
مجهود ايوا، اذا ذاكرت كويس و فهمت الشرح خلاص مو قدرات يعني، لانو هوا اختبار و شرح

١١. يعني كيف تحسي مستواك الان في ليفيل ٤.
مستواي كويس بس في الاختبار لا. بس نوعا ما يعني لو غير الاختبار مثلا كتكوين جمل و كذا غير عن ليفيل ٢ اتحسن.

١٢ . طيب كيف حسيتي ردة فعلك الان لما تمرى بشي صعب. حاجه مرا صعبه مرت عليك ايش تكون رة فعلك تحبطي او كيف تحسي. احيانا احبطه بس خلاص الإحباط ما يفيدني ما راح يفيدني، اذا احبطت مرا مرا محافيدني لازم اتجاوز هذا الشى عشان اعدل منه.

١٣ . هل هذا تفكيرك و شخصيتك من اول او بعد ما كلمتكم؟
تقريبا ايوا من اول

١٤ . يعني ماله علاقه؟

لا. لازم أمر بإحباط بس خلاص لازم اتصرف

١٥ . أهدافك في تعلم اللغة؟ هل اتغيرت الان لما جيتي في مستوى اصعب.
للان احس ابغى اتعلم

١٦ . لانو هدفك مو لانو انا قلتكم.

ايوا لانو انا ابغى اطور من نفسي

١٧ . هل اتغير شى في طريقة مذاكرتك بعد الدورة؟

تقريبا حاولت اني يعني اعرف.. ايش انا.. كيف اذاكر يعني كيف طريقة مذاكرتي، لسا إلى الآن ماني عارفه.

١٨ . طيب تفكيرك؟

تقريبا الا.. الا. زي لما قلتي انو ما يعتمد على الخبرة، يعني انتي يمديك يعني تطوري من نفسك، يعني هذا الشى مكتسب.

١٩ . ايش اكثر كلام تتذكره إلى الآن و أثر فيك؟

اه.. انو حسيت انو.. انو حاتعلم انجليزي بس لازم يكون... يعني كيف اقولك....ماني عارفه كيف اقولك

٢٠ . انو مو مستحيل تتعلمي...

ايوا مو مستحيل، كنت في البداية مرا مستصعبته بس دحين لا الحمدلله.

٢١ . طيب حسيتي مقابلتي معاك المرة الأولى غيرت فيك شى؟ أثرت في افكارك حماسك شى..
تقريبا نفس الاثر