INVESTIGATING THE EFFECT OF MOTIVATIONAL DESIGN ON SAUDI UNIVERSITY STUDENTS' MOTIVATION AND L2 WRITING PERFORMANCE: AN EXPERIMENTAL MIXED METHODS DESIGN USING KELLER'S ARCS MODEL

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For my family—Dad, Mom, my wife Mashael, my daughter Hanai, and my little boy Battal—
without your support and prayers, this journey would have been impossible.

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ABSTRACT

According to Boo et al. (2015), between 2005 and 2014, the majority of L2 motivation studies focused on general learner motivation, neglecting research on motivating learners in classroom contexts. Similarly, Sudina (2021) stated that most research on motivation focused on students' individual motivation, even though what teachers do to motivate students in the classroom is also of major interest. Although some attempts have been made to propose motivational strategies for teachers (Dörnyei, 2001), traditional motivation research in SLA rarely considered the influence of classroom materials and instructional practices as the interface between motivation and learning. To this end, the present study brought Keller's (2010) Attention, Relevance, Confidence, Satisfaction (ARCS) model from educational psychology to applied linguistics, as recommended by Crookes and Schmidt (1991) and Lamb (2019), to address how materials and associated teacher instructional practices can be motivating based on a motivational theory of instruction. It investigated the effect of teachers' implementation of an ARCS-based motivational strategies intervention on the motivation and L2 writing development of EFL learners.

The study employed an experimental mixed-methods approach, randomly assigning 82 Saudi adult EFL students to an experimental group (N = 50) or a control group (N = 32). Two teachers of the experimental group received an instructional guide for implementing 17 ARCS-based motivational strategies, while the one teacher of the control group followed conventional methods. Data collection occurred over a 7-week period, involving four pre-posttest motivation surveys and writing tests, audio recordings, observations, exit interviews, and reflection journals collected from teachers and students.

The findings obtained from the quantitative analysis showed that the ARCS-based intervention had a small to medium effect on students' instruction-related motivation, while no significant changes were found on other aspects of motivation such as intrinsic motivation,

motivational self-evaluation, and course interest. It also showed that the intervention had a medium-sized effect on students' overall L2 writing development, specifically on aspects of content and communicative achievement. Nevertheless, no significant changes were discerned in aspects related to organization, language, and fluency, despite more pronounced changes over time in the treatment group compared to the control group.

The qualitative analysis of students' interviews showed that the ARCS-based intervention had noticeable effects on students' motivation and engagement in the classroom. The qualitative results also added some context and deeper insights into how students perceived the intervention, how it affected their motivation, which motivational strategies the students noticed being used consistently by the teacher, and what specific strategies they felt helped improve their writing. Additionally, interviews with teachers who implemented the intervention shed light on teachers' motivational practices, revealing their personal growth as educators and their intent to continue implementing these strategies in their teaching while recommending them to other teachers.

The study concludes with pedagogical recommendations for teachers to utilize various motivational strategies in their instruction and some recommendations for researchers to help understand more about this line of research.

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CHAPTER 1. INTRODUCTION

Focus of the Study

This study sheds light on a blind spot in second language education (and instructed SLA)—the role of classroom materials and associated instructional practices *as the interface between motivation and learning*. Perhaps surprisingly, very little research has addressed the matter of the specific motivational effects of classroom materials and associated instructional practices, or how they can and should be designed to motivate, on the basis of a motivational theory of instruction. This study is also the first to investigate the effect of teachers' use of them on specific aspects of EFL learners' L2 writing development by means of an experimental research design. It is also the first to offer insights into teachers' beliefs and motivation towards incorporating motivational strategies into their L2 instruction using a true experimental design.

Csizér (2017) stated that Instructed SLA would benefit from more empirical investigation into the relationship between L2 classroom intervention and motivation. Lamb (2019) attributed the scarcity of research on motivation and pedagogy in SLA to the complexity of the research design usually associated with such intervention studies—usually quasi-experimental or true experimental, which might be hindered by institutional obstacles, thus leading to less research in this area. Dörnyei and Ushioda (2021) emphasized that good research in this area should not only show us the effect of the motivational intervention on students' motivation, but it should also enable us to examine the influence of motivation on L2 performance. That is to say, these four prominent specialists in L2 motivation are indicating that despite the large number of studies of L2 motivation, there remain some notable gaps.

In the specific context where the proposed study is being conducted, Saudi Arabia, only two studies published have investigated the effect of a motivational intervention. These used a quasi-experimental design (Alrabai, 2016; Moskovsky et al., 2013).

Statement of the Problem

In the area of motivation, the late Zoltan Dörnyei's work has dominated the field of applied linguistics for the last two decades, and when we talk about motivational strategies (MotS) in the field we often encounter his well-known (2001) motivational strategies taxonomy. Lamb (2019) notes that this taxonomy was the base for more than 20 studies published in major SLA/applied linguistics journals (e.g., Alrabai, 2016; Guilloteaux & Dörnyei, 2008; Papi & Abdollahzadeh, 2012; Moskovsky et al., 2013, *inter alia*). The issue with Dörnyei's (2001) taxonomy, however, is that it did not offer guidance or make a connection to integrate MotS into teachers' instructional materials. Maeng and Lee (2015) state that traditional research on MotS in the field did not consider the role of "materials, tasks, and instructional design" (p. 27). There is probably unintentional neglect of the lesson itself as an instructional unit in applied linguistics literature (in favor of, for example, the task, which while important, is not the only important element of instructional implementation in a classroom context). Long ago, Crookes and Schmidt (1991) emphasized the role of classroom practice, manifested in lessons and their activities, in motivation research, stating that "even the straightforward framing remarks initiating an activity or the presentation stage of a lesson deserve to be assessed in the light of motivational considerations" (p. 487). They highlighted that activities such as group work could have a positive effect on learners' motivation. They also considered the role of materials, claiming that the content and design of relevant and interesting materials could enhance students' motivation. Subsequently, Dörnyei (2001) developed MotS for L2 teachers who are willing to foster their

students' motivation, but he did not address how these strategies could be integrated in L2 materials, or how they might appear and what form they might take in an actual lesson plan. In Dörnyei's taxonomy, it appears that teachers' voluntary use or perception of MotS is favored in place of instructional design, leaving out L2 materials. This leaves the way that materials might be introduced, organized, and executed in a motivational way relatively underexplored within our view of MotS. Lamb (2019) stated that Dörnyei's (2001) taxonomy, although well known in the field, is still "limited in scale and impact" as teachers do not use MotS consistently in their instruction, and learners often fail to notice them when they do (p. 295).

Outside of applied linguistics, in educational psychology, a long line of work addresses how materials and associated teacher instructional practices can be motivating. These are available in the work of Keller and his associates (e.g., Keller, 1987, 2010). This work has motivated me as a researcher to bring Keller's (1987, 2010) Attention, Relevance, Confidence, Satisfaction (ARCS) model to the field of Second Language Studies, as recommended by Crookes and Schmidt (1991) and Lamb (2019), to properly address these issues and contribute further to our understanding of the interplay between motivation and pedagogy in L2 classrooms.

In addition to the theoretical rationale driving the investigation of this research gap, there are pedagogical considerations that have inspired me to pursue this study. This research has the potential to make valuable contributions within the local context of the Saudi EFL setting, particularly in the domain of L2 writing instruction.

Historically, according to several sources (e.g., AlRawi et al., 2022; Elyas et al, 2021; Mahboob & Elyas, 2014), English was introduced alongside French in Saudi public secondary schools during the 1920s, replacing the Turkish language after the fall of the Ottoman Empire. However, Mahboob and Elyas (2014) mentioned that it was not until 1959, following the

discovery of oil and the establishment of the Saudi Arabian Oil Group ARAMCO, that legislation was passed to make English the sole compulsory foreign language in all Saudi private and public schools. The authors added that, initially, English instruction was confined to high schools, with students meeting four times a week for 45-minute instruction slots. However, due to recent economic and infrastructural reforms in Saudi Arabia, English has gained increased prominence and is now integrated into all K-12 grades (AlRawi et al., 2022). Moreover, proficiency in English and passing specific English courses have become requirements in the foundation year for most public and private Saudi colleges and universities.

Alqahtani (2015) noted that when English was initially introduced into the Saudi educational system, the primary focus was on teaching oral communication skills, leading to a relative neglect of L2 writing and placing more emphasis on speaking and listening. Consequently, composition writing was only introduced during the final year of secondary school. This perceived insignificance of teaching English writing was not unique to Saudi Arabia, as evidenced by a study conducted by Ruecker et al. (2014) involving 401 TESOL members teaching English writing in various ESL/EFL contexts. The study revealed that 95.2% of ESL teachers considered writing an important skill in postsecondary education, whereas only 61.9% of EFL teachers held the same opinion. The authors attributed this clear disparity between the two contexts to the greater emphasis on oral skills in EFL contexts compared to writing skills. Moreover, Hyland (2003) argued that EFL students sometimes perceive writing as a cognitively demanding and complex skill to master. This was substantiated by a survey of 72 Saudi college EFL learners, who reported facing difficulties in dealing with writing in general, particularly with regard to the mechanics and structure of English writing (Alharbi, 2019). Consequently, many Saudi students perceive writing in English as a demotivating task, with their

motivation driven primarily by instrumental factors such as passing exams or seeking job promotions (Alotaibi, 2004; Moskovsky & Alrabai, 2009).

Since writing performance is closely associated with high levels of motivation (McLeod, 1987; Pintrich & Schunk, 2002), and students who perceive writing as an enjoyable activity demonstrate greater engagement and persistence in writing tasks (Graham et al., 2007), EFL practitioners have been encouraged to seek pedagogical methods to enhance motivation for writing. Encouraging students to write about topics of their preference (Schiefele, 1991) and utilizing motivational regulation strategies in writing instruction (Teng & Zhang, 2018) have been identified as effective pedagogical approaches for fostering L2 writing performance. However, these teaching methods have been found to be lacking among EFL writing teachers in Saudi Arabia. In fact, Al-Khairy (2014) conducted interviews with four senior faculty members in a Saudi university, revealing issues in teaching and learning L2 writing in EFL classes. These issues included teachers' lack of interest in teaching writing and the utilization of outdated and inappropriate teaching methods, which significantly contributed to students' poor performance in academic writing courses. Additionally, Alqahtani (2015) highlighted that teaching in Saudi Arabia is primarily teacher-centered, with limited emphasis on learners' autonomy and peer-to-peer interaction.

Hence, this research aims to contribute to teacher education in the Saudi EFL context by providing pedagogical recommendations for L2 writing teachers to adopt a more motivating teaching approach that could lead to a positive impact on students' motivation and L2 writing performance.

Research Objectives

Through the lens of Keller's ARCS Model, it is hoped that the design of L2 materials such as lesson plans and language activities with motivational intent will open new avenues in L2 motivation research. This model also offers language teachers a practical manual that would help them to integrate both motivational and instructional factors into their lesson design. Chang et al. (2016) state that although Dörnyei's taxonomy of MotS can offer teachers a detailed list of strategies, Keller's model offers a "simple but useful framework for instructors to achieve their goals" (p. 102). Keller's line of work, although well-known in motivation theory and recurrently mentioned in SLA/SLT publications (Crookes & Schmidt, 1991; Dörnyei & Ushioda, 2011, 2021; Lamb, 2017, 2019), has not received much attention by L2 scholars, even though in a number of recent studies the application of this model has shown a positive influence on EFL students' motivation and L2 performance (Chang et al., 2016; Chang & Lehman, 2002; Hung et al., 2013; Karimi et al, 2021; Kurt & Keçik, 2017; Li et al., 2020; Maeng & Lee, 2015; Min & Chon, 2021; Proske et al, 2014; Refat et al., 2019; Tsai & Liao, 2021; Ucar & Kumtepe, 2019; Wu, 2018)

This study also contributes to filling a significant gap in the L2 writing literature, as it is, to the best of my knowledge, the first study to investigate the effect of MotS on overall L2 *writing* performance using an experimental design among EFL students. Several L2 writing scholars claim that there is an overall scarcity of research on the role of motivation in L2 writing development (e.g., Kormos, 2012; Papi, 2021), with most research being correlational in design (e.g., Cheung, 2018; Hashemian & Heidary, 2013; Jang & Lee, 2019; Tahmouresi & Papi, 2021; Teng & Zhang, 2018; Yu et al; 2020). Papi (2021) stated that interventional research is rare in research connecting motivation with L2 writing. Kormos (2012) suggested that in L2 writing correlational studies it is challenging to "gain deeper insight into possible causal relationships

between writing success, learning processes, and individual variables" (p. 400). To the best of my knowledge, no previous experimental research has examined the effect of teachers' use of motivational and instructional strategies on the development of specific aspects of L2 writing (e.g., writing structure such as content or organization, or writing fluency) among EFL university learners, and the current study is the first to do so.

Finally, no previous study to my knowledge scrutinized teachers' beliefs and motivations towards incorporating motivational strategies into their L2 instruction using a true experimental design, and in this dissertation I attempt to gain deeper insights into teachers' beliefs and motivations towards delivering a motivational intervention and motivating students.

This dissertation consists of five more chapters following this first introductory chapter. The second chapter is a systematic review of the literature concerning motivation—its origins prior to and after SLA, motivational teaching strategies, research issues in L2 motivation, and some conceptual gaps in the field of L2 motivation. The third chapter is a detailed explanation of the methods used to carry out this research. The fourth chapter demonstrates the quantitative and qualitative findings of the research. The fifth chapter discusses each of the four research questions posed for this research and also offers pedagogical implications for teachers and researchers. The final chapter is the concluding chapter and it summaries the key findings and discusses the limitations and future directions.

CHAPTER 2. LITERATURE REVIEW

This chapter consists of four major sections. In the first section, I start by offering a brief historical overview of the concept of motivation and highlighting its disciplinary origins in fields such as biology, psychology, and sociology, how it was perceived by different theorists over time, and the limitations of each historical era. As I discuss those concepts and theories in the first section, which mostly existed in other fields such as psychology, I show their influence on our current understanding of motivation in SLA and how L2 scholars utilized them to inform research on L2 motivation. I then discuss some prominent concepts and theories that shaped the field of L2 motivation in the second section, starting from its birth in the Gardnerian era, all the way to discussing some emerging themes and concepts that hold some potential contribution for future research on motivation in SLA. The third section highlights the role of motivation in L2 pedagogy and discusses how the cognitive-situated period of L2 motivation underscored the role of the L2 learning situation, especially the role of teachers in influencing students' motivation. The fourth and last section in the literature review chapter is a methodological review of the most popular research methods that are used to measure students' motivation in the L2 motivation field. This section also discusses L2 classroom motivation research, and it outlines desirable research methods and design issues in this particular type of research. Moreover, this section looks into the relationship between motivation and achievement, and whether motivation can be elicited by means of better language outcomes, such as improved L2 writing ability. I conclude this section with highlighting some conceptual and empirical gaps that are associated with research on the role of motivation in L2 pedagogy, and I propose some solutions from the relevant literature which will lead to the research questions and hypotheses.

The History of Motivation Before SLA

According to Weiner (1990), the word *motivation* has its origin in the Latin verb *movere* which means 'to move.' It represents the things that move all living creatures to behave in a certain way, whether this motive is hunger, love, power, reward, or even survival. Many motivation theorists, mainly psychologists and biologists, have attempted to understand what instigates behavior and what could be the cause of actions. As a result of this, several motivation theories have come into existence, including those we currently have in modern-day SLA. In his book *Human Motivation,* Robert Franken (2007) explains that motivation theorists tend to understand motivation as it relates to three interrelated concepts, biology, learning, and cognition, which in turn have prompted the birth of six lines of motivation inquiry, namely instinct theories, need/personality theories, drive/learning theories, growth and mastery motivation theories, humanistic theories, and cognitive theories. Franken (2007) states that the aim of all these theories was to "account for the arousal, direction, and persistence of behavior" (p. 9). This statement was also endorsed by Dörnyei and Ushioda (2021) in their recent book on motivation, stating that choice, persistence, and effort are aspects of behavior that most motivation theorists agree with. In this section, I briefly overview some of the major motivation theories that were established prior to the starting point of SLA in the 1960s (Ellis, 2021; Larsen-Freeman, 2018) to see how different theorists conceived of the concept of motivation over the years.

Instinct Theories

According to Franken (2007), the earliest motivation theories were linked to understanding the behavior of animals, in what is called 'Instinct Theories,' where action was interpreted from a pure biological nature and separate from cognition and learning, that are often

associated with human behavior. Thomas Aquinas (1225-1274), who was an Italian philosopher and a Catholic priest, explained that animals are driven by their instincts, and that those wild instincts are nonexistent in humans because humans have a will and are far more privileged creations than animals. To Franken, Aquinas's views were obviously influenced by his religious background and his role as a doctor of the church and were not appealing to Charles Darwin (1872), who believed that the same instincts that drive animals' behavior also drive humans' behavior. Franken added that Darwin's evolutionary theory had an impact on Sigmund Freud's understanding of instincts. He thought that Freud, who was a neurologist and the founder of psychoanalysis, believed that instincts could be biological in nature, but they are merely sources of energy that can be directed and controlled by means of learning and cognition. In other words, aggression is an instinct (i.e., a source of energy), but the way we direct our behavior toward approaching this instinct, simply by setting a goal object, is driven by principles of learning and cognition that will eventually determine how we deal with this instinct and act accordingly. In other words, Franken suggests that Freud is arguing for motivation being something more goal-driven than pure instinct.

Need Theories

According to Fiske (2008), Freud's ideas particularly influenced social and personal psychologists such as William McDougall (1908), Henry Murray (1938), and Abraham Maslow (1943, 1967), who are also known as needs theorists. Franken (2007) states that unlike biologists, psychologists abandoned the idea of instincts, as it was limited in explaining different behaviors in different environments. They chose to change their focus to needs and drives rather than on instincts to account for the learning and cognition aspects of behavior. Needs theorists believe that there is a limited number of needs that could be innate, learned, or even acquired. Therefore,

most needs theorists tried to group those needs in specific frameworks, such as Murray's List of Basic Human Needs (e.g., achievement, autonomy, understanding) and Maslow's Hierarchy of Needs (starting from basic physiological needs such as food to self-actualization needs at the top of the pyramid). In short, needs theorists wanted to convey that "energy, direction, and persistence of behavior are due to the existence of needs," not instincts (Franken, 2007, p. 14).

Learning Theories

Needs and instincts were replaced with learning and drives in the wake of the behaviorism school (Hull, 1943; Skinner, 1953, also known as learning theorists). Behaviorists put a great emphasis on concepts like rewards and punishments. Skinner, for example, postulated that positive and negative reinforcement or rewards are what actually influence behavior, and whenever rewards change, behavior also changes. It is worth mentioning that learning theorists have also asserted the role of the environment in shaping behavior from the premise that cultural differences influence behavioral differences in people (Franken, 2007). The rewards system, however, was not appealing to social learning theorists who believed that people act to emulate the behavior of others, with no actual need for rewards to instigate action. For example, a child does a certain act just to emulate the acts of their parents, without necessarily being allured by a reward.

The First Appearance of the Word 'Motivation'

Up to this point in the historical overview, words like *instincts*, *drives*, and *needs* were recurrently used to describe what instigates action, but there was no explicit mention of the word *motivation*. Danziger (1997) states that motivation, as an abstract term, was first introduced in psychology by Thomson and Troland in the 1920s. Psychologists believed that motivation,

unlike other descriptors of human intentionality is "an abstract category that groups all the older referents together, implying that they all have something important in common" (Danziger, 1997, p. 144)[1]. According to Danziger (1997), the first appearance of the word motivation in education was in the title of a book, *The Motivation of School Work,* by educationalists Wilson and Wilson (1918). In this book, the authors claimed that tailoring materials to students' interests, instead of imposing some outside educational policies set by administrative authorities, could improve the students' motivation. Wilson and Wilson stated that teachers saw the benefit of working according to motivational principles in the classroom and that it reflected on students' high interest in some courses. For instance, they mentioned an example of a language teacher who organized her materials according to students' interests, and as a result, witnessed high levels of achievement and project completion. In Danziger's (1997) view, students' lack of interest in their schoolwork was not something new, but the fact that we could possibly apply scientific theory and integrate psychological principles to influence their motivation was definitely appealing to educationalists. That said, around that time, education was "divorced" from the study of motivation amongst psychologists, who found that it was easy to do experiments on animals and generalize the findings to humans—far simpler compared to dealing with the cognitive aspect of human motivation (Wiener, 1991).

Cognitive Theories

The study of motivation developed with the rise of cognitive theories (Lewin, 1938; Piaget; 1970; Tolman, 1932). Cognitivists believed that mental representations of action were the main cause of behavior (not habits, rewards, needs, instincts, or even drives). They also believed

[1] I will return to this point below when explaining the emergence of neighboring constructs to motivation in SLA

that humans have the cognitive ability to choose between alternatives once they form mental maps. Mental maps are the cognitive structures that people use to organize their experiences, memories, and knowledge about different aspects of the world. They allow people to navigate through their environment and plan actions. While mental maps may influence behavior, individuals are not necessarily constrained by them and can use them to make choices about their actions. In Keblawi's (2009) view, old motivation theories such as behaviorism had little use to educational psychologists, and the rise of cognitive theories was long-awaited to emphasize the role of cognition in driving human behavior. That said, the idea of mental representation in psychology, according to Franken (2007), was initially based on the observation of animals' behavior, such as how rats form a mental map to navigate a maze in the absence of rewards. It was not until the 1950s that the notion of mental representation was associated with human cognition, which in turn resulted in the rise of two major cognitive theories of motivation in psychology: expectancy-value theories (Atkinson, 1957, 1964) and goal-setting theories (Locke, 1968). These two theories influenced most of what we know of motivation in SLA, as we will observe later.

Expectancy-Value Theory

Expectancy-value theory postulates that in the process of forming thoughts of pursuing a certain activity, humans decide to act once they expect they will succeed in that activity, and once they assign value to it. Eccles et al. (1983) expanded the theory into the field of education, in what they called 'the Expectancy-value theory of Achievement Motivation,' where they categorized achievement values into four components: (a) intrinsic value, where self-enjoyment is the pure motive for doing a task (e.g., a student who loves learning languages because they enjoy the process of getting to know different cultures, rather than for any external rewards), (b)

utility value, where one perceives the usefulness of achieving a task for some future goal (e.g., a student who is studying to become a teacher might see the value in taking a business course, even though it is not directly related to teaching, because they know that strong business skills will be useful in their future career), (c) cost value, where completing one task might happen at the cost of another favorable task (e.g., a student who has to choose between playing video games and studying for an important exam might perceive a high cost in playing video games, since it would mean sacrificing valuable study time), and (d) attainment value, where the completion of a task is perceived to be important (e.g., a student who has always dreamed of attending an Ivy League university might view getting accepted as highly important and work hard to achieve that goal.)

Goal-Setting Theory

In Franken's (2007) view, forming expectations about the future has given rise to goal-setting theories, where goals are the primary source of human motivation (Locke, 1968). According to Locke and Latham (1990), there are five goal-setting principles (i.e., moderator variables) that could strengthen or weaken goal attainment: (1) ability has to match the effort needed to obtain a goal, (2) feedback is essential to monitor goal regulation, (3) commitment must be present, (4) the challenge level of the task must match current skills and knowledge, and (5) resources such as supplementary materials must be available. One prominent theory that resulted from goal-setting theories was self-efficacy theory (Bandura, 1977). This theory was originally derived from Bandura's social-cognitive theory of goal-setting and explained humans' confidence in their ability to attain a certain goal. Franken (2007) emphasizes the role of *self* in this theory and distinguishes it from *expectancy* in expectancy-value theories by stating that

"expectancy relates to outcomes corresponding to a specific level of effort, whereas self-efficacy expectations focus on our beliefs about our capacities" (p. 24).

The cognitive aspect of motivation did not start to have a major influence in SLA until the 1990s when Crookes and Schmidt (1991) called for reopening the research agenda. In the 30 years preceding that, the socio-educational model of L2 motivation by Gardner and his associates dominated the field starting from the late 1950s (Gardner & Lambert, 1959). The next section will outline how motivation has been viewed in the field of SLA, beginning with the work of Gardner and his colleagues up to the recent developments and emergence of new concepts.

Motivation in SLA

L2 motivation research has gone through three historical phases in the field of SLA (Dörnyei, 2005; Dörnyei & Ryan, 2015; Dörnyei & Ushioda, 2021):

1. *The social psychological* period prompted by Gardner and his associates in Canada (1959-1990).
2. *The cognitive-situated* period, stimulated by Crookes and Schmidt (1991) and their call for more attention to L2 learners and the learning situation by drawing on cognitive theories from educational psychology.
3. The *process-oriented period* (the turn of the 21st century) characterized by the expansion of motivation research to encompass the dynamicity and contextuality of motivation, such as the issue of time, vision, and conceptions of the individual and society.

It is worth mentioning that this historical classification, as many L2 motivation scholars would argue, is not a historical division, as many time periods overlap with each other and draw insights from each other. However, I will use this specific categorization to guide my discussion

throughout this section and to offer a holistic perspective on how L2 motivation research evolved since the time of Gardner and what limitations were noted. Furthermore, I will briefly discuss some constructs that have been viewed as overlapping with motivation and that are getting more attention recently in the field of L2 motivation, such as *investment* (Norton, 1995, 2000), *engagement* (Hiver et al., 2021a, 2021b; Lambert et al., 2017), and *grit* (Feng & Papi, 2020; Khajavy et al., 2021; Teimouri et al., 2020).

The Social Psychological Period

Many SLA scholars give credit to social psychologists Robert Gardner and Wallace Lambert as the first to introduce motivation into the field of Applied Linguistics (Dörnyei & Ryan, 2015). In his dissertation, Gardner (1960) mentions that language learning had been historically (prior to his model) associated with high intelligence or measures of language aptitude, but no explicit connection was established between motivation and SLA due to the complexity of measuring a psychological construct like motivation. Gardner and Lambert's classic 1959 classic paper was one of three studies that Gardner conducted during his master's degree under the supervision of Wallace Lambert. This paper marked the start of the L2 motivation field in its social psychological era, where Gardner and Lambert proposed several motivational variables in the form of a battery of tests that they called the 'Attitude/Motivation Test Battery' (AMTB). One of the variables in this battery is an orientation index. They found that language learners with an 'integrative motivation,' that is a motive to be integrated in the culture or to contact a speaker of the target language, will most likely perform better when learning a second language. According to Gardner and Lambert (1959), the notion of integrativeness, which is heavily stressed in their model, was originally influenced by theories in child first language acquisition, manifested in the work of Mowrer (1950) and Ervin (1954).

These L1 acquisition specialists showed that children's drive to imitate their parents, and their desire to be valued members of the community as they grow, are two factors that drive their motivation to acquire their native language. The other orientation index in Gardner's AMTB is called 'instrumental motivation', where learning the L2 is contingent on the presence of an external reward (e.g., passing a requirement). Gardner postulated that a student with an instrumental motivation to learn an L2 will not maintain as high motivation as a student who has an integrative motivation. The socio-educational model has shown merit for almost 30 years, with research conducted in the U.S., Canada, Europe, and Asia (Gardner, 2009). Notwithstanding the influence of Gardner's model, it was criticized for (a) its heavy emphasis on the idea of integrative motivation especially in contexts where there is no, or minimal, social interaction with the target language community and (b) its dismissiveness of classroom-related motivational issues, which involve teachers, students, tasks, and materials (Crookes & Schmidt, 1991; Dörnyei, 1994, 2001).

The Cognitive-Situated Period

The seminal article by Crookes and Schmidt in 1991 called for reopening the motivation research agenda after almost 30 years of the social psychological era. The need for change was necessary, as Crookes and Schmidt (1991) were concerned that the understanding of motivation in Gardner's theory "does not do full justice to the way SL teachers have used the term motivation" (p. 469). They also add that a language learner could be motivated to learn the L2 without necessarily having the disposition to be integrated in the target language community, highlighting the insignificance of the L2 classroom context in Gardner's theory. Their critique was centered around the notion that whatever attempts might be made by the teacher to motivate their students were not particularly connected to integrative or instrumental motives that students

possess prior to coming to the L2 classroom. To address these issues, Crookes and Schmidt (1991) distinguished four levels of L2 classroom motivation; a *micro-level* that is related to cognitive processes such as attention, a *classroom level* that deals with motivational techniques and strategies, a *syllabus level* that is relevant to course design issues, and finally a level of seeking opportunities to learn the L2 outside the L2 classroom. The call for a classroom-friendly motivation marked the beginning of the cognitive-situated phase of L2 motivation research, where cognitive theories like expectancy-value theory, self-determination theory, and attribution theory have contributed to our understanding of motivational issues in the L2 classroom.

Expectancy-Value Theory in SLA

Crookes and Schmidt (1991) drew on work by educational psychologist John Keller (1983, 2010) and his model of motivation and instructional design, which has its roots in the expectancy-value theory and integrates perceptions from multiple theories (Keller & Kopp, 1987). Keller (1983) defines motivation as "the choices people make as to what experiences or goals they will approach or avoid, and the degree of effort they will exert in that respect" (p. 389). He also considers motivation to be the "neglected heart of our understanding of how to design instruction" (p. 390). Crookes and Schmidt (1991) referred to Keller's ARCS (attention, relevance, confidence, satisfaction) model as a potential framework to bridge the gap between L2 motivation research and the classroom learning situation. They also brought up other similar frameworks from educational psychology (e.g., Wlodkowski, 1985). Research following Crookes and Schmidt's (1991) influential article was booming (Dörnyei, 1994; Gardner & Tremblay, 1994; Oxford, 1994; Oxford & Shearin, 1994), and different applied linguists started to draw on other cognitive theories that were developed in educational psychology, such as self-

determination theory and attribution theory, which according to Dörnyei and Ushioda (2021) opened new horizons in L2 motivation research.

Self-Determination Theory

Self-determination theory (SDT; Deci & Ryan, 1985) concerns "the investigation of people's inherent growth tendencies and innate psychological needs that are the basis for their self-motivation and personality integration" (Ryan & Deci, 2001a, p. 68). According to Ryan and Deci (2001a), those psychological needs are grouped into three categories: (a) the ability to relate and connect to other beings, (b) the ability to feel autonomous and controlling of one's behavior and choices, and (c) the ability to feel competent and capable of achieving a task. Subsequently, SDT distinguishes between three types of human motivation: *intrinsic*, *extrinsic,* and *amotivation* on the spectrum of possible motivation approaches (Ryan & Deci, 2001b). Intrinsic motivation refers to the spontaneous act of doing something to seek self-enjoyment (e.g., learning English because it is interesting), whereas extrinsic motivation is doing something to seek a desirable outcome (e.g., learning English to get a good job). Amotivation is the state of lacking motivation in doing something, no matter if it brings an intrinsic or extrinsic value (e.g., a student who has no interest in learning a new language, even if they recognize the potential intrinsic or extrinsic value of doing so).

According to Dörnyei and Ushioda (2021), L2 scholars have seen merit in SDT, and they tried to draw insights from its components to understand L2 motivation (Noels, 2001; Noels et al., 2019). Noels and her colleagues were the first to create an instrument to measure motivation in SDT. They developed the Language Learning Orientations Scale (LLOS), which is a questionnaire designed to measure the three types of motivation in SDT: intrinsic, extrinsic, and amotivation. This instrument is somewhat similar to Gardner's AMTB, as Noels and her

colleagues found that the integrative motivation is strongly correlated with the intrinsic motivation and the instrumental motivation with the extrinsic motivation. Thus, in some respects, it looks like the field was circling back to Gardner's socio-educational model. Nonetheless, as Dörnyei and Ryan (2015) claim, SDT has worked its way to connect the past with the future, and the decision of which theory to use pertains to specific research goals and rests with the researchers. That said, Noels's line of work, in accordance with SDT principles, has generated a wealth of research in the L2 motivation field (McEown et al., 2014). Noels et al. (2019) mention that in the past 20 years, more than 300 studies have utilized SDT in language learning research, including research on designing classroom interventions to raise L2 students' interest and autonomy (Kaur et al., 2015), teaching with the aid of technology to promote self-determination (Akbari et al., 2015), and assessment (Zoghi & Malmeer, 2013).

Attribution Theory

Dörnyei and Ryan (2015) reported that attribution theory (Wiener, 1986) gained prominence amongst educational psychologists in the 1980s as a potential theory to explain students' motivation. The theory postulates that individuals' attribution of their achievement or failure in past events to factors like effort, ability, task difficulty, or luck, shapes their motivation in future events. Dörnyei and Ushioda (2021) point out that explaining the attributional process of students' past experiences was appealing to L2 motivation scholars because it paved the way for promoting qualitative methods as a new line of research inquiry in the field (Ushioda, 1994, 2020). Attribution theory also drew attention to the temporal and dynamic nature of motivation that shaped most of the current approaches to studying L2 motivation, as we see next in the process-oriented period of L2 motivation research.

The Process-Oriented Period (Socio-dynamic)

As we observed earlier, cognitive theories of motivation that were mostly established by psychologists such as John Atkinson, Kurt Lewin, Richard Ryan, Edward Deci, and Bernard Weiner had, and still have, a major influence on shaping our understanding of motivation in SLA. However, as Dörnyei and Ushioda (2021) explain, learning a second language happens over a long period of time and goes through certain processes where motivational levels could be fluctuating and unstable. The understanding of the utility of cognitive theories, at that time, did not expand to explain the temporal and dynamic nature of motivation, especially when it unfolds in learning a second language. Also, the role of context and the relationship between the individual and society had yet to be examined as possible influencers of motivational change in learning a second language. Therefore, the field was ready to turn to the process-oriented period of L2 motivation research, or what others call the 'socio-dynamic' period (Boo et al, 2015; Dörnyei & Ryan, 2015) or even the 'social turn' (Block, 2003; Dörnyei & Ushioda, 2021), which helped in shaping the face of current L2 motivation research. This period has been mainly categorized by research on the role of context (Norton, 2000; Ushioda, 2009), vision, (Dörnyei, 2005), and time (Hiver et al., 2021a; Feng & Papi, 2020) in understanding L2 learners' motivation.

Identity and Investment

Research on identity and investment in the field of SLA started in the 1990s when Bonny Norton published her seminal article 'Social identity, investment, and language learning' (Norton Peirce, 1995) in *TESOL Quarterly*. Although the notion of investment is strongly tied to identity, I will focus on explaining investment because it is usually discussed alongside motivation (Darvin & Norton, 2021). Dörnyei and Ushioda (2021) mention that Norton's interest in the social construct she calls *investment* aligned with the social turn of L2 motivation research where

language learning started to be viewed from a sociocultural lens rather than a cognitive psycholinguistic one. Darvin and Norton (2015) claim that cognitive theories of motivation fundamentally focused on individual differences and on establishing linear models to explain causality, but little attention was paid to the role of society and identity in shaping individuals' motivation. There was an urgent need for a new research paradigm that accounts for the social complexities embedded in the L2 learning context and the subsequent effect of the environment on language learners' motivation. Consequently, Norton developed the construct of investment and defined it as "a learner's commitment to learn a language, given their changing identities and their hopes for the future, in frequently inequitable social contexts" (Norton, 2020, pp. 161-162). In Norton's view, language learners might be motivated to learn a target language but become easily not invested in it or in the learning context if they felt that their identity was threatened by inequitable social practices, such as being discriminated against or marginalized in the society or the learning context. In other words, their motivation could be hindered by their complex relationship as individuals with the society, which in turn will impact their language learning.

In a recent article, Darvin and Norton (2021) mentioned that investment is usually conflated with motivation in SLA research. However, they illustrated that the two constructs are conceptually and theoretically distinct, wherein motivation is "a psychological construct that focuses on conscious and unconscious factors," but investment is "primarily sociological and focuses on how histories, lived experiences and social practices shape language learning" (p. 1). Darvin (2019) points out that while the affective aspect of motivation places individual differences over social issues, investment positions the learner as a social being with a unique and fluid identity. The two constructs, in essence, aim to answer two different questions; one is "Are students motivated to learn a language?" and the other is "Are students invested in the

language practices of the classroom or community?" (Darvin & Norton, 2015, p. 37). That said, it should be noted that although motivation and investment are conceptually different, many scholars consider them complementary to each other, and they offer a wider perspective on understanding the motivation and commitment of the learner to learn the L2 (Clément & Norton, 2021; Darvin, 2019; Darvin and Norton, 2015, 2021). Furthermore, Darvin and Norton (2021) explain that these two constructs "are not substitutes for each other and neither is one subsumed by the other" (p. 9).

Empirical research on investment is proliferating in Applied Linguistics with research investigating the effect of investment on L2 learning and identity mostly done in contexts like Asia (Gearing & Roger, 2017; Gu, 2008; Lee, 2014) and Africa (Early & Norton, 2014; Norton et al, 2011; Norton & Williams, 2012; Stranger-Johannessen & Norton, 2017), though with little research done in the Arab context, probably due to the complexities of power relations in those contexts where students might abstain from challenging policy makers in some situations where they feel they might face a backlash from those on the top of the hierarchical structure and which may lead to course failure. At least in my own experience as a teacher in this cultural context, I have found teachers who discouraged bringing political or critical social matters inside language classrooms because they were afraid of losing their jobs. With that said, that is not always the case as we can see in a longitudinal study on the investment of two Syrian students in English learning by Hajar (2017).

Ushioda's Person-in-Context Relational View of L2 Motivation

According to Dörnyei and Ushioda (2021), most of Bonny Norton's work was reflected in Ema Ushioda's work, who started to develop an interest in qualitative research methods in L2 motivation in 1996 when she was finishing her PhD. Ushioda (2020) mentions that Crookes and

Schmidt's (1991) call for a shift in the research agenda helped in positioning her as a doctoral researcher to carry out a similar research agenda, wherein their focus was more oriented to a 'practitioner-validated' concept of motivation and hers on a 'learner-validated' concept of motivation. Similar to Norton's ideas, Ushioda (2009) sees L2 learners as 'persons-in-context' whose identities and motivations are shaped by their historical contexts. Ushioda looks at the learner as being part of the historical and cultural context, not as a separate 'individual' as Gardner's theory implied. She emphasizes learner's 'agency,' which was neglected in most cognitive theories of learning. In Ushioda's view, the motivation to learn a second language is far more complex than merely establishing cause-effect linear models that assume a one-size-fits-all approach of understanding motivation. Instead, motivation should be viewed as emergent from the learners themselves, who are the products of their own unique cultural contexts. This relational view of motivation has been influential in the field of SLA and has helped in shifting the research paradigm from solely relying on self-report measures of motivation to exploring more holistic and qualitative approaches of researching L2 motivation, such as conducting interviews (Lamb & Arisandy, 2020), collecting learner and teacher reflective journals (Sampson, 2016), and doing narratives (Harvey, 2017). I will elaborate more on this in the last section of this chapter.

Dörnyei's L2 Motivational Self System

As we observed with the two previous concepts, context plays a major role in shaping and understanding L2 motivation. Besides context, *future vision* has recently come to be a major construct in many psychological and L2 motivation theories and it is considered the dynamic aspect of self-theories (Dörnyei & Ushioda, 2021). One of the most influential theories in L2 motivation research, which highlighted the notion of future vision, is the L2 Motivational Self

System (L2MSS; Dörnyei, 2005). Teimouri (2017) points out that Dörnyei's L2MSS theory drew on self-theories in social psychology, specifically Markus and Nurius's (1986) possible-selves theory. The core of possible-selves theory relies on concepts like 'goal-setting' and 'expectancy' to explain human behavior. Referring back to the first main section where I analyzed the history of motivation, I pointed out that forming expectations about the future gave rise to goal-setting theories and some self-theories in early psychology research. These theories were found to be useful in explaining how L2 learners' mental imagery of themselves shapes their motivation in SLA, as postulated by the L2MSS theory.

According to Dörnyei and Ushioda (2021), the L2MSS is composed of three constructs: the ideal L2 self, the ought-to L2 self, and the L2 learning experience. The ideal L2 self is how L2 learners imagine themselves as successful (i.e., ideal) L2 learners or speakers. Conversely, the ought-to L2 self is the L2 learners' realization of someone else's vision of them becoming ideal language speakers. The L2 learning experience is more concerned with how the L2 environment (i.e., teachers, students, materials, tasks) helps in predicting and shaping the L2 learners' motivation. This theory is important to highlight because, first, it is the most common theory in L2 motivation studies, being the basis of more than 40 studies published in high-impact journals (Boo, et al, 2015; Mahmoodi & Yousefi, 2021). Second, Teimouri (2017) states that the 'L2 learning experience' construct in Dörnyei's theory was found to be the most predictive factor of motivation in several L2 studies. This construct, as Dörnyei and Ushioda (2021) explain, has been extended in recent years to incorporate research on L2 engagement, which in their view is a concept that offers a concise description of L2 classroom practices, compared to the broader term 'L2 learning experiences'.

Engagement

Alongside context and future vision, the temporal aspect of motivation shaped most of the current literature in the process-oriented period of L2 motivation in SLA. The idea that learning an L2 happens over an extended period of time or that it needs to be sustained was particularly influential in developing theories of L2 engagement (Hiver, et al., 2021a; Hiver, et al., 2021b; Lambert, et al., 2017) and grit (Feng & Papi, 2020; Khajavy, et al., 2021; Teimouri, et al., 2020). Engagement is characterized as being action-related, context-dependent, dynamic, and often associated with an object such as a task or an activity (Hiver et al., 2021b). However, there is a mutual agreement among L2 scholars and educational psychologists that 'action' is the defining aspect of engagement (Hiver et al., 2021a, 2021b; Mercer & Dörnyei, 2020). Skinner et al. (2009) define engagement as "energized, directed, and sustained actions" (p. 225). In L2 learning, the action aspect of engagement is often associated with active participation and task involvement (Dörnyei & Ushioda, 2021). Thus, engagement is also defined as "effortful learning through interaction with the teacher and the classroom learning opportunities" (Christenson et al., 2012, p. vi). Taking a holistic approach, in educational psychology, Fredricks et al. (2004) view engagement as a meta construct that encompasses three main dimensions: (a) behavioral engagement, which is related to students' active participation in academic tasks, (b) emotional engagement, that concerns students' feelings and emotions toward the learning environment (e.g., tasks and peers), and (c) cognitive engagement, which refers to the cognitive and thinking processes a learner undergoes to achieve a task. Hiver et al. (2021b) also add 'social engagement' and define it as the learners' social interaction with peers and their affiliation with the society and the learning environment, which in some respects is similar to Norton's investment concept.

Dörnyei and Ushioda (2021) believe that in current times, learners are distracted by many things, and that it is becoming more than ever a challenging task to attract their attention. A student might be highly motivated to learn, but gets easily distracted by the surrounding environment and thus loses this initial motivation. The concept of attention, therefore, is core to engagement; without attention there is no engagement (Hiver et al, 2021b). It is worth mentioning that attention is a popular construct in the field of language learning (Rebuschat, 2015), and also one of the four constructs in Keller's (2010) ARCS (Attention, Relevance, Confidence, Satisfaction) model of motivational design for learning and performance. (I will elaborate more on the notion of attention when I discuss Keller's ARCS model in the next section.)

As with investment (Norton, 1995), a concept like engagement is not easily defined. It also has been widely conflated with numerous concepts in the educational psychology literature (Fredricks et al., 2004), including *motivation to learn* (Brophy, 1987). This confusion has extended to the field of SLA (Hiver et al., 2021b), especially when it comes to drawing a line between engagement and motivation, considering their conceptual similarities. Even Dörnyei himself, who published a book about engagement with Sarah Mercer (*Engaging Language Learners in Contemporary Classrooms*, 2020) just before his untimely death, refers to engagement as "motivational engagement" (Dörnyei & Ushioda, 2021, p. 101). This makes it complicated for motivation researchers in SLA to set those terms apart. Some scholars attempted to fully distinguish between engagement and motivation on the basis that motivation is a psychological variable that is concerned with learners' individual differences, whereas engagement is more concerned with the learning environment (Järvelä & Renninger, 2014). The unique aspect of engagement (i.e., action) has also been used as a distinct factor, with motivation

often seen as a precedent of action: “motivation is considered to be intent and engagement as action” (Reschly & Christenson, 2012, p. 14). Regardless of stated differences, I tend to see these two concepts as complementary to each other, the same way investment and motivation are interrelated. Mercer and Dörnyei (2020) described this complementary relationship by writing that “motivation is undoubtedly necessary for ‘preparing the deal,’ but engagement is indispensable for sealing the deal” (p. 6).

Grit

Grit is another recent construct from educational psychology that Teimouri et al. (2020) claim has not received much attention in the field of SLA. As with engagement, the notion of grit is associated with long-term motivation; students with more grit overcome obstacles and sustain high levels of motivation for longer periods of time (Dörnyei & Ushioda, 2021). Grit was originally introduced by psychologist Angela Duckworth and her colleagues (Duckworth et al., 2007). They defined grit as “working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress” (pp. 1087-1088). They also divided grit into two traits: (a) perseverance of effort, which refers to sustaining efforts for extended times, and (b) consistency of interest, which refers to maintaining passion even with failures and setbacks.

According to Feng and Papi (2020), the fact that grit is associated with academic achievement has attracted many SLA researchers to examine its relationship with L2 achievement. Teimouri et al. (2020) mention that, over the years, SLA researchers have attempted to connect motivation to L2 achievement, but little attention has been given to the role of grit as a personality trait in predicting L2 performance. Recent research in SLA found that grit is positively related to L2 achievement (Sudina & Plonsky, 2020; Teimouri et al., 2020; Wei et

al., 2019). Grit was also found to be related to engagement (Datu et al., 2016) and L2 learners' motivation (Teimouri et al., 2020). For example, Feng and Papi (2020) found that grit is associated with the ideal selves in Dörnyei's L2MSS theory. Grit is also significantly correlated with intrinsic and extrinsic motivation in Deci and Ryan's SDT, as shown in Changlek and Palanukulwong (2015). Yet, as Teimouri et al. (2020) explain, the notion of grit is still in its infancy and more research needs to be conducted in order to explore its potential contribution in the field of SLA.

Trait versus State Motivation

Before turning to discussing learner population in L2 motivation research, I should note that different traditions in motivation research have addressed themselves to conceptually distinct aspects of students' motivation in instructional settings, namely trait and state motivation. On one hand, Keller (2010) referred to trait motivation as a more enduring, stable characteristic of an individual's motivation that persists over time and across different situations. He added that trait originated in genetics but was widely adopted in personality theories in psychology to explain the individual's psychological traits. Brophy (1987) explained that students' motivations to learn can stem from a trait condition, especially when they find that learning is an intrinsically valuable and enjoyable activity. In language learning for example, trait motivation could reflect a student's overall interest in languages, curiosity about other cultures, or intrinsic desire to learn new things. Trait motivation constructs such as intrinsic motivation or motivational self-evaluation (another way to say self-assessed motivation) have been used in a couple of studies to measure students' trait motivation in L2 instructional settings (Alrabai, 2016; Moskovsky et al., 2013).

On the other hand, state motivation, also known as situation-specific motivation (Keller, 2010), refers to the temporary or situational motivational state that a person experiences in a specific moment or context. Keller (2010) highlights that state motivation can be influenced by factors such as the learning environment, the lesson activities, and the current level of interest or engagement, which he claims has useful applications for motivational design and for suggesting appropriate motivational strategies for learners. For example, a language learner might feel highly motivated when the teacher promotes group work but less motivated when studying alone. Keller (2010) makes an excellent distinction between trait and state motivation by stating that "even though trait psychology as a formal school does not command much allegiance anymore, the use of the word trait in a more metaphorical sense to refer to a stable personality characteristic in contrast to situationally demonstrated characteristics, called *states*, is quite common and as indicated applies to virtually all motivational variables" (p. 16). In L2 instructional settings, Moskovsky et al. (2013) found that state motivation variables, compared to trait variables, were more sensitive to the nature of the experimental study they conducted on Saudi L2 learners to measure their motivation towards teachers' use of motivational strategies (see also Guilloteaux & Dörnyei, 2008 for similar remarks).

Learner Populations in L2 Motivation Research

Now that I have covered what motivation is, how it works, and how it was perceived prior and after its starting point in SLA, one may wonder whose motivation is investigated in research, in terms of demographics such as geographical location, age, cultural differences, educational level. Is the L2 motivation field still dominated by North American populations as was evident in Gardner and his associates' work, or even European populations that are often featured in the work of Hungarian Zoltan Dörnyei and his students such as Kata Csizér? Boo et

al.'s (2015) analysis of more than 423 L2 motivation studies conducted between 2004 and 2015 in 53 countries revealed that the field is shifting attention from the famous Canadian/French bilingual context to Asian contexts. Their data showed that the largest number of studies were conducted in China (51 studies), followed by Japan (38 studies). Outside of Asia, the United States came in third with 30 studies. The dominance of the Asian population was also reported in a recent synthetic exploration (Mahmoodi & Yousefi, 2021) of 100 L2 motivation studies conducted between 2010 and 2019, where the researchers found that 53% of the studies took place in China and Japan. Europe and North America together constituted 46%, followed by only 1% in South America. Although the field is noticeably shifting interest to study the motivation of East Asian students, probably due to large EFL populations in these contexts, none of these syntheses reported statistical information regarding students in West Asia or the Middle East (including Saudi Arabia). The lack of reporting such data indicates that there is a scarcity of research investigating the L2 motivation of students in these specific cultural contexts (compared to West Asia and Europe), and that they deserve more attention considering the popular status of EFL learning/teaching in this part of the world. In addition, some limitations of previous research were indeed cultural. The individualistic aspects of North America could play out differently from the collectivist cultures of East Asia. And where the Middle East comes in remains to be seen—that is one of the motivations for my dissertation.

To sum up the second section of the literature review, I discussed the three historical stages that L2 motivation went through, beginning from the Gardnerian theory in social psychology up to the cognitive and process-oriented periods where L2 motivation researchers adapted concepts and theories from educational psychology to inform our knowledge of L2 learners' motivation. I just want to note that there is a forest of related concepts and terms in the

L2 motivation field, coverage of which goes well beyond the capacities of a (single) dissertation. To mention a few: resilience, persistence, self-control, coping capacity, stamina, hardiness, buoyancy, conscientiousness, mental toughness, self-regulation, directed motivational currents, willingness to communicate, unconscious motivation, mindsets, and many others. (See Dörnyei & Ushioda, 2021 for a review of some of these concepts.) Instead, I have tried to be selective by choosing the most influential theories and concepts that have shaped most of what we read in the L2 motivation literature. (See Mahmoodi & Yousefi, 2021 for a discussion of the most employed theoretical frameworks in L2 motivation studies.) I also illustrated shifts of ideas over time by highlighting constructs like engagement and grit which are getting more attention in recent years by L2 motivation scholars. Conceptions of individual and society were also manifested in my discussion of Norton's notion of investment and Ushioda's person-in-context relational view of motivation, wherein I illustrated that besides the prominent role of individual differences in cognitive theories, context also plays an integral role in shaping the motivation of L2 learners. I concluded this section by discussing the learner populations that have been primarily considered in L2 motivation research and those populations that were comparatively neglected or understudied. On a final note, the word *motivation*, as I have observed in the previous sections, has been often conflated with several related concepts such as engagement, investment, and grit. It has become challenging for me as a novice researcher to separate motivation from these 'neighboring' constructs. This brings me back to the point I raised in the first section of the literature review, when Danziger (1997) mentioned that motivation was used as an abstract term in the 1920s by psychologists to put words like instincts, drives, and needs under the umbrella of motivation as a general concept that represents their commonalities. Following a similar approach, from here on in the dissertation, I will be using the conventional term 'motivation' to

avoid conceptual unclarity in discussing issues of motivation in L2 research. In other words, similar to how educational psychologists perceive the multidimensionality of the engagement construct, I will view motivation as a 'meta construct,' acknowledging its multifaceted nature and also its subtle differences with other related concepts. Nevertheless, the growing number of terms appearing in the L2 motivation field shows that the field is thriving and that there is room for more research to understand L2 learning motivation. I will conclude this section with a comment from Dörnyei and Ushioda (2021) on the recent emergence of several concepts:

> It is not yet clear which of these initiatives will play a lasting role in moving the field forward and which will not stand the test of time, but the emergence of such a variety of perspectives is evidence of the vigour of L2 motivation research. (p. 93)

Motivation in L2 Pedagogy

In this third main section, I first start by reviewing how the cognitive-situated period of L2 motivation highlighted the role of L2 learning, especially the role of teachers in influencing students' motivation. This has resulted in a major line of research called motivational strategies (MotS) that has been integrated into the field from various perspectives, namely Dörnyei's (2001) taxonomy of MotS, Keller's (1987, 2010) model of motivational design, and other alternative approaches. I lastly turn to discussing some theory-based approaches to researching motivation in L2 pedagogy, such as Deci and Ryan's (1985) SDT, Dörnyei's (2005) L2MSS, and other theories in mainstream education.

Teachers' Use of Motivational Strategies

Upon the rise of the cognitive revolution in L2 motivation research called for by Crookes and Schmidt (1991), there was a strong push to depart from the dominating social psychological

perspectives of understanding L2 motivation in SLA by Gardner and his associates. Gardner's (1959) model was criticized because it focused heavily on attitudes toward the community of the target language and left little room for exploring the role of motivation in L2 pedagogy, especially as it relates to teachers, classroom activities, and materials. In their recent synthesis of more than 400 L2 motivation studies conducted between 2005 and 2014, Boo et al. (2015) found that while the majority of studies focused on learners' 'motivation,' almost 30% of the remaining studies were on 'motivating' the learner. Sudina (2021) also stated that most research on motivation focused on students' individual motivation, but what teachers do to motivate students in the classroom is also of interest. According to Lamb (2017), motivating the learner commonly happens in the L2 classroom, which highlights the central role of the teacher in promoting motivation in such an environment. Crookes and Schmidt (1991) state that prior to the cognitive-situated period of L2 motivation, the "teacher-validated use of the term motivation has not been adopted by SL investigators, but it is very close to the concept of motivation that has been substantially explored outside SLA, particularly in social and educational psychology" (p. 480). In response to Crookes and Schmidt's calls for a teacher-friendly understanding of motivation in the early 1990s, several L2 scholars started to look for ways that teachers can motivate their students to learn an L2 (Brown, 1994; Dörnyei, 1994; Dörnyei, 2001; Williams & Burden, 1997). A popular example is Dörnyei's (2001) taxonomy of MotS that was the base of more than 20 studies published in major SLA/applied linguistics journals (e.g., Alrabai, 2016; Guilloteaux & Dörnyei, 2008; Lamb et al, 2016; Moskovsky et al., 2013; Papi & Abdollahzadeh, 2012; Wong 2014).

Considering the prominent role of the teacher in motivating students, which was emphasized in the aforementioned studies, the question of whether teachers must motivate their

students or not has been the subject of considerable debate among scholars in the literature (Ahl, 2006; Dörnyei & Ushioda, 2021; Lamb, 2017, 2019; Noddings, 1997). On one hand, Ahl (2006) questions the ethicality of motivating students in the first place and claims that it is merely an external agenda imposed on students from policy makers to achieve excellence in designated educational contexts. Noddings (1997) takes a more democratic stance by claiming that teachers and students can participate in the participatory process of creating a curriculum that allows the teachers to keep their jobs and the students to be exposed to topics of their own interests. Lamb (2017), on the other hand, admits that English teachers across the globe face several motivational challenges, and they find themselves under constant pressure from educational entities and from learners to deliver excellent teaching; however, he points out that excellent teaching does not necessarily entail motivational teaching. He claims that teachers sometimes should go the extra mile, especially on a Monday morning for example, by explicitly focusing on promoting and sustaining their pupils' motivation to ensure better learning outcomes. Lamb's views coincide with those of Dörnyei and Ushioda (2021) as they explain that students' motivation to learn anything should not be taken for granted, even under ideal conditions, and that their motivation can be "worked on" and "increased" (p. 113). Notwithstanding the ethical concerns, and out of the belief that teachers play an essential role in motivating their students to learn the language, a major line of research called motivational strategies (MotS) has emerged in the field to bridge the gap between theory and practice and offer teachers practical ways to enhance students' motivation. This line of research gained prominence among L2 scholars upon the rise of the cognitive-situated period of L2 motivation research, as it simply provides teachers with techniques "to consciously generate and enhance student motivation, as well as maintain ongoing motivated behaviour and protect it from distracting and/or competing action tendencies"

(Dörnyei & Ushioda, 2011, p. 103). Lamb (2019) points out that this type of research pertains to the motivational dimension of language teaching—a major subset of how motivation has typically been conceived of in L2 pedagogy. In particular, researchers have recently considered the motivational qualities of instructional materials in L2 learning, drawing on Keller's (2010) ARCS model of motivational design as a potential framework to research MotS as they relate to the teacher's instructional materials.

Dörnyei's (2001) Taxonomy

The MotS line of research gained prominence among L2 scholars upon the rise of the cognitive-situated period of L2 motivation research, as it provides teachers with techniques "to consciously generate and enhance student motivation, as well as maintain ongoing motivated behaviour and protect it from distracting and/or competing action tendencies" (Dörnyei & Ushioda, 2011, p. 103). When we talk about MotS in the field, we often encounter Dörnyei's (2001) well-known motivational taxonomy. This taxonomy was an expansion from Dörnyei's (1994) first attempt to create a framework based on Crookes and Schmidt's (1991) categorization of motivation levels in the learning situation. Subsequently, Dörnyei (1994) proposed a framework of three levels: a language level, which is based on Gardner's theory of integrative and instrumental motivation; a learner level, that is based on self-theories such as self-efficacy; and a learning situation level, that drew insights from educational psychology such as the work of Keller (1983, 2010). This framework turned into an extended taxonomy in Dörnyei's (2001) well-known book on MotS where he proposed four components that teachers can integrate in their teaching and thus, he claimed, motivate students: (a) creating basic motivational conditions, (b) generating initial motivation, (c) maintaining and protecting motivation, and (d) encouraging positive retrospective self-evaluation. Across these four components, a total number of 102

micro-strategies were identified, which Dörnyei proposed to L2 teachers. This extensive list was also an expansion from the original ten 'Commandments for Motivating Language Learners' that were suggested by Dörnyei and Csizér (1998).

Gardner and Tremblay (1994) challenged the idea that teachers' use of MotS can have a real effect on learners' motivation, and they asked for empirical evidence to prove this relationship. Thus, in response to their challenge, more than 20 studies were published in major SLA/applied linguistics journals to validate Dörnyei's taxonomy and show that MotS do actually work (Lamb, 2019). Several of these studies have examined teachers' self-reported perception and use of the MotS suggested in his taxonomy (Cheng & Dörnyei 2007; Guilloteaux, 2013; Henry et al., 2018; Lamb et al., 2016; Wong, 2014). However, only a few empirical studies attempted to examine the relationship between teachers' use of MotS and learners' motivation (Guilloteaux & Dörnyei, 2008; Papi & Abdollahzadeh, 2012; Sugita & Takeuchi, 2014), and even fewer on the direct effect of these strategies on students' motivation (Moskovsky et al., 2013) and L2 performance (Alrabai, 2016) by means of a quasi-experimental design (see Table 1 below for a summary of some studies based on Dörnyei's (2001) taxonomy). An example of a correlational study was conducted by Guilloteaux and Dörnyei (2008), who investigated the effect of teachers' use of MotS on the motivation of 1300 EFL students in South Korea. The teachers were encouraged to use a set of strategies proposed in Dörnyei's (2001) taxonomy. Data was collected using a self-reported questionnaire, a post-lesson teacher evaluation scale, and a classroom observation scheme. Their results showed that students' high motivation correlated positively with teachers' use of MotS, indicating that MotS can play a positive role in motivating students to learn a foreign language. However, because correlation is not causality, Alrabai (2016) attempted to validate Dörnyei's taxonomy using a quasi-experimental design to

investigate the effect of teachers' use of MotS on the motivation and L2 achievement of 437 Saudi EFL learners. Participants were equally distributed into a control group (receiving traditional instruction) and an experimental group (receiving 6 MotS that were chosen by 14 EFL Saudi teachers). Similar to Guilloteaux and Dörnyei (2008), self-reported questionnaires and an observation scheme were used to collect the data. The results indicated that during a 10-week course, students in the experimental group showed higher L2 achievement and motivation compared to students in the control group. Alrabai concluded that teachers' use of MotS had a positive effect not only on students' motivation, but on their L2 achievement as well.

Table 1 A Summary of Empirical Studies Based on Dörnyei's (2001) Motivational Taxonomy

Study	Context	Design	Main findings
Guilloteaux & Dörnyei, 2008	1300 EFL students in South Korea and 27 teachers.	The design was correlational—the authors aimed to find a relationship between the teachers' use of motivational strategies and students' motivation—measured with a survey, observation scheme, and a teacher evaluation scale.	Teachers' motivational practices had a high and significant correlation with students' motivation ($r = .61$), yet students' self-reported motivation showed a lower correlation with their observed motivational behavior ($r = .35$).
Papi & Abdollahzadeh, 2012	741 EFL students and 17 teachers in an Iranian secondary school.	A replication of Guilloteaux & Dörnyei (2008) with additional focus on some elements of Dörnyei's (2005) L2 Motivational Self System.	Teachers' motivational practice highly and significantly correlated with students' motivational behavior, but students' self-reported motivation yielded a nonsignificant relationship with their motivational behavior.
Moskovsky et al., 2013	296 EFL Saudi college students and 14 teachers	A pretest-posttest quasi-experimental design where the treatment group ($N = 153$) received motivational treatment (10 motivational strategies), whereas the control group ($N = 143$) received traditional instruction over the span of 8 weeks. The authors only utilized a motivation survey that consists of 19 motivational constructs to test the effect of teachers' use of motivational strategies on students' motivation.	The results indicated that the intervention had a significant effect on students' motivation in the treatment group compared to their peers in the control group. It was also interesting to note that this effect was larger in the state variables in the survey compared to the trait variables (no effect size was reported). The authors mentioned that state items in the survey were more sensitive to the experimental nature of the study.
Sugita & Takeuchi, 2014	222 EFL undergraduate students and one teacher in Japan	This study was correlational in design and looked for relationships between 17 motivational strategies utilized by the teacher during one semester and students' motivation. This relationship was examined through a motivation self-report survey that was administered four times.	Seven motivational strategies correlated highly with students' motivation, whereas five did not show a significant correlation and three correlated negatively with students' self-reported motivation.
Alrabai (2016)	437 EFL Saudi students and 14 teachers in 5 different Saudi colleges.	A pretest-posttest quasi-experimental design where the experimental group received motivational treatment (6 motivational strategies), whereas the control group received traditional instruction over the span of 10 weeks. The author used a 66-item self-report survey that consisted of 8 different constructs to measure students' motivation and he also used an observation scheme. He also examined if motivation would lead to better language achievement using a short achievement test.	The results showed that the treatment had a significant effect on all motivational variables, except motivational intensity, in favor of the experimental group. The effect sizes, in terms of partial eta squared, were small on four motivation constructs and medium on three constructs. Also, achievement scores were significantly higher in the experimental group compared to the control group. The effect size was medium.

The results of these two studies (Alrabai, 2016; Guilloteaux & Dörnyei, 2008), and all the other studies mentioned above, show that teachers' use of MotS does influence students' motivation. However, while Dörnyei's (2001) taxonomy is certainly expansive, a limiting factor in its application may be that it does not offer guidance or make a connection on how to integrate MotS into teachers' instructional materials, such as lesson plans, activities/tasks, and related materials. In other words, the abovementioned studies, taken together, focused on suggesting broad strategies that are derived from cognitive theories whereas "little is known about strategies relating to the design and content of classroom activities" (Henry et al., 2018, p. 304). After all, the teacher is not the only source of motivating students in the L2 classroom; materials, tasks, and activities also play a significant role in influencing learners' motivation. This is supported by Crookes and Schmidt's (1991) claims more than 30 years ago, that activities such as group work have a positive effect on learners' motivation. They also consider the role of materials by claiming that the content and design of relevant and interesting materials can enhance students' motivation. These aspects of the L2 learning situation, however, did not receive enough attention in studies that used Dörnyei's (2001) taxonomy. Maeng and Lee (2015) state that orthodox research on MotS did not consider the role of "materials, tasks, and instructional design" (p. 27). This was also evident in Lee and Lin's (2019) study where they asked 22 EFL Chinese teachers to record the MotS they used in a journal, and then the authors compared them to the MotS in Dörnyei's taxonomy. They found that teachers mostly reported instructional strategies rather than motivational strategies, such as utilizing media in the classroom to support a certain idea. Also, there is probably unintentional neglect of the lesson itself as an instructional unit in the literature on language learning and teaching, especially in Dörnyei's taxonomy. Long ago, Crookes and Schmidt (1991) emphasized the role of classroom practice, manifested in lessons

and their activities, in motivation research, stating that "even the straightforward framing remarks initiating an activity or the presentation stage of a lesson deserve to be assessed in the light of motivational considerations" (p. 487). Subsequently, Dörnyei developed MotS for L2 teachers who are willing to foster their students' motivation, but he does not address how these strategies could be integrated in L2 materials, or how they might appear and what form they might take in an actual lesson plan. In Dörnyei's taxonomy, it appears that teachers' voluntary use or perception of MotS is emphasized over their integration into instructional materials. Lamb (2019) stated that Dörnyei's (2001) taxonomy, although well known in the academic field, is still "limited in scale and impact" as teachers do not use MotS consistently in their instruction, and learners often fail to notice them when they do, which Lamb thinks is important for learners' motivation (p. 295). For example, if we look at some of the strategies used in Alrabai (2016)— turn the language classroom into an anxiety-free zone, reduce learner communication apprehension, reduce the fear of negative evaluation in learners, reduce the fear of language testing in learners, properly address learner anxiety-provoking beliefs/misconceptions, help students to set specific and realistic goals for learning English— teachers might find it challenging to translate these into actual instructional tactics, or even decide how they might be embedded in instructional materials like activities or the lesson plan itself. Lamb (2019) asserts this position by stating that the inherent problem of researching MotS is to figure out "what do individual teachers understand by strategies like 'present the tasks properly,' 'give sensitive feedback' or 'increase the learners' goal-orientedness,' and how do they try to realize them in practice?" (p. 300). Even though in Alrabai (2016), for example, those strategies were operationalized by suggesting some techniques for teachers in the form of an implementation guide (which the author did not share publicly), he still shared some examples of these

techniques in the main study (e.g., turn the language classroom into an anxiety-free zone, reduce learner communication apprehension, and reduce the fear of language testing in learners) which are still, to Lamb's (2019) point, fairly general. It could be challenging for teachers to make sense of or know how to integrate them into their teaching style.

To address these issues, I look outside of applied linguistics to educational psychology, where a long line of work addressing how materials and associated teacher instructional practices can motivate students is available in the work of Keller and his associates (e.g., Keller, 1987, 2010). I propose bringing Keller's (1987, 2010) Attention, Relevance, Confidence, Satisfaction (ARCS) model to the field of applied linguistics, as recommended by Crookes and Schmidt (1991) and Lamb (2019), to offer an additional perspective on understanding the interplay between motivation and pedagogy in L2 classrooms as mediated by forms of instruction. Through the lens of Keller's ARCS Model, it is hoped that the design of L2 materials such as lesson plans and language activities with motivational intent will open new avenues in L2 motivation research, particularly in the MotS line of research.

Keller's (2010) ARCS Model

Over some decades, Keller (1987, 2010) created a motivational design model that instructors can use to incorporate four major components into their lesson design with the goal of boosting students' motivation toward learning the subject matter. Keller (2010) defined motivational design as "the process of arranging resources and procedures to bring about changes in people's motivation" (p. 22). This model is called the ARCS model and it consists of four elements, namely, Attention, Relevance, Confidence and Satisfaction (hence the ARCS). Keller (2010) stated that instructors using the ARCS model need to attract students' attention by provoking curiosity in the lesson, designing tasks that are relevant to students' interests, building

students' confidence by making them believe they will succeed, and rewarding students so they can feel some sense of satisfaction. Keller (1987) wanted to synthesize several human motivation theories and instructional theories into one comprehensive and practical model that practitioners and teachers could easily utilize in their instruction. His concern at that time was that many motivation theories were either focused on explaining individual psychological variables or explaining job performance-related motives, without looking carefully into the application aspect of these theories and how instruction, for example, could influence motivation. Keller (1987) adds that motivation theories in education were more concerned with reinforcement issues, and even the most promising ones with clinical application (e.g., Wlodkowski, 1978) fell short in integrating a broad range of theoretical perspectives and tailoring MotS for the specific needs of the teacher and instruction. All these concerns combined led Keller to integrate several motivation theories and concepts that formed the four dimensions of his model, including but not limited to social learning theory, environmental theories, humanistic theories, aspects of attitude theory, decision theory, attribution theory, cognitive evaluation theory, equity theory, cognitive dissonance theory, locus of control, and learned helplessness (Keller & Kopp, 1987). Keller (2010) also states that his model is deeply rooted in Tolman and Lewin's expectancy-value theory. In fact, the construct of expectancy was expanded from his original model (Keller, 1983) to encompass attention and relevance, whereas value is depicted in confidence and satisfaction as observed in the current state of the model (Keller, 1987, 2010).

According to Keller and Kopp (1987), the first step to motivate students is to acquire their attention, direct it to a certain stimulus, and then sustain it. Keller (2010) categorizes attention as (a) perceptual arousal, where teachers attempt to gain and maintain students' motivation by telling a joke or introducing a surprising fact, for example, (b) inquiry arousal,

where they use problem-solving activities to provoke students' curiosity, and (c) variability, where they vary the forms of instruction like using a video to explain a certain point in the lesson instead of a traditional form like the textbook. Once students' attention is acquired, Keller (2010) points out that it is important to make instruction relevant to their own interests. He mentions that students would lose their motivation if they figured that nothing about the content of the course will add value to their real lives or will be relevant to their own interests. After students assign 'value' to the instruction that is relevant to their interests and makes them curious, their 'expectancy' for success determines their motivation. Keller and Kopp (1987) explain that even if students found instruction interesting and relevant, they would still fail to be motivated if they lacked confidence in their likelihood of success. This could be avoided by providing students with evaluation rubrics or reminding them constantly of what it takes to succeed in a course. The last step is to ensure the continuity of this motivation by making students satisfied with the outcomes of their efforts. Keller (2010) mentions that learners' satisfaction can be enhanced by providing intrinsic rewards (i.e., positive comments that will enhance their self-esteem) or extrinsic rewards (i.e., extra grades), in accordance with Deci and Ryan's SDT.

In addition to the ARCS strong theoretical underpinnings, it is presented as a practical tool for teachers who are willing to motivate their students, but do not know how, that they can utilize effectively in the classroom. Keller (1983) stated that motivation is the "neglected heart of our understanding of how to design instruction" (p. 390). Also, in his most recent book, he shared a comment of a teacher who struggled with motivating students: "I don't know how to determine what kinds of motivational strategies to use, how many to use, or how to design them into the lesson" (Keller, 2010, p. 44). Keller (2010) also notes that his model does not bridge theory with practice in a linear relationship; rather it is a bidirectional relationship where

practitioners and designers could also inform theory by their unique motivational practices in the classroom. Therefore, the practicality of the ARCS model, in my view, could potentially answer some of Lamb's (2019) concerns that the core issue of MotS research in applied linguistics lies in teachers' lack of understanding of the application of MotS, as they are usually derived directly from the theory.

In addition, since instruction and materials are two key components in Keller's ARCS model, it is important to draw a line between these two terms. *Instruction* refers to the methods, strategies, and techniques that educators use to facilitate learning. It involves the actual teaching process where educators impart knowledge, skills, and concepts to students. This is usually done via using *materials*, which simply can be defined as the resources used to support instruction. These can include textbooks, worksheets, multimedia presentations, online resources, lesson plans, and other educational tools. Simply put, instruction is the process of teaching, while materials are the tools and resources used to facilitate that teaching.

Keller (1987) provided the first empirical evidence of the effectiveness of the ARCS model by testing it in two K-12 teacher training workshops in New York City. The goal of the workshops was to help teachers design motivational instruction with the help of the ARCS four components. After four months of the project, the teachers reported that the ARCS model offered them a broad perspective on how to easily integrate motivational aspects into their instruction. Since then, Li and Keller (2018) reported that the ARCS model has gained prominence in the educational field and has proven to be effective for the last 30 years in various educational contexts (e.g., Social Science, Business, EFL), in different countries (e.g., China, Turkey, Austria), and with different students (e.g., K-12 students, college and graduate students). It was even picked up by applied linguists such as Crookes and Schmidt (1991) as one of the easiest

bases from which to develop work that would compensate for the lacunae of Lambert and Gardner. In fact, Keller's model influenced the design of Dornyei's (1994) framework of MotS, and subsequently his 2001 taxonomy, as Dörnyei explained that the third level of his framework (the learning situation level) was originally derived from "Keller's motivational system-which is particularly comprehensive and relevant to classroom learning" (p. 277). However, the ARCS model has only rarely been drawn on directly in SLA, even though it was recurrently mentioned in publications on L2 motivation (Crookes & Schmidt, 1991; Dörnyei & Ushioda, 2011, 2021; Lamb, 2017, 2019) as an alternative approach to researching MotS. The impetus to do so appears to have come from EFL specialists who have found it themselves rather than any push from those most strongly associated with motivation in applied linguistics, such as Dörnyei. The small efforts by those EFL researchers resulted in a few promising empirical studies that adopted the ARCS model and examined its effect on students' motivation and L2 achievement in a few EFL contexts. A recent meta-analysis by Goksu and Bolat (2021) attempted to find the overall effect of the ARCS model on students' motivation and academic achievement across several domains, including EFL. They found that the ARCS model has a small positive effect on EFL students' motivation (d = .44) and a medium positive effect (d = .53) on their L2 achievement.

The majority of EFL studies that used Keller's model attempted to establish a cause-effect relationship between teachers' use of ARCS-based MotS as an independent variable and learners' motivation and L2 achievement as dependent variables (Chang et al., 2016; Chang & Lehman, 2002; Hung et al., 2013; Karimi et al, 2021; Kurt & Keçik, 2017; Proske et al, 2014; Ucar & Kumtepe, 2019; Wu, 2018). The findings of these studies indicated that learners who received the ARCS-based instruction in the experimental group outperformed their counterparts in the control group on measures of motivation and L2 performance. For example, in their

investigation of the effect of integrating ARCS components on the motivation and language achievement of 67 Taiwanese students in a mobile inquiry-based language learning setting, Chang et al. (2016) found that students in the experimental group performed slightly better than students in the control group on an outcome measure of vocabulary, grammar, and summarizing skills. Although there was no significant gain in achievement scores, students' motivation in the experimental group was significantly higher than those in the control group. Chang et al. (2016) concluded that although Dörnyei's taxonomy of MotS can offer teachers a detailed list of strategies, Keller's model "advocates four attributes in the motivational manipulations of the instructional process, offering a simple but useful framework for instructors to achieve their goals" (p. 102). More recently, in a traditional face-to face setting, Karimi et al. (2021) asked 10 EFL Iranian teachers to incorporate the ARCS four components into their instruction and deliver it to 100 Iranian learners. Teachers were randomly assigned to using ARCS or not using ARCS, but they taught intact student groups which may or may not have been equivalent. (This was not a true experimental design.) Data were collected via a self-report questionnaire (the Course Interest Survey, CIS), audio-recorded observations and a checklist to ensure the implementation of the intervention, and a student evaluation form. Among other findings, the CIS revealed that teachers' use of ARCS-based MotS had a significant positive effect on students' motivation in the experimental group with a moderate effect size. The authors stated that Keller's model is underexplored in EFL settings, especially in relation to research on MotS and their effect on students' motivation. Other correlational studies have also found that there is a strong relationship between teachers' use of ARCS-based MotS and students' motivation and L2 achievement (Li et al., 2020; Maeng & Lee, 2015; Min & Chon, 2021; Refat et al., 2019; Tsai & Liao, 2021).

In sum, based on the results of these studies, the ARCS model has shown some promising initial findings as a MotS model that can offer an additional useful perspective to the traditional research on MotS in our field, usually dominated by Dörnyei's (2001) famous taxonomy of MotS. Jeon (2020) mentions that a major strength of the ARCS model lies in its "simplicity and practicality which has contributed to popular application of the model in diverse academic fields" (p. 266). This model also offers a comprehensive view of MotS and shows some practical ways of integrating them into teachers' activities, materials, and instruction (Goksu & Bolat, 2021; Keller, 2010; Maeng & Lee, 2015). This line of research has shown some promising initial findings and presents a potentially useful and additional perspective on motivation in L2 learning and teaching/instruction.

Alternative Approaches to Researching MotS

Before I conclude this section on MotS, it is worth noting that there are alternative frameworks for researching MotS as reported by several L2 motivation specialists (Dörnyei & Ushioda, 2021; Lamb, 2017, 2019). One that is often cited alongside Dörnyei (1994), and in a lot of ways similar to it, is Williams and Burden's (1997) framework of L2 motivation that is based on Vygotsky's social constructivist theory of learning. Williams and Burden (1997) categorized motivational influences into (a) internal factors, such as self-worth, self-efficacy, and attitudes toward the target language and the target language community, and (b) external factors, that are more aligned with perceiving motivation as a dynamic and complex concept (e.g., how motivation is influenced by family relations and environmental influences). These two factors resulted in 12 general MotS that Williams and Burden suggested for teachers, such as 'recognizing people as individuals' or 'developing internal beliefs' (see Williams & Burden, 1997, pp. 141-142 for a full list).

Other approaches are mentioned in Lamb (2017), such as Bernaus and Gardner's (2008) traditional and innovative labels of MotS (measured by Gardner's AMTB), and other approaches reported in the wider educational literature (Anderman & Anderman, 2011; Schunk et al., 2013). The common theme between these alternative approaches, similar to Dörnyei's approach, is that they offer teachers some useful MotS based on different theories and concepts without particularly considering integrating these strategies into materials, activities, and the instructional design of the lesson (as was heavily emphasized in Keller's work). This is by no means an attempt to decry the effectiveness of those frameworks in helping teachers to motivate students; rather I see Keller's work adding a different perspective (perhaps a more practical one for teachers) to the traditional way of researching MotS in our field.

Motivation in L2 Pedagogy: Beyond the Traditional MotS Approach

MotS were not the only research avenue from where motivation is perceived in L2 pedagogy. Lamb (2017) reports that some prominent theories in psychology and the L2 motivation field have contributed to our understanding of the role of motivation in informing L2 pedagogy. One of these theories, which I already discussed in the previous section, is Deci and Ryan's (1985) SDT. I have previously mentioned that SDT gained merit in our field after it was picked up by Noels and her colleagues in Canada (Noels, 2001; Noels et al., 2019). Most empirical research that is based on SDT attempted to connect L2 teachers' efforts to promote autonomy with students' high levels of intrinsic motivation (Pae & Shin, 2011). After all, the SDT postulates that learners who enjoy the process of learning a language (i.e., have an intrinsic motivation) are most likely to exert more effort to learn the language, as compared to those who are solely driven by external motives such as passing an exam. Lamb (2017) mentions that Noels's work was heavily criticized because it is centered on the notion of autonomy, which

could be more pertinent to Western individualistic traits as opposed to Eastern collectivism. In other words, students in western cultures could be motivated if given the freedom to choose the activities and forms of instruction/evaluation that better suit their objectives; however, that might not be the case in a country like China where students might prefer the teacher to make such high-stake decisions. This criticism was refuted by Noels et al. (2014), who found that both Euro-Canadian and Asian-Canadian undergraduates valued their teachers' efforts to promote autonomy in the classroom and involve them in the decision-making process of designing instruction, as long as they had the teachers' active support and guidance.

Another prominent theory that influenced the current trend of vision-based instruction in the L2 motivation field (Dörnyei & Kubanyiova 2014; Sato, 2021; Sato & Lara, 2019) is Dörnyei's L2MSS theory. Studies that connected L2MSS with L2 pedagogy hypothesized that forms of instruction that support students' vision of themselves as future L2 users will help in increasing their motivation and L2 goals achievement. Dörnyei and Kubanyiova (2014) claimed that "vision is one of the single most important factors within the domain of language learning: where there is a vision, there is a way" (p. 2). Sato and Lara (2019) validated this claim in their quasi-experimental study where they designed seven vision-based tasks and asked teachers to implement them in two intact EFL classes in Chile. Examples of these tasks are asking students to record themselves while envisioning that they are highly proficient English businessmen, and then list some imagined situation where they might fail and how they might overcome this failure. The authors eventually found that those visionary tasks had a positive influence on students' ideal L2 self and learning experience. Other studies have utilized other forms of vision-based instruction, such as role-play (Munezane, 2013) and language counseling sessions (Magid & Chan, 2012). Other theories with L2 pedagogical implications are mentioned (Dörnyei &

Ushioda, 2021; Lamb, 2017) such as how teachers can promote students' self-efficacy according to Bandura's (1997) social cognitive theory and how they can regulate students' attributional beliefs based on Weiner's (1986) attribution theory.

Research Methods in L2 Motivation

Since the Gardnerian era, the idea that an abstract construct like motivation can be measured via some research tools at our disposal has been appealing to L2 researchers. Gardner himself, who was a skilled statistician according to Dörnyei and Ushioda, (2021), made it possible for researchers to measure motivation by means of his AMTB battery test tool, which was widely used and validated across several contexts for almost three decades (Gardner, 2009). However, the current advances in the L2 motivation field and the emergence of new concepts made researchers realize the multifaceted nature of motivation, which cannot be fully measured by solely relying on self-report quantitative tools, and therefore qualitative and mixed-methods tools were utilized to capture the complexity of such a concept (Ushioda, 2019, 2020). Although it might be valuable, Dörnyei and Ushioda (2021) explain that measuring motivation is inherently challenging due to its abstract (i.e., not observable), multidimensional, and dynamic nature. Nevertheless, it is worthwhile for L2 motivation researchers because it helps answer two major questions: "why individuals engage (or do not engage) in L2 learning, and how successfully they acquire the L2" (p. 662). The quest to find answers for these two questions resulted in three major lines of research inquiry in the L2 motivation field: quantitative, qualitative, and mixed methods, which will be discussed thoroughly in the beginning of this fourth and final section of the literature review. Following that, I will discuss issues related to researching motivation in instructed settings such as the classroom and expand on matters related to the possible effects of motivation on students' L2 writing performance and ways of measuring

this effect. Lastly, I will highlight some conceptual and empirical gaps that are associated with research on the role of motivation in L2 pedagogy, and I will propose some solutions from the relevant literature that drove the research questions I developed for this dissertation research. It will become apparent that different traditions in motivation research have addressed themselves to conceptually distinct aspects of students' motivation in instructional contexts as will be discussed towards the end of this section.

Quantitative Research Methods in L2 Motivation

Influenced by the Gardnerian tradition, Dörnyei and Ushioda (2021) mention that the field of L2 motivation has mostly relied on self-report questionnaires as the predominant quantitative research method to examine L2 motivation variables. In their analysis of 335 L2 motivation studies conducted between 2009 and 2014, Boo et al. (2015) found that the majority of studies (178) used quantitative research methods, while only 71 and 73 studies employed qualitative and mixed methods respectively. A more recent analysis by Mahmoodi and Yousefi (2021) revealed that out of 93 L2 motivation studies that were published between 2010 and 2019, 48 studies were quantitative in nature, whereas 21 studies were qualitative and 22 used mixed methods. Self-report measures such as questionnaires were the most common quantitative instrument in their research sample. Also, according to Sudina (2021), self-report questionnaires were found to be the primary research method to measure L2 motivation.

Advantages of Quantitative L2 Motivation Research

The heavy reliance on questionnaire-based research designs in the L2 motivation field is due to several advantages. One is mentioned by Ushioda (2019), who states that designing psychometric instruments such as questionnaires to measure the latent constructs in prominent motivation theories enables the researcher to "compare new motivation constructs with existing

constructs, to determine their relative explanatory power and relevance across different contexts" (p. 664). This is evident in the design of popular instruments such as the AMTB (Gardner & Lambert, 1959) and the Language Learning Orientation Scale (LLOS) (Noels et al., 2019), among others (see Taguchi et al., 2009 and Al-Hoorie, 2018, for a discussion of L2MSS-related instruments). The purpose of creating such instruments was to promote the adaptivity and generalizability of the theoretical models associated with these instruments in different parts of the world. From a practical perspective, questionnaires are also an efficient option to save the researchers' time, effort, and money (Dörnyei & Taguchi, 2010). In a matter of hours, a researcher can collect responses from a large population by means of distributing an electronic survey, for example. A good example of this is a large-scale stratified motivation survey that was distributed to 10,413 Chinese students to measure their motivation in relation to the L2MSS theory (You & Dörnyei, 2016). If designed well, Dörnyei and Taguchi (2010) point out that analyzing the data obtained from those surveys can be easily executed using proper computer software that would save time, effort, and cost.

Disadvantages of Quantitative L2 Motivation Research

Despite the merits of conducting quantitative questionnaire-based studies, there are several limitations to note. Ushioda (2019) states that averaging responses across a large group, as we see in large-scale motivation surveys, fails to account for the role of the individual and their historical experiences in the environment, as well as neglects the dynamic and multifaceted nature of motivation. Dörnyei and Ushioda (2021), therefore, mention that relying on self-report measures might not depict the overall motivational dispositions of learners. Another limitation concerns the 'self-report' trait of most L2 motivation questionnaires, which provokes what Dörnyei and Taguchi (2010) refer to as 'social desirability' or 'prestige bias' issues. In other

words, if asked explicitly, people tend to provide an answer that they find socially appropriate or wish to be true, rather than giving an answer that represents their true feelings. This might result in conveying "a distorted picture of a person's overall motivational setup" (Dörnyei & Ushioda, 2021, p. 199). Dörnyei and Taguchi (2010) also mention several other related issues such as halo effect, acquiescence bias, and self-deception. A final limitation is brought up by Iwaniec and Dunn (2020), who explain that although conducting survey-based research might sound convenient, designing or administering an excellent survey requires a rigorous process of design and administration. Even though these kinds of studies are proliferating in the L2 motivation field, Sudina (2021) reports that in her sample of 76 studies that used motivation-specific scales, several questionable practices were noted. One of these is the lack of presenting validity evidence once an instrument is adapted in another cultural context. Sudina (2021) points out that because validating an existing instrument entails acquiring advanced research skills, some researchers tend to rely on the original authors' validity evidence instead of obtaining evidence based on the new survey. Flake and Fried (2020) refer to such practices as "questionable measurement practices" and assert that "the use of an existing measure does not eliminate flexibility and threats to validity, as it is common practice to modify measures" (p. 462). Other questionable practices in designing L2 motivation self-report questionnaires include the lack of reporting psychometric properties, scale design properties, survey response, and the translation processes of some surveys that are adapted in other non-English cultural contexts (Sudina, 2021). Therefore, as simple as using self-report measures of motivation might look, Sudina (2021) recommends that "to move the field forward, we—primary and secondary researchers, reviewers, and journal editors—need to take collective responsibility for survey research" (p. 1184).

Regardless of the disadvantages associated with using self-report measures of motivation, I must acknowledge their influence in our field, as their popularity has generated more than 100 different motivation questionnaires most of which are freely accessible at the digital repository IRIS (Marsden et al., 2016; see Dörnyei & Ushioda, 2021). On a final note, it is worth mentioning that self-report questionnaires are not the only quantitative research method utilized in L2 motivation studies (Dörnyei & Ushioda, 2021); experimental research is another important research design that will be discussed later in this section.

Qualitative Research Methods in L2 Motivation

As previously discussed, quantitative methods are limited in capturing the motivational experiences and social realities of individuals. This has prompted L2 scholars such as Ema Ushioda to embark on qualitative research in L2 motivation, which was an innovative method at the time she developed interests in this area while she was doing her doctoral research in 1991. In one of her recent chapters, Ushioda (2020) narrates her journey in the field as a motivational specialist with a Japanese-Irish upbringing—which in a lot of ways shaped her interest in the influence of social and cultural experiences on individuals' motivation. She states that the long quantitative heritage of Gardner and his associates tended to marginalize qualitative data at that time and treated them as "statistical noise" (p. 196). Interestingly, she also mentions that her research agenda was probably similar to that of Gardner's supervisor Wallace Lambert when he was asked by Spolsky in 1968 about the possibility of using other methods, besides questionnaires, to learn more about learners' integrative motivation. His answer was: "the best way to learn about someone's integrative motivation was probably to sit quietly and chat with him over a bottle of wine for an evening" (Spolsky, 2000, p. 160, as cited in Ushioda, 2020).

Influenced by the work of scholars like Ema Ushioda and Bonny Norton, interest in qualitative research started to gradually grow in the field of L2 motivation. An earlier collection by Dörnyei and Schmidt (2001) revealed that qualitative L2 motivation studies constituted a relatively small number compared to quantitative studies since the cognitive shift in 1991. That number started to noticeably grow between 2005 and 2015 with more than 73 studies using qualitative methods, in what Boo et al. (2015) call "a major research paradigm shift" (p. 153). The interest in qualitative methods remains high in the field, especially in response to the social turn that was discussed in the second section of the literature review. Mahmoodi and Yousefi's (2021) recent synthesis of 100 L2 motivation studies reveal that the number of qualitative and mixed methods (combined) almost equaled quantitative studies that were conducted between 2010 and 2019.

Advantages of Qualitative L2 Motivation Research

The publication surge of qualitative methods in L2 motivation from the 1990s until recently is attributed to several advantages of these methods. A major feature of qualitative methods, that was reiterated in several publications (Boo et al., 2015; Dörnyei, 2007; Dörnyei & Ushioda, 2021; Ushioda, 2019, 2020) is that they enable the researcher to account for the social, contextual, and historical complexities that shape the dynamic aspect of individuals' motivation. In other words, qualitative methods are more suited to dig deeper into the personal realities of individuals and they view motivation from individuals' own perspectives. Dörnyei and Ushioda (2021) claim that semi-structured interviews are the most common qualitative method used to unravel the realities behind L2 learners' motivation. This was supported by Mahmoodi and Yousefi (2021), who found that more than half of the qualitative studies in their sample used interviews. A recent example of how interviews help the researcher to view motivation from the

perspective of students was conducted by Lamb and Arisandy (2020) in Indonesia. The authors investigated whether Indonesian English learners were more motivated to learn English via online or in-person learning. They conducted semi-structured interviews with four students to gain better insights into their motivation. A female participant preferred self-teaching through online sources over traditional teaching in schools, stating that "I learned from reading books, from watching films or listening to songs by myself, yeah grammar is grammar, that's it" (p. 56). Other participants had similar views, and the authors concluded that qualitative interviews enabled them to understand how the surrounding social affordances have shaped students' motivation to learn English in both online and traditional contexts. Besides interviews, Ushioda (2020) mentions that reflection journals (Murphy, 2011; Sampson, 2016) are another qualitative method used recently in the literature and offer even more sophisticated accounts of the dynamic aspect of L2 motivation. Sampson (2016), for example, took a dynamic approach to investigate his motivation as a teacher, as well as his Japanese EFL students' motivation over the course of one year. He adopted 'a person-in-context' approach (Ushioda, 2009) by reflecting on his own teaching in a teacher journal that he kept for the entire duration of the study. He also asked students to keep a daily reflection journal in the form of a diary that can offer a different perspective of understanding his own motivation and identity as a language teacher. A thematic analysis of the data revealed a fluctuation in his motivational levels, and it showed the complex and dynamic nature of the 'person-in-context' view that was manifested in the narratives written by him and his students. The author prompted future researchers to ask teachers and students to keep reflection journals to better understand the evolving and dynamic nature of motivation and identity in the classroom.

Several other innovative approaches lend themselves the ability to unravel learners' complex motivational dispositions, such as critical discourse analysis (Gu, 2009; Gu & Qu, 2017), narrative analysis (Harvey, 2017), observations (Waninge et al., 2014), and other techniques like case studies and think aloud protocols (see Dörnyei & Ushioda, 2021; Ushioda, 2020 for a comprehensive review of qualitative data collection methods in language motivation). Another advantage of qualitative methods, that I personally find interesting, is that conducting interviews with students or asking them to keep reflection journals about their motivation, for example, encourages them to be aware and conscious of their motivation. Ushioda (2020) states that by engaging with participants' lives using such methods, they "may develop better understanding of their motivations and of themselves as language learners" (p. 261). Other general advantages of using qualitative methods are their ability to explore new phenomena, explain inconsistent patterns found in quantitative data, signify depth over width, offer a different angle if uninteresting quantitative data were elicited, and give researchers the opportunity to write at length (Dörnyei, 2007).

Disadvantages of Qualitative L2 Motivation Research

Although qualitative research methods are growing in popularity (Boo et al., 2015), there are several disadvantages to highlight. As opposed to the generalizability trait that is often assumed by researchers using quantitative methods, Ushioda (2020) mentions that qualitative research has been commonly criticized for its inability to produce generalizable data. This is due to the relatively small sample usually investigated in qualitative studies, as mentioned by Dörnyei (2007). However, it should be noted that most qualitative paradigms argue that findings should be understood in their context, and therefore generalizability is not even an aim of the research. Another criticism is related to the role of the researcher in analyzing qualitative data,

which might be a subjective role considering reflexivity concerns (Dörnyei, 2007; Ushioda, 2020). This, however, largely depends on the inquiry at hand as some qualitative research does not aim for objectivity. Lastly, Ushioda (2020) notes that conducting qualitative research is time consuming, labor intensive, and requires a special set of training and expertise to make sense of mountains of data.

Mixed Methods in L2 Motivation

As with qualitative research, the field of L2 motivation has also noticed a rise in mixed methods research in the past 10 years (Boo et al., 2015, Mahmoodi & Yousefi, 2021). Ushioda (2020) mentions that her interest in qualitative inquiry offers a "complementary" rather than an "oppositional" position to the quantitative research legacy in L2 motivation (p. 197). Therefore, L2 motivation researchers saw merit in combining both methods to elicit a fuller picture of learners' motivation. According to Dörnyei (2007), the idea of mixing methods first appeared in the 1970s in social sciences in order to offer some sort of triangulation to increase the credibility of findings. He adds that it was not until the late 1990s that applied linguists started to realize the merits of this approach and the necessity of producing more mixed methods research in the field.

Advantages of Mixed Methods L2 Motivation Research

A strong advantage of mixed methods research in the L2 motivation field that was mentioned in several publications (Dörnyei, 2007; Dörnyei & Ushioda, 2021; Riazi, 2018; Ushioda, 2019) is that it creates a balance between quantitative and qualitative methods by mitigating the weaknesses and highlighting the strengths of either method. Dörnyei and Ushioda (2021) mention that combining questionnaires with semi-structured interviews has been the most common mixed methods research design in L2 motivation studies. An example of this was a study conducted by Rasool and Winke (2019) in which they used a self-report questionnaire and

semi-structured interviews to investigate the motivation of EFL Pakistani learners to learn English. The authors followed a *sequential explanatory design* where they collected survey data first, then they used these data as a lead in their interview protocol and invited participants to elaborate on their survey responses. For example, one of the survey findings was that Pakistani learners mostly agreed with using English as an official language in Pakistan. That, however, was not enough to know why they thought English should be an official language. Therefore, they invited selected participants to do an interview and elaborate on why they thought English should have such high status in a context like Pakistan. Most participants mentioned that English is the future of learning, and that learning English would qualify them to have a good job. By using surveys, the authors were able to collect as many as 229 responses from participants, which would have not been possible if only interviews were used considering the large number of participants. Moreover, the interviews enabled the researchers to gain more insights into participants' motivation, which also could not be possible if the researchers solely relied on self-report data. In this respect, "the limitations of one method of inquiry are mitigated by the strengths of the other" (Ushioda, 2019, p. 669). (For other similar studies see Kormos et al., 2014; Sasaki et al., 2017; You & Chan, 2015.)

Another popular mixed methods approach in the L2 motivation field is the use of observational data, usually alongside a questionnaire or an interview, to make sense of students' or teachers' motivational behavior in the classroom (Dörnyei & Ushioda, 2021). The MOLT (Motivation Orientation in Language Teaching; Guilloteaux & Dörnyei, 2008) and Motivational Checklist (Keller, 2010) are two popular observation schemes well-suited for that purpose. Mixed methods are also a desirable approach in classroom-based research as highlighted by Polio and Lee (2019). (I will turn to this in the next main section.) Other advantages of mixed

method research are mentioned by Dörnyei (2007), such as improving the internal and external validity of research outcomes and reaching a wider audience of quantitative-only or qualitative-only researchers.

Disadvantages of Mixed Methods L2 Motivation Research

Although mixing quantitative and qualitative methods might help in mitigating the weaknesses of each other, Dörnyei and Ushioda (2021) note that "the sum is greater than its parts is not always true" (p. 224), and that the choice of independent variables in a mixed methods study needs to be principled. Furthermore, Ushioda (2019) emphasizes that it is rare to find a researcher with excellent skills in performing both quantitative and qualitative research; nonetheless it is a great opportunity for a doctoral researcher to acquire training in both domains. At the end of this section, it is worth mentioning that whether it is quantitative or qualitative, Dörnyei and Ushioda (2021) state that there is no best method to capture L2 motivation, and that "either – or a mixture of them – can offer rigorous and fruitful insights into L2 motivational issues" (p. 190).

L2 Classroom Motivation Research

Several L2 scholars defined second language classroom research as empirical research that involves three integral parts: the classroom, the teacher, and the learners (Dörnyei, 2007; Mackey, 2017; Polio & Lee, 2019). Chaudron (1988) categorized classroom research into four types, one of which is psychometric research, or what Polio and Lee (2019) refer to as experimental research. In the field of L2 motivation, Al-Hoorie (2018) claims that experimental studies are scarce. In fact, Dörnyei and Ushioda (2021) mention that it was mainly utilized to examine the effectiveness of teachers' use of motivational strategies in the L2 classroom. Mackey (2017) explains that this is understandable considering that many classroom-based SLA

research studies use experimental research to evaluate the effectiveness of teaching methods. And even with that, Al-Hoorie (2018) argues that most research in this area is correlational with a lack of establishing cause–effect relationships by means of doing experimental research, especially when the research suggests pedagogical implications for teachers. This is evident in Lamb's (2019) recent analysis of 20 motivational strategies (MotS) studies in which he found that 18 were correlational and only two were quasi-experimental (i.e., Alrabai 2016; Moskovsky et al. 2013). Lamb (2017, 2019) mentions that the field could benefit from more experimental research in this area because correlation does not imply causation. Furthermore, Al-Hoorie (2018) stresses that "conducting experimental research - whether inside or outside the class - would eventually lead to a science that is more instructive to classroom practice and to language learning in general" (p. 741). This statement is also endorsed by Dörnyei and Ushioda (2021), who called for more experimental research in the L2 motivation field.

Now that I have generally highlighted the significance of experimental research as a desirable approach in conducting L2 classroom motivation research, I will turn to discussing the principles of conducting good experimental research and the most favorable data collection methods (Mackey, 2017; Polio & Lee, 2019; Rogers & Revesz, 2020).

Experimental Design in Classroom-Based Research

Rogers and Revesz (2020) explain that the main goal of experimental and quasi-experimental research is to investigate the effect of the independent variable(s) on the dependent variable(s) to establish solid cause–effect relationships. For example, if the independent variable was a motivational teaching strategy (i.e., intervention/treatment) and the dependent variable was students' L2 writing performance, an experimental design in this case enables us to claim that any resulting change in students' L2 writing performance is attributed to the effect of the

intervention. However, in order to reach that conclusion, there are certain principles to follow. First, to examine the effect of the intervention (I will use motivational strategies as an example of the intervention), Rogers and Revesz (2020) explain that we should have an experimental group that receives the treatment and a control group that does not receive the same treatment. The only distinction between a true experiment and a quasi-experiment in this case is the random assignment of participants (Mackey, 2017; Polio & Lee, 2019; Rogers & Revesz, 2020). In their analysis of 30 experimental L2 classroom studies over the last seven years, Polio and Lee (2019) found that only six studies did a random assignment of participants and are thus considered to be true experimental studies. Even though random assignment helps in making "the average participant in one group comparable to the average participant in the other group" (Dörnyei & Ushioda, 2021, p. 206), Polio and Lee (2019) point out that this was not possible in many studies in their sample because of the ethical concerns and institutional hurdles associated with obtaining consent to conduct a true experiment. Nonetheless they claim that a true experimental design is definitely preferred over a quasi-experimental one to prevent any confounding variables (e.g., students' placement in classes) that may pose threat to the internal validity of the study, and to establish comparability between groups.

Second, after assigning participants to two groups, using my previous example, the experimental group receives the motivationally-enhanced instruction while the control group receives traditional instruction. Now to examine the effect of the treatment on students' L2 writing performance, Rogers and Revesz (2020) recommend using a pretest–posttest design, where the aim of the pretest is to "ensure the comparability of the two groups prior to the treatment" and the posttest to "determine the immediate effects of the treatment on the outcome variable(s)" (p. 135). Of course, as I mentioned before, random assignment helps in mitigating

initial differences between the two groups (e.g., students' L2 writing proficiency), and on that basis a pretest is only required in a quasi-experiment. However, Mackey (2017) notes that pretests allow us to obtain baseline data that could be useful in determining the effect of the treatment. So, if we hypothesized that the pre/posttest in our example here is some sort of a writing test that is administered to both groups (counterbalanced) prior and after implementing the intervention (i.e., motivational instruction), then the difference in gain scores between these two tests serves as evidence that the intervention was (un)successful in enhancing students' writing performance. Based on such findings, we can assume that there is a cause–effect link between the independent and dependent variables in our experiment. To calculate the difference in gain scores between the pretest and posttest, Polio and Lee (2019) found that most studies used t-tests or ANOVA. Also, Dörnyei and Ushioda (2021) found that interventional L2 motivation studies usually employ an ANOVA design to calculate gain scores between the pretest and posttest and determine the success of the intervention and the change it brought on the dependent variable(s). For maximum sensitivity, Rogers and Revesz (2020) recommend the use of a repeated-measures ANOVA design, also known as a within-subjects design, so each participant is exposed to all levels of an independent variable and that more than one dependent measure can be used, which leads to a mixed ANOVA design and the possibility of combining both between-subjects and within-subjects factors. According to Larsen-Hall (2015), the repeated-measures design is advantageous because it reduces variability–since each participant serves as their own control, individual differences and variability between participants are minimized. This can increase the sensitivity of the study to detect true effects of the independent variable. Another advantage mentioned by Rogers and Revesz (2020) is that the use of a repeated-measures design helps to eliminate participant variables; because participants are

exposed to all levels of the independent variable, any individual differences that could affect the results (e.g., personality traits) are evenly distributed across conditions, reducing their impact on the results. Other characteristics of experimental research are highlighted in Polio and Lee (2019), who found that the average number of participants in 30 different experimental L2 classroom studies was 67. As for the timing of implementing the tests, Rogers and Revesz (2020) explain that it is better to do the pretest at least a week before the treatment to prevent any influence a pretest could have on the treatment. They also add that the posttest should be implemented immediately after the end of the intervention unless it is a delayed posttest. The length of the treatment ranged from two weeks to two years in most experimental research reviewed by Polio and Lee (2019).

Desirable Approaches in Collecting Classroom-based Research Data

When adopting an experimental research design, mixed methods has come to be considered the most desirable approach for collecting data in classroom-based research because it "adds to the methodological rigor of the investigation" (Mackey, 2017, p. 543). Polio and Lee (2019) add that classroom-based research in applied linguistics could benefit from mixed methods research because it accounts for the various interactions that may unfold between the teacher and learners. Mackey (2017) mentions that these methods could be a combination of questionnaires with observations, reflection journals, or interviews, which are also seen as the most preferred data collection methods in L2 classroom-based research. She explains that observations allow the researcher to document various classroom practices such as student-student interaction or teacher-student interaction. More importantly, observations help in documenting whether the treatment is fully delivered by the teacher (i.e., whether there is fidelity or not as qualitative researchers would say). Polio and Lee (2019) explain that in experimental

research, the teacher variable is hard to control (i.e., whether one teacher is more motivated or skilled than another), but observations offer us insights on how the intervention was administered and what other sources of variability (other than treatment itself) emerge upon delivering the intervention. However, Mackey (2017) argues that observations are not sufficient to document internal variables such as students' motivation, and that they should be triangulated with other introspective measures such as journals or interviews. In instances where the principle of triangulation is pertinent, Mackey and Bryfonski (2018) propose the adoption of a concurrent triangulation mixed methodology, particularly when the research objective involves drawing insights from both quantitative and qualitative data, with equitable consideration of both types during the analytical phase. By corroborating findings across methods, researchers can compare and contrast the findings, enhance the credibility and trustworthiness of their results, and provide a more comprehensive and nuanced understanding of the research phenomenon than either method alone. Quantitative data might offer statistical patterns and trends, while qualitative data can provide depth and context to these patterns.

At the end of this section, I would like to elaborate that even though experimental research is scarce in L2 classroom motivation research (Al-Hoorie, 2018; Dörnyei & Ushioda, 2021) and even more sparse in the motivational strategies domain (Lamb, 2017, 2019), there are some promising attempts to investigate the effect of motivational strategies on students' motivation and language performance (Alrabai, 2016), the effect of motivational and visionary techniques on facilitating vocabulary acquisition (Le-Thi et al., 2020), and the effect of interaction-focused vision intervention on L2 learners' motivation (Sato & Lara, 2019). Nonetheless, Al-Hoorie et al. (2021) state that interventional studies in the L2 motivation field are "a rare commodity" (p. 142) and that the field needs more experimental research to elicit the

true effectiveness of the motivational intervention, and consequently suggest reliable pedagogical implications for teachers based on empirical findings.

L2 Writing Achievement as a Dependent Measure in L2 Motivation Research

L2 Motivation and Achievement

Dörnyei and Ushioda (2021) mention that L2 motivation research has mostly relied on self-report dependent measures, such as questionnaires, to explain L2 learners' motivation. They also state that these measures were not the only interest of L2 motivation scholars, as they were also curious about examining how students' motivational behavior could translate into better learning outcomes (i.e., high achievement/performance). To put this differently, a researcher could implement a motivational intervention (i.e., independent measure) and simply measure how successful this intervention was in boosting students' motivation by means of a motivational questionnaire (i.e., dependent measure). However, it would be more meaningful if the dependent measure was a "behavioral measure," such as language achievement, to see if the intervention had a positive effect on some aspects of language development (Dörnyei & Ushioda, 2021, p. 187). The issue with the motivation-achievement relationship, according to Ushioda (2016), is that it has always looked at the effect of motivation on learners' overall language achievement. For example, Alrabai (2016) investigated the effect of teachers' use of motivational strategies on learners' second language achievement via a multiple-choice test that targeted all four language skills. Ushioda (2016) sees this as problematic because it overlooks the discrete cognitive aspects of individual language skills such as vocabulary acquisition or specific aspects of writing development. Therefore, she calls for a "small lens" approach for researching L2 motivation, arguing that

> a major reason why motivation research has remained somewhat isolated from the core linguistic traditions of the SLA field is because the analysis of motivation and its role in language learning has largely been at the level of global learning behaviours and L2 achievement outcomes, and motivation research has tended not to address more fine-grained processes of language acquisition or linguistic development. (Ushioda, 2016, p. 565)

Ushioda's call for a narrow research agenda to better understand the relationship between motivation and L2 achievement has resulted in some promising empirical evidence that shows the effect of various motivational variables on the acquisition or development of particular features of the L2, such as oral fluency and accuracy (Han & McDonough, 2018), incidental vocabulary learning (Papi, 2018), and EFL writing performance (Teng & Zhang, 2018). That said, Iwaniec and Dunn (2020) emphasize that there is still a dearth of research on the relationship between motivation and L2 achievement, and that the field of L2 motivation would benefit from more research in this area.

The Effect of Motivation on L2 Writing Achievement

Kormos (2012) points out that motivation plays an integral role in predicting the writing processes and writing quality of L2 students. However, several scholars claim that there is a scarcity of research on the role of motivation in L2 writing development (Kormos, 2012; Papi, 2021), with most research being correlational in design (e.g., Cheung, 2018; Hashemian & Heidary, 2013; Jang & Lee, 2019; Tahmouresi & Papi, 2021; Teng & Zhang, 2018; Yu et al; 2020). For example, aspects of Dörnyei's L2MSS theory were found to be strong predictors of L2 writing achievement among Iranian EFL students in Tahmouresi and Papi's study (2021). Jang and Lee (2019) also found that the ideal L2 self-correlated significantly with Korean EFL

learners' L2 writing quality. Students' reported use of motivational regulation strategies also highly correlated with their writing performance in Teng and Zhang's (2018) study of Chinese EFL students.

Taken together, although the aforementioned studies showed the positive effect of various motivational variables on predicting L2 writing achievement, they mainly relied on correlational data. Kormos (2012) argues that in L2 writing correlational studies it is challenging to "gain deeper insight into possible causal relationships between writing success, learning processes, and individual variables" (p. 400). Papi (2021) also claims that interventional research is rare in research connecting motivation with L2 writing (see Lo & Hyland, 2007 for a relevant example). Furthermore, to the best of my knowledge, no previous experimental research has examined the effect of teachers' use of motivational and instructional strategies on the development of specific aspects of L2 writing among university EFL learners. The only close attempt was made by Alrabai's (2016) quasi-experimental study where he aimed at establishing a cause-effect relationship between teachers' use of motivational strategies and EFL learners' overall language achievement (all four language skills including writing). However, he used a multiple-choice test that targeted all four language skills instead of focusing on the various processes of writing development such as writing quality or fluency or an actual curriculum that focuses on writing development (hence adopting Ushioda's small lens approach). Overall, we can conclude from this discussion that more research is needed to explain the relationship between L2 writing and motivation, especially by doing more experimental research as recommended by Kormos (2012) and Papi (2021).

Experimental Design in L2 Writing Research

Now that I have highlighted the importance of experimental research as a desirable approach that explores the effect of motivation on various aspects of writing quality, I think it is reasonable to briefly discuss the principles of conducting a good L2 writing experimental study. Polio and Friedman (2016) point out that the majority of experimental research in L2 writing has focused on eliciting the effect of an intervention on students' text quality. Polio (2012) adds that text quality is better assessed by using a variety of methods to capture the overall effect of the intervention. One of the methods she mentions is using an analytic rubric to evaluate the content, organization, and cohesion of students' writing. Another method is to use some of the relevant complexity, accuracy, fluency (CAF) measures of writing quality.

As for the writing task to be assessed, Polio (2012) recommends using a pretest-posttest design to monitor the development of students' writing prior to and after implementing the intervention. Furthermore, the pretest helps in establishing equivalency of writing proficiency between participants in the control and experimental groups. The writing task in both tests could be a prompt like those found in standardized proficiency tests such as the TOEFL or the IELTS. Polio (2012) explains that this task needs to be counterbalanced where "half the students in each group write on task A as the pretest and task B as the posttest, while the other half do the reverse" (p. 152). She finally adds that it is recommended to triangulate the quantitative data obtained from the analytic rubric and CAF measures with qualitative data such as interviews to ensure that the intervention is executed as planned.

Conceptual Gaps and Proposed Solutions

Besides the solutions I proposed to highlight the role of instructional materials in enhancing students' motivation in previous sections, there are also some general, yet important,

conceptual and empirical gaps to highlight when researching motivation in L2 pedagogy. First, it is important to establish that there is a dearth of research on the interplay between motivation and L2 pedagogy, especially research on MotS. Lamb (2019) mentions that "The body of published research evidence about motivational language teaching strategies remains thin" (p. 301). Henry et al. (2018) add that although researching MotS is important, it is getting less attention in the literature, particularly in relation to the instructional design of classroom activities. They also point out that it is being overshadowed by imagination-oriented (visualization and imagination-related) and socio-dynamic orientations to L2 motivation research. Since motivational interventions usually take place in instructed settings, Csizér (2017) also highlights that instructed SLA would benefit from more empirical investigation into the relationship between L2 classroom intervention and motivation.

Another pertinent argument is related to the different motivation constructs that are usually measured quantitatively by means of self-report survey(s) in studies based on Dörnyei's (2001) taxonomy and Keller's ARCS model—that is, we are uncertain as to which of these constructs might be affected by an instructional intervention. For example, in most studies that used Dörnyei's (2001) taxonomy, researchers designed surveys to measure the effect of the instructional intervention on trait motivation constructs, such as learners' intrinsic motivation or motivational self-evaluation, which are considered general and more oriented to language learning as a whole. In contrast, in Keller's model, the two major motivation constructs (course interest and reaction to instructional materials), which have been systematically used in almost every study that utilized this framework, are more like state motivation constructs that revolve around learners' motivational reaction to a specific intervention. Keller (2010) stated that the two situational self-report instruments (i.e., The Course Interest Survey CIS and The Instructional

Materials Motivation Survey IMMS) that he created in conjunction with the ARCS model "are not intended to measure students' generalized levels of motivation toward school learning; that is, they are not trait- or construct-type measures. The goal with these instruments is to be able to measure how motivated students are with respect to a particular course" (p. 277). With that said, I claim that these areas have been investigated somewhat separately and these lines of research have not coalesced; hence, we do not exactly know which motivation constructs are more sensitive to an instructional intervention. Even though Moskovski et al. (2013) found that state items in their motivation survey were more sensitive to the treatment (driven by Dörnyei's, 2001 framework of motivational strategies), it is still unknown whether it is students' trait or state motivational variables that will be more affected by a treatment based on Keller's model of motivational design–especially since the instruments associated with his model only include state items. Put differently, my intention is to ascertain whether an ARCS-based intervention could potentially have an impact not solely on students' temporal motivation or their attitudes toward the current course (state motivation), but also on their general disposition towards language learning as a whole and whether they will have a consistent willingness to put effort into learning English over time (trait motivation). Consequently, the first research query is formulated to investigate the specific dimension of motivation—be it trait or state—that is most susceptible to modification through a motivational intervention based on Keller's model.

Besides motivational constructs and measurement issues, the 'interventional' nature of researching MotS leads me to propose some useful solutions to some research design-related gaps. Lamb (2019) attributed the scarcity of research on motivation and pedagogy in SLA to the complexity of the research design usually associated with such intervention studies—usually quasi-experimental or true experimental which might be hindered by institutional obstacles, thus

leading to less research in this area. Dörnyei and Ushioda (2021) support Lamb's observation and add that the true effectiveness of a motivational intervention is better assessed via an experimental design, especially if we wanted to observe an actual influence on language performance. This explains the lack of research on MotS, as Lamb (2017, 2019) reported that out of the 20 studies that are based on Dörnyei's taxonomy, only two (Alrabai, 2016; Moskovsky et al., 2013) investigated the effectiveness of teachers' use of MotS on students' motivation and L2 achievement by means of a quasi-experimental design. Lamb (2019) states that "The language education profession would benefit from such ambitious large-scale intervention studies of motivational teaching strategies" (p. 296). In my view, the field could adopt other MotS frameworks that already have shown promising results in experimental research, such as Keller's ARCS model. As shown previously, the majority of EFL studies that utilized Keller's model were experimental in nature. In their recent literature review, Li and Keller (2018) mention that experimental design is one of the most popular research designs found in ARCS-based studies. Furthermore, Goksu and Bolat (2021) report that experimental research was profound in educational studies that utilized Keller's model, including EFL studies. Their meta-analysis also revealed that the ARCS model had a positive medium effect on language achievement, which is relevant to Keller's calling his model 'Motivational Design of Learning and *Performance*'. Enhanced L2 performance was evident in EFL studies that showed the effectiveness of ARCS-based MotS on vocabulary learning (Chang et al., 2016; Wu, 2019), grammar (Chang et al., 2016; Refat et al., 2019), reading (Hung et al., 2013; Li et al., 2020), introduction building strategies in writing (Proski et al., 2014), and overall language achievement (Chang & Lehman, 2002; Ucar & Kumtepe, 2019). The relative significance of performance and how it could be influenced by motivation is rooted in the theoretical bases of Keller's model, as the expectancy-

value theory is strongly connected to McClelland's (1961) achievement motivation theory. Grabe (2009) states that "Research shows positive relations between task persistence and task achievement on one hand, and a person's expectations for success, as well as the value they place on a task, on the other hand" (p. 177). Overall, whether based on Dörnyei's taxonomy, Keller's model, or any other MotS framework, we need more experimental studies to show "the most persuasive evidence of motivational impact" (Lamb, 2017, p. 334). To the best of my knowledge, and as discussed earlier in this section on the effect of motivation on EFL students' writing, little is known about the effect of a motivational intervention on certain aspects of students' writing by the means of an experimental research design. More importantly, since this relationship is relatively underexplored in the literature and because we are stepping one conceptual level back and dealing with motivation as opposed to direct instruction on a certain linguistic feature of second language writing such as grammatical structure, we do not really know which specific aspects of writing will be most improved by a motivational intervention, and thus it would be challenging to make directional hypotheses. Therefore, in the second research question I will explore the effect of the intervention on students' overall L2 writing development, as well as on specific writing aspects like content, communicative achievement, organization, language, and writing fluency.

Lamb (2017) notes that another gap in MotS research is the lack of studies that focused on teachers' motivational practices and beliefs in the L2 classroom. Henry et al. (2018) also add that L2 motivation research has rarely drawn on insights from teachers' motivational practices. Glas (2016) mentions "if and how teachers put motivational strategies into action depends on their own beliefs about motivation and their perceptions of the context in which they work" (p. 442). Therefore, depicting the overall motivational state of a certain pedagogical context would

be incomplete, unless teachers' practices are put under scrutiny. To highlight those practices, Lamb (2019) recommends using Ushioda's (2016) 'small-lens' approach by zooming in on the specific moments a teacher delivers a motivational strategy or reacts to students, so we understand these processes as they instantly unfold. This could be captured via observing the classroom, recording the instruction, or conducting interviews, or conducting stimulated recall techniques such as collecting reflection journals after the end of each class. He also points out that teachers need to be treated as 'persons-in-context' (Ushioda, 2009), and researchers are encouraged to conduct in-depth qualitative investigation to unravel teachers' beliefs about motivating students and the ways they implement MotS in their instruction. Lamb (2017) writes that researchers need to "recognize the complexity of teachers' mental lives by enquiring into teachers' prior educational experiences, as learners, as teacher trainees, and as novice teachers" (p. 333). These recommendations emerge from the fact that teachers are the center of delivering a successful motivational intervention and that they ought to know which strategies fit their students' cultural beliefs; "What works in one educational context may not work in another" (Lamb, 2017, p. 332). This "small lens" approach is also recommended with learners to gain deeper insights into their reactions and feelings toward the motivational intervention (Lamb, 2019), as follows in the third and fourth research questions. This dissertation research attempts to address all these conceptual and methodological gaps by answering the four research questions posed in the next and final section of the literature review.

Research Questions and Hypotheses

Therefore, to fill these gaps, the present study investigates the following research questions:

1- Did the ARCS-based intervention have any effect on students' self-reported motivational levels[2] in an L2 writing course at the end of the experiment?

2- Did the ARCS-based intervention have any effect on students' L2 writing at the end of the experiment?

3- How was the ARCS-based intervention perceived by students in the experimental group at the end of the experiment?

4- How was implementing the ARCS-based intervention perceived by the teachers who taught students in the experimental group?

Each research question was formulated with some expectations about what might be found, and thus the following four hypotheses were postulated:

H1A. The experimental group will demonstrate a greater level of instruction-related motivation (as measured by scores on the IMMS survey).

H1B. The experimental group will demonstrate a greater increase in course-related motivation (as measured by scores on the CIS survey) from pre to posttest.

H1C. The experimental group will demonstrate a greater level of intrinsic motivation (as measured by scores on the intrinsic motivation survey) from pre to posttest.

H1D. The experimental group will demonstrate a greater level of motivational self-evaluation (as measured by scores on the motivational self-evaluation survey) from pre to posttest.

H2. The experimental group will show greater improvement in their overall L2 writing total scores from pre to posttest.

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[2] State motivation levels: instruction-related motivation and course-related motivation. Trait motivation levels: intrinsic motivation and motivational self-evaluation.

More specifically:

H2A. The experimental group will show greater improvement in their L2 writing content from pre to posttest.

H2B. The experimental group will show greater improvement in their L2 writing communicative achievement from pre to posttest.

H2C. The experimental group will show greater improvement in their L2 writing organization from pre to posttest.

H2D. The experimental group will show greater improvement in their L2 writing language from pre to posttest.

H2E. The experimental group will show greater improvement in their L2 writing fluency (measured by the number of written words) from pre to posttest.

H3. Qualitative measures of student motivation and reports of experience are predicted to show more positive student attitudes and motivation (etc.) in the experimental group as compared to the control group.

H4. Qualitative measures of teacher experience are predicted to show positive teacher attitudes (etc.) in the experimental group.

CHAPTER 3. METHODOLOGY

Research Context and Participants

Research Context

This study was conducted in The Institute of Public Administration (IPA)—a large multi-site governmental institution that provides thousands of Saudi students with diplomas in various administrative fields, such as Banking, Accounting, Administrative Studies, Business, and Law. These diplomas are not equivalent to a bachelor's degree, but they are treated as certificates of completion for any two-year program offered by an accredited Saudi institution for students after they graduate high school. Most students attending IPA are recent high school graduates. Students who recently graduated high school and enrolled in IPA must study academic English for one year, referred to as the 'English mandatory year' before being admitted into a diploma program of their choosing. Students in the English center get randomly assigned to sections by the Office of Admissions at IPA after they take a placement test (see below in the Procedures section for more explanation on random assignment).

The English program is organized into four levels. Students are assigned to these levels (1-4) upon their enrollment at IPA and after taking a computer-based placement test. Each level is completed in eight weeks of full-time study. Students study Listening, Speaking, Reading, Writing, and Grammar at each level. The participants in this study are students in the writing course for level 3. The writing textbook that teachers used for this course was *National Geographic Great Writing 2* (5th edition, 2018). With this textbook, students are to learn how to write different forms of paragraphs, such as opinion paragraphs or narrative paragraphs, as well as the elements that form a paragraph like the topic sentence and supporting ideas. I had substantial administrative support from my home institution, the Institute of Public

Administration, Dammam, Saudi Arabia. With this support, I conducted initial pilot work, which was completed in January 2021. Main data collection started on the first day of classes (08/28/2022) and was concluded on the week before final exams (10/13/2022).

Student Participants

The present study recruited 82 male students with intermediate English proficiency (level 3) across two different locations[3] (hereafter campus A and campus B) in the Institute of Public Administration (IPA), Saudi Arabia. The ages of participants in this study ranged between 18-22. Students are categorized by IPA as being of "intermediate" English proficiency. But for the purposes of this study, I used three different measures of proficiency to provide a comprehensive description of students' English proficiency and to establish equivalency between groups of students assigned to different treatments in this study. (1) The Cambridge General English Test, a freely-available 25-item multiple-choice test intended as a quick proficiency screener for general placement purposes. (2) Participant self-ratings (Marian et al., 2007) using a Likert Self-rating scale ranging between (1-10). (3) The CEFR writing grid that includes six statements describing students' writing ability. The three measures were integrated into a Google Form, with the self-rating and CEFR statements translated into Arabic (see Appendix A). Participants, both in the experimental and control groups, were found to have equivalent proficiency on all three measures, as will be discussed further in the Results chapter.

[3] Data from one extra location which had a small number of students was discarded as it became clear that required procedures were not being followed at that site.

Teacher Participants

The study involved three male teachers, with two teachers (one in campus A and one in campus B) instructing 50 students, that is, the experimental group using my ARCS-based intervention, while one other teacher (in campus A) taught 32 students, that is, the control group, using conventional, program-determined instruction without reference to any ARCS-based MotS (see Table 2). The study spanned an eight-week semester, from the last week of August 2022 to the end of the third week of October 2022 (see Appendix B for a timetable). The study design will be discussed in detail in the Design and Procedures section.

Table 2 Teachers' Assignment to Classes

Teacher	Campus/Level	Class	N	Experimental Assignment
Ray	A/level 3	A	17	Experimental
Ray	A/level 3	B	19	Experimental
George	A/level 3	C	17	Control
George	A/level 3	D	15	Control
Ali	B/level 3	E	14	Experimental

Note. Names are pseudonyms

In order to randomly assign the four teachers into teaching either the experimental or the control group, I entered their names in a software application that randomizes options[4]. This process resulted in instructors Ray and Ali teaching the experimental group in campus A and B respectively, while instructor George taught the control group in campus A. The background information of the teachers was obtained through a background survey designed using Google Forms and is presented in Table 3 alongside their group assignments.

[4] List Randomizer https://www.random.org/lists/

Table 3 Teachers' Background Information

Teacher	Assigned group	Age	Nationality	Qualifications	Years teaching English	Years teaching English at IPA
Ray	Experimental/ Campus A	59	American	MA TESOL	20	5
George	Control/Campus A	43	South African	BA in economics and TEFL certificate	13	4
Ali	Experimental/ Campus B	45	Saudi	MA Applied Linguistics & TESOL	20	17

The survey also included questions about the teachers' teaching philosophy and beliefs on motivating students, as shown in Table 4. The teachers' perspectives on student motivation are important because it shows where teachers stand on the matter of motivating students (as discussed in Chapter Two) and also because they provide insight into IPA students' motivation in writing courses. Overall, the teachers in this study believed that motivation was crucial for learning and that most IPA students were *not* highly motivated.

Table 4 Teachers' Beliefs about Teaching and Motivating Students

Teacher	What is your philosophy of teaching? (Talk generally about things that inspired you to teach English, your method of teaching, what you believe is good teaching etc.)	Do you think teachers should motivate students in the class? why or why not?	In your experience, how would you describe IPA students' motivation or attitude towards 'writing' courses?
Ray	1) I fell in love with language (German) as a student at the University of Salzburg in Austria. Later, when the opportunity to work with the Japanese government program JET arose, I thought my love of learning German--and Japanese--could inspire my English teaching. 2) Regarding method of teaching, I follow whatever is effective at engaging the students. Just to mention one "tool," I rely a lot on social interaction, especially working in groups. 3) Good teaching is good learning, engaging students and providing an atmosphere where they can use English and learn from their mistakes, for example.	Yes. The teacher should be motivated, feel excitement teaching, and through this, motivate the students indirectly.	Like anywhere, there are highly motivated and brilliant students as well as uninterested and academically challenged ones.
George	I believe that all students have greatness inside them.	Teachers should facilitate learning and guide students appropriately.	Not all students at IPA are highly motivated, but many students are motivated.
Ali	A strong passion makes the first component of my philosophy of teaching. This passion drives a teacher to give, facilitate, motivate, support in a non-threatening environment where learners naturally and spontaneously interact and make mistakes.	I believe each student should be motivated towards learning and overcoming mistakes in order to improve and keep their interest in the learning process. Student motivation may give not only impression of how much a teacher cares, but also how much he /she would like their learners to keep their high spirits and meet higher expectations through the learning process.	I can confidently say that students nowadays are not highly motivated as they were over than 10 years ago. This is simply because students were used to daily writing journals (using pencils or pens) so they got the habit of writing and they know their mistakes would be addressed by their motivated teachers to help them overcome their mistakes and improve. Nowadays, students are highly distracted by tech devises where they simply chat so they produce little writing.

Research Instruments

The present study adopted a concurrent triangulation mixed methods design (Mackey & Bryfonski, 2018), collecting data by triangulating several quantitative and qualitative data collection methods. Surveys and writing prompts were utilized as quantitative methods and were triangulated with qualitative reflection journals, semi-structured interviews, and an observational review of implementation of treatment. This section concludes with a detailed description of the ARCS-based intervention delivered to teachers.

Surveys

In this study, four motivation surveys were employed to address the first research question and find out the possible effects of the intervention on students' state motivation such as their motivation towards teachers' instructional materials and their interest in the writing course, and also on general trait-like motivation constructs such as intrinsic motivation and motivational self-evaluation.

The Instructional Materials Motivation Survey (IMMS)

The first survey was the Instructional Materials Motivation Survey (IMMS), developed by Keller (2010). This survey comprises 36 items that aim to assess students' perception of the instructional materials used by their teachers. However, since this tool was originally designed for various instruction formats, including print-based or online instruction, five items were removed to align with the course format at IPA. For instance, an item related to print-based materials, "The quality of the writing helped to hold my attention," was excluded because it did

not match the materials used by the teachers at IPA[5]. In addition, some items were modified to fit the writing course investigated in this study. The modified survey included 31 items that were used in the current study. Keller (2010) reported that the reliability of this instrument was high (α = .96), and he also found the instrument to be valid after incorporating some instructional tactics in an undergraduate course.

The Course Interest Survey (CIS)

The second motivation survey was the Course Interest Survey (CIS), a 34-item questionnaire developed by Keller to assess students' perceptions of instructor-led courses. This instrument was translated into Arabic and validated for use among 223 EFL Saudi students at IPA (Alzahrani & Isbell, in preparation). The survey validation, carried out using confirmatory factor analysis, showed that a two-factor model with only 20 items demonstrated an acceptable model fit and it accounted for the dataset better than Keller's original 34-item CIS designed according to the four elements of the ARCS. The shortened version was also found to have a satisfactory Cronbach's alpha (α = .90) during the pilot testing. Therefore, I used this version in the current study.

Intrinsic Motivation Survey

The intrinsic motivation survey was adapted from Alrabai (2016) and it consisted of 7 items that were compiled from a number of studies on L2 motivation (e.g., Alrabai 2011; Guilloteaux 2007; Moskovsky et al., 2013). Unlike the previous two surveys, which were designed to measure situation-specific motives toward the writing course, this survey was

[5] As stated earlier, materials can be things other than the textbook, that is, handouts or worksheets. This did not cross my mind when I removed this item from the survey. The exact wording of the item led me to think of the textbook's quality. I should have adapted this item to match the design of the handouts and other worksheets used by the teacher, but since I did not, I was concerned at the moment that students might not understand the purpose behind this question and thus I removed it along with some others that I thought were not relevant to the instructional setting of this study.

created to tap into more general attitudinal or motivational factors toward language learning. Alrabai (2016) deemed this instrument to be reliable and valid in the Saudi context as previously used among Saudi students in Moskovsky et al. (2013), and the Cronbach's alpha reported was ($\alpha = .90$).

Motivational Self-Evaluation Survey

Similar to the previous survey, this survey was also adapted from Alrabai (2016) and consisted of 7 items that revolve around trait motivation or general dispositions toward language learning. This survey was considered reliable and valid among Saudi college students, and Cronbach's alpha as reported in Moskovsky et al. (2013) was ($\alpha = .90$).

The Translation Process of Surveys

Each item of the four surveys is a statement and the five response options are *not true, slightly true, moderately true, mostly true, and very true*. To ensure that Arabic L1 EFL students with various proficiency levels could respond easily and accurately to the surveys, I translated the surveys into Arabic. The translation was double-checked by a certified translation center[6] which proposed changing some of the wording to fit the investigated context. (These proposed changes were accepted.) For example, the word 'course' in the original CIS was changed into 'writing' to avoid any possible confusion with a different course. Also, to avoid participants reporting attitudes toward L2 writing in general, directions were revised to clearly instruct students to respond based on their current writing course. The final translated versions were sent to the Research Department at IPA where two translation experts also recommended minor modifications of some statements (which were taken up). Finally, the translated surveys were

[6] This is a web-based translation center called 'Torigemat'.

incorporated into a Google form and administered to students in Arabic. Please refer to Appendix C and D for the English and Arabic versions of the four surveys.

Writing Prompts

To assess writing performance and address the second research question, I asked students to write a short opinion paragraph about a general topic. The writing prompt was selected to reflect what students would learn in the textbook about how to write good paragraphs. In other words, I reviewed their textbook prior to the beginning of the study to search for a prompt that would be consistent with course content, so as to ensure that the (experimental) writing task was at an appropriate level for the students. This is an example of the prompt:

> "You should spend about 25 minutes on this task. Write a paragraph with 6-10 sentences. Be sure to include a topic sentence, supporting sentences, and a concluding sentence. Write at least 150 words"

After finding a suitable prompt, two general topics related to school and learning were chosen. In Writing Task 1, students were asked to write an opinion paragraph of 6-10 sentences, or at least 150 words, responding to the question, "In your opinion, should schools and universities have online courses? Why, or why not?" Writing Task 2 used the same instructions, but the question was, "In your opinion, should people attend college after graduating high school? Why, or why not?" (See Appendix E for the two writing prompts.) Both tasks were counterbalanced between the experimental and control groups as explained in the Procedures section below. While the two topics were chosen to be culturally accessible to students in Saudi Arabia and also to appeal to an international audience, confirmation was sought from two teachers at IPA to ensure they were level-appropriate and did not require any content knowledge. The teachers recommended slight changes in timing and word count, but had no issue with the topics. (These changes were taken

up.) The writing tasks were integrated separately into a Google Form and students were given 30 minutes to complete the task assigned to their groups in a computer lab.

Interviews

To address the third and fourth research questions, I utilized interviews, reflection journals, and an observational review of the treatment delivery. Semi-structured interviews were conducted to gather data from both teachers and selected students in the experimental group after the intervention period. The participants were selected through "maximum variation sampling" (Dörnyei, 2007) to obtain a wide range of perspectives from participants with varying motivational and educational levels and to elicit a more comprehensive understanding of the phenomenon being studied. To achieve this, the teacher in the experimental group at campus A was asked to categorize students as low, mid, or high performers based on their motivation and performance in the writing course. This categorization was corroborated by my observation of students' engagement and writing midterm scores. Based on these performance categories, all participants were then approached to participate in an interview. A similar approach was also taken with all students in the control group. The purpose of the control group interviews was to examine students' perception of their teachers' instruction and to confirm that conventional instruction was being implemented. Participating in the interviews was voluntary and 22 students indicated their willingness to participate in the interviews. Fortunately, these 22 students were compatible with the categorization above and therefore the concept of maximum variation was maintained. The interview questions were designed based on the outcomes of the questionnaires and reflection journals completed by the students and teachers (see Appendix F for the interview

guide used with students and teachers). The interview also served as an opportunity to refer to some of the students' survey responses and seek additional clarification.[7]

Reflection Journals

Participants in the experimental group, including both students and teachers, were asked to keep a reflection journal and reflect on what they had experienced immediately after each lesson (prompts and inducements were trialed in the pilot study; the pilot study is discussed in detail just below). The reflection journal was used to determine whether students noticed the MotS implemented by the teacher and whether they found it motivating or not, as well as how teachers reacted to delivering these strategies and what observations they had on students' engagement and motivation. The prompts in the students' reflection journals were adapted from Sampson (2016) and modified to avoid words like *motivation*, avoiding any potential misunderstandings of the concept. For example, Sampson (2016) asked students to "reflect on something that was motivating"; however in the current study this was reworded to "What did the teacher do that made you want to participate in the discussion/feel like you were able to contribute to the lesson activities?" The reflection journal comprised six short open-ended questions about what participants experienced during instruction, and they were instructed to write at least a sentence answering all six questions during the last 5-10 minutes of each class. Instructions were translated into Arabic for students, but I kept the English version for teachers' reflections. The teachers' reflection journals comprised five questions and were designed to enable or encourage them to reflect on several aspects of implementing the intervention, including how they felt when implementing the strategies, if they noticed any change in students'

[7] This directly reflects Rasool and Winke (2019), discussed earlier (p. 59).

engagement, and what specific motivational strategies they implemented from the intervention. Teachers were instructed to use English when completing their reflections and were given the last ten minutes of their classes to complete them with their students. The prompts for both teachers' and students' journals were incorporated into a Google Form and sent to participants via email (see Appendix G).

Observational Review of Implementation of Treatment

During the intervention period, I conducted observations of the experimental group's teachers using a digital audio recorder and an observation scheme that I designed. The purpose of this observation was to ensure that the motivational strategies, which I had asked the teachers to use, were being implemented. The observation scheme was structured similarly to the intervention guide discussed in the following section, with an additional column for taking notes on the motivational strategies used in each lesson. I used this scheme to observe every class in the experimental group throughout the intervention period. Additionally, I observed a small selection of classes in the control group to check the nature of the instruction there to determine that it differed from that delivered to the experimental group. (That is to say, to check that the control was itself intact and had not been contaminated by any contact with the ideas or teaching strategies associated with the treatment.) The data collected from the recorder was useful for documenting how the intervention was delivered and comparing it with the data from the observation scheme. Furthermore, the audio recordings were especially helpful in regard to campus B where I could not physically observe the classes (because of distance and time from my home base and the primary experimental site in campus A). It should be noted that the audio data will not be transcribed or presented in this dissertation; instead, my global interpretation of

the recordings is used solely to support my judgment concerning whether the teachers followed the instructions provided in the intervention guide.

The Intervention

The teacher participants were introduced to a teacher's instructional guide that I created. The intervention brings together 17 ARCS-based MotS from numerous studies in the literature and suggests some instructional tactics that teachers can use to ensure the implementation of these MotS in various stages of the lesson (see Appendix H). Keller (2010) distinguishes strategies and tactics by stating that "Strategies are general guidelines and overall approaches to achieving a goal, while tactics are specific activities that contribute to implementing the strategy" (p. 23). For example, one of Keller's (2010) Motivational Strategies (MotS), which focuses on the constructs of confidence and relevance (Strategy #1 from the guide), is to 'Incorporate clearly stated, appealing learning goals into instruction.' To achieve this, an instructional tactic I suggested in the teacher guide was for the teacher to write lesson objectives on the board and remind students of their relevance to future goals. Put differently, the strategies were derived from Keller's work while the tactics were designed by me to help teachers understand and operationalize these strategies. Teachers were asked to use at least five MotS from the guide in each lesson as they saw fit, aligning with their specific goals and teaching method. The guide did not strictly enforce the way in which these strategies were implemented, but teachers were reminded that I needed to be able to recognize, while reading my observational notes or listening to the recordings, which specific strategies were adapted from the guide for the intervention to be effectively implemented.

Participants in all six classes met three times a week for the writing course, with each class lasting approximately 50 minutes. Some classes were held consecutively for two sessions,

with a ten-minute break in between, on one day. This came to a total of five writing classes per week. The intervention was implemented throughout the entire intervention period, except for mid-term exams or national holidays. Table 5 provides additional information on the class schedule.

Table 5 Class Schedule

Group	Days/time
Campus A/Class A/Exp.	Tue (11:00-11:50) Wed (10:00-11:50) Thurs (9:00-10:50)
Campus A/Class B/Exp.	Sun (8:00-9:50) Tue (10:00-10:50) Wed (8:00-9:50)
Campus A/Class C/Control	Tue (12:30-2:20) Wed (12:30-2:20) Thurs (12:30-2:20)
Campus A/Class D/Control	Sun (10:00-11:50) Mon (12:30 -1:20) Thurs (11:00-11:50)
Campus B/Class E/ Exp.	Mon (8:00-8:50) Wed (8:00-9:50) Thurs (10:00-10:50)

Research Design and Procedure

Pilot Study

The present study was initially piloted[8] for two weeks in November 2021, and Table 6 provides a summary of the pilot study details. The notes and data collected from the pilot helped me to review the proposed data collection process and see if I should make modifications to my research procedures or instruments. The pilot was conducted in campus B, and a Saudi teacher volunteered to run the pilot in his class. Prior to the pilot's commencement, I gave the teacher an explanation of the ARCS-based motivational strategies intervention via a Zoom interview since the pilot was conducted remotely, from the United States. Prior to returning to Saudi Arabia to conduct the main study, I was physically located in the US while students and teachers were in Saudi Arabia. I worked collaboratively with the teacher to plan and implement the data collection procedures as tested in the pilot. The pilot was administered to a class of 22 advanced

[8] Except for the writing tests because the teacher mentioned he did not have the time or the resources (i.e., a testing lab) to do it.

level students studying writing level 4. The class met three times a week on Sunday, Monday, and Thursday, with a total of five 50-minute sessions per week. The plan was to collect data from ten different sessions over the two-week period, but several administrative and institutional issues arose. One issue was that the Sunday of the first week was entirely spent administering the CIS survey, which took about 20-25 minutes, including setting up the computers in the lab and instructing students on how to fill out the survey. Therefore, in the main study, I planned to employ any pretest before the official start of the experiment. Additionally, the teacher faced some technical issues with the recorder, which was frustrating for him. Hence, I ensured that the teachers in the main study received immediate assistance with the recorder to avoid wasting class time and make the recording process less stressful. Furthermore, several holidays and midterm exams obstructed regular class instruction, and out of the ten planned sessions, only six were successfully conducted. These issues were taken into account when planning the main study since more intervention time was determined to be likely crucial to elicit any noticeable effect on students' motivation and writing development.

Regarding the data collection procedures, various data types were collected in the pilot study, including survey responses, reflection journals from students and the teacher, and semi-structured interviews with the teacher and six students. The CIS survey was employed as both a pre and posttest survey, and students filled it out online using Google Forms. In the pretest stage, 21 responses were collected, with only one student absent. However, in the posttest stage, six students were absent, which had to be considered in the main study since missing responses could potentially impact the comparison between pretest and posttest data. The reflection journal proved to be a valuable source of qualitative data, providing insights into students' and the teacher's perceptions of the intervention after each class. The teacher reflected on his experience

after each class telling me about what strategies he used and what kind of obstacles he faced while implementing them, and even how he thought students reacted to these strategies. However, I faced some unexpected issues with students' reflections, such as their ability to reflect on what was required in the prompt and their ability to write in English, and the return rate for the number of reflections was unstable. To address these issues, later in the pilot I asked students to write in Arabic and stick to a word limit, leading to an improvement in the reflection return rates. In the pilot study, more than 60 student reflection journals were collected over six classes. These journals showed that some students were picking up some of the MotS I suggested in the guide, such as visual representation (YouTube video about writing), group work, and suggesting a topic of their interest to write about. I was able to verify this by looking at the teacher's and students' reflections and by listening to the audio recordings, which I thought was a good way of triangulating the data.

The final data collection method involved exit interviews with the teacher and six students. The interviews were conducted via Zoom and recorded with participants' consent. From the teacher's interviews, the most prominent theme was that motivation is necessary for success and sustaining interest. When asked if they think it is necessary to be motivated by the teacher, most students expressed a preference for being encouraged and pushed sometimes. Also, when students were asked "did you notice any difference in the teacher's style during the last two weeks?", some of them mentioned noticing differences in the teacher's style, such as the use of YouTube videos and group projects, while others did not. This highlights the importance of considering students' individual differences, attention span, and effort for learning. The interview questions were not pre-determined, but I followed an approach where I showed students their reflection journals and asked them some questions about what they included there.

I also asked some questions related to class instruction and their overall motivational dispositions toward learning English. This approach provided insights for developing questions in the main study, and most importantly, it highlighted the benefit of creating questions that seek further elaboration on some students' responses to survey questions and reflection journals. This helped in justifying the use of a mixed methods design—to connect quantitative data with qualitative data to make a better sense of the phenomenon under investigation, following a similar approach to Rasool and Winke (2019), discussed earlier.

In general, the implementation of the MotS in the pilot study was reported to be easy by the teacher, who noted that some of the MotS were new while others were part of his usual teaching. However, the teacher faced some issues due to the lack of time and preparation as he had to manage three other courses. The teacher also faced technical challenges related to recording, survey administration, and continuously asking students for reflections. In the main study, I took charge of these technical aspects to allow the teacher to focus solely on implementing the intervention. Despite the challenges faced, students were able to pick up on some of the MotS used by the teacher and appreciated this change from traditional instruction, expressing a desire for it to continue throughout the course. It is important to note that Lamb (2019) criticized Dörnyei's (2001) taxonomy for being limited in scale and impact, as teachers (he says) often fail to use MotS consistently in their instruction and learners may not even notice them. However, this was not the case in the pilot study, as evidenced by the qualitative data collected. Previous quasi-experimental studies in Saudi Arabia using Dörnyei's taxonomy (Alrabai, 2016; Moskovsky et al., 2013 collected entirely quantitative data, which may not have fully captured the effects of MotS implementation. In fact, while analyzing the survey data (of the pilot), there was no significant change in students' motivation. (No significant change was

expected due to the short intervention period.) However, the survey data did not adequately inform me of students' perception of the MotS or whether it had even slightly altered their motivation toward the writing course. Therefore, in the main study, I supplemented quantitative self-report data with qualitative data to gain a deeper understand of students' motivation and perception of the MotS suggested in Keller's ARCS model.

Table 6 A Summary of the Data Collected in the Pilot Study

Data Type	Data Quantity	Date of Collection	Notes
Teacher background survey	1	Wed 11/10	
Teacher pre-interview	1hr 32mins	Wed 11/10	Interview in English
Pretest surveys	21	Mon 11/15	
Classroom recordings	4 (108 mins)	Mon 11/15, Thur 11/18, Sun 11/21	Two recordings missing due to technical issues
Teacher reflections	4	Mon 11/15, Thur 11/18, Sun 11/21, Mon 11/22	
Students' reflections	60	Mon 11/15, Thur 11/18, Sun 11/21, Mon 11/22	
Posttest surveys	16	Mon 11/29	Seven students were absent
Teacher interview	42 mins	Sun 11/28	Interview in English
Student interview	6 interviews	Mon 11/29- 12/3	Each interview lasted between 15-30 mins in Arabic

Main Study

Random Assignment

As shown in Table 7 below, this study employed a true experimental design in which students from five different classes (that is, sections) were assigned randomly to either an experimental condition or a control condition. In addition, I was able to take advantage of existing procedures which were used as the first phase of assignment of students to classes and conditions.

A department external to the English department, Admissions, applies a regular administrative process for assignment of students to classes. They use ORACLE software (which includes a randomization routine) for all of their administrative procedures. IPA's regular procedures with incoming students is to assign them at random to English classes at their geographical site, consistent with their placement test results, but independent of students' GPA. So even without any request on my part, there would have been a random distribution of students within each level. I reviewed this matter with the Directors of the English Departments at the campuses. They are highly qualified professionals with PhD degrees in applied linguistics from the United States and UK who fully understand research procedures. They were fully understanding of the matter as it plays out in research and they confirmed it also was a necessary and standard part of the administrative practice. For their own purposes they need classes to be equivalent. Continuing students who were grouped together in the previous level are not guaranteed to be grouped together again in the new level as they get randomized again.

In the second phase, I assigned random numbers to classes to determine which class would be experimental and which would be the control group, thereby increasing the randomness of the process. While group randomization was feasible at campus A, it was not possible at campus B, as only one class was available in level 3 at this campus.

Table 7 Experimental Assignment of Participants

Branch/Level	Class	N	Experimental Assignment
Campus A/level 3	A	17	Experimental
Campus A/level 3	B	19	Experimental
Campus A/level 3	C	17	Control
Campus A/level 3	D	15	Control
Campus B/level 3	E	14	Experimental

Implementing the Pretest

Following the random assignment of participants to either an experimental or control condition, the present study utilized a five-week intervention delivered within an eight-week trimester (see Table 8 below for a summary of the study's design). In the first week of classes, all participants were taken to a computer lab to complete the proficiency test and the writing pretest in each site. IPA has a computer lab equipped with more than 20 computers prepared originally for taking placement tests and computer-based final exams. The administration gave me full access to these labs in order to administer the required tests for this research. At campus A, before participants came to the lab, I contacted the administration to create a Google Chrome shortcut on every desktop to enable students to access the Google Form containing the links to the tests easily. Upon their arrival, I spent 10 minutes explaining the study and what was expected from them as participants throughout the eight weeks. I also made it explicit that their participation was entirely voluntary and that their consent was required before they started taking the tests. The consent form was integrated into the first page of the Google Form (see Appendix I). To encourage participation, I arranged for an additional five marks to be added to each participant's final grade, with the approval of the teacher and administration, and assured participants that those who chose not to participate would not be penalized. The same reward system was applied to the control group to ensure equal participation. This incentive prompted all students to take part in the study, and therefore no participant was excluded. Since I was not

physically present in the other research site, campus B, I conducted a (remote) meeting with the teacher in this location and I recruited him as a research assistant to help me administer the tests and to familiarize students with the research procedures. To ensure consistency across all locations, I provided the teacher in campus B with a test protocol outlining a step-by-step guide to running the tests in the lab (see Appendix J).

Once the students were familiarized with the study and test procedures, they were asked to complete the proficiency test first. The first page of the form consisted of a consent form followed by personal information, including age, name, and campus. Then, the self-rating, CEFR grid statements, and 25 multiple-choice English proficiency questions followed. The entire session was timed for 30 minutes using a smartboard timer (visible in the classroom) to prevent participants from rushing through the test and leaving early. Students who finished before the end of time were asked to review their personal information before submitting the form. The majority of students completed the proficiency test in approximately 25 minutes, and no requests for additional time were made.

After all students had submitted the proficiency test form, they were instructed to open the writing test, which was also timed for 30 minutes. The writing pretest aimed to investigate the development of students' writing skills prior to and after implementing the intervention. The pretest was also used to establish equivalency of writing proficiency between participants in the control and experimental groups. In line with Polio (2012), the task was counterbalanced where "half the students in each group write on task A as the pretest and task B as the posttest, while the other half do the reverse" (p. 152). Before students started the test, I spent five minutes explaining the prompt and receiving clarification questions. Students were informed that the spellcheck feature in the browser settings had been disabled to simulate a traditional paper and

pen exam. The test was timed for 30 minutes, and students were asked to not submit the form until the time was over. The entire testing session, including instructions, took approximately 80 minutes in all campuses. After the session, students were thanked for their cooperation, and they were sent back to their classes.

Traditional instruction took place in both the experimental and control groups during the first two weeks of the study. The ARCS-based intervention was initiated in week 3 with the experimental group. At the end of week 2, both groups were taken to the laboratory and asked to complete three motivation surveys, namely CIS, intrinsic motivation, and motivational self-evaluation. These surveys were utilized to assess students' motivational levels before the start of the study and to determine if the intervention had brought about any changes in their motivation, as the surveys were administered again in the final week as a posttest. The pretest was also intended to evaluate whether students had comparable motivational tendencies towards writing courses. The reason why the surveys were not conducted in the first week was to allow students to ponder their experience with the limited instruction they had received in the current writing course rather than in previous levels. The three surveys were all compiled together in one Google Form, and students took approximately 15 minutes to complete them. Students were then instructed to return to their classes. These surveys were the last pretest instrument to be administered before the commencement of the intervention on the first day of week three. It is pertinent to mention that in the present study, I requested the students to include their names when filling out the two motivation surveys. While other studies often do not require the participants' names to ensure unbiased responses, it was necessary to obtain their identities in this study. This was because certain students' responses needed to be identified and presented during the interview, where I intended to ask for additional clarifications. However, I assured the

students that their identities would remain confidential, and no one besides the researcher would have access to their responses.

Table 8. Design of the Study

Time	Procedure	Experimental Group	Control Group
Week 1	● Proficiency test	√	√
	● Pre-writing test	√	√
Week 2-6	● Three motivation surveys	√	√
	● Intervention commences (week 3)	√	-
	● Motivation survey IMMS	√	√
	● Observations	√	√
	● Reflection journals (teacher-student)	√	-
Week 7	● Post-writing test	√	√
	● Three motivation surveys	√	√
	● Teacher interviews	√	-
	● Student interviews	√	√

Teacher Workshop

On the last day of week two and after all pretests were collected, I conducted a workshop for the two teachers in the experimental group to introduce them to the teacher guide and provide them with details on how to implement the intervention. During the workshop, I assured the teachers that they could contact me at any time if they encountered any difficulties or required further clarification. The workshop was conducted in person with the teacher in campus A and remotely over Zoom with the teacher in campus B. The instructor in the control group was not informed of the participation of other instructors or the existence of a special intervention. This was done to prevent any possible leakage of motivational strategies by teachers in the experimental group. Furthermore, the identities of all instructors involved in the study were kept

confidential from each other, especially the two instructors in campus A, to avoid any casual encounters that might have led to the intervention being discussed.

Observing and Recording Instruction

Upon the commencement of the intervention in week three, I attended the first writing class of the experimental group to observe the teacher's instruction and record the session from the back of the classroom. Students were informed that the purpose of the recording was to understand the teacher's teaching method and that their voices would not be identified or used for data analysis. Both teachers in the experimental group were also informed that the recording would be used to identify the motivational strategies they adopted from the intervention and how they incorporated them into the lesson plan. They were assured that the recording would not be used for evaluation or judgment of their teaching. With the consent of the teacher and students in the experimental group at campus A, I attended and recorded all sessions throughout the intervention period using a checklist to document the use of the 17 motivational strategies and take notes on interesting observations. I also requested instructional materials from the teachers, such as presentation slides, handouts, and rubrics. (Examples will be shown in the Results section.) Some of these materials were designed to align with the motivational strategies provided in the teacher guide. In the other remote research site, campus B, the teacher was equipped with a digital recorder to record the sessions himself since I was not physically present at this location. To be able to claim that students in the experimental group in campus B received enough treatment and one that is as comparable as possible to the treatment delivered to students the experimental group in campus A, I created a shared Google Drive with the teacher in campus B to ensure the recording and instructional materials were uploaded for analysis. Notes were

taken based on the recordings and compared with the teacher's reflection journals regarding the specific use of motivational strategies in each lesson.

Despite the absence of any special instructional materials or active intervention in the control group (which received the normal instruction programmed by IPA, part of their standard curriculum), I monitored and documented two sessions of the control group during weeks five and six to ensure that the teacher had not deliberately or inadvertently incorporated any motivational strategies from the guide, which might have been leaked by the teacher in the experimental group. This did not indicate a desire for the teacher in the control group to provide subpar instruction, but rather a need to ensure that conventional instruction was being implemented in the control group, independent of the teacher's personality and instructional approach.

Collecting Reflection Journals

In addition to classroom observations, students and teachers in the experimental group were requested to complete reflection journals during the last five to ten minutes of class. Following consultation with the teachers, we concluded that it was optimal to prompt students to reflect on their learning experience while it was still fresh in their minds. I had concerns that this might detract from the time allocated to instruction, but the teachers reassured me that it was a valuable learning opportunity for both themselves and the students to reflect on the events that had taken place in the class. Both the teachers and the students completed the reflection journals by accessing the Google Form using their mobile devices throughout the entire intervention period.

Implementing the Posttest

Towards the end of week six, both control and experimental group students were brought to the laboratory to complete the IMMS motivation survey, used only as a posttest. They were asked to reflect on the instructional materials and strategies utilized by the teachers during week six. At the start of week six, all four teachers were requested to postpone any assessments or exams and entirely focus on instruction for that week. To ensure all participants in all branches received instruction on the same unit, I arranged with the teachers to focus on one unit in the textbook. This decision was made to assist students in reflecting on the instruction itself and not be influenced by the topic or complexity of a different unit. The survey took approximately 15 minutes to complete, and participants were returned to classes as soon as they had finished submitting the form.

During week seven, the final week of instruction, all participants were taken to the laboratory one last time to complete the same three motivation surveys they originally did in week 2 as a pretest, this time as a post-test. In addition, they did a post-writing test. The same procedures used in the pretest were followed during the posttest, including timing and instructions. Participants completed the posttest within one hour, and they were thanked for their time and effort. After the posttest, I contacted the participants in campus A and the two instructors in the experimental group to take part in one-on-one exit interviews to discuss their experiences in the writing course candidly. The interviews were conducted in a quiet office, and all participants provided consent to record the interview. The study concluded in week seven, a week prior to the final examinations in week eight.

Data Analyses

The collected quantitative data were subjected to statistical analyses, including the internal consistency Cronbach's alpha of all scales/tests and relevant descriptive and inferential statistics. All quantitative analyses reported in this dissertation were conducted in R 4.2.0 (RCore Team, 2022) and Statistical Package for the Social Sciences (SPSS) version 20, unless otherwise indicated. The following section describes these in more detail. Qualitative research techniques were used on the interview data and are described in the section after that[9].

Quantitative Analysis

Surveys

To address the first research question and investigate the impact of the intervention on the first dependent variable (i.e., students' motivation, as operationalized in terms of scores on IMMS, CIS, intrinsic motivation, and motivational self-evaluation surveys), several analyses were conducted. Firstly, the reliability of the four motivation surveys used in the study was assessed by calculating Cronbach's alpha, and all scales were found to be satisfactory (exact values reported in the Results section). Descriptive statistics (M, SD, Min, Max) were then computed for the experimental and control groups on the pre and posttests. 95% confidence intervals (CI) were also computed. To determine if there were any pre-existing differences between the two groups in terms of the three key motivational variables that were used in the pretest (course interest, intrinsic motivation, motivational self-evaluation), independent samples *t*-tests were conducted on the pretest scores. To confirm equivalence, a two one-sided *t*-test was also performed, following the method recommended by Lakens et al. (2017). Finally, a 2x2

[9] Although I collected reflection journals from students and teachers, I did not analyze them in this dissertation considering time restrictions. These two data points alone can be shared —they constitute more than 450 student reflection journals and 35 teacher reflection journals— and will be analyzed in a separate study.

Mixed ANOVA was conducted on these three motivation surveys' pre and posttest scores to examine whether there was a statistically significant change from T1 to T2.

Since the IMMS motivation survey was implemented as a posttest only, an independent samples *t*-test was run to see if there was a statistically significant difference in scores between the experimental and control groups. An alpha level of .05 was used to determine statistical significance, and effect size was estimated using Cohen's *d*. Additionally, the 95% CIs of the difference in means was reported along with the *p*-value to establish significance.

Writing Tests

To address the second research question and examine the effect of the intervention on the second dependent variable (i.e., students' improvement in writing), two different analyses were conducted to examine students' texts. First, an analytic rubric (Assessing writing for Cambridge English qualifications: A guide for teachers, 2020) was used to assess students' writing based on Content, Communicative Achievement, Organization and Language (see Appendix K). Each one of these four band descriptors is given a score out of five, for a total of 20 marks. This specific rubric was used because it was intended for B1 (Intermediate proficiency) students, according to CEFR. Moreover, according to the developers, the participants' writing textbook was designed to fit students at the B1 level. The writing essays (N = 164) were sent to three experienced EFL raters with master's degrees in TESOL. Two of them were highly proficient male Saudi raters, PhD students in Applied Linguistics in the United States. The third rater was a female American rater whose L1 was English. All raters had approximately 3 to 9 years of experience teaching English to EFL/ESL students. The Saudi raters had experience teaching English to college students in the local context of this study (Saudi Arabia), which adds to the local ecological validity of the study since the instructional approach is designed for Saudi students specifically.

The English rater also happened to have some experience with Saudi students studying English in the U.S., in addition to her previous work in the writing center at a state university.

First, all essays (N = 164) collected in pretest and posttest were coded blindly and assigned unique numbers based on a random distribution using Excel so raters could not identify which essay was collected as a pretest or a posttest. Before the practical scoring was carried out, the three raters went through a standardization procedure in a training session that I prepared by recording a 16-minute Zoom video introducing the raters to the study, the rubric, and some writing samples that I had independently scored with a writing professor. We made sure to leave comments justifying our scoring on all four writing categories in the rubric so raters could understand exactly what each band descriptor means. I also provided the raters with a guide (Assessing writing for Cambridge English qualifications: A guide for teachers, 2020) that included detailed explanations of the four descriptors, followed by an example of a real exam task, a real response to that task, and the comments given by a Cambridge English writing examiner. After watching the video, being familiar with rubric, and checking the writing samples scored by the writing professor and me, the three raters were invited to independently score 7 randomly selected anchor samples of different writing quality to check for initial consistency in scoring and mutual understanding of the rubric. Once these tasks were fulfilled by raters, I set up a two-hour training session via Zoom to discuss the consistency of their scoring and the rationale behind their scoring method. Following recommendations by Pill and Smart (2020), I received any clarification questions from the raters on the rubric, the participants, or the writing samples they were supposed to score, as well as providing feedback on their scoring. However, I did not share any information about the research that might introduce bias, such as gender or the fact that this research investigates the effect of using motivational strategies on students' writing

performance. I also urged raters to refer to the criteria and the scored samples each time they faced an issue with assigning scores to the four descriptors to ensure consistency in rating (i.e., intra-rater reliability). Following the training session, raters were given the remaining writing samples to assess separately in an Excel spreadsheet. Rating took about a week for the raters to score all 164 essays.

In addition to the analytic rubric, a writing fluency measure, operationalized by counting the total number of written words in a text (Wolfe-Quintero et al., 1998), was employed to check any linear relationship to writing proficiency; the relevant descriptive and inferential statistics are reported in the Results chapter.

As for establishing reliability among the three raters, interrater reliability was calculated using interclass correlation coefficients (ICC) with the following benchmarks offered by Koo and Li (2016): ICC < 0.5 = poor, 0.5 < ICC < 0.75 = moderate, 0.75 < ICC < 0.9 = good, 0.90 < ICC = excellent.

Similar to measuring surveys, first, reliability estimates of the rubric and descriptive statistics of the four writing categories and the total scores were computed for the pretest and posttest collected from participants in the experimental and control groups to show any writing improvement trends between the two groups. Second, independent samples *t*-tests were conducted on the pretest scores to determine if there were any pre-existing differences between the two groups in terms of their writing performance. Lastly, a 2x2 Mixed ANOVA was conducted on the pre and posttest writing scores to examine whether the intervention brought a statistically significant change from T1 to T2 on participants' L2 writing in terms of content, communicative achievement, organization, language, and total score.

Benchmarks for Quantitative Analysis

All the quantitative analyses were conducted with the alpha level set to $p < .05$, except for the four categories of writing where alpha was adjusted to 0.0125 (.05/4) for each ANOVA as multiple comparisons were made to answer the same question ('Which subscores improved more for the experimental group?'). The writing total score, however, remained set at .05. Cohen's *d* was used for the effect size in this study for all *t* tests. Following Plonsky and Oswald (2014) guidelines for effect sizes in SLA, Cohen's *d* was interpreted using the following benchmarks: small ($d = 0.40$), medium ($d = 0.70$) and large ($d = 1.00$) with respect to the effect size. As for estimating effect size for ANOVA, partial eta-squared, which is part of the family of effect sizes used in conjunction with ANOVAs, was used to estimate effect size. Based on recommendations from Norouzian and Plonsky (2017) to avoid mislabeling or interpreting eta squared with partial eta squared as usually happens in earlier versions of SPSS, I used the latest version of SPSS (IBM SPSS 29). Benchmarks for partial eta-squared effect size were as follows: small .01, moderate .06, and large .14 (Dörnyei, 2007).

Qualitative Analysis

Interviews

To address the third and fourth research questions, 22 student and two teacher interviews were collected from participants (selection process previously described in the Procedures section) in both groups, totaling four hours of interview data. Each interview lasted between 13 and 22 minutes. The interview recordings were transcribed using a speech-to-text transcription application (Sonix.ai). This specific application was used because it is one of the few applications that recognizes Arabic language. The transcription generated by the application was checked by the researcher to ensure the accuracy of the transcribed data. The transcripts of the

student interviews, conducted in Arabic, were translated into English by the researcher, and the translation was verified for accuracy by a certified translation center. The teacher interviews were conducted in English and did not require translation. A total of 24 interview transcripts were analyzed using Dedoose software, with the aim of identifying common themes and patterns in participants' responses. After transcripts were inserted in Dedoose, I first read through the data to get a sense of the content and to identify initial ideas or themes. So, I started by coding broadly. Then, following an inductive coding approach (Saldaña, 2011), I identified patterns and themes, assigned descriptive labels to these patterns, and combined codes into categories and subcategories to decrease the overall number of codes. The codes mainly came from the intervention guide I designed—since the interview focused on asking students about their perceptions of the teacher's instruction. I finally organized the codes so they could tell a story, starting by understanding why students learn English, how they viewed their experience in the current writing course, and finally whether they would continue to learn how to write in English after the end of the course.

Observational Review of Implementation of Treatment

I manually reviewed observation notes to verify if teachers adhered to the instructions provided in the intervention guide. Audio recordings were not transcribed; the audio itself was reviewed broadly to confirm if teachers used the specified number of MotS, particularly in campus B (which I could not otherwise observe directly). The Results section will feature some of the instructional materials, such as animations, rubrics, and handouts, that the teachers created to align with the ARCS-based MotS. Table 9 provides a summary of all the qualitative data collected for the dissertation.

Table 9 Summary of Interview/Reflections/Audio Recorded Data

Data type	Group	Quantity	Duration
Student Interviews	Exp.	16	(11-27 minutes), total 306 minutes
	Con.	6	(11-16 minutes), total 82 minutes
Teacher Interviews	Exp.	2	Ray (22 minutes) Ali (27 minutes)
Student Reflections	Exp.	(N=404), ~15000 words	
Teacher reflections	Exp.	(N=32), ~2500 words	
Audio recordings	Exp.	31	1611 minutes (~ 27 hours)
	Con.	3	145 minutes

CHAPTER 4. RESULTS

Quantitative Findings

This section provides answers for the first and second research questions, wherein I report the findings derived from the four motivation surveys and the writing scores, to see if the intervention had a significant effect on students' motivation and writing performance. I start this section by reporting the findings from the IMMS survey (used as a posttest), followed by the results of the CIS, intrinsic motivation, and motivational self-evaluation surveys (used as a pre and posttest). Second, I share the results of the language proficiency measures that were used to determine if both groups had a similar proficiency level before they participated in the study. Finally, I share the findings obtained from the writing test scores. It should be noted that I will be reporting two parallel analyses: one that combines both campuses (campuses A & B) and another that only reports the results obtained from students in campus A. This was done because instructors are different in each campus, which could introduce potential variability. Therefore, reporting parallel analyses will enable the reader to determine the robustness of results. Randomization was feasible at campus A, which had four different Level 3 classes. In contrast, randomization was not feasible at campus B as it had only one Level 3 class. This is why I report a separate analysis in this chapter; one for all campuses combined together (N = 82) and another for campus A only (N = 68).

RQ1/ Did the ARCS-based intervention have any effect on students' self-reported motivational levels in an L2 writing course at the end of the experiment?

IMMS Survey

Descriptive Analysis

Table 10 summarizes the descriptive statistics (M, SD, Min, Max) and 95% confidence intervals (CI) obtained from the responses of participants in all campuses and campus A to the IMMS. This survey was implemented only as a posttest to assess students' perception of the instructional materials used by their teachers. First, the IMMS demonstrated good reliability (α = .88) and the survey was deemed reliable. As shown in Table 10, the experimental group in all campuses (M = 4.00, SD = .48) showed more positive attitudes toward the instructional materials used by the teachers compared to the control group (*M* = 3.71, *SD* = .48). This was also true for the experimental group (*M* = 3.98, *SD* = .47) compared to the control group in campus A (*M* = 3.71, *SD* = .57) who showed less positive attitudes in the instructional materials used by the teacher in the control group. To check if the difference in means was statistically significant, further inferential analyses were conducted.

Inferential Analysis

As shown in Table 11, an independent samples *t*-test showed that the difference in the posttest scores between the experimental group and the control group was statistically significant in all campuses, $t(80) = 2.40$, $p = .019$, 95% CI [0.0478 – 0.5156] and in campus A, $t(66) = 2.11$, $p = .039$, 95% CI [0.0144 – 0.5184]. The effect size for this comparison is $d = .543$ for participants in all campuses and $d = .513$ for campus A, which by Plonsky and Oswald's (2014) guidelines for effect sizes for SLA can be considered a small to medium effect. Figure 1 visually

illustrates the difference in the posttest scores between the experimental group and the control group in all campuses and in campus A.

In sum, in response to the first research question, the results suggest that the motivationally enhanced intervention had a significant positive effect on learners' instruction-related motivation in the experimental group, and therefore we accept Hypothesis 1A.

Table 10 IMMS Descriptive Statistics

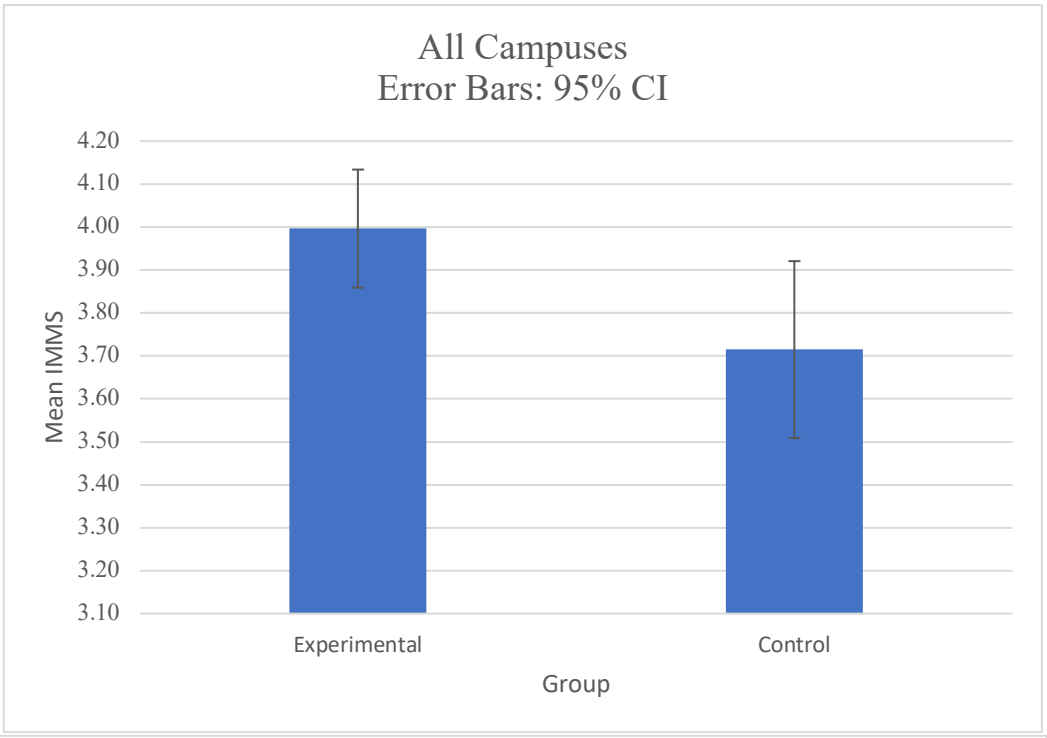
	Experimental						Control					
	N	M	SD	Min	Max	95% Confidence Interval of Mean	N	M	SD	Min	Max	95% Confidence Interval of Mean
All Campuses (α = .88)	50	4.00	.48	2.74	4.81	[3.86-4.13]	32	3.71	0.48	2.32	4.87	[3.51-3.92]
Campus A (α = .88)	36	3.98	.47	2.90	4.81	[3.82-4.13]	32	3.71	.57	2.32	4.87	[3.51-3.92]

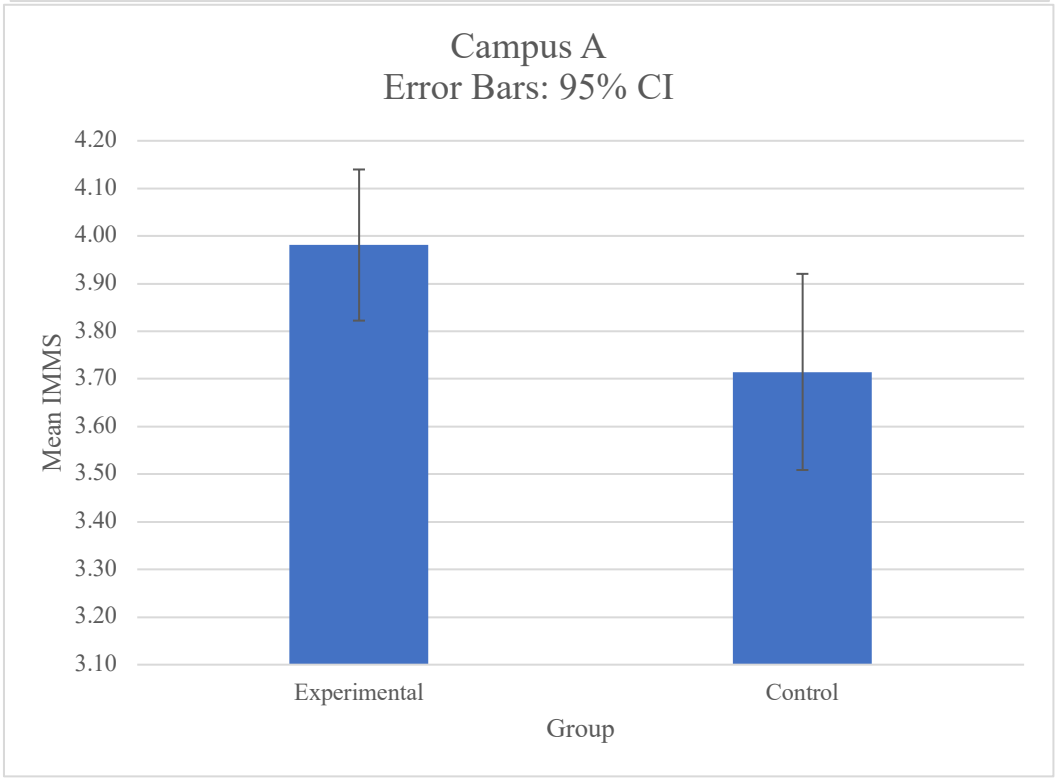
Table 11 Independent Samples t-test of IMMS Scores (Experimental v. Control)

	N	*t*	*df*	*p*	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference	*d*
All Campuses	82	2.40	80	.019*	.28	.12	[0.0478 – 0.5156]	.543
Campus A	68	2.11	66	.039*	.27	.13	[0.0144 – 0.5184]	.513

Note. *p < .05

Figure 1 IMMS Posttest Scores (All Campuses vs. Campus A)





CIS, Intrinsic Motivation, and Motivational Self-evaluation Surveys

Descriptive Analysis

Table 12 summarizes the descriptive statistics (M, SD, Min, Max) and 95% confidence intervals (CI) obtained from the responses of participants in all campuses to the three motivational surveys (CIS, intrinsic motivation, motivational self-evaluation). First, all three surveys demonstrated an acceptable reliability on the two time points, ranging from $\alpha = .65$ for the motivational self-evaluation survey and $\alpha = .88$ for the CIS survey. The mean of the experimental group slightly decreased from 4.15 to 4.04 on the CIS survey and from 3.53 to 3.51 on the motivational self-evaluation survey between the two time points. A similar pattern was noticed with the control group on the CIS but with a slightly smaller mean (pretest $M = 3.91$, posttest $M = 3.87$). However, on the intrinsic motivation survey, the mean of the experimental group slightly increased from 3.89 to 3.92, but it decreased from 3.79 to 3.75 for the control group. Unlike with the experimental group, the mean of the control group increased from 3.36 to 3.45 on the motivational self-evaluation survey. Considering the possible score range on the surveys, from 1 (*not true*) to 5 (*very true*), the mean scores of the pretest indicate that students in the two groups generally started with a higher motivation that slightly declined as time progressed. Looking only at the posttest scores, it looks like the experimental group showed higher motivational levels on all three surveys compared to the control group, but that does not necessarily reflect an improvement in gain scores between the pretest and posttest. Therefore, further inferential analyses were necessary to explore any pre-existing differences between groups and to check any significant differences between the two groups and time points.

Table 12 Descriptive Statistics of CIS, Intrinsic Motivation, and Self Evaluation Scales (All Campuses)

		N	M	SD	Min	Max	95% Confidence Interval of Mean	M	SD	Min	Max	95% Confidence Interval of Mean
Survey	Group		Pretest (α = .83)					Posttest (α = .88)				
CIS	Exp.	50	4.15	.43	3.25	5	[4.02-4.27]	4.04	.47	2.95	4.90	[3.90-4.17]
	Con.	32	3.91	.53	2.60	4.85	[3.72-4.10]	3.87	.68	2.20	4.90	[3.63-4.12]
			Pretest (α = .80)					Posttest (α = .77)				
Intrinsic	Exp.	50	3.89	.83	1.86	5	[3.66-4.13]	3.92	.73	1.57	5	[3.71-4.13]
	Con.	32	3.79	.88	2	4.86	[3.48-4.11]	3.75	.81	1.29	5	[3.46-4.04]
			Pretest (α = .65)					Posttest (α = .70)				
Evaluation	Exp.	50	3.53	.71	1.57	4.86	[3.33-3.74]	3.51	.77	1.71	4.71	[3.30-3.73]
	Con.	32	3.36	.66	2.14	4.57	[3.12-3.60]	3.45	.66	2.14	4.57	[3.21-3.69]

Similar findings were yielded among participants in campus A, with a slightly smaller difference in mean scores on all three surveys between the two time points. Table 13 presents descriptive statistics of all three survey for participants in campus A only.

Table 13 Descriptive Statistics of CIS, Intrinsic Motivation, and Self Evaluation Scales (Campus A)

		N	M	SD	Min	Max	95% Confidence Interval of Mean	M	SD	Min	Max	95% Confidence Interval of Mean
Survey	Group		Pretest (α = .86)					Posttest (α = .87)				
CIS	Exp.	36	4.06	.44	3.25	5	[3.90-4.20]	3.96	.48	2.95	4.90	[3.80-4.12]
	Con.	32	3.91	.53	2.60	4.85	[3.72-4.10]	3.87	.68	2.20	4.90	[3.62-4.12]
			Pretest (α = .80)					Posttest (α = .78)				
Intrinsic	Exp.	36	3.82	.87	1.86	5	[3.52-4.11]	3.85	.80	1.57	5	[3.57-4.11]
	Con.	32	3.79	.88	2	4.86	[3.48-4.11]	3.75	.81	1.29	5	[3.46-4.04]
			Pretest (α = .67)					Posttest (α = .69)				
Evaluation	Exp.	36	3.46	.79	1.57	4.86	[3.19-3.73]	3.46	.81	1.71	4.43	[3.18-3.72]
	Con.	32	3.36	.66	2.14	4.57	[3.12-3.60]	3.45	.66	2.14	4.57	[3.21-3.69]

Inferential Analysis

(1) Were there any initial differences between control and experimental groups (even despite randomization), or were they equivalent?

To check for any pre-existing differences between the students in the experimental and control groups with regard to these three key motivational variables, an independent samples *t*-test was run on the pretest scores obtained from the three motivation surveys (Table 14). Results show a statistically significant difference between the pretest scores obtained from the CIS for the experimental group ($M = 4.15$, $SD = .43$, $N = 50$) and the control group ($M = 3.91$, $SD = .53$, $N = 32$); the 95% CI for the difference in means is [.02, .45] ($t = 2.26$, $p = .027$, $df = 80$). Since the 95% CI does not cross zero, we conclude that there is a statistically significant difference between groups in favor of the experimental group. The effect size for this comparison was Cohen's $d = .51$ which by Plonsky and Oswald's (2014) guidelines for effect sizes for SLA can be considered a small effect. However, no significant difference was found on participants' scores on the intrinsic motivation survey (t (80) = .51, $p = .606$, 95% CI [-.28, .48]) or the motivational self-evaluation survey (t (80) = .1.10, $p = .274$, 95% CI [-.01, .48]).

According to Lakens et al. (2017), a single *t*-test is not sufficient proof to demonstrate equivalency between groups or claim they are meaningfully different in practical terms. Therefore, I performed an equivalence test via a two one-sided *t*-test (TOST) on the pretest scores of all three motivational surveys. The null hypothesis was that the two groups were not equivalent (i.e., their difference in means is either less than the lower bound of the equivalence margin or greater than the upper bound of the equivalence margin), and the alternative hypothesis was that they were equivalent within a pre-specified margin of error (-.5-.5)—what Lakens et al. (2017) call the "smallest effect size of interest (SESOI)" (p. 359). The results of the

TOST, presented in Table 14 alongside the results of the independent samples *t*-test, were statistically significant for all three motivational surveys; CIS $t(80) = -2.44$, $p = 0.008$, intrinsic motivation $t(80) = -2.08$, $p = 0.013$, motivational self-evaluation $t(80) = -2.11$, $p = 0.019$. Since all *t*-tests were statistically significant, I rejected the null hypothesis and concluded that the mean differences were within the pre-specified equivalence margin. In other words, while the two groups had a statistically significantly mean difference on the CIS only, based on the results of the independent samples *t*-test, (with effect size of $d = .51$, which is "small" according to Plonsky & Oswald 2014), the two group means could be considered practically equivalent given they differed by less than half a point on the raw scale (TOST results). Also, the mean difference falls within the pre-specified equivalence margin of -.5 to .5. Therefore, I found evidence to support the conclusion that the two groups were statistically equivalent and that they had similar motivational levels prior to the beginning of the intervention.

Similar findings were found among participants in campus A only as shown in Table 15, and therefore it was determined that they were equivalent in their motivational levels before the commencement of the study.

Table 14 Independent Samples t-test and TOST of CIS, Intrinsic Motivation, and Self-Evaluation Scales Pretest Scores (All Campuses) (Experimental v. Control)

	N	*t*	*df*	*p*	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference	*d*	*TOST t*	*TOST p*
CIS	82	2.26	80	.027*	.24	.11	[0.028 – 0.450]	.511	-2.44	.008*
Intrinsic	82	.51	80	.606	.10	.19	[-0.283 – 0.482]	.117	-2.08	.013*
Eval	82	1.10	80	.274	.17	.16	[-0.139 – 0.484]	.250	-2.11	.019*

Note. *p < .05

Table 15 Independent Samples t-test and TOST of CIS, Intrinsic Motivation, and Self Evaluation Scales Pretest Scores (Campus A) (Experimental v. Control)

	N	*t*	*df*	*p*	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference	*d*	*TOST t*	*TOST p*
CIS	68	1.26	66	.209	.15	.12	[-0.085 – 0.384]	.308	-2.97	.002*
Intrinsic	68	.11	66	.913	.02	.21	[-0.401 – 0.448]	.027	-2.21	.020*
Eval	68	.58	66	.564	.10	.18	[-0.251 – 0.457]	.141	-2.25	.013*

Note. *p < .05

(2) Were there any differences in the experimental group on measures of motivation over the duration of the treatment?

(3) Were there differences (in the predicted direction) on measures of motivation between the experimental and control groups following the treatment?

To explore the group difference and their score changes over time, a 2x2 mixed ANOVA was conducted to examine the effects of the first independent variable (Group) and the second independent variable (Time) on the dependent variable (scores on the three motivational surveys). The between-subjects factor was Group with two levels (experimental vs. control), and the within-subjects factor was Time with two levels (pretest, posttest). No important deviations from normality and homogeneity of variances for the residuals were discovered, and the assumption of sphericity was met for all tests (all Mauchly's test results > .05).

ANOVA Table 16 shows the results of the tests of within-subjects effects and between-subjects effects, which include the main effects of Time and Group, as well as the interaction between Time and Group on all three motivational variables (CIS, intrinsic motivation, motivational self-evaluation). Going on to the question of any difference over time (in either treatment or control group)—there was a non-significant interaction between Time and Group on all motivational variables: CIS ($F(1, 80) = .48$, $p = .487$, $\eta_p^2 = .006$), intrinsic motivation ($F(1, 80) = 0.23$, $p = .632$, $\eta_p^2 = .003$), motivational self-evaluation ($F(1, 80) = .65$, $p = .421$, $\eta_p^2 =$

.008). This suggests that the effect of Time on all three motivational variables did not differ significantly between the two groups. Similarly, there was also no significant main effect of Time on CIS scores ($F(1, 80) = 1.79$, $p = .184$, $\eta_p^2 = .022$), intrinsic motivation scores ($F(1, 80) = .01$, $p = .919$, $\eta_p^2 = .000$) or motivational self-evaluation scores ($F(1, 80) = .25$, $p = .614$, $\eta_p^2 = .003$), suggesting that there was no significant difference in all motivational variables' scores across the two time points.

The results also indicate that there was no significant main effect of group on the CIS scale scores ($F(1, 80 = 3.77$, $p = .056$, $\eta_p^2 = .045$), intrinsic motivation scorers ($F(1, 88) = .66$, $p = .416$, $\eta_p^2 = .008$) or motivational self-evaluation scores ($F(1, 80) = .66$, $p = .417$, $\eta_p^2 = .008$). This means that there was no significant difference between the two groups in terms of their course interest, intrinsic motivation, and motivational self-evaluation.

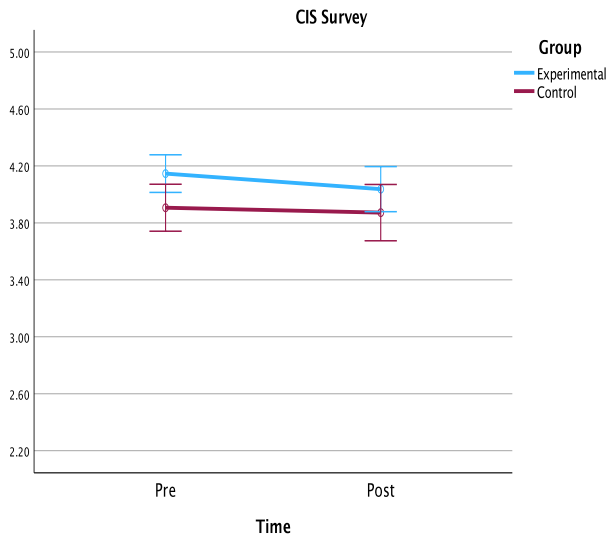
In summary, the findings reported in Table 16 shows no significant Time x Group interactions were observed for the CIS, intrinsic motivation, or self-evaluation, indicating that the groups did not differ in changes from pre to posttest. In other words, these results show no significant effect of the intervention on students' interest in the course, intrinsic motivation, or their motivational self-evaluation as elicited from these three motivation surveys, on the two time points. This also applies to the analyses conducted for campus A only (Table 6). Figures 2 and 3 depict the effects of the intervention on the three constructs in all campuses and in campus A alone. Therefore, based on the non-significant interaction effect we reject hypotheses 1B, 1C, and 1D.

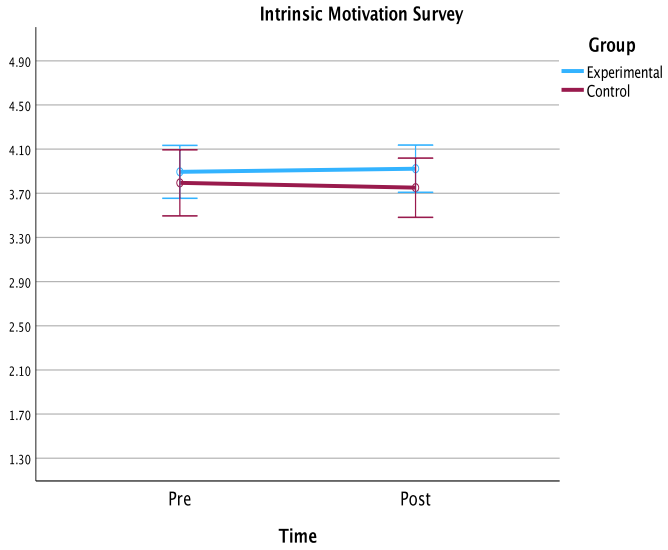
Table 16 Summary of 2×2 Repeated-Measures ANOVA on CIS, Intrinsic Motivation, and Motivational Self Evaluation Scales (All Campuses)

Scale	Source of Variation	SS	*df*	Mean square	*F*	*p*	η_p^2
CIS	Between-subject						
	Group	1.59	1	1.59	3.77	.056	.045
	Error	33.92	80	.42			
	Within-subject						
	Time	.20	1	.20	1.79	.184	.022
	Time X Group	.05	1	.05	.48	.487	.006
	Error (time)	8.93	80	.11			
Intrinsic	Between-subject						
	Group	.72	1	.72	.66	.416	.008
	Error	86.42	80	1.08			
	Within-subject						
	Time	.00	1	.00	.01	.919	.000
	Time X Group	.05	1	.05	.23	.632	.003
	Error (time)	17.86	80	.22			
Evaluation	Between-subject						
	Group	.56	1	.56	.66	.417	.008
	Error	67.49	80	.84			
	Within-subject						
	Time	.04	1	.04	.25	.614	.003
	Time X Group	.10	1	.10	.65	.421	.008
	Error (time)	13.34	80	.16			

Note. *p < .05

Figure 2 The Effects of the ARCS Intervention on CIS, Intrinsic Motivation, and Motivational Self-Evaluation (All Campuses)





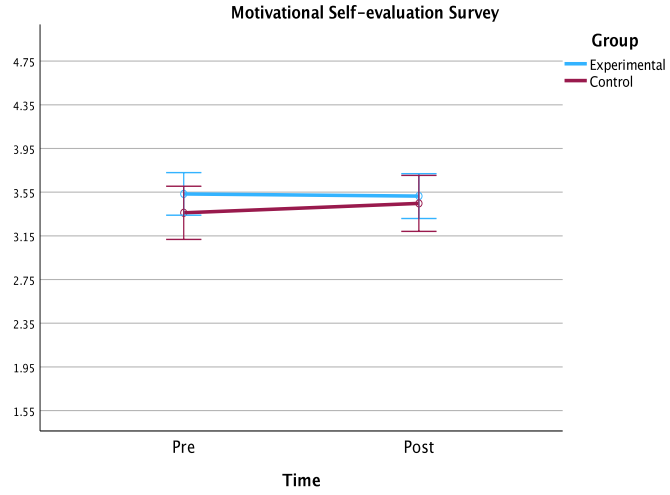
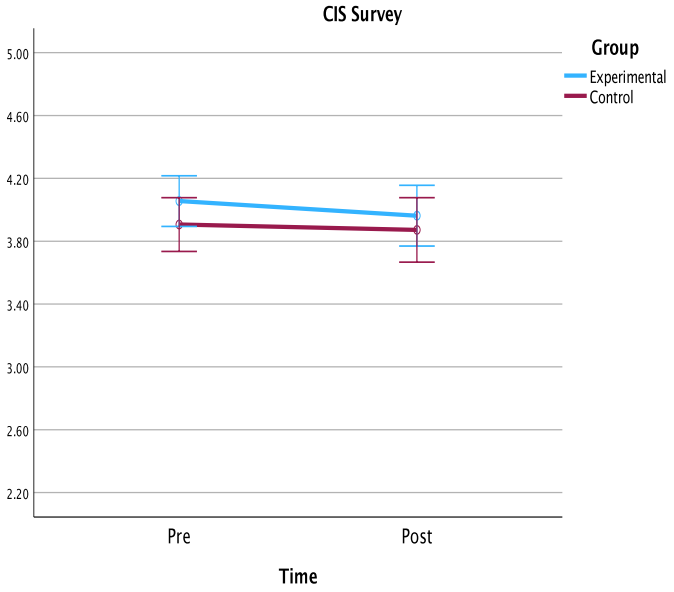


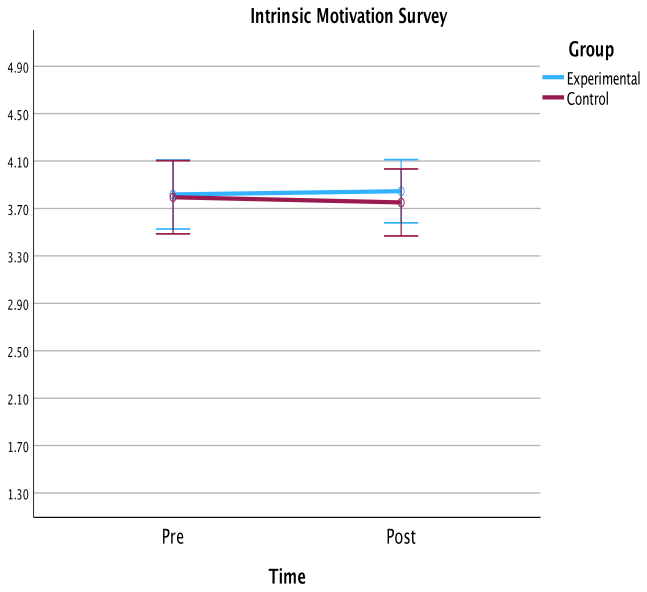
Table 17 Summary of 2×2 Repeated-Measures ANOVA on CIS, Intrinsic Motivation, and Motivational Self Evaluation Scales (Campus A)

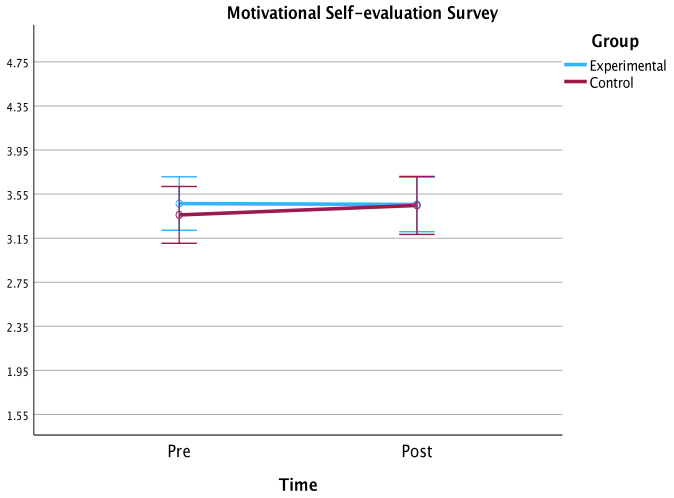
Scale	Source of Variation	SS	*df*	Mean square	*F*	*p*	η_p^2
CIS	Between-subject						
	Group	.48	1	.48	1.10	.298	.016
	Error	29.24	66	.44			
	Within-subject						
	Time	.13	1	.13	1.06	.305	.016
	Time X Group	.02	1	.02	.22	.636	.003
	Error (time)	8.49	66	.12			
Intrinsic	Between-subject						
	Group	.11	1	.11	.10	.751	.002
	Error	76.73	66	1.16			
	Within-subject						
	Time	.002	1	.00	.010	.922	.000
	Time X Group	.04	1	.04	.17	.677	.003
	Error (time)	16.22	66	.24			
Evaluation	Between-subject						
	Group	.10	1	.10	.11	.735	.002
	Error	60.31	66	.91			
	Within-subject						
	Time	.05	1	.05	.29	.588	.004
	Time X Group	.07	1	.07	.43	.514	.006
	Error (time)	11.44	66	.17			

Note. *p < .05

Figure 3 The Effects of the ARCS Intervention on CIS, Intrinsic Motivation, and Motivational Self Evaluation (Campus A)







Establishing Equivalency of Groups Via Proficiency Measures

Descriptive Analysis

To check for any pre-existing differences between the students in the experimental and control groups with regard to their English proficiency, I first present some descriptive statistics showing how students performed on the three proficiency measures utilized in this study. Table 18 shows that the experimental group performed slightly better on the Cambridge multiple-choice English test with an average score of (M = 9.66, SD = 3.40, N = 50) than the control group (M = 8.91, SD = 3.99, N = 32). This test demonstrated a moderate reliability (α = .63). Considering that the maximum score of this test was 25, both groups showed an A2 (Elementary) to B1 (Intermediate) English proficiency according to CEFR guidelines, which also aligns with their designated level at IPA and the level of the writing textbook assigned to them in this course. As for the writing self-rating (Min = 1, Max = 10), both groups rated themselves towards the middle of the scale, with a slight advantage for the experimental group (M = 5.90, SD = 1.75) over the control group (M = 5.59, SD = 1.48). The final proficiency measure was the use of CEFR‘s six writing ability statements (1 pertains to writing simpler texts and 6 more sophisticated texts). The results show that both groups had somewhat similar descriptions of their writing ability that ranged between 2 ‘they can write short, simple notes and messages relating to matters in areas of immediate needs’, and 3 ‘they can write simple connected text on topics which are familiar or of personal interest’ (refer to all six statements in Appendix B). The control group perceived their writing abilities to be marginally higher (M = 2.50, SD = 1.30) than their counterparts in the experimental group (M = 2.38, SD = 1.16). Yet, both groups reported they have basic writing skills that pertains to an A2-B1 level, according to CEFR’s categorization of

these self-assessment statements. Similar results are yielded with students in campus A as can be shown in the same table.

Inferential Analysis

Although the descriptive analysis showed that the two groups are homogeneous in terms of their proficiency level, also supported by the overlapping 95% CI interval values, further inferential analysis was necessary to determine if there was a significant difference between groups. An independent samples *t*-test and TOST were run on the pretest scores obtained from all three measures and is presented in Table 19. Results show a statistically non-significant difference between the pretest scores obtained from the Cambridge test for the experimental group and the control group, $t(80) = .91$, $p = .363$, 95% CI [-0.884-2.392], the writing self-rating, $t(80) = .81$, $p = .415$, 95% CI [-0.488-0.912], and the writing ability, $t(80) = .43$, $p = .663$, 95% CI [-0.666-.0.426]. Since the 95% CI crosses zero in all tests, we fail to reject the null hypothesis that there is no statistical difference between groups on all three proficiency measures. This assumption was also affirmed by conducting a TOST equivalence test where the null hypothesis was that the two groups were not equivalent (i.e., their difference in means is either less than the lower bound of the equivalence margin or greater than the upper bound of the equivalence margin), and the alternative hypothesis was that they were equivalent within a pre-specified margin of error. This margin of error was determined to be (-2.5 – 2.5) for the Cambridge test based on the Standard Error of Measurement SEM (calculated using this formula: $SD \times \sqrt{1 - \alpha}$, where alpha is the Cronbach's alpha for the test). As for the writing self-rating and the writing ability, (-1 – 1) were chosen as equivalence bounds. The TOST results, shown in Table 10, were all significant showing that the mean difference for each proficiency measure falls within the pre-specified equivalence margin of error. Therefore, I found evidence to support

the conclusion that the two groups were statistically equivalent and that they had similar English proficiency prior to the beginning of the intervention. This is also true for campus A (Table 20).

Table 18 Proficiency Measures Descriptive Statistics

		Test Results (α = .63)						Writing Self-Rating					Writing Ability				
		N	M	SD	Min	Max	95% Confidence Interval of Mean	M	SD	Min	Max	95% Confidence Interval of Mean	M	SD	Min	Max	95% Confidence Interval of Mean
All Campuses	Exp.	50	9.66	3.40	4	17	[8.69-10.36]	5.90	1.75	1	10	[5.40-6.40]	2.38	1.16	1	5	[2.05-2.71]
	Con.	32	8.91	3.99	3	21	[7.47-10.34]	5.59	1.48	2	9	[5.06-6.13]	2.50	1.30	1	6	[2.03-2.97]
Campus A	Exp.	36	9.56	3.29	4	16	[8.44-10.67]	5.81	1.41	2	9	[5.33-6.28]	2.25	1.13	1	5	[1.87-2.63]
	Con.	32	8.91	3.99	3	21	[7.47-10.34]	5.59	1.48	2	9	[5.06-6.13]	2.50	1.30	1	6	[2.03-2.97]

Note. Test Results (Min= 1, Max= 25), Writing Self Rating (Min= 1, Max= 10), Writing ability (Min= 1, Max= 6)

Table 19 Independent Samples t-test and TOST of Proficiency Measures Scores (Experimental v. Control) (All Campuses)

	N	*t*	*df*	Mean Diff.	Std. Error Diff.	*p*	95% Confidence Interval of the Difference	*d*	*TOST T*	*TOST P*
Test Results	82	.91	80	.75	.82	.363	[-0.884-2.392]	.207	-2.12	.018*
Writing Self-Rating	82	.81	80	.31	.37	.415	[-0.437-1.050]	.185	-1.84	.034*
Writing Ability	82	.43	80	-.12	.27	.663	[-0.666-.0.426]	-.099	3.19	.000*

Note. *p < .05

Table 20 Independent Samples t-test and TOST of Proficiency Measures Scores (Experimental v. Control) (Campus A)

	N	*t*	*df*	Mean Diff.	Std. Error Diff.	*p*	95% Confidence Interval of the Difference	*d*	*TOST T*	*TOST P*
Test Results	68	.73	66	.65	.88	.465	[-1.113-2.412]	.179	-2.52	.011*
Writing Self-Rating	68	.60	66	.21	.35	.548	[-0.488-0.912]	.147	-2.22	.014*
Writing Ability	68	.85	66	-.25	.29	.398	[-0.837-.0.337]	-.206	2.54	.006*

Note. *p < .05

Writing Development Measures

RQ2. Did the ARCS-based intervention have any effect on students' L2 writing at the end of the experiment?

The previous section considered the effect of the intervention on students' self-reported motivation. The following section shows any effect on students' L2 writing.

Descriptive Analysis

Rater Performance. First, the interrater correlation coefficient ICC was calculated to examine the consistency of scoring between the three raters on the four categories in the rubric

(content, communicative achievement, organization, language), as well as the total score. Since the three raters are the only raters of interest and they were not randomly selected from a larger pool of possible raters, I used a two-way mixed effects model to calculate interrater reliability in SPSS. The average measures ICCs for consistency showed good to excellent interrater reliability between the three raters (content = .85, communicative achievement = .85, organization = .89, language = .86, total score = .92). This indicates that all raters were measuring writers' performance consistently.

After I established good reliability for the raters, I then calculated the mean and standard deviation of the scores assigned by each rater to the four categories in the rubric (content, communicative achievement, organization, language), as well as the total score, and I presented the relevant descriptive statistics in Table 21. The mean scores suggest that Rater 1 (Saudi rater) was the most severe rater, assigning the lowest mean scores on all four categories. Rater 1 also assigned the lowest mean total score, 5.00. Rater 2 seemed to be the most lenient rater, assigning the highest mean scores on all four categories and on the mean total score, 10.51. Rater 3 (American rater) had mean scores falling between the mean scores assigned by rater 1 & 2 on the four categories and the mean total score, 8.35.

Table 21 Descriptive Statistics of Rater Scores by Category (N = 164)

	Rater 1		Rater 2		Rater 3	
Category	M	SD	M	SD	M	SD
Content	1.52	1.09	3.15	1.47	2.47	1.45
Communicative Achievement	1.12	.83	2.62	1.30	2.02	1.23
Organization	1.05	.97	2.45	1.37	1.77	1.17
Language	1.31	.87	2.29	1.09	2.09	1.50
Total	5.00	3.41	10.51	4.86	8.35	4.86

Writing Quality. To explain what specific aspects of students' writing were most affected by the motivational intervention, I calculated descriptive statistics for both measures of writing: analytic measure and the linguistic measure of fluency. Table 22 summarizes the descriptive statistics (M, SD, Min, Max) and 95% confidence intervals (CI) of the four categories of analytic rubric, as well as the total scores, on the pretest and posttest for both the experimental and control groups in all campuses. Table 23 presents the descriptive statistics for analytic rating in campus A. Finally, Table 24 demonstrates descriptive statistics related to the linguistic measure of fluency (operationalized by the number of words) for both groups in all campuses and in campus A.

As shown in Table 22, on the pretest, the treatment group did slightly better than the control group across all four categories and the total score, except for organization and language, where the control group showed better pretest scores compared to the treatment group. Both groups showed that writing relevant content was their point of strength before the intervention took place, but they struggled with writing organization as both the treatment group (M = 1.43, SD = 1.00), and the control group (M = 1.57, SD = 1.09) performed the least well on this category compared to the other three categories. Furthermore, as shown in Table 24, students in the control group wrote more words on their pretest (M = 64.16, SD = 57.43) compared to students in the treatment group (M = 62.48, SD = 47.67).

Table 22 Descriptive Statistics for Analytic Rating (All Campuses)

	Treatment group (N = 50)		Control group (N = 32)	
	Pre	Post	Pre	Post
Content (0-5)				
M	2.13	2.80	2.10	2.25
SD	1.25	1.06	1.13	1.20
Min	.00	.00	.00	.00
Max	4.33	5.00	4.67	5.00
95% CI lower bound	1.75	2.50	1.68	1.82
95% CI upper bound	2.50	3.10	2.53	2.68
Communicative Achievement (0-5)				
M	1.70	2.33	1.66	1.77
SD	1.10	.99	.93	1.03
Min	.00	.00	.00	.00
Max	4.00	4.67	3.67	4.00
95% CI lower bound	1.39	2.05	1.32	1.40
95% CI upper bound	2.01	2.61	1.99	2.14
Organization (0-5)				
M	1.43	2.36	1.57	1.71
SD	1.00	1.18	1.09	.95
Min	.00	.00	.00	.00
Max	4.33	4.67	4.33	4.00
95% CI lower bound	1.36	2.02	1.18	1.37
95% CI upper bound	2.00	2.70	1.97	2.05
Language (0-5)				
M	1.68	2.23	1.73	1.84
SD	1.12	1.02	1.05	1.06
Min	.00	.00	.00	.00
Max	3.67	4.67	4.33	4.00
95% CI lower bound	1.49	1.94	1.40	1.46
95% CI upper bound	2.07	2.52	2.07	2.23
Total (0-20)				
M	6.94	9.72	6.67	7.57
SD	4.37	4.04	3.88	4.05
Min	.00	.00	.00	.00
Max	16.33	18.67	15.00	16.67
95% CI lower bound	5.70	8.57	5.27	6.11
95% CI upper bound	8.18	10.87	8.07	9.03

Table 23 Descriptive Statistics for Analytic Rating (Campus A)

	Treatment group (N = 36)		Control group (N = 32)	
	Pre	Post	Pre	Post
Content (0-5)				
M	2.10	2.58	2.10	2.25
SD	1.27	1.06	1.13	1.20
Min	.00	.00	.00	.00
Max	4.33	4.67	4.67	5.00
95% CI lower bound	1.67	2.22	1.68	1.82
95% CI upper bound	2.53	2.94	2.53	2.68
Communicative Achievement (0-5)				
M	1.64	2.15	1.66	1.77
SD	1.09	.97	.93	1.03
Min	.00	.00	.00	.00
Max	4.00	4.33	3.67	4.00
95% CI lower bound	1.27	1.82	1.32	1.40
95% CI upper bound	2.01	2.48	1.99	2.14
Organization (0-5)				
M	1.36	2.11	1.57	1.71
SD	.92	1.11	1.09	.95
Min	.00	.00	.00	.00
Max	4.33	4.67	4.33	4.00
95% CI lower bound	1.05	1.74	1.18	1.37
95% CI upper bound	1.67	2.49	1.97	2.05
Language (0-5)				
M	1.60	2.05	1.73	1.84
SD	1.10	1.07	1.05	1.06
Min	.00	.00	.00	.00
Max	3.67	4.67	4.33	4.00
95% CI lower bound	1.23	1.68	1.40	1.46
95% CI upper bound	1.97	2.41	2.07	2.23
Total (0-20)				
M	6.70	8.89	6.67	7.57
SD	4.24	4.00	3.88	4.05
Min	.00	.33	.00	.00
Max	16.33	18.33	15.00	16.67
95% CI lower bound	5.27	7.54	5.27	6.11
95% CI upper bound	8.14	10.24	8.07	9.03

As for gain scores from the pretest to posttest, both groups seemed to show improvement between the two time points on all four writing analytic categories as well as on the fluency measure. The treatment group showed higher gains with an average of 2.78 compared to only .90 for the control group on the total score, and an average of 20.28 compared to 9.09 on the fluency measure. Ranked from highest to lowest, on posttest, the treatment group did better in content (*M* = 2.80, *SD* = 1.06), organization (*M* = 2.36, *SD* = 1.18), communicative achievement (*M* = 2.33, *SD* = .99), and finally language (*M* = 2.23, *SD* = 1.02). The largest gain for the treatment group from the pretest to the posttest was on organization with an average gain of .93.

Table 24 Descriptive Statistics for Fluency Measure (All Campuses v. Campus A)

	Treatment All (N = 50)		Control All (N = 32)		Treatment A (N = 36)		Control A (N = 32)	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Fluency								
M	62.48	82.76	64.16	73.25	67.17	82.22	64.16	73.25
SD	47.67	36.97	57.43	61.27	52.93	37.52	57.43	61.27
Min	0	23	0	0	0	25.00	0	0
Max	215	213	325	328	215	213.00	325	328
Interquartile Range	63.25	56	38.50	66.75	69	50.25	38.50	66.75
95% CI lower	48.93	72.25	43.45	51.16	49.26	69.53	43.45	51.16
95% CI upper	76.03	93.27	84.86	95.34	85.08	94.92	84.86	95.34

The control group also scored highest in content, but surprisingly they did better in language compared to organization and communicative achievement. Their highest gain was in organization and content with a .15 average gain difference. Looking at the 95% CI upper and lower bounds for both writing development measures on the pretest, there seems to be an overlap that might indicate that the two groups had equivalent writing proficiency prior to the start of the intervention. As for gain scores, the 95% CI values of all four writing categories, plus the total, substantially overlap with each other from pretest to posttest, which suggests that gains were not statistically significant among students in the control group. This is also true for the 95% CI

intervals of the fluency measure. On the other hand, the treatment group showed a different trend as the 95% CI values did not overlap in content, communicative achievement, organization, and the total scores, which might indicate some meaningful gains from pretest to posttest in these categories. That said, I do not claim that there are statistically significant gains or that the two groups had equivalent writing proficiency before reporting further inferential analyses.

Inferential Analyses

(1) Were there any initial writing ability differences between control and experimental groups (even despite randomization), or were they equivalent?

To determine whether participants in both groups had an equivalent writing ability before the beginning of the intervention, an independent samples *t*-test was run on the pretest scores obtained from all four writing categories and the total score (Table 25), as well as the fluency measure (Table 26). Results show a statistically non-significant difference between the pretest scores obtained on all four categories and the total score for the experimental group and the control group, content $t(80) = .08$, $p = .936$, 95% CI [-0.545-0.591], communicative achievement $t(80) = .18$, $p = .857$, 95% CI [-0.425-0.510], organization $t(80) = .45$, $p = .654$, 95% CI [-0.339-0.538], language $t(80) = .42$, $p = .673$, 95% CI [-0.393-0.605], and total scores $t(80) = .28$, $p = .893$, 95% CI [-1.614-2.159]. Non-significant differences were also found on the number of words written by students on the pretest: fluency $t(80) = .14$, $p = .939$, 95% CI [-24.956 – 21.604]. Since the 95% CI crosses zero in all measures (also supported by the non-significant *p* values), we fail to reject the null hypothesis that there is no statistical difference between groups for each writing development measure. This was also supported by the significant *p* values in the TOST test, indicating that both groups were equivalent on all pretest writing measures. Therefore, I found evidence to support the conclusion that the two groups were statistically

equivalent and that they had similar writing ability prior to the beginning of the intervention.

This is also true for campus A (Table 27).

Table 25 Independent Samples t-test of Analytic Writing Pretest Scores (Experimental v. Control) (All Campuses)

	N	*t*	*df*	Mean Diff.	Std. Error Diff.	*p*	95% Confidence Interval of the Difference	*d*	*TOST t*	*TOST p*
Content	82	.08	80	.02	.28	.936	[-0.545-0.591]	.018	-3.55	.000*
Communicative Ach.	82	.18	80	.04	.23	.857	[-0.425-0.510]	.041	-4.88	.000*
Organization	82	.45	80	.10	.22	.654	[-0.339-0.538]	.116	3.66	.000*
Language	82	.42	80	.10	.25	.673	[-0.393-0.605]	.096	3.83	.000*
Total	82	.28	80	.27	.94	.893	[-1.614-2.159]	.065	-1.82	.035*

Note. *p < .05

Table 26 Independent Samples t-test and TOST of Fluency Measure Pretest Scores (Experimental v. Control) (All Campuses v. Campus A)

	N	*t*	*df*	*p*	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference	*d*	*TOST t*	*TOST p*
All	82	.14	80	.939	-1.67	11.69	[-24.956 – 21.604]	.032	3.27	.000*
A	68	.225	66	.823	3.01	13.38	[-23.712 – 29.733]	.055	-2.19	.016*

Note. *p < .05

Table 27 Independent Samples t-test of Analytic Writing Pretest Scores (Experimental v. Control) (Campus A)

	N	*t*	*df*	Mean Diff.	Std. Error Diff.	*p*	95% Confidence Interval of the Difference	*d*	*TOST t*	*TOST p*
Content	68	.01	66	.00	.29	.995	[-0.597-0.593]	.001	-3.41	.000*
Communicative Ach.	68	.07	66	-.02	.24	.909	[-0.513-0.475]	.028	3.96	.000*
Organization	68	.12	66	.03	.22	.904	[-0.421-0.476]	.030	3.24	.000*
Language	68	.10	66	.03	.27	.749	[-0.505-0.561]	.026	3.32	.000*
Total	68	.03	66	.04	.98	.971	[-1.939-2.012]	.054	-1.99	.025*

Note. *p < .05

(2) Were there any differences between the two groups, on measures of writing, over the duration of the treatment?

To explore the group difference and their writing score changes over time, a 2x2 mixed ANOVA was conducted to examine the effects of the first independent variable, Group, and the second independent variable, Time, on the dependent variable (scores on the four writing categories and the total score). The between-subjects factor was Group with two levels (experimental vs. control), and the within-subjects factor was Time with two levels (pretest, posttest). No important deviations from normality and homogeneity of variances for the residuals were discovered and the assumption of sphericity was met for all tests (all Mauchly's test results $p > .05$).

ANOVA Table 28 shows the results of the tests of within-subjects effects and between-subjects effects, which include the main effects of Time and Group, as well as the interaction effect between Time and Group on all four writing categories and the total score obtained from students in all campuses. The effects of key interest are the significant Group × Time interactions—significant interaction indicates that changes over time in learners' writing ability were statistically different for the two groups. ANOVA Table 28 shows that there was a significant main effect of Time on all writing categories and the total score with large effect sizes explained by the η_p^2 values: content scores ($F(1, 80) = 18.48$, $p = <.001$, $\eta_p^2 = .188$), communicative achievement scores ($F(1, 80) = 18.87$, $p = <.001$, $\eta_p^2 = .191$), organization scores ($F(1, 80) = 35.52$, $p = <.001$, $\eta_p^2 = .308$), language scores ($F(1, 80) = 16.26$, $p = <.001$, $\eta_p^2 = .169$), and total scores ($F(1, 80) = 29.93$, $p = <.001$, $\eta_p^2 = .272$). This suggests that both groups showed improvement from pretest to posttest on all writing categories and the total score.

The main effect of time was qualified by a significant Group × Time interaction in content scores ($F(1, 80) = 7.64$, $p = .007$, $\eta_p^2 = .087$), communicative achievement scores ($F(1,$

80) = 9.14, p = .003, η_p^2= .103), total scores (F(1, 80) = 7.72, p = 007, η_p^2 = .088). This shows a moderate effect size on content, communicative achievement, and the total scores. The interaction effect did not reach significance on organization scores (F(1, 80) = 6.39, p = .013, η_p^2 = .074) and no significant difference was found on language scores (F(1, 80) = 1.85, p = .177, η_p^2 = .023). This suggests that while both groups improved from pretest to posttest, the effect of time on content, communicative achievement, and the total scores differed significantly between the two groups (in favor of the treatment group), but it did not in organization and language scores. As for the separate analyses run for campus A (Table 29), we see that the only significant change was driven by the main effect of Time, but this effect was not qualified by a significant Time x Group interaction on any of the four writing categories or the total score.

As for the fluency measure, Table 30 shows that there was a significant main effect of Time (F(1, 80) = 10.82, p = .001, η_p^2= .119), but no significant interaction effect was found (F(1, 80) = 1.57, p = .214, η_p^2= .019). This indicates that both groups wrote more words from pretest to posttest, but gains were not significantly different between the two groups. This is also true for the separate analysis conducted with participants in campus A only, as shown in the same table.

In summary, in response to the second research question which asked if the intervention would have a positive effect on students' L2 writing development, these results show a significant moderate effect of the intervention on the treatment group's overall writing ability, and specifically on aspects of content and communicative achievement. Therefore, I accepted Hypotheses 2, 2A, and 2B. As shown in Figure 4, even though the treatment group showed noticeable gains from pretest to posttest on the other two categories (organization and language), these gains did not reach statistical significance when compared to the control group, especially with the modified stringent alpha level of 0.0125 for the writing analytic subcategories. Hence, I

rejected Hypotheses 2C and 2D. In addition, as shown in Figure 6, the treatment group wrote more words compared to the control group, but both groups showed similar trends and the ANOVA test did not detect any significant difference between the two groups. Therefore, I also rejected Hypothesis 2E.

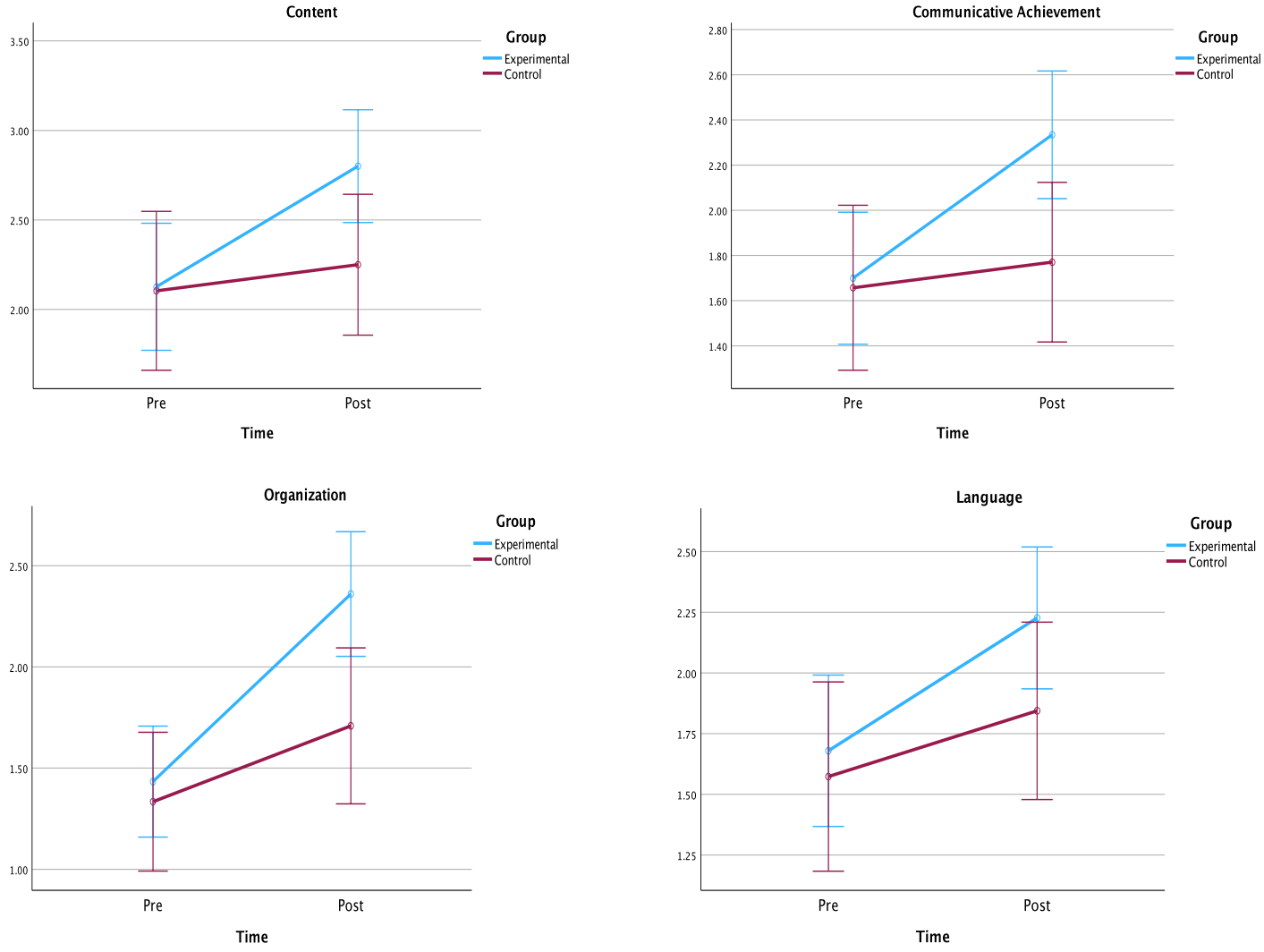
Figure 5 depicts the effects of the intervention on the analytic scores in campus A. Examining this figure closely and comparing it to Figure 4, we can see similar trends. Even though the separate analysis in campus A did not find a significant Time x Group interaction, some of the trends when looking at means are similar. This is supported by the descriptive statistics reported earlier in this section. This is also true for the fluency measure as shown in Figure 6, where similar mean trends are found between the analysis conducted in all campuses vs. campus A.

Table 28 Summary of 2×2 Repeated-Measures ANOVA Analytic Rating (All Campuses)

Scale	Source of Variation	SS	*df*	Mean square	*F*	*p*	η_p^2
Content	Between-subject						
	Group	3.20	1	3.20	1.28	.260	.016
	Error	198.96	80	2.48			
	Within-subject						
	Time	6.55	1	6.55	18.48	<.001*	.188
	Time X Group	2.71	1	2.71	7.64	.007*	.087
	Error (time)	28.37	80	.35			
Communicative Achievement	Between-subject						
	Group	3.58	1	3.58	1.99	.162	.024
	Error	143.67	80	1.79			
	Within-subject						
	Time	5.46	1	5.46	18.87	<.001*	.191
	Time X Group	2.65	1	2.65	9.16	.003*	.103
	Error (time)	23.15	80	.28			
Organization	Between-subject						
	Group	5.49	1	5.49	3.26	.075	.039
	Error	134.73	80	1.68			
	Within-subject						
	Time	16.52	1	16.52	35.52	<.001*	.308
	Time X Group	2.97	1	2.97	6.39	.013	.074
	Error (time)	37.21	80	.46			
Language	Between-subject						
	Group	2.33	1	2.33	1.22	.272	.015
	Error	152.47	80	1.90			
	Within-subject						
	Time	6.53	1	6.53	16.26	<.001*	.169
	Time X Group	.74	1	.74	1.85	.177	.023
	Error (time)	32.14	80	.40			
Total	Between-subject						
	Group	57.09	1	57.09	1.93	.168	.024
	Error	2358.9	80	29.48			
	Within-subject						
	Time	132.67	1	132.67	29.93	<.001*	.272
	Time X Group	34.25	1	34.25	7.72	.007*	.088
	Error (time)	354.59	80	4.43			

Note. *p < .05 for the Total score and *p < .0125 for the four writing categories

Figure 4 The Effect of the ARCS-based Intervention on Participants' Analytic Writing Scores (All Campuses)



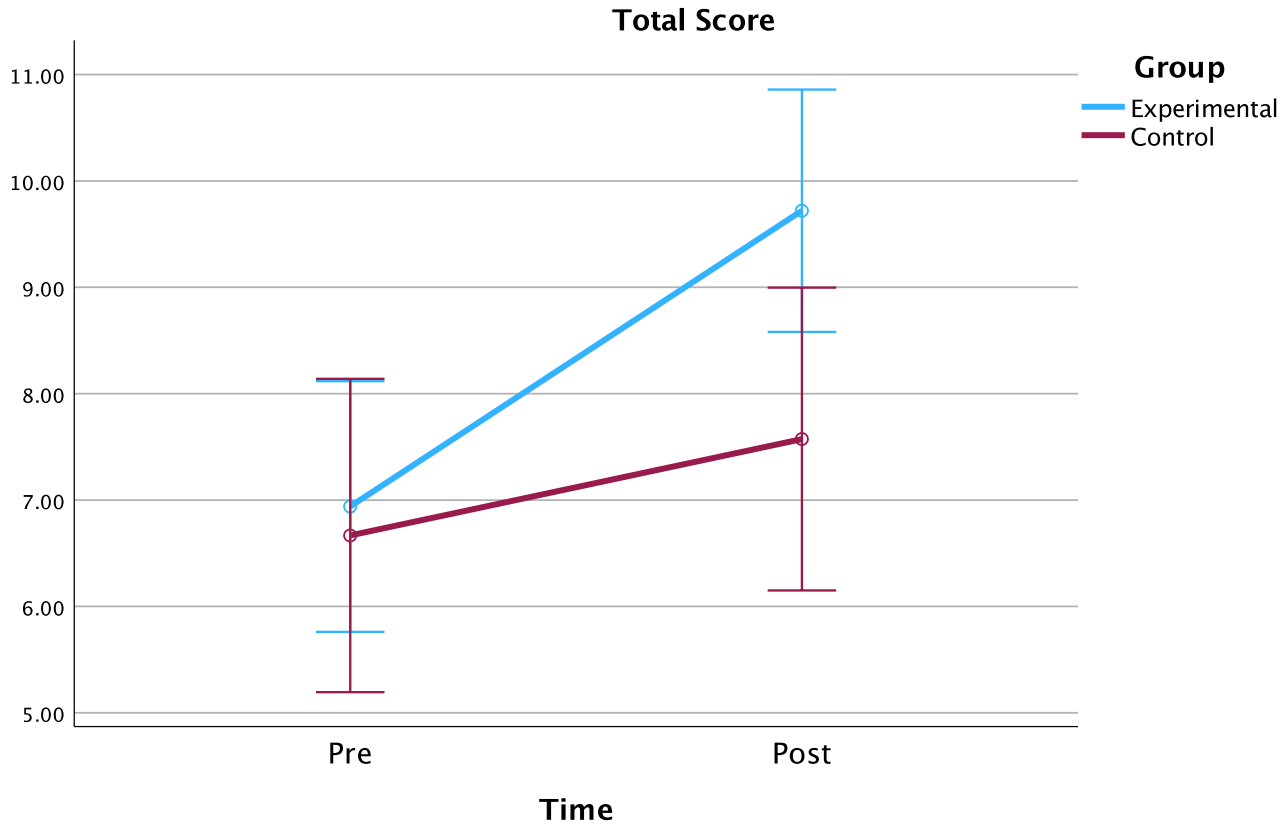
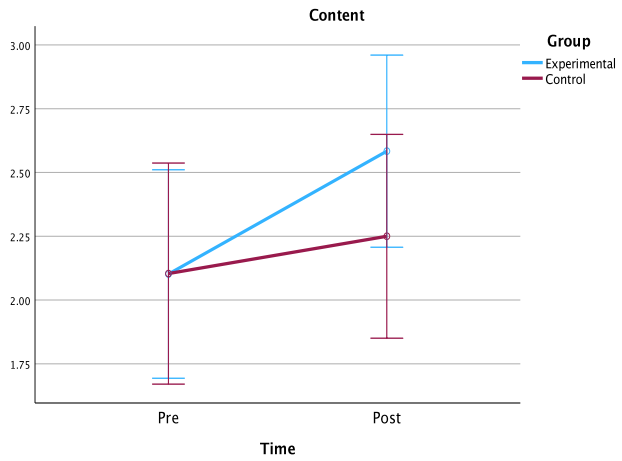

Total Score
11.00
10.00
9.00
8.00
7.00
6.00
5.00
Pre
Post
Time
Group
Experimental
Control

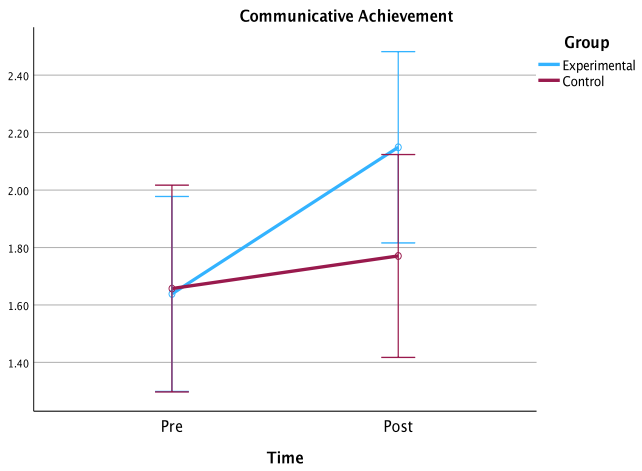
Table 29 Summary of 2×2 Repeated-Measures ANOVA Analytic Rating (Campus A)

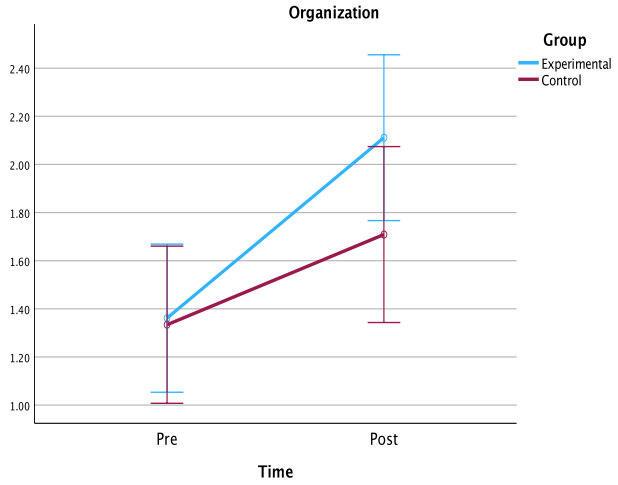
Scale	Source of Variation	SS	*df*	Mean square	*F*	*p*	η_p^2
Content	Between-subject						
	Group	.93	1	.93	.37	.542	.006
	Error	163.72	66	2.48			
	Within-subject						
	Time	3.34	1	3.34	10.81	.002*	.141
	Time X Group	.95	1	.95	3.08	.084	.045
	Error (time)	20.38	66	.30			
Communicative Achievement	Between-subject						
	Group	1.09	1	1.09	.62	.433	.009
	Error	115.87	66	1.75			
	Within-subject						
	Time	3.29	1	3.29	11.55	.001*	.149
	Time X Group	1.33	1	1.33	4.67	.034	.066
	Error (time)	18.84	66	.28			
Organization	Between-subject						
	Group	1.56	1	1.56	1.06	.305	.016
	Error	96.63	66	1.46			
	Within-subject						
	Time	10.70	1	10.70	23.05	<.001*	.259
	Time X Group	1.19	1	1.19	2.56	.114	.037
	Error (time)	30.65	66	.46			
Language	Between-subject						
	Group	.45	1	.45	.22	.636	.003
	Error	131.59	66	1.99			
	Within-subject						
	Time	4.34	1	4.34	12.24	<.001*	.157
	Time X Group	.25	1	.25	.72	.398	.011
	Error (time)	23.40	66	.35			
Total	Between-subject						
	Group	15.47	1	15.47	.54	.465	.008
	Error	1889.0	66	28.62			
	Within-subject						
	Time	81.03	1	81.03	19.47	<.001*	.228
	Time X Group	13.86	1	13.86	3.33	.073	.048
	Error (time)	274.66	66	4.16			

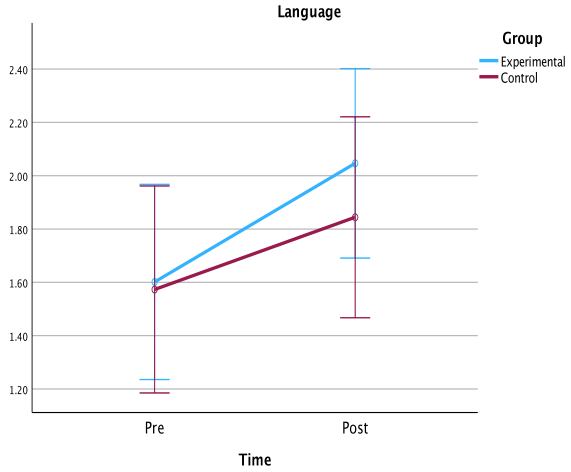
Note. *p < .05 for the Total score and *p < .0125 for the four writing categories

Figure 5 The Effect of the ARCS-based Intervention on Participants' Analytic Writing Scores (Campus A N = 68)









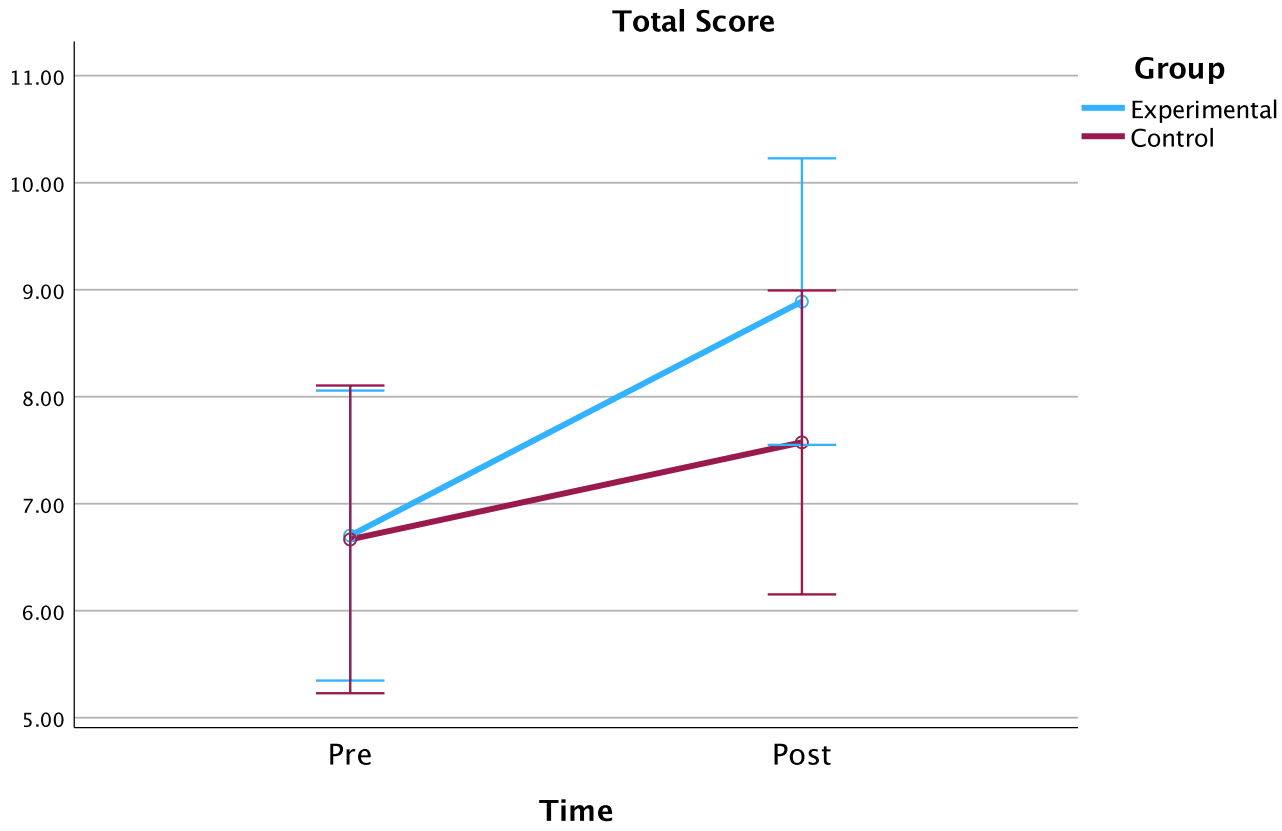
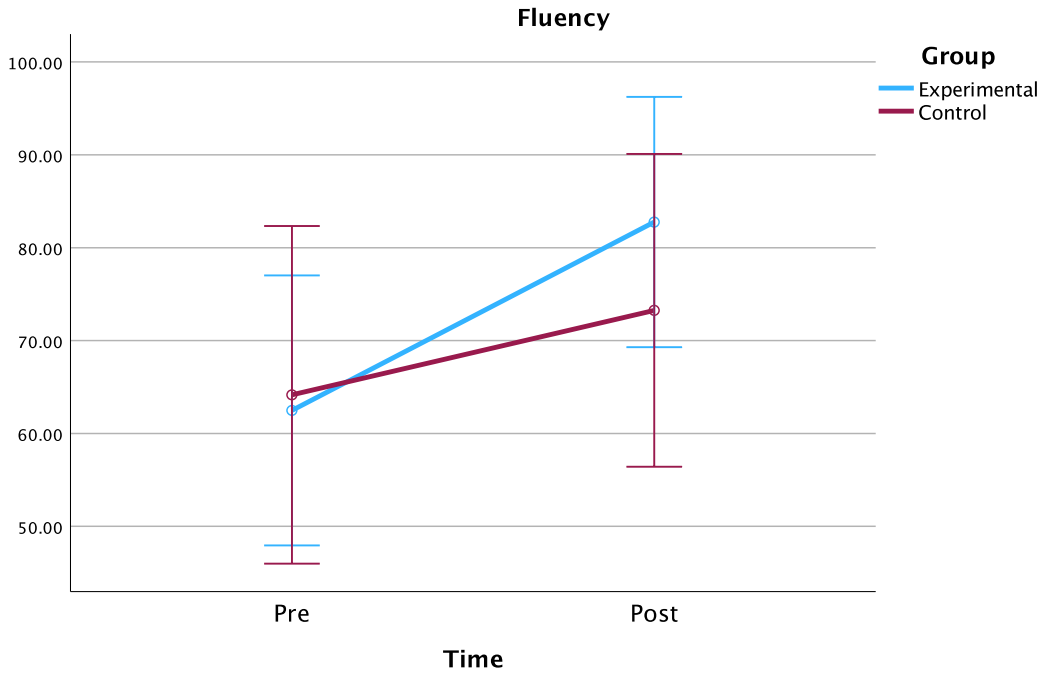

Total Score
11.00
10.00
9.00
8.00
7.00
6.00
5.00
Pre
Post
Time
Group
Experimental
Control

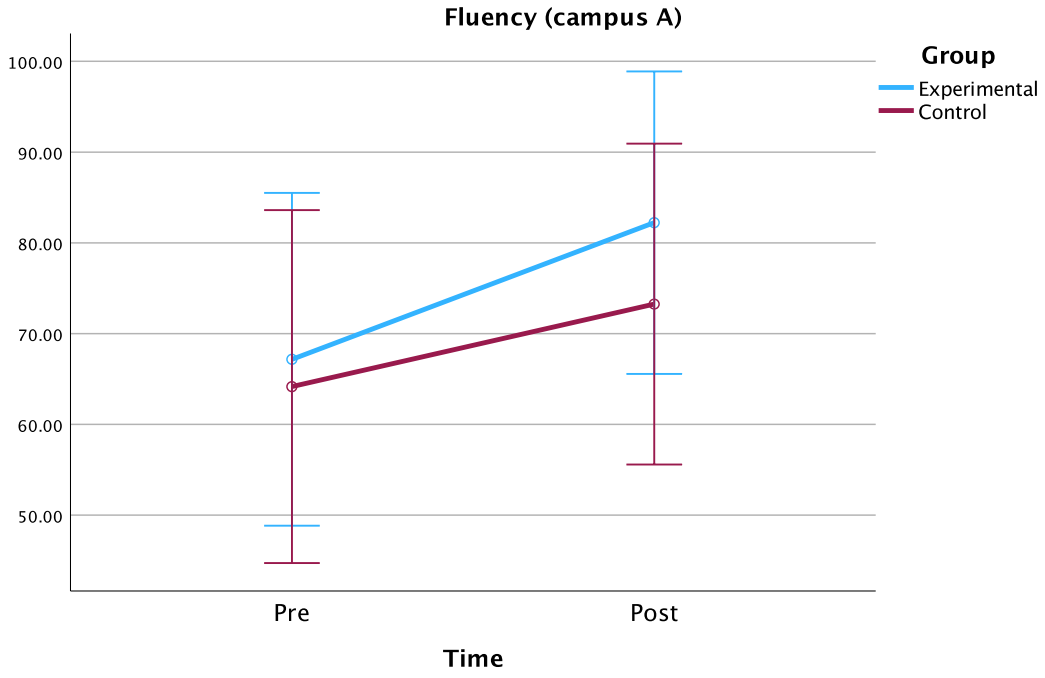
Table 30. Summary of 2×2 Repeated-Measures ANOVA Fluency Measure (All Campuses v. Campus A)

Scale	Source of Variation	SS	*df*	Mean square	*F*	*p*	η_p^2
Fluency (All Campuses)	Between-subject						
	Group	598.70	1	598.70	.143	.706	.002
	Error	334765.4	80	4184.56			
	Within-subject						
	Time	8417.72	1	8417.72	10.82	.001*	.119
	Time X Group	1220.80	1	1220.80	1.57	.214	.019
	Error (time)	62192.39	80	777.405			
Fluency (Campus A)	Between-subject						
	Group	1216.23	1	1216.23	.26	.612	.004
	Error	308557.1	66	4675.10			
	Within-subject						
	Time	4939.95	1	4939.95	5.68	.020*	.079
	Time X Group	301.07	1	301.07	.34	.558	.005
	Error (time)	57380.30	66	869.39			

Note. *p < .05

Figure 6 The Effect of the ARCS-Based Intervention on Participants' Writing Fluency (All Campuses N = 82 v. Campus A N = 68)





Qualitative Findings

This part of the results section pertains to the third and fourth research questions, by which the investigation examines and reports the outcomes obtained from interviews with students and teachers to discern their perceptions of the ARCS-based intervention beyond the self-report measures. Furthermore, the analysis showcases certain instructional materials utilized by the teachers in the experimental group, which I observed during classroom sessions.

RQ3/ How was the ARCS-based intervention perceived by students in the experimental group at the end of the experiment?

Student Interviews

This section presents the outcomes of the interviews that were primarily conducted with students from the experimental group (N = 16), along with a small number of interviews conducted with selected, focal participants from the control group (N = 6). I transcribed the interviews verbatim from the audio recordings, and I translated excerpts to English while being careful to maintain the original meaning and context. The coding process of the students' interviews produced four major themes— (a) general motivation to learn English, (b) perception of the ARCS-based motivational intervention, (c) perceived writing improvement, and (d) desire to continue learning English writing— along with several subthemes presented in Table 31. Table 31 also provides an explanation of each theme and an exemplifying quotation drawn from the interview excerpts. The number of coded excerpts for each theme/subtheme identified in the students' interviews is presented in Table 32. I also created a code cloud (Figure 7, below), which is a visual representation of the codes that have been applied to segments of data within Dedoose. Each code is represented by a phrase, and the size of the phrase corresponds to the frequency or prevalence of the code in the data. Codes that have been applied more frequently to

the data will appear larger in the code cloud, while codes that have been applied less frequently will appear smaller. The code cloud can provide an overview of the key themes and concepts that have emerged from the data and can help to identify patterns and trends in the data.

Table 31 Themes Found in Students' Interviews

Theme/Subtheme	Explanation of Theme	Exemplifying quotations
General Motivation to Learn English ● Extrinsic Motivation ● Intrinsic Motivation	This theme offers us an understanding of students' attitudes towards learning English, regardless of the intervention implemented. It provides us with in-depth insights into how students view the significance of language learning in Saudi Arabia. All these excerpts respond to the question "What's your overall impression of learning and using English?" This was the first question I asked each participant before delving into their perception of the intervention. Students' motivation to Learn English was classified as either extrinsic or intrinsic.	Extrinsic: "This is in addition to jobs; this is something that people have known for a long time. English is almost a basic requirement. We have learned that since we are young." Intrinsic: "Also to benefit from it outside the institute and to learn any field because English sources are vast, and I can delve into the subject I want to learn and know more about it."
Perception of the ARCS-based Motivational Intervention ● The teacher uses diverse teaching methods ○ *Handouts* ○ *Videos* ○ *Visual representation* ○ *Smartboard* ○ *We like the 'debate' activity* ○ *Sharing our writing with peers* ○ *I'm not used to this type of instruction* ● We don't entirely rely on the textbook ● General Perception of the Writing Course ● Humor is fun and it attracts our attention! ● Feedback is thorough and helpful ● Group work is engaging	This theme focuses on students' perceptions of the intervention and their impression of the various motivational strategies and techniques utilized by the teacher during the intervention period. This theme contains several sub-themes, which are categorized based on the most frequently mentioned strategies by students during the interviews.	"In general, videos, illustration characters, and these things, I mean, he doesn't stick to one thing throughout the term. Every week, he brings us something new, either a new drawing or a new thing."
Perceived Writing Improvement • Teacher's feedback helped my writing • My writing is more organized • Spelling and mechanics	This theme shows what specific strategies students thought helped their writing and what aspects of their writing they said they improved.	"It helped me with writing and spelling. It got me used to writing because we didn't practice writing before."
Desire to Continue Learning English Writing	This theme pertains to whether or not students intend to continue developing their English writing skills after graduating from IPA and how writing may benefit them in the future. It examines the potential impact of the intervention on their motivation to continue writing in English and their eagerness to enhance their skills even after completing the language requirement at IPA. This question was asked as the final inquiry during the interview process.	"I still need to improve my writing skills. Later, when I enter my specialization, like computer networks, I will need to write."

Figure 7 Student Interviews Code Cloud (Extracted from Dedoose)

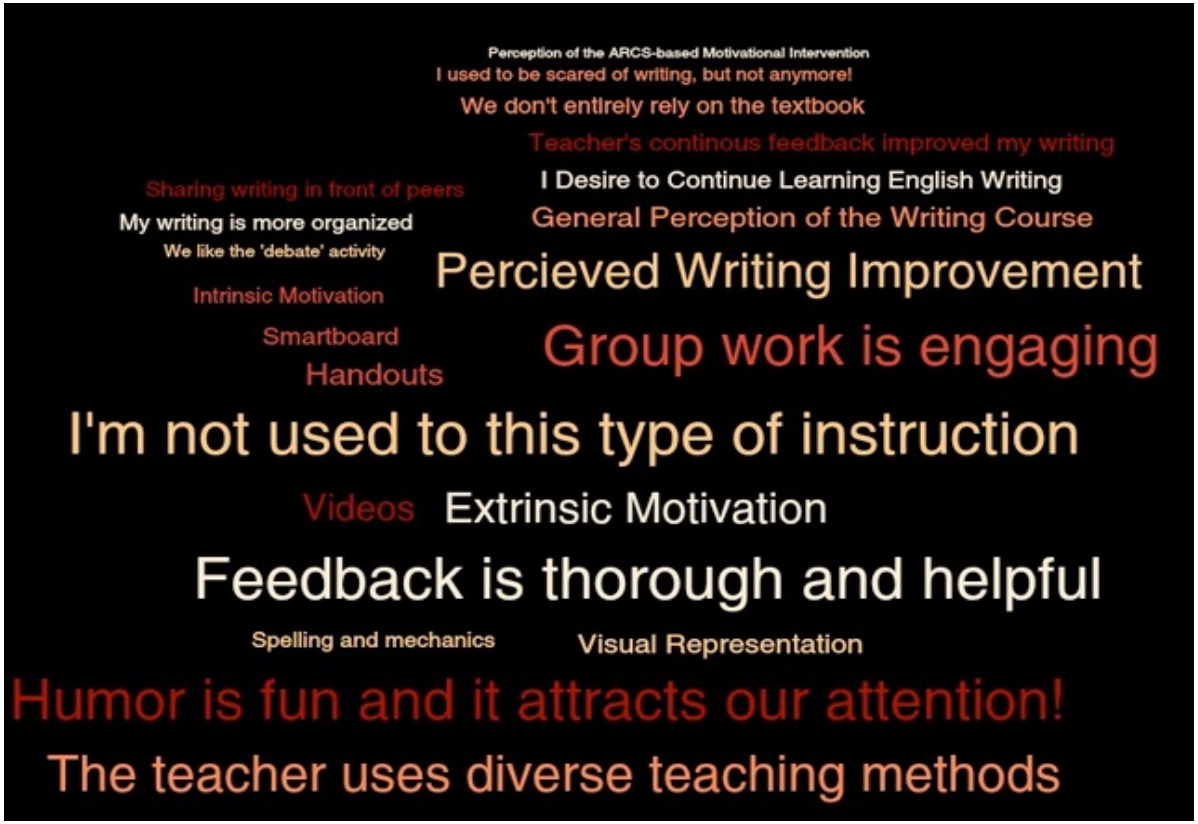


Table 32 The Number of Coded Excerpts in Students' Interviews Per Category

Codes/Subcodes	Count
General Motivation to Learn English	
● Extrinsic Motivation	16
● Intrinsic Motivation	5
Perception of the ARCS-based Motivational Intervention	
● The teacher uses diverse teaching methods	20
○ *Handouts*	10
○ *Videos*	12
○ *Visual representation*	8
○ *Smartboard*	7
○ *We like the 'debate' activity*	3
○ *Sharing our writing with peers*	5
○ *I'm not used to this type of instruction*	24
● We don't entirely rely on the textbook	6
● General Perception of the Writing Course	9
● Humor is fun and it attracts our attention!	23
● Feedback is thorough and helpful	24
● Group work is engaging	23
Perceived Writing Improvement	
• Teacher's feedback helped my writing	7
• My writing is more organized	5
• Spelling and mechanics	5
Desire to Continue Learning English Writing	7

General Motivation to Learn English

The first question of the interview asked students about their general motivation to learn English and why they thought it was an important language to learn. Students' responses to this question generated two main subthemes: extrinsic motivation and intrinsic motivation.

Extrinsic Motivation. The majority of students mentioned that English is gaining prominence in Saudi Arabia and that it has become one of the most important qualifications for getting a job. One student mentioned that English was important for communication in his job:

> "In my view, learning the language is crucial right now. Before joining IPA, I was unemployed for a while, and every time I applied for a job, they required English. If you

don't have English or perform well in an interview, you can see it in their face. So, my parents encouraged me to learn English." (Student 15)

In addition to being a significant advantage for employment opportunities, most students admitted that English was considered the lingua franca and that it has evolved into an indispensable mode of communication in local shops:

> "I see it as extremely essential, especially in the present time and for the future. I believe that English is the language of the world now. If you want to communicate with anyone, engage in business, secure future employment or positions, you need to learn English. Moreover, we feel that we can't live without it. Nowadays, most local restaurants here offer international services and speak English." (Student 16)

An interesting point was mentioned by a student who considered English to be even more important than Arabic when communicating with workers at local shops:

> "English is the global mother tongue, for example, if you go to any cafeteria, the workers only speak English. Honestly, it's important in your personal life that you learn English. I don't know how to put it, but it's even more important than our mother tongue, Arabic. It's normal, for instance, if you go to supermarkets, cafes, restaurants that you find people only speaking English." (Student 11)

This comment resonates with my experience as a Saudi because I personally noticed that most workers in restaurants and local shops, especially prestigious restaurants, speak English or are prompted to speak English by customers. Overall, students seemed to mostly have an extrinsic motivation to learn English.

Intrinsic Motivation. Extrinsic motives were not the only factors driving students' motivation to learn English as a few mentioned that they are learning English because of

personal preferences and enjoyment. Notably, one student expressed that he is learning English for personal enjoyment, as he uses the language to communicate with his gaming friends from various regions of the world. This suggests that he is utilizing English to establish a personal connection with them:

> "…especially in games, there are some games that, as they say, our guys don't like. So, when I go there and join groups with people from all over the world: British, American, Brazilian, everywhere, according to them, the common language is English. They all speak English, so I join them and try to understand what they are saying with simple words like "Yes" and "No." This was a motivation for me to want to chat with them and know their news, especially with some of them whom I have a relationship with." (Student 3)

One student expressed that learning English would provide him with access to diverse English resources, allowing him to acquire knowledge from multiple resources:

> "…to learn any field because English sources are vast, and I can delve into the subject I want to learn and know more about it." (Student 2)

It is noteworthy that the student made this statement after initially stating that learning English is merely a hurdle that he must overcome to graduate from IPA. Although the majority of students were extrinsically motivated, some were intrinsically motivated.

Perception of the ARCS-based Motivational Intervention

A crucial aspect of this study is the comprehensive feedback obtained from students regarding the various motivational strategies implemented during the intervention period. This feedback resulted in the identification of seven subthemes regarding students' perceptions of the intervention. Furthermore, during the interview, I utilized the opportunity to request further

clarification from students regarding their responses to some of the self-report motivation surveys I used in this study.

The Teacher Uses Diverse Teaching Methods. As shown in Figure 7 and Table 32 above, the most prominent theme that emerged during the interviews when students were asked about their perceptions of the teacher's teaching approach was its diversity. The teacher utilized various tools such as the smartboard to display animations or lesson content, videos and visual representation of instructional materials, handouts containing supplemental information, and activities promoting group work, such as the 'debate' activity and sharing students' writing on the class projector. Here are some remarks from students on the diversity of teaching methods:

> "I see that the teacher uses more sources than the book and a variety of teaching methods, not in the same way as the textbook dictates. And he saves me from searching for other sources, as he presents me with more sources." (Student 1)
>
> "The teacher is one of those who have diverse teaching methods. He adds comedy to seriousness and uses a smart board with interaction, so the class is always engaging and never boring. Each part of the lesson gives you something to work on, whether it's interacting with your classmates, writing, or using the smart board. He is one of those professors who makes you forget about time during the class." (Student 2)

According to students, the incorporation of videos into the teacher's instructional materials and lesson planning was the most well-received aspect of the diverse teaching methods, as they felt that it provided a valuable alternative format for explaining the lesson and it provided them with ideas on how to organize their writing:

> "Video clips were motivating to start a writing lesson. For example, once we watched a clip about job interviews and how to prepare for them. We analyzed the writing process and then wrote about the same topic. So, the clips provide us with ideas." (Student 9)
>
> "What caught my attention, to be honest, were the video clips; they are very good. They include information on what we are going to learn in writing." (Student 13)

Out of the various activities employed during the intervention period, the debate activity and sharing writing in front of peers were highlighted as the most effective means of promoting interaction among students in a competitive, yet engaging manner. The comments provided by students indicated that they found the debate activity both instructive and enjoyable:

> "The debate activity was enjoyable and had a sense of excitement and challenge because it makes you practice English correctly while giving your opinion and trying to impose it on the other, and the other responds to you. You practice the language as if it were your mother tongue and you learn more." (Student 1)

Some students found that projecting their writing in front of their peers and discussing the strengths and weaknesses constructively have added a sense of competition and excitement, as well as a chance to learn from peers' mistakes:

> "In every group, there are two students. They come up, show their work on the projector, and explain it to the whole class. Then, there's a competition to see which group is the best. It's positive because of the competition. You learn from the mistakes and you can discuss or argue with your group about some writing aspects." (Student 6)

During the interviews, I took the opportunity to inquire further about students' responses to one of the motivation surveys utilized in this study (IMMS) as this instrument required that they

chose from a preset Likert-scale options without having the chance to articulate what specific methods they had in mind when responding to the survey items:

> **Interviewer**: “There was another question in the questionnaire: "The teacher uses eye-catching things in his explanation, such as drawings, colors, and presentations, and varies sources of learning," you chose "very true", what was in your mind?”
>
> **Student 3**: “In general, videos, illustration characters, and these things. I mean he doesn't stick to one thing throughout the term. Every week, he brings us something new, either a new drawing or a new thing.”

> **Interviewer**: “In your responses to the questionnaire from the previous week, "The teacher uses attention-grabbing things like drawings, colors, presentations, and varied learning resources in his instruction”. You put “very true." What was on your mind?”
>
> **Student 12**: “Because the professor put some drawings on the smartboard and lightens the mood a bit. It significantly reduces tension.”

This comment was interesting as the intention of using visuals was to draw students’ attention to the lesson, but this specific student perceived it from a different emotional dimension and viewed those drawing as something that made students comfortable and relaxed during the lesson. This was brought up again by a different student as we see in the following excerpt.

I also inquired whether students were accustomed to receiving varied teaching methods from other teachers in different courses, or if they were encountering this type of instruction for the first time. Based on their responses, it appeared that none of the students were used to this type of instruction, as their previous teachers mostly employed traditional methods. Here is an illustrative example from one student:

> "No other teacher does what he does. Some teachers might add similar elements to PowerPoint presentations, but I mean in terms of making it engaging and understandable he is unique in that regard because he tries to make us relaxed and prepared to understand the topic by providing a picture for example." (Student 15)

Another characteristic response— a student reported that he found the writing teacher's method of delivering instruction to be unique compared to what he had experienced before, and that he had noticed an improvement in his writing as a result of this approach:

> "…we did not learn in this way before, as other teachers used to go through the topics of the book by reading it only, and it did not start from the ground up and the outputs were very weak, but now I noticed a great improvement in my writing." (Student 2)

One student mentioned that this teaching style was different from what he had experienced with other teachers at IPA:

> "Most teachers at IPA focus on finishing the unit on time and finishing the curriculum as quickly as possible, but not this teacher" (Student 11)

This student probably felt that moving slowly through the curriculum gave him more time to digest the large amount of information teachers must deliver in merely seven weeks.

Humor Is Fun and It Attracts Our Attention. In addition to the positive perception of the diversity of instructional methods, the use of humor by the teacher that was found to attract learners' attention was another prevalent theme in the data. Students generally reported enjoying the use of humor in class and perceived it as a technique that made them more attentive to the lesson and enhanced the class atmosphere. Humor manifested in starting the class with either a joke, a funny story, or a comic drawing that was perceived as funny (see Figure 8 for some comics used by the teacher in class). The majority of students mentioned that using humor before

the start of the lesson made the class more enjoyable and encouraged them to pay closer attention to what the teacher had to say:

> “At the beginning of the lecture, he brings something out of the ordinary, like a funny picture, a clip, or anything like you said, it prepares your mind during the lecture. I see it as a positive thing sometimes. He doesn't just start with "hello everyone, let's start, open your books quickly and let's write." He gives us something like that to get our attention. It distracts you from your phone and makes you follow him and get ready for the lesson right away.” (Student 3)

Notably, a student mentioned that using humor creates closeness with the teacher, especially that humor is not a common conversational practice in the Saudi culture and teachers are always perceived as serious and father-like figures.

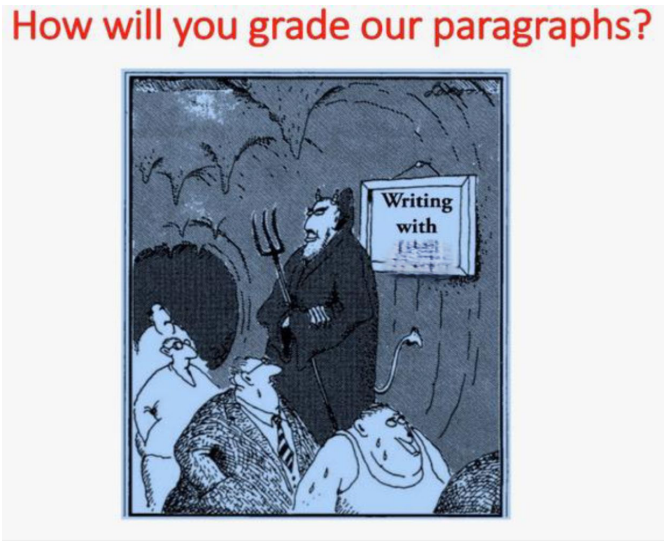
> “Honestly, the thing that caught my attention the most was his timing for jokes, especially in the same topic where he makes a joke related to it. It improves the class and helps the teacher’s instruction to be more effective. It gives you a feeling that he's a friend or something like that.” (Student 13)

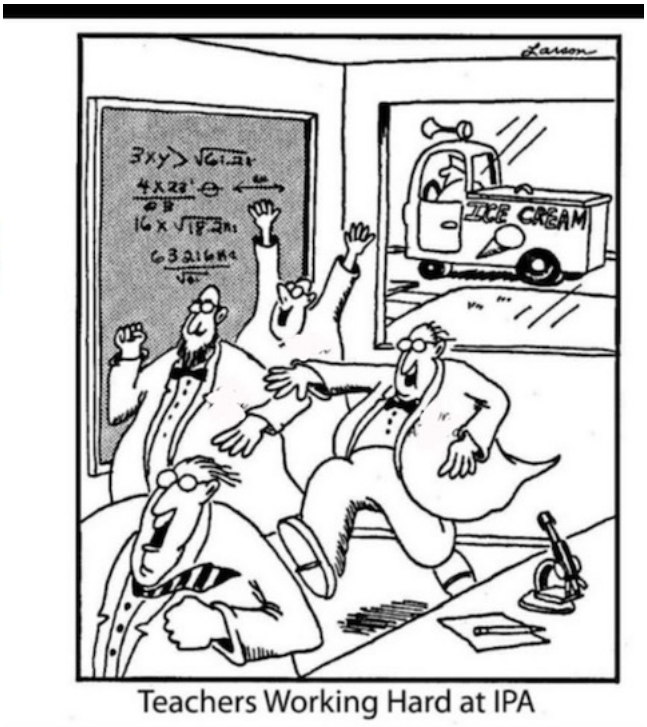
The timing of the jokes was brought up by several students given that the writing course was scheduled as the initial morning session, starting at 8 AM. Most students found that humor helped them start a fresh morning with full concentration:

> “The teacher’s style is fun, a funny style. Not like some teachers who make you hate the subject and want to leave. This teacher, for instance, might see someone who just woke up, probably since 7:30 AM, and it's 8 AM, and he'll still make you laugh.” (Student 4).

“He has a humorous sense. His humor, I find, is great for students. For example, in the morning, your mood might not be great, you're not feeling your best, but even something as simple as this changes your mood. It makes you enjoy the lesson.” (Student 11)

Figure 8 Examples of Funny Cartoons Used in Class[10]





[10] These pictures were used by the American teacher 'Ray'

Group Work Is Engaging. During the interview, when students were asked about the factors that encouraged their participation in the class, the most frequently mentioned response was that group work fostered a more engaging class environment. Here are some of their remarks:

> "When we collaborate as a team and work in a group, discussing things, it sparks excitement for me." (Student 8)
>
> "…he motivates us to participate, like when there are group activities or something that the teacher does in class it makes us interact with other students." (Student 3)

Generally, there is not a lot of group work or participating from students in traditional classrooms at IPA.

In addition to facilitating interaction among students, group work was perceived by some students to enhance both their writing and social skills:

> "Group work made me more sociable. It made me feel like saying, "Hey everyone, hold on, I'm here." I'm a more social person. You go and talk to a student and then talk to another. We collaborate and present things or discuss them." (Student 5)

What was interesting in some of the students' responses is that some of the extrovert students found group work to be a chance to help and engage their shy peers:

> "In terms of the group system, most of the time, the teacher put us in groups. Even for students whose levels were lower, he would have them in a group, and we would help and understand them and address their issues" (Student 13)
>
> "I think the idea of group work is very positive. For instance, if someone is shy, tense, or exhausted, we help and support him and support each other." (Student 11)

Their responses encouraged me to investigate how these shy students[11] perceived group work. Some of their remarks:

> "I think group work makes time passes by. Now, if there's a question, each group tries to solve it, and they help each other by identifying and explaining mistakes. They learn together and share knowledge." (Student 12)
>
> "He forms groups and encourages us to discuss more. It's better than just solving things on your own." (Student 14)

Then I was curious to know if peer to peer interaction was a common a practice in some students' experiences, but it turns out that it's not according to this student:

> "In some other classes, if you don't understand something, you can't ask the person next to you. You have to ask the teacher. So, it's not as nice as seeing it like this in the writing course. In some classes, teachers form groups, but it's quite rare and not as much as what I experienced in this writing course." (Student 8).

I took this chance to see if this is the case with students in the control group, and it seems that most of them did not witness any group work:

> "He [the teacher] was the one who asks the question and there was no chance to interact and share ideas in groups" (Student 7)
>
> "Most of the work in class was individual and I did not see any group work. I think it goes back to individual preferences" (Student 20)

[11] As mentioned in the methodology chapter, I utilized a maximum variation approach to select participants for the interviews so they approximately represent the entire sample. This resulted in a selection process approved by the teacher and me as a researcher and an observer in classes. Shy students were students that both I and the teacher felt were less engaged in class and tended to participate less frequently.

Feedback is Thorough and Helpful. Most students responded positively to the detailed feedback provided by the teacher on their writing midterm exam. (See Figure 9 for a grade report that I and the teacher designed together.) They perceived it as something they were not used to in other courses and believed that it helped them identify their mistakes and prevent them in future tests:

> "I find his feedback to be good. For instance, last time I took a test, he called me over and explained my grades. He pointed out my mistakes, what I should focus on, what I got wrong, and what I did right. It really encouraged me to be a good writer." (Student 14)
>
> "The teacher treats you like a younger brother. You sit next him, he discusses things with you, tells you where you're wrong and guides you to what's correct. He takes and gives with you in all aspects. That's what I've experienced with him." (Student 8)

The most prominent theme that emerged when talking about feedback is that some students felt that mistakes were tolerated and that they were perceived by the teacher as a way to improve:

> "It's okay to make mistakes--this feedback, honestly, was great. Before, I got feedback for my Midterm, saw my mistakes, and then this, and it actually motivated me when I saw my mistakes. I didn't feel like I had failed. I didn't feel like I couldn't do better. I saw it as a way to improve my skills. I would focus on areas that needed improvement." (Student 5)

This student never forgot the teacher's statement in the first day of instruction that it was fine to make mistakes (see Figure 10):

> "I can remember in our first class with him, I remember he said, "We all make mistakes, don't worry about mistakes." What I liked about it is that he broke the barrier of shyness that students have." (Student 8)

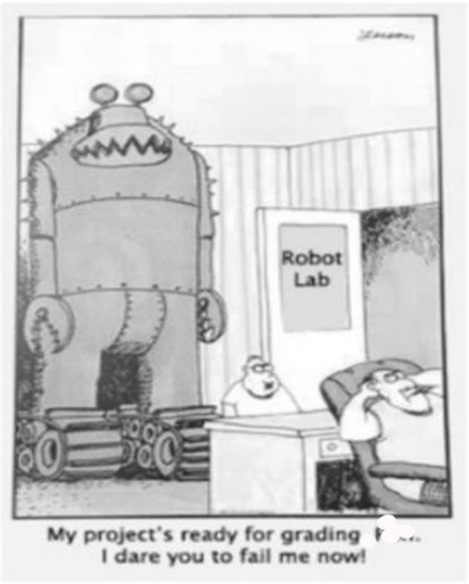
Figure 9 Grade Report Handed to Students After their Writing Midterm Exam

Midterm Exam Grade Report

Dear _____

Thank you for your paragraph. I appreciate your hard work and enjoyed reading about your thoughts and ideas.

Paragraph	Sentences
✓ *Topic, Supporting, and Concluding Sentences* ✓ *Sentence complexity* ✓ *Quantity of information* ✓ *Clarity and flow*	✓ *Grammar* ✓ *Spelling* ✓ *Punctuation* ✓ *Capitalization* ✓ *Readability*
_____ points	_____ points
Total _____	



You did this well!

Paragraph	Sentences
Topic and Concluding Sentences *Supporting Sentences* *Sentence complexity* *Quantity of information* *Clarity and flow*	*Grammar* *Spelling* *Punctuation* *Capitalization* *Readability*

Please work on this.

Paragraph	Sentences
Topic and Concluding Sentences *Supporting Sentences* *Sentence complexity* *Quantity of information* *Clarity and flow*	*Grammar* *Spelling* *Punctuation* *Capitalization* *Readability*

Figure 10 A Picture Shared with Students about Making Mistakes

We Don't Entirely Rely on the Textbook. For some students, the teacher's use of various instructional methods meant that they were not solely reliant on the textbook, which provided them with more time to concentrate on writing paragraphs instead of being concerned about completing textbook tasks:

> "I think not relying entirely on the textbook made my writing better. The teacher still refers to a small part of the book, but he leaves the rest for us to rely on ourselves. If we rely solely on the book, what's the point? You have to bring an outside source to understand more about writing. It is a more useful way. It gives us more than what's in the textbook. We spend more time writing paragraphs instead of wasting it doing textbook exercises." (Student 2)
>
> "We write paragraphs weekly, work on handouts weekly, group work weekly. This way, we don't get bored of writing. You're here to learn how to write, and not all the activities in the book help you with that." (Student 5)

I asked students in the control group if there were any other sources the teacher used to deliver the lesson, and all students said that he mostly relied on the textbook and finishing required activities. For example, one student who was perceived by the teacher as a high-achiever said:

> "The teacher mostly focuses on the textbook and assigning homework. He sometimes might use the internet to clarify things in the textbook." (Student 19)

General Perception of the Writing Course. The final subtheme derived from the data on students' perception of the intervention was based on an open-ended invitation for anything else they want to say that I did not specifically ask about. Most students found the teaching method in this particular course was innovative and that it changed their perspective on the challenges associated with English writing:

> "Honestly, I'm surprised as an individual like me, who was never interested in writing, suddenly became interested in writing in a month or less and it caught my attention. It's rare for me to have people make me pay attention to something. The only people who have done that are my math teacher in the first year of high school, and now the writing teacher." (Student 13)
>
> "For me, writing is the most difficult subject compared to others, but it's the only course that I noticed the teacher pulls an effort to motivate us to learn" (Student 3)

Perceived Writing Improvement

The second major theme found in students' interviews was regarding the specific strategies that students found to improve their writing and the types of improvement they reported. This major theme resulted in the following three subthemes:

Teacher's Feedback Improved my Writing. The most recurrent theme found in students' responses to their writing improvement, most students mentioned that the teacher's detailed feedback helped them recognize their mistakes and prevent them in the future.

> "Every time we write a paragraph, he corrects it. Every time he corrects it, he teaches me my mistakes and tells me to correct them the next time. The next time comes, I correct

my first mistakes but then find that I have second mistakes, so he corrects those for me. I improved a lot." (Student 2)

An emotional dimension of feedback was commented on by several students. For example, providing feedback was perceived by one student as a way for the teacher to show care, which motivated this student to be better in writing:

> "His comments are great. I don't get any negative words from him. I feel that he somewhat is thoughtful and cares about our feelings, which motivates me to try harder in writing." (Student 13)

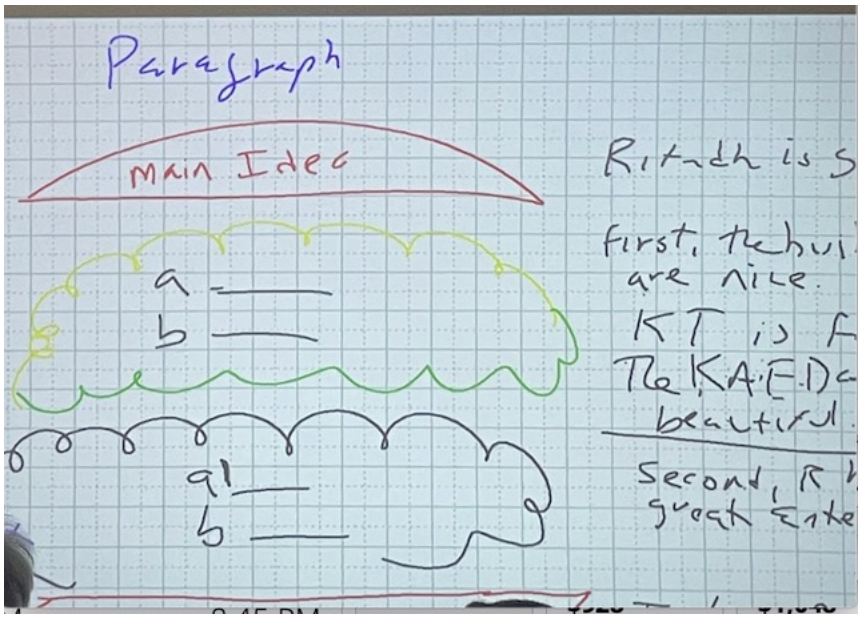
My Writing is More Organized. As for the writing aspects that students felt improved, writing an organized paragraph was mentioned by some of the students:

> "Yes, I feel that the foundational aspects have improved. I now know how to start and conclude a paragraph, when to use points, commas, capital letters. I feel it's showing." (Student 16)

One student mentioned that a drawing named "the Hamburger" (see Figure 11) was effective in teaching him how to write an organized paragraph:

> "The activity called "the hamburger" where he teaches us the organization of the paragraph I found innovative and it helped improve my writing" (Student 5)

Figure 11 An Example of a Picture Used to Illustrate the Hamburger Activity



Spelling and Mechanics. The mechanics of writing such as spelling and punctuation were among the improvements reported by some of the students:

> "I learned to leave space so your words are clear for the reader. Where to put commas, if you want to continue a sentence, put a comma and then continue. The full stop is necessary. These things improved my writing." (Student 8)
>
> "I put spaces everywhere, and with commas, I put a comma after every sentence. The teacher understands if I make mistakes. Now, in week six, I find myself almost unintentionally getting it correctly." (Student 4)

Desire to Continue Learning English Writing

The final major theme identified from students' interviews was that the majority of students expressed the desire to continue learning how to write in English even after completing their studies and leaving IPA. Two students specifically noted that the acquisition of writing skills would enhance their performance in future professional endeavors:

"I will definitely keep improving my writing skills because my major requires it. God willing, when I get employed, I'll be an Operations Manager. Half of the job is writing, whether on paper or on the computer." (Student 5)

"I still need to improve my writing skills. Later, when get a job in computer networks, I will definitely need to know how to write in English." (Student 3)

RQ4/ How was implementing the ARCS-based intervention perceived by the teachers who taught students in the experimental group?

Teacher Interviews

This section presents the results of interviews conducted with the two teachers in the experimental group, Ray in campus A and Ali in campus B, to gauge their perception of the intervention's implementation. The coding process yielded seven main themes, which are discussed in detail below. Each theme is also accompanied by an explanation and an exemplifying quotation from the data in Table 33. The number of coded excerpts for each theme is presented in Table 34. Additionally, Figure 12 visually represents the most frequent themes detected in the interview data.

Table 33 Themes Found in Teachers' Interviews

Theme	Explanation of Theme	Exemplifying Quotations
It changed my students' motivation	This theme refers to teachers' perceptions of the impact of the intervention on enhancing students' motivation and engagement in the classroom, and highlights specific strategies from the intervention that the teachers considered valuable additions to their instruction	"For example, the idea of bonus points, it's highly motivating. The idea of humor. Also, I love the first part"
It has become a part of my teaching (a new comfort zone)	This theme pertains to teachers' perceptions regarding the implementation of new teaching tactics, which required them to navigate and adapt to a new and unfamiliar territory	"..noticing the gradual improvement into my students' writing style got me to think that this was a wonderful experience. It got me out of my comfort zone a little bit, then it became a new comfort zone."
I loved it and I hated it	This theme outlines both the obstacles encountered by the teachers when applying the tactics, as well as the advantages they derived from them	"So I loved it, and I hated it, because of the headache and the stress. But now it's over. And like any worthwhile thing, no pain, no gain. I'm old enough to, to know that."
It made my teaching more student-centered	This theme delineates teachers' perceptions of the different strategies outlined in the guide, which aimed to cultivate a student-centered learning environment by encouraging teachers to prioritize group work and other strategies that promote student participation	"So, having some of those tactics in mind helped me to basically change the focus of class, instead of being a teacher oriented class, it became gradually student oriented.."
Guidelines to run the intervention were sufficient	This theme describes the perceptions of teachers towards the guidelines provided in the intervention guide that was shared with them prior to the commencement of the study.	"They were, you know, helpful, in terms of at least giving me the basic idea behind those motivational tactics and providing me with some hints on how to implement them into class."
Other teachers should know about this	This code pertains to whether or not the teachers would recommend the intervention to their colleagues and their suggestions on how to effectively implement it in other classrooms or train other teachers to utilize it.	"Definitely after this wonderful experience of adding new ways into my class instruction, I would probably hint and tip those techniques to any other colleague or teacher who is probably going to teach writing"
More time could have been more ideal	This theme describes teachers' perception regarding the duration of the intervention and whether they believed that more time was needed to observe significant changes in students' motivation and writing skills	"..usually, and maybe ideally, this is done over a longer time span. And I could appreciate that it takes a few weeks for the teacher to become comfortable with it, and then to deliver it in a natural way."

Figure 12 Teacher Interviews Code Cloud (Extracted from Dedoose)

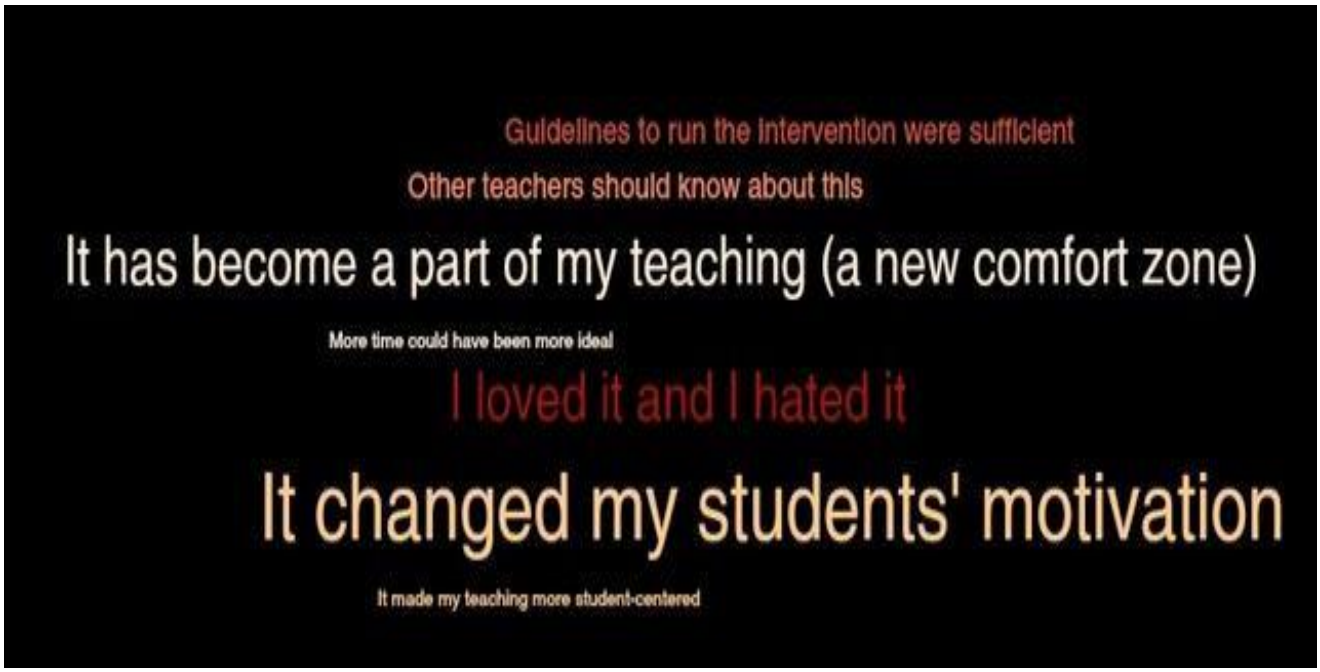


Table 34 The Number of Coded Excerpts in Teachers' Interviews

Themes	Count
It changed my students' motivation	7
It has become a part of my teaching (a new comfort zone)	5
I loved it and I hated it	5
It made my teaching more student-centered	2
Guidelines to run the intervention were sufficient	3
Other teachers should know about this	3
More time could have been more ideal	2

It Changed My Students' Motivation

The most prevalent theme in the data is that the inclusion of various motivational strategies in the intervention resulted in a positive impact on students' motivation and engagement in the classroom, as reported by both teachers (hereafter Ray and Ali). Ray, for instance, highlighted that several strategies mentioned in the intervention guide (See strategy #3,

12, 16 in Appendix H) were found enjoyable and motivating by students, even to the seemingly less motivated students:

> "For example, the idea of bonus points, it's highly motivating. They love that. And the opportunity to do something to make their grade a little better excites them. And even the low level or the less interested students sometimes come alive and want to participate. So that's kind of golden, and in some way continue that. The idea of humor. Also, I love the first part, I had so much fun thinking what I could put up for them. And I think that sets a good tone. The idea of using students' works is a brilliant idea. And I had usually shown former students' stuff just because the logistics of using current students' papers seemed hard. But now that I had to do it, and I see it's not hard, just take a picture and you got it. Maybe Photoshop the levels a little to make it clear and then putting it into picture frame. I think they really love that. And it made their writing something precious like in the museum. So I see positive effects for just off the top of my head those three things, absolutely."

Ray seemed to like the idea of using humor at the beginning of class and he perceived it as an effortless approach to integrate into his instruction and as a means to alleviate students' stress in the learning environment.:

> "Some were easy and thrilling, like the humorous ones, I quickly came across the idea of using cartoons as a way to set the tone for the lesson at the very beginning. And that was something that I could easily figure out before class, stick on the board for a minute or two. And then I came to the idea that, let me throw that up while I'm doing the attendance. And that I really enjoyed and found entertaining, and I think also helpful, it's a good idea. And I'm probably going to continue that in some way, it's a nice way to start,

> because students don't want to come open your books, you know, we're gonna study this and that's boring. We want learning to be exciting, and something a little more comfortable for them. So anything we can do to make it a little bit more enjoyable, I think will happen."

Ray's perception of using humor can be linked to students' observation of this strategy and it was interesting to see that both the students and the teacher felt that humor was an effective strategy to set the tone for the class.

Ali, who has been teaching at IPA for 17 years, made an interesting observation that incorporating motivational strategies into instruction was not a common practice at IPA. He believed that using strategies like videos and group work from the guide had a significant impact on increasing students' motivation and engagement in his classroom:

> "At IPA, students are more motivated when you just mention grades. That was always the case. But you know, having a shift in their motivation was something unusual, I would say in our classrooms at IPA. When implementing these new tactics in class, I noticed that students started to gain more motivation and more engagement when I used one of the ideas in the guide such as, designing sheets, getting students interacting more in my classroom, showing a video and then having students to reflect or to participate or to get a little bit of engagement. Also, having students engaged in adding ideas, like for example, to some handouts, students gradually showed more motivation in participating in class. What helped really more, when the students understand that mistakes are always welcome. Having those ideas, worksheets, videos, audio visual I think added to my students' motivation, and engagement in my class."

Ali perceived that reducing reliance on the textbook and instead utilizing strategies from the intervention guide had positively impacted students' motivation:

(4) "I think there was an idea in the guide where you have to show a printed worksheet or something like print-based. That was basically, to me, I have a friend that smartly designed authentic materials to bring into my class, why not, instead of just having I would say sometimes a dull textbook, where all students would look at the same material, and then they would not be engaged for a long time. And like, when I collect, like 30-40 items from the students' real production, students' real mistakes and problems, and then bringing them into class and having the students engaged in terms of thinking, editing, correcting, and then in the end asking them what's the correct answer? I think that was a smart design, I would call it probably."

In particular, Ali made an interesting observation regarding a strategy outlined in the guide (strategy #11), which involved projecting students' writing on the board and soliciting feedback from peers. He noted that this activity not only motivated students but also contributed to their improvement in writing:

(5) "That other time, I had to create one worksheet that was specifically designed to correcting sentences. That was a very smart idea suggested in the guide, because it allowed me to form this idea where I collected students' paragraphs, projected them on the smartboard, and asked students to work collaboratively to identify the strengths and weaknesses of each paragraph. That was a direct goal to addressing my students' needs. And let me tell you, it was very fun. When I looked at some of my students, I heard them saying stuff like: "oh, probably this is my sentence", "I wrote this sentence", "Oh, why

did I have this sentence here", I thought that was very productive. I would say that students who have seen their sentences on that smartboard have produced less mistakes later on their exams and in their future paragraph writing."

Interestingly, the activity mentioned by the teacher (Ali in campus B) in this excerpt was brought up by several students in campus A, who were taught by a different teacher (Ray). This suggests that both teachers used similar strategies and that the intervention was implemented equally in both groups. It also shows that students noticed and appreciated certain strategies that they saw most motivating.

I Loved It and I Hated It

In addition to the impact of the intervention on students' motivation, I was curious to know how teachers perceived the incorporation of motivational strategies in their instruction and lesson planning. The two teachers had mixed feelings about implementing the intervention. Despite their long experience in teaching English, they initially struggled to accept the new approach but eventually found it worthwhile. Ray expressed concerns about students perceiving the intervention as unnatural and sought ways to integrate the strategies seamlessly into his teaching. While he found it challenging at first, he later became more comfortable with the approach and aimed to improve his delivery. Here are some of his comments:

"But definitely it was stressful to suddenly change my way of teaching and in some ways deeply. I mean, I know it's just do this, just do that. But to fit it in is a deeper affair, that caused me a lot of brain power and worry. Will the students see it as a natural progression? from lesson to lesson? Am I integrating it naturally into the lesson? Is it effective? Is it really helping them? Or am I just saying do this for doing its sake. So the first two, two or three weeks were very hard and then it led up for a week or two. And

then I think as I got comfortable and I even wanted to hit another level to do what I was doing okay to do it better, and to do more."

"Clearly, it was a challenge, because I have a way to teach, which is evolving, which is developing, you know, it's not stuck, I hope. So I'm constantly evaluating what I'm doing, how I'm doing it, how I can do it better. But then suddenly, there's this layer that I need to somehow not impose on but integrate into my instruction. For me, that was the great challenge. I didn't want to go in the classroom and just appear "let's do this, let's do that just because we have to do it. I wanted to have some form of a deeper inside rationale, driving my teaching driving students' learning, and that needed to be connected to the implementation of what you gave me. So that was the really hard thing at the beginning, trying to understand what you're asking me to do, and how I can do it in a natural way so that the students don't see that we working together to create this special kind of class. But instead, I needed them to believe that it's my way of teaching that I deeply believe is effective for them and important for them."

Similarly, Ali was also hesitant in the beginning to embark on this journey. However, as time progressed, he began to feel more at ease with it.:

"I was a little bit reluctant in the beginning to accept this journey. I would call it a journey because it was a little bit challenging in the beginning, but then gradually it became a bit easier and easier to accept and adopt the ideas in the guide."

Given the significant shift in pedagogical approach from traditional methods to motivational teaching, I was curious to explore whether the adoption of this new approach had impacted the

teachers' beliefs about teaching, particularly in light of the fact that they had been following their established methods for several years. Ray commented:

> "It really pushed me just to think about what am I doing as a teacher? Then we if we had, what you're asking me to do, and how has that helped me as a teacher? Absolutely. It's been a profound, it had a profound and it has had and will continue to have a profound impact on me. Anytime that you get ideas for what you're doing, or perspectives on what you're doing, or ideas for how you might do it differently, is a profound step up, I believe in teaching. So I loved it, and I hated it, because of the headache and the stress. But now it's over. And like any worthwhile thing, no pain, no gain. I'm old enough to know that."

Ali mentioned that the intervention was a great way to keep students active and engaged:

> "In my opinion, the intervention was a great and wonderful idea that helped me in getting really organized in terms of having some ideas before going to class. It also helped getting students ready for class, keeping them active, and sometimes implementing these tactics helped facilitate the process of them understanding what is being taught in class."

Both teachers stated that they initially encountered challenges when contemplating changes to their teaching approaches. Nevertheless, they recognized the necessity for change, viewing it as an awakening to assess their own professional development as educators. It was interesting to notice how the teachers took advantage of this opportunity to zoom in on their own teaching practices and realized that there are various motivational techniques that they either did not know about or knew about but did not use consistently. Ray mentioned that the intervention compelled him to reflect on his own teaching and that it had a profound effect on how he will view and adapt his teaching in the future. Similarly, Ali viewed this experience as challenging in the beginning, but as time progressed, he started to feel more comfortable with it.

It Has Become a Part of My Teaching (A New Comfort Zone)

Both teachers made an interesting observation regarding the implementation of the intervention; although they faced challenges initially, they noted that it has gradually become an integral part of their teaching and cannot be ignored:

> **Ray**: "I think I can't avoid them. I made them a part of my teaching. It's no different now then whatever else is in my toolbox as a teacher. And that was the hard part making it mine. So now what you see was mine. That's my teaching. But of course, thanks to your ideas, and your need for me to change my teaching to reflect this. So absolutely. Again, I can't avoid it. It's a part of me."
>
> **Ali**: "But if you continue using those motivational strategies and implementing them into your lessons for a longer period of time, like six, seven weeks, like what I have done, they become part of you. They become part of your instructional techniques, they become part of your teaching style, and they become part of who you are as a teacher."

Both teachers provided intriguing remarks on how the intervention pushed them beyond their comfort zone, while also changing their perspective on teaching students in a motivating manner, prompting them to reflect on their progress. Here are some of their comments:

> **Ali**: "Noticing the gradual improvement in my students' writing style got me to think that this was a wonderful experience. It got me out of my comfort zone a little bit, then it became a new comfort zone after I have accepted new tactics into my teaching style. So, why not having a new comfort zone at all times? As teachers, we need to think of our progressive development--we can't just stick to one teaching style for our entire career. We always need to think of how can we help our students. How can we change. How can

we make our classes fun and motivating. How can we get our students motivated and engaged all the time. Remember, generations are different--newer generations with technology and stuff make you wonder "are we different than who we used to be in the past?" So we need to think, how can we be of a great help to those students in classroom to achieve their learning goals and objectives."

Ali: "You know, after all these years, and being in a comfort zone for a long period of time, and then getting a new way to implement into the regular teaching style, it was a little bit not difficult, but it was a bit challenging to get out of my comfort zone. But then I had to reflect on why not to try something, not totally new, but would help you to get more organized, probably would help you guide your students to gain skills in an easy, fun, and very relaxing way. So, then, gradually the idea of implementing some specific tactics into class became like part of my teaching style and it got a little bit easier and easier that it became like something automatic. I can just think about them now, and then bring into my class instruction."

Ray: "I deeply appreciate the opportunity, and it really hit me. It hit me and changed me and helped me. So I'm grateful."

Both teachers perceived this experience as an opportunity for self-reflection and stressed the importance of educators continually evaluating their professional growth while staying updated on contemporary pedagogical approaches to enhance student motivation. Ultimately, despite initial resistance to altering their teaching methods or making incremental adjustments, the teachers came to view this experiment as a valuable lesson in teaching with motivational intent

and an innovative approach they would carry forward in their teaching journeys. I think Ray's statement regarding the integration of motivational strategies into his instruction, "It has become a part of my teaching, a new comfort zone," says it all about teachers' perceptions of the usefulness of implementing Keller's (2010) ARCS-based motivational principles in L2 instruction. Despite the fact that there was an intervention, I cannot really tell whether all IPA teachers feel that they should continue improving their teaching methods and be part of professional development workshops on better ways to teach.

It Made My Teaching More Student-Centered

As highlighted in previous excerpts, both teachers acknowledged that the intervention prompted them to modify some of their previous teaching practices. One such example was their tendency to conduct a teacher-centered class, instead of prioritizing group work and interaction among students in the classroom. Nevertheless, both teachers expressed that the suggestions presented in the intervention guide aided them in devising methods to enhance student engagement with their peers:

> **Ali**: "In the past, my teaching was more of relying on sentence analysis the Grammar Translation Method in teaching. Having it was not a lot of creativity, I can admit this. However, after getting to know at least some motivational tactics and having them in mind, it provided me with an idea to help think of how can I help my students. How can I make my class a little bit different, productive. How can I get my students more engaged and more active in the class. So, having some of those tactics in mind helped me to basically change the focus of class, instead of being a teacher-oriented class, it became gradually student-oriented class. Students tend to ask more questions and students tend to engage together in class by being in pairs or in groups. So, I think that was what I

changed in my class thanks to implementing these tactics, compared to what I used to do in my long years of experiences."

Here Ali is recognizing the importance of the intervention in suggesting tactics that make the classroom environment more student-centered, thus more engaging, which was something that he did not do in previous classes. Ray shares the same sentiment as shown in this excerpt:

> **Ray**: "In previous classes, my role was a little more active, and it was a little more teacher centered than I usually do. And there are good points and negative points to that. I mean, as a language teacher, I really want to decentralize my role, and have the students assume some importance and prominence. But if you go too far, in that, I think that a little bit hurts the students. So needing to use these tactics, pushed me to think about how I could clearly do it and I had hoped that would clearly shine like a light on what we're. And I think that's very good for the students, instead of just the teacher talking. I mean, we don't want to just talk, we want to include visual, audio, all kinds of sensory data that we can use to introduce things to help the students. So that added absolutely another level to the class. It was very opposite of a teacher centered; it was a student centered."

Guidelines to Run the Intervention Were Sufficient

According to both teachers, the intervention guide I created was instrumental in facilitating the intervention and providing them with clarity. Ali believed that the guide provided him with a better understanding of the strategies and how to integrate them into his teaching:

> "Definitely. They were helpful in terms of at least giving me the basic idea behind those motivational tactics and providing me with some hints on how to implement them into class. Definitely, they were very helpful, and they have eased the process for me."

Ray also expressed his gratitude for the guidance he received, particularly in regards to the strategies that were initially challenging to incorporate into his lessons:

> **Interviewer**: "Were the guidelines sufficient for you to understand the strategies and develop lesson activities that incorporated them?
>
> **Ray**: Yeah, absolutely. I mean, they were perfect. I had no problems with that. And it was taking what you clearly gave me and thinking how I can fit it into what I do or want to do. That was the hard part. And I don't think there's any way that you could, but you did. You gave some additional suggestions "You might think about it in this way, You might think about it in that way". So they weren't crystal clear. But you also went a step further and helped me figure out how I might integrate it into my way of doing things."

He also mentioned:

> "The descriptions were sufficient to give me ideas for how to use it in the classroom. So kudos to your guide. I mean, it's well done. But that's not the hard part. The hard part is taking that clear information, that helpful information, and integrating it naturally into your teaching."

Ray here clearly thinks that the guide was adequate for him to know what the strategy was and how it could be implemented in the classroom, but he also recognized that there are steps beyond that before it can be put into practice in a specific lesson (i.e., tactics).

More Time Could Have Been More Ideal

Despite the positive experience, Ray expressed the belief that having additional time for intervention and preparation could have been more beneficial:

> "Usually, and maybe ideally, this is done over a longer time span. And I could appreciate that it takes a few weeks for the teacher to become comfortable with it, and then to deliver it in a natural way. And then at some point he is gonna spontaneously create these ideas for the lesson."

He also added:

> "It would just add the time of stress? But yes, what might have helped is if I had more time. I mean we didn't start in week one or two, we really started from week three. So I guess I had some time to start thinking about how to do it. But I guess it's like learning to swim, you might study this, you might study that. But when you jump in the water, regardless of what you've done before, it's still going to be scary. So I don't know, I think you did a fine job of supporting me. I'm very happy."

Other Teachers Should Know About This

The final theme identified in the data pertained to the teachers' willingness to recommend the motivational strategies utilized in the study to their colleagues and the additional resources they believed would be necessary to facilitate this. Both teachers affirmed their intent to share their experiences with other teachers, and Ali suggested that a workshop be conducted to train educators at IPA on how to incorporate these motivational strategies into their teaching materials and lesson plans:

> **Ali**: "Definitely after this wonderful experience of adding new ways into my class instruction, I would probably hint and tip those techniques to any other colleague or teacher who is probably going to teach writing. At least adding a new idea to their teaching experience would be a great help. Again, it's up to them, whether they accept it

or not, but they would never notice the change until they bring it to their classroom and test it and continue editing until they get to the ultimate result."

Ali: "I would say probably having an expert in writing or having an experienced senior teacher to show how he or she would implement some of the tactics in classroom and then we have to observe the teachers who are not using those tactics. Or probably doing a presentation in class or to guide new teachers on how to implement those tactics would be a great way of help to those teachers."

Interviewer: "Do you think in the future if we wanted this to be implemented by many teachers in IPA or even outside of IPA, do you think like having a workshop, like a three-day workshop, with examples and with additional instruction would be helping?"

Ali: "That's exactly what I've just said. Not just a presentation, but a presentation with the practical activities on how to guide your teachers to specifically apply those techniques and those tactics into the lesson."

Recognizing the benefits of the intervention, Ali's responses to my questions suggested that the motivational strategies listed in the intervention guide should be shared with other teachers at IPA as part of teacher development workshops. Ray also mentioned that he would recommend these strategies to other teachers:

Interviewer: "And would you recommend those strategies to another teacher?"

Ray: "You mean, do I think other teachers should be aware of? Absolutely, absolutely."

Interviewer: "What additional resources would help you to do this?"

Ray: "I guess time is the most precious thing. Yeah. So have the administration just give us one more writing class."

Summary of the Findings

The quantitative analysis showed that students in the experimental group exhibited significantly higher levels of motivation towards teachers' integration of motivational strategies into their instructional materials, as indicated by the IMMS survey. However, no significant changes were found on the other three surveys tapping into students' course-related motivation, intrinsic motivation, or motivational self-evaluation. Therefore, I conclude that the ARCS-based intervention had a positive impact on students' state motivation, namely their perception of the motivationally enhanced instructional materials that the teacher utilized in delivering the lesson, such as lesson plans, activities, tasks, and handouts. This impact, however, did not extend to students' course-related motivation or even their trait motivation (i.e., intrinsic motivation and motivational self-evaluation), at least as measured in the surveys[12].

As for the impact of the intervention on students' L2 writing development, a 2x2 ANOVA revealed significant improvements in various aspects of L2 writing in favor of the experimental group, namely content, communicative achievement, and the total score. However, this impact did not show significant improvements on other writing aspects such as organization, language, and writing fluency; nonetheless the treatment group showed higher improvement trends on these aspects as shown by the descriptive statistics.

The qualitative analysis of students' and teachers' interviews unveiled students' appreciation of various motivational strategies and a noticeable shift in their motivation. They liked the use of humor, the use of diverse teaching methods, group work, and most importantly the continuous feedback their received from the teacher on their participation or exams. Teachers

[12] The ARCS did not suggest it could change students' trait motivation, but I was interested in seeing if the intervention would show any effects on not only students' state motivation but also their trait motivation (please refer to the conceptual gaps section in chapter 2 for more discussion on this matter).

also reported personal growth as educators and expressed their intent to continue implementing these strategies in their teaching and their willingness to recommend them to other teachers. They also felt that these strategies should be packaged and shared in teacher education workshops, promoting the advantages of incorporating motivational strategies into teachers' instructional materials. Based on the positive responses received from teachers and students in the treatment group, I accept Hypotheses 3 and 4.

CHAPTER 5. DISCUSSION

This chapter provides a comprehensive discussion of each of the four research questions, offering insights, interpretations, and pedagogical implications threaded throughout this section drawing from the study's outcomes. It also draws connections to the relevant literature, highlighting the contribution I have added to the existing body of knowledge in the field. The aim of the present student was to investigate the impact of the ARCS-based motivational intervention on EFL learners' motivation and L2 writing performance. This chapter is divided into four sections. First, I will discuss the results obtained from the motivation surveys to answer the first research question on the effect of the intervention on students' motivational levels. Second, I will discuss the results obtained from the writing tests analysis which aimed at finding the effect of the intervention on students' L2 writing development. The third section delves into discussing the findings obtained from the qualitative interviews conducted with students in the treatment group to gauge their perception of the intervention. The fourth and last section discusses the findings obtained from the interviews conducted with the two teachers in the treatment group on their perception of implementing the treatment.

The Effect of the ARCS-based Motivational Intervention on Motivation

The first research question sought to examine the effect of the intervention on four motivational levels representing state and trait aspects of students' motivation. The state variables were derived from Keller's (2010) theory of motivation and were measured by an instruction-related motivation survey (IMMS) and a course-related survey (CIS), while trait variables were measured by an intrinsic motivation survey and a motivational self-evaluation survey. Responses to the IMMS survey indicated that the motivationally-enhanced intervention

had a positive impact on the treatment group's instruction-related motivation. The independent samples *t*-test comparing the treatment and control groups revealed significant differences in favor of the treatment, with a small to medium effect size. The findings from the IMMS provide evidence that the incorporation of motivational strategies in the design of instructional materials, such as lesson plans, activities, and handouts elicit a small to medium positive effect on students' motivation. These results align with the outcomes of prior EFL ARCS-based studies (e.g., Chang et al., 2016; Hung et al., 2013; Kurt & Keçik, 2017; Ucar & Kumtepe, 2019) which demonstrated enhanced motivation among treatment group students who received instruction aligned with ARCS strategies, in contrast to the control group students who received conventional instruction, as measured by the IMMS. Furthermore, these findings are congruent with the meta-analysis conducted by Goksu and Bolat (2021) in the EFL domain, wherein the majority of studies which utilized the ARCS model demonstrated a small positive impact on EFL students' motivation (d = .44). The present study similarly exhibited a similar effect size (d = .543) for participants across all campuses and (d = .513) for campus A; per Plonsky and Oswald's (2014) guidelines for effect sizes in SLA, these effect sizes can be considered small to medium. It is important to acknowledge that the IMMS survey was administered only as a posttest due to time constraints. The short academic term at the study site (IPA), spanning just eight weeks, with the first and last weeks primarily allocated to introductions and exams, precluded the feasibility of a pretest and reflection on instructional materials during the initial two weeks of instruction. This may not have given the students enough time to form a solid perception of the instruction, nor did it allow teachers to prepare instructional materials besides the textbook. The academic term at the current study site (IPA) is different from most academic terms that could last for up to 16 weeks. While repeated measures are generally preferred for their greater sensitivity and error variance control,

the specific academic term duration rendered this impractical. In an ideal scenario, within a conventional 16-week semester, a pretest in, for example, week 4, would afford students ample time to form a comprehensive perception of instructional materials, permitting a posttest in week 15 or 16. It is surprising that in Chang et al. (2016), for example, the IMMS was administered as a pretest in week 1 and as a posttest in week 6, even though some IMMS items, such as "After working on the activity for a while, I was confident that I would be able to pass a test on it" (p. 114), were posed prior to the initiation of the intervention, not giving students enough 'while' to form a complete perception of any activity. Administering the IMMS as a posttest only was not something new—Ucar and Kumtepe (2019) did the same as in the present study as they administered the IMMS only after the end of the ARCS-based intervention period.

Despite the intervention's significant positive effect on students' instruction-related motivation, this effect did not extend to their course-related motivation, intrinsic motivation, or motivational self-evaluation. Course-related motivation was measured by Keller's (2010) other survey, the CIS, which was designed in conjunction with his ARCS model alongside the IMMS. Surprisingly, students in both groups started with a higher course-related motivation (Experimental $M = 4.15$, Control $M = 3.91$) that slightly declined by the end of the term (Experimental, $M = 4.04$ – Control, $M = 3.87$). These findings are contrary to those observed in a study by Karimi et al. (2021) involving Persian EFL students, where a statistically significant increase in CIS scores from pretest to posttest was noted following the application of an ARCS-based intervention. The drop in students' course interest in the current study may be attributed to the premature administration of the CIS as a pretest at the end of the second week. At IPA, students typically spend the first week making course adjustments, with little actual instruction occurring. Furthermore, some students do not commence classes until the start of the second

week due to their awareness that the first week lacks instructional activities or unresolved issues with the registration department. In fact, when I administered the survey in the lab at the end of the second week, several students expressed concerns that they had only joined in the second week and therefore lacked sufficient knowledge about the course or the instructor to provide fair responses to certain survey items, such as item 13, "The instructor uses an interesting variety of teaching techniques" or item 18 "I feel that I get enough recognition of my work in this course by means of grades, comments, or other feedback." By the end of the second week, it is likely that students had not yet formed a comprehensive perception of the instructor's teaching style to assess its diversity, nor had they received substantial feedback or formed expectations about the course. Consequently, I anticipate that the early administration of the CIS as a pretest may have led students to offer positive responses in an effort to be fair to the instructor, which may not necessarily reflect their overall sentiments about the course. This notion is further supported by the observation that both the treatment and control groups commenced with higher course-related motivation scores and concluded with reduced motivation levels. Supporting evidence for this observation can be found in Moskovsky et al. (2013), where the responses of Saudi EFL students on a similar survey, evaluating the English course before and after the implementation of a motivational strategies intervention, did not exhibit significant differences between the time points or between the treatment and control groups. Additionally, Ucar and Kumtepe (2019) administered the CIS only as a posttest to examine the effect of their ARCS-based intervention on EFL students' course interest, without any pre-stage assessment.

Regarding the two trait motivational variables, the treatment group's intrinsic motivation demonstrated a slight increase from pretest to posttest (pre, $M = 3.89$, post, $M = 3.92$), whereas it decreased between the two time points for the control group (pre, $M = 3.79$, post, $M = 3.75$).

Nevertheless, the repeated measures ANOVA did not reveal a significant interaction effect between Time and Group for this variable. Comparable results were obtained in a study conducted by Chang and Lehman (2001), who found that their ARCS-based intervention had no statistically significant effect on EFL students' intrinsic motivation. One possible explanation for this outcome could be the intervention's limited focus on strategies emphasizing the 'Relevance' construct in Keller's ARCS model, relative to the other three constructs in the model. As demonstrated in the teacher guide provided in Appendix H, only three tactics encouraged teachers to incorporate activities or materials that aligned with students' interests, and these tactics may not have been consistently employed in instruction. In my observations, I also noticed that teachers did not use relevance strategies as much as they did use other strategies that reflected different constructs of the ARCS. When discussing the significance of designing activities that resonate with students' personal lives and their impact on satisfaction, Keller (2010) remarked that "Every student and every teacher can think of at least one situation where the relevance of the content or the enthusiasm of the teacher sparked a degree of intrinsic interest" (p. 190). A similar trend was observed in Maeng and Lee's (2015) study, where they found that teachers' utilization of relevance strategies was notably lower compared to attention-grabbing strategies. Ucar and Kumtepe (2019) similarly noted no significant change in the teachers' utilization of relevance strategies following the conclusion of their ARCS-based intervention. Designing activities or content that align with students' interests can be challenging for some educators, often requiring a comprehensive needs analysis that may be impeded by time constraints, resource limitations, or motivational factors. This could explain the infrequent implementation of relevance strategies in the present study and the two other studies mentioned, which in turn did not lead to substantial changes in students' intrinsic motivation. Motivational

self-evaluation among students was also unaffected by the intervention, with no significant improvements observed between the two time points. These findings contrast with results from prior experimental studies conducted among EFL college students in Saudi Arabia (Alrabai, 2016; Moskovsky et al., 2013), which found a significant effect of their motivational interventions on students' intrinsic motivation and motivational self-evaluation. It is worth noting that both of these studies were conducted over a standard 16-week semester, with interventions lasting 8-10 weeks, compared to the mere 5 weeks of actual intervention in the current study (excluding long weekends and national breaks, as detailed in Appendix A). Moskovsky et al. (2013) reported that the effects of their intervention were more pronounced in state variables compared to trait variables, even though their intervention occurred over a standard academic term. They suggested that "trait variables might need prolonged or repeated interventions over time to show a comparable degree of change" (p. 57). Thus, the brief intervention period in the current study may not have been sufficient to induce changes in students' trait motivation, as these are stable and intrinsic aspects of an individual's motivation that require extended efforts to modify. This notion was further supported by student interviews, wherein the majority expressed that their motivation for learning English was primarily driven by extrinsic factors such as job prospects or graduation from IPA (further discussion of students' interview data will be presented in the third section of this chapter).

In summary, the first research question aimed to investigate the impact of an ARCS-based intervention on various dimensions of students' motivation in an L2 writing course. The results indicated a positive and significant change only in their instruction-related motivation, as measured by the IMMS survey. This suggests that students in the treatment group positively perceived the presence of various motivational strategies in their teachers' instruction, such as

humorous introductions, group work, and visual materials, compared to students in the control group who received conventional instruction without reference to ARCS-based motivational strategies. This had a positive influence on their instruction-related motivation, but it had a limited impact on other motivational variables. I argue that the IMMS survey exhibited greater sensitivity to the treatment, with its items effectively reflecting the presence and utilization of motivational strategies in the classroom, in contrast to the other surveys, which were more inclined to elicit general perceptions of the course or language learning as a whole. The IMMS, as a situational measure of students' motivational reactions to instructional materials, is designed to gauge temporary or situational motivational states experienced in specific moments or contexts. This aligns with Keller's (2010) assertion that state motivation is influenced by factors like the learning environment, lesson activities, and current levels of interest or engagement, making it useful for the motivational design of instructional materials. Moskovsky et al. (2013) made a similar observation, noting that state motivation variables, compared to trait variables, were more attuned to the nature of their interventional study on Saudi L2 learners. Additionally, Guilloteaux and Dörnyei (2008) only included state motivation constructs in their correlational study examining the relationship between teachers' use of motivational strategies and students' motivation. They administered a survey titled "The Student Motivational State Questionnaire" which they claimed is designed to "target the students' situation-specific motivational disposition related to their current L2 course. Consequently, the questionnaire did not include items seeking to tap into more general attitudinal or motivational factors" (p. 65).

Having made these observations, I feel obligated to draw the readers' attention to the inherent issues associated with measuring students' motivation through self-report surveys, which include factors like prestige bias and social desirability—a subject that I addressed in the

literature review chapter. A comprehensive large-scale study, conducted by Guilloteaux and Dörnyei (2008), encompassing 1300 EFL students and involving 27 teachers in South Korea, revealed that students' self-reported motivation exhibited a weaker correlation with their observed motivational behavior. These findings were replicated in a study conducted by Papi and Abdollahzadeh (2012) with 741 Iranian EFL students where they found that students' self-reported motivation yielded a nonsignificant relationship with their motivational behavior. Therefore, the outcomes derived from self-report motivation surveys in this study should be interpreted with caution, and it is advisable to consider them in conjunction with the qualitative results that will be discussed later in this chapter. As reported in detail in the Results section, a robustness check involving sub-analyses of each of Campus A and B showed no difference from results obtained across both campuses.

The Effect of the ARCS-based Motivational Intervention on L2 Writing Development

The second research question aimed to assess the impact of the intervention on students' overall writing quality and specific aspects of their writing, including content, communicative achievement, organization, language, and fluency. The treatment group displayed significant gains over time in overall writing scores and in the sub-scores of content and communicative achievment, with medium effect sizes. Increases in learners' writing organization, language, and fluency over time were more pronounced in the treatment than control conditions, and were in the predicted direction, except that this change did not reach statistical significance.

When examining each category of the analytic rubric, it was evident that the treatment group experienced significant improvements in content and communicative achievement due to the ARCS-based motivational intervention. According to the developers of the Cambridge B1 analytic rubric, higher content scores indicate students' ability to directly address the task and

fully inform the intended reader. Those who show progress in communicative achievement in their writing can effectively utilize the conventions of the communicative task to engage the reader's attention and convey straightforward ideas, including genre, format, register, and function. Identifying the specific aspect of the motivational intervention that had a significant impact on these two categories is challenging. However, these gains can be partly attributed to the integration of ARCS-based motivational strategies into the instructional materials used by the teacher in the treatment group. This is supported by the fact that both groups started with equivalent writing performance in all subcategories and the overall score, and both groups made significant improvements across all writing aspects, as indicated by a significant Time effect. Notably, however, the treatment group exhibited more substantial gains compared to the control group over the brief intervention period of 5 weeks. Moreover, both groups used the same textbook and were taught the same content because curriculum is unified at IPA and teachers are obligated to deliver its contents in an 8-week period. It is plausible that greater improvements in content and communicative achievement can be linked to the ARCS-based motivation strategies provided to the teachers in the treatment group (see Appendix H). For example, strategy #17 encouraged the teachers to consistently offer detailed and motivating feedback on students' writing and participation. Additionally, strategies #6 and #10 advocated for peer-to-peer interaction, enabling students to provide feedback to their peers and assist each other with writing tasks. During the intervention, students in the treatment group received ample motivating feedback from both the teacher and their peers, and they also had multiple opportunities to revise and refine their written work, ensuring that their ideas were clearly articulated and well-supported. As discussed by Lamb (2017, especially p. 35), good teaching does not entail motivational teaching (see more on this matter in his article). The peer interaction aspect of these

strategies derives directly from Keller's view of what motivates learners, and includes human desires to interact and affiliate. Doing this while providing feedback on writing implies an overlap, perhaps an inseparable one, between good teaching and motivating teaching, though the emotional and affiliative aspects of peer interaction and teacher-student interaction may in fact enhance the cognitive- or writing-features focused aspects of the feedback. The motivating feedback likely contributed to improvements in students' ability to communicate relevant ideas and support the content of their writing, consequently enhancing their content and communicative achievement abilities in writing. The impact of providing substantial feedback from the teacher on students' written work and encouraging peer feedback was evident in a study by Teng (2022), which found that implementing such strategies significantly enhanced students' overall writing quality and aspects related to content and communicative achievement. These findings align with a wealth of literature highlighting the positive effects of both peer and teacher feedback on various facets of L2 writing, as extensively reviewed in a meta-analysis by Vuogan and Li (2022) and a state-of-the-art article by Yu and Lee (2016).

However, when examining scores on organization and language categories, the repeated measures ANOVA did not yield a significant interaction effect between Time and Group, despite the treatment group displaying improvements from pretest to posttest in these two categories. The treatment group exhibited the largest gain in organization scores, with an average gain difference of 0.93. The control group also showed improvement in the same category, but with a smaller mean difference between the pretest and posttest (0.15). Both groups demonstrated the least improvement in the language category, but both exhibited slight progress from pretest to posttest, with a slight advantage for the treatment group. Despite these observations, since the change in organization and language scores did not reach statistical significance at the stringent

p-value threshold of 0.0125, even though it approached significance for organization scores (p = .013), the observed differences may have arisen due to random variability or chance, rather than representing a genuine effect of the ARCS-based intervention on students' writing organization and language. Several factors could account for this.

First, it is essential to consider the definition of organization in the Cambridge B1 analytic rubric, which primarily focuses on the ability to create a coherent text using various linking words and cohesive devices such as "for example," "because," "finally," etc. This emphasis on the usage of cohesive devices within this category surpasses considerations related to the organization and development of ideas or the logical sequencing of content, which are more prominent in the content and communicative achievement categories. This distinction differs notably from the well-known Jacobs et al. (1981) analytic rubric, as the category of 'communicative achievement' does not exist there, and the definition of 'organization' in this rubric overlaps significantly with how 'communicative achievement' is defined in the Cambridge B1 analytic rubric. Therefore, I suspect that raters were primarily seeking linguistic elements functioning as linking words and cohesive devices, such as pronouns, relative clauses, and substitutions, to assign high ratings for organization. For example, examining the raters' justifications for scoring the sample anchor papers during their training, it is evident that rater 3 was particularly focused on identifying linking words and cohesive devices, in accordance with the rubric guidelines. She mentioned that she assigned a low score for organization on some students' papers because "Most linking devices are 'and/or' which ties their answer into a run-on sentence. They still attempt to use a subordinate clause through 'My opinion' which is missing 'In' but can still be understood." In contrast, when evaluating communicative achievement, her attention shifted towards evaluating the flow of ideas in the text as she mentioned that "The

writer understands and uses paragraph conventions to communicate to the reader their stance on how advantageous distance learning is. Their ideas are straightforward and they give some good examples/reasoning for their pro stance." That said, it is illogical to conclude that a text supported by well-developed content and straightforward ideas suffers from a lack of organization, as these aspects are typically linked to how students structure their ideas within paragraphs. This is supported by the statistical analysis of students' writing, which revealed that the treatment group showed the most gains in organization scores. However, it is noteworthy that the control group also made their most improvements in the same category, potentially explaining why organization did not reach statistical significance in favor of the treatment group. This could be attributed to the fact that organization is the easiest and most frequent aspect to teach in writing classes, potentially overshadowing any potential effects of the intervention. Also, the textbook had lessons on how to use linking devices. In other words, regardless of the intervention, all teachers in both the control and treatment groups likely focused their instruction on teaching students how to structure organized paragraphs.

Second, in the Cambridge B1 analytic rubric, language was assessed in terms of the degree of using high-frequency vocabulary, producing grammatical sentences, and avoiding errors that might impede meaning. I think students' subpar performance in this category was due to their low-intermediate proficiency level. Descriptive statistics revealed that, on average, students scored less than 2 points out of a possible 5 on the language category in the pretest, indicating their low writing proficiency. Furthermore, both groups did not demonstrate significant improvements from the pretest to the posttest in this category, even though the treatment group exhibited slightly better progress on the posttest. One potential factor contributing to this lack of improvement could be the decision I made to disable spelling auto-

correction on the Google Form used for the writing test, which may have led students to produce more spelling and grammatical errors. Ultimately, I think it was challenging for a motivational intervention not specifically designed to instruct students on the acquisition of linguistic features, to induce changes in students' vocabulary usage or grammatical knowledge within a short period. For comparison, Teng (2022) developed an integrated model of self-regulated learning strategy intervention, and one of the strategies his teachers implemented involved using linguistic, rhetorical, and discourse knowledge for revising students' written texts. This strategy resulted in significant improvements in the language category, which is unsurprising considering that the intervention specifically targeted improving linguistic aspects of writing. However, it is possible that a more extended intervention period might have yielded improvements in language, especially if students became more invested in their own development as a result of using motivational strategies in writing instruction. Nevertheless, this aspect remains largely unexplored in the literature and warrants further investigation.

The last measure of writing I used was a fluency measure, which was assessed by simply counting the number of words in students' written productions. In line with Lo and Hyland (2007), this measure aimed to investigate whether more motivated students would write more words on the posttest as a cumulative result of the teacher applying motivational strategies. Although students in the treatment group wrote more words on the posttest (M = 82.76) compared to those in the control group (M = 73.25), the gain from pretest to posttest was not statistically significant, as both groups produced more text between the two time points. These results, however, cannot be compared to those of Lo and Hyland (2007) because even though they claimed their new program, which they designed to incorporate motivational techniques, increased students' motivation and led to greater word count on the posttest, they relied mainly

on descriptive statistics to compare group means from pretest to posttest on the fluency measure, without conducting inferential analysis. Without inferential analysis, it remains inconclusive whether the observed gains were likely due to chance or represented genuine effects of the intervention. In the current study, I speculate that the significant changes in content and communicative achievement categories for the treatment group might have contributed to their increased word count. However, I cannot definitively assert that this effect was solely attributable to the utilization of motivational strategies based on the ARCS model, as no significant results were obtained from the inferential analyses conducted on the fluency measure. Nevertheless, it is posited that a more extended intervention period could potentially enhance students' motivated behavior and lead to increased word production in their writing.

Overall, the findings from the current study highlight the significant effect of the ARCS-based motivational intervention on students' overall writing quality, and more specifically on aspects of content and communicative achievement, with a moderate effect size. This aligns with the results of a meta-analysis conducted by Goksu and Bolat (2021), which indicated a medium positive effect (d = .53) of the ARCS model on L2 students' achievement in the field of EFL. Importantly, this study not only reaffirms the established positive correlations between EFL teachers' motivational practices and L2 writing development, as observed in previous research (e.g., Cheung, 2018; Hashemian & Heidary, 2013; Jang & Lee, 2019; Tahmouresi & Papi, 2021; Teng & Zhang, 2018; Yu et al., 2020), but it also experimentally validates the causal relationship between the use of motivational strategies in the EFL classroom and improvements in L2 writing. I also believe that the results of this study respond to the calls made by Kormos (2012) and Papi (2021) to investigate the causal link between motivation and L2 writing development through experimental research design. It also addresses Ushioda's (2016) call for a more focused

research agenda by emphasizing the positive role of motivation in influencing specific cognitive aspects of individual language skills, such as aspects of writing development, rather than concentrating solely on global L2 achievement (e.g., Alrabai, 2016). This study contributes to the growing body of literature linking motivation to fine-grained processes of language acquisition, including aspects like oral fluency and accuracy (Han & McDonough, 2018) and incidental vocabulary learning (Papi, 2018). Most importantly, it adds to the limited number of studies that explored the relationship between motivation and L2 achievement, demonstrating that students' motivational behavior can indeed translate into improved learning outcomes, as advocated by influential L2 scholars like Dörnyei and Ushioda (2021), Iwaniec and Dunn (2020), Kormos (2012), and Papi (2021).

Moreover, the evidence presented in this study regarding the positive effects of ARCS-based motivational strategies on L2 writing can be integrated with findings from other ARCS-based studies that have reported similar positive impacts on linguistic development, including vocabulary learning (Chang et al., 2016; Wu, 2019), grammar (Chang et al., 2016; Refat et al., 2019), reading (Hung et al., 2013; Li et al., 2020), introduction building strategies in writing (Proski et al., 2014), and overall language achievement (Chang & Lehman, 2002; Ucar & Kumtepe, 2019). These improvements across various facets of L2 achievement lend empirical support to the theoretical foundations of Keller's (2010) ARCS model and its connections to the Expectancy-value Theory, which is closely tied to McClelland's (1961) Achievement Motivation Theory.

In summary, the present study stands as the first true experimental investigation providing empirical validation that the incorporation of motivational strategies rooted in Keller's (2010) ARCS model into teachers' instructional materials leads to enhancements in L2 writing,

and not only aids students in becoming better content writers but also enables them to effectively communicate straightforward ideas in their written work.

Students' Perception of the ARCS-based Motivational Strategies

In line with recommendations from several prominent L2 motivation specialists (Boo et al., 2015; Dörnyei, 2007; Dörnyei & Ushioda, 2021; Lamb, 2017, 2019; Ushioda, 2019, 2020) the third research question attempted to provide deeper insights into students' motivation and feelings toward the ARCS-based motivational intervention and treat participants as 'persons-in context' (Ushioda, 2009) by means of conducting qualitative research interviews. I also conducted observational reviews in every class throughout the semester to ensure that motivational strategies were implemented consistently and to share some examples of the instructional materials used by the teachers in the treatment group. The exit interviews conducted with 16 students in the treatment group and 6 students in the control group revealed four major themes and several subthemes that will be discussed thoroughly in this chapter. It will become apparent to the reader how the qualitative findings of students' interviews helped understanding some of the statistical patterns found in the quantitative analyses obtained from the motivation surveys and L2 writing measures. This shows the merit of the use of a concurrent triangulation mixed methods design in the present study to triangulate the quantitative findings with the qualitative ones and offer a more comprehensive understanding of the phenomena under examination.

The first major theme revolved around students' primary motives for learning English, which were found to be mainly extrinsic rather than intrinsic. The majority of students reported that their primary motivation for learning English was driven by extrinsic factors, with employment opportunities being a predominant reason. Proficiency in English was viewed as a

valuable asset in job applications. Some students also mentioned that English served as a lingua franca, enabling them to communicate with foreign workers in local establishments such as restaurants and grocery stores. In contrast, only a minority of students expressed intrinsic motivations, such as personal enjoyment, forming online friendships through gaming, and gaining access to English-language resources for knowledge enrichment. These findings are consistent with other studies conducted among EFL Saudi students (Moskovsky & Alrabai, 2009), and more specifically among IPA students (Al-Otaibi, 2004) which showed that Saudi adult EFL students mainly learn English for extrinsic rather than intrinsic factors. This could also explain the quantitative results in this study that showed non-significant improvements on the intrinsic motivation self-report survey. This observation is the first evidence linked to my initial remark at the introduction of this section about how triangulating quantitative with qualitative methods can offer us an explanation of the presence (or lack thereof) of statistical significance in quantitative analysis.

The second major theme was generated from students' attitudes and opinions toward the various motivational strategies used by the treatment groups' teachers during the intervention period. One of the subthemes that emerged frequently in the responses of several students when they were asked about their teacher's teaching methods was that they varied greatly. Varying the medium of instruction was one of the motivational strategies used in Keller's (2010) ARCS model to maintain students' *attention,* hence the first letter of the ARCS, and curiosity during the lesson. The teacher guide provided 17 different motivational strategies based on Keller's model, including strategy #5, which encouraged teachers to vary instruction. In the guide, I urged the teachers to use this strategy occasionally when they saw fit, and I added some instructional techniques on how to incorporate it into their instruction and use it systematically. I also

observed classes and found that this strategy was used consistently and in various forms throughout the intervention period. This was evident in students' responses, as most of them stated that the teacher utilized various tools such as the smartboard to display animations or lesson content, videos and visual representation of instructional materials, handouts containing supplemental information, and activities promoting group work, such as the 'debate' activity and sharing students' writing on the class projector. It is interesting to note that the last two activities were recommended in the teacher guide (strategy #13 and #11 in Appendix H), and it was also the case that multiple students picked up on those strategies and found them motivating among many other activities. It is also noteworthy that students appreciated unconventional and creative ideas, such as starting lessons with videos or incorporating images and pictures into instruction, which differed from their typical English learning experiences. This was a major departure from what they were used to in other classes—that is, focusing entirely on the textbook, as remarked by several students. Several students explicitly conveyed their appreciation for the implementation of visual aids in instructional delivery, asserting that it "captured their attention" and heightened their motivation to engage with the educational content. Concurrently, other students noted that varying instructional methods prevented boredom and piqued their curiosity regarding additional instructional resources employed by the teacher. It is worth noting that *boredom* is a well-established psychological construct (Geiwitz, 1966), consistently demonstrating a negative correlation with *arousal* in extant research on this construct. Furthermore, akin to the concept of engagement, boredom has its roots in educational psychology (Goetz & Hall, 2014) and has more recently surfaced in SLA literature as *foreign language learning boredom* (FLLB; Dewaele & Li, 2021; Li, 2021; Li & Wei, 2023; Li et al., 2021). These findings corroborate Keller's assertions (2010) that variability within instruction

generates perceptual and inquiry-based arousal, both of which are constituents of the broader construct of 'attention' within the ARCS (Attention, Relevance, Confidence, Satisfaction) model. The findings also align with studies that found that using visual resources help maintain and increase students' attention (Bernaus & Gardner, 2008; Bernaus et al., 2009; Gilakjani, 2012; Shelly & Cunter, 2006; Madrid, 2002).

Another subtheme that emerged and an additional attention-attracting strategy used by the teachers was the use of humor (strategy #3 in Appendix H). Humor was the second most frequent strategy brought up by students, after receiving helpful feedback. In fact, all 16 students who were interviewed from the treatment group mentioned that humor was used frequently in the class. Most students found that starting the lesson with a funny story or an animation made them more attentive to the teacher. Several students had interesting comments about the timing of these jokes, especially that the course started at 8 AM, and said that it helped them "change the mood" at such an early time of the day. Moreover, some students remarked (positively) that this style of teaching is unusual and that the last time they witnessed such thing was in elementary school. This reaction is understandable considering that humor is not a common practice in the Saudi culture, especially at IPA, as it is a government facility and teachers usually try to mandate formal relationships with students. This was evident in one student's comment as he mentioned that the teachers' humorous sense made him feel that he is more of a friend than a teacher. Using humor in language learning classrooms has been found to foster a friendly learning atmosphere and a good strategy to eliminate stress (Bell, 2017; Bell & Pomerantz, 2014; 2015). This finding also responds to Bell's (2017) calls for providing evidence on the effectiveness of using humor in L2 classrooms, as empirical evidence is lacking in this area.

Group work was also another subtheme brought up by students in the interviews as they perceived collaborating with their peers to foster an interactive and engaging classroom environment. Many students noted that group work was utilized extensively, in contrast to other classes where instruction primarily adhered to a teacher-centered approach, with students often working independently. This was evident in the responses of all six students I interviewed in the control group, who reported that most of the activities were carried out individually. Allowing students to work in groups and collaborate on writing tasks was highly emphasized in the teacher guide (strategies #6 and #13). These strategies have a positive influence on students' confidence, as hypothesized in Keller's ARCS model, as they give students the ability to have some control over their performance and over the learning environment by choosing who to work with. This observation partly supports Maeng and Lee's (2015) investigation of EFL teachers' use of ARCS-based motivational strategies, which found that group work contributed to increased student motivation by creating a less stressful learning environment. It is also consistent with Crookes and Schmidt's (1991) remarks that activities like group work have a positive effect on learners' motivation as it "serves the need for affiliation, and makes it easier for a feeling of achievement to be attained" (p. 488).

Students consistently emphasized the extensive and beneficial feedback they received on their participation and exams as another subtheme in their perception of ARCS-based strategies. In fact, this subtheme was the most recurrent among all themes found in the data. This was predicted considering that the teacher guide explicitly incorporated three distinct strategies (#9, #14, #19) aimed at encouraging teachers to provide detailed and motivating feedback on students' writing exams. Importantly, the guidelines in the teacher guide underscored the significance of elucidating evaluation criteria and ensuring that students comprehended the

strengths and weaknesses of their writing, as well as the rationale behind their assigned grades. Notably, one student highlighted a practice I observed throughout the semester in which the teacher dedicated an entire session to meeting with students individually, providing them with grade reports, and discussing areas of improvement in their writing for future exams, along with the reasons for the grades assigned (as depicted in the grade report Figure 9 in the Results Chapter). This strategy resulted from collaborative negotiations between me and the treatment teacher in campus A, with the aim of devising an effective method that aligns with the emphasis on providing feedback as outlined in the instructional guide. The treatment teacher in campus B also created his own grade report, and I made sure that he understood the importance of providing consistent feedback. Multiple students conveyed that they were unaccustomed to receiving feedback as comprehensive and satisfactory as that provided in their current writing course. Some students recalled previous experiences where their writing instructors merely assigned grades without explaining the rationale behind them or offering guidance for improvement. I think this is due to the short semester at IPA, which spans only 8 weeks, thus limiting the time available for dedicating entire sessions to providing feedback on students' writing. In fact, both teachers in the treatment group were initially resistant to spend so much time on providing feedback as they struggled with the short period of the course. These findings are consistent with the large body of literature on teachers' corrective feedback (e.g., Afshin et al, 2011; Cho et al, 2006; Hamidun et al, 2012; Srichanyachon, 2012; Tang & Liu, 2018) and its positive influence on enhancing students' motivation in writing, primarily by reducing learners' *affective filter*.

The third major theme emerging from student interviews pertained to their perceived enhancements in writing skills and the strategies that facilitated improvement in various aspects

of writing. The majority of students attributed their writing progress to the continuous feedback provided by their teacher, which helped them rectify errors and avoid repeating them in future exams. Students also noted that the teacher consistently emphasized that mistakes were a natural part of the learning process, thereby boosting their confidence and motivation to write within a stress-free environment. It is noteworthy that one of the strategies outlined in the teacher guide (#2 in Appendix H) focused on conveying statements regarding the likelihood of success given a good amount effort and reiterating this message daily. This strategy, in accordance with Keller's framework (2010), is related to the theory of self-efficacy (Bandura, 1977), which pertains to an individual's belief in their ability to succeed in performing a specific task. Therefore, it enhances students' confidence and leads to higher levels of motivation. Interestingly, it is mentioned in the Cambridge B1 analytic rubric guide that one of the aims of assessing the categories of content and communicative achievement is to "motivate learners who are afraid of making mistakes." (p. 12) This might explain why students showed significant improvements in these two categories following the implementation of ARCS-based motivational strategies. This observation is additional evidence that utilizing a mixed methods design was beneficial in explaining the possible cause behind students' significant improvements in these two specific categories, which would have been impossible to know by relying only on quantitative results. Providing detailed feedback was found by Sešek (2016) to positively correlate with the number of revisions made to the content. Students also reported that the teachers' corrective feedback helped improve the structure of their paragraphs and made them more aware of some grammatical and mechanical errors in their writing. Overall, these findings are in line with several studies demonstrating the effectiveness of encouraging feedback in scaffolding writing skills (Goh, 2017; Shintani &

Aubrey, 2016), engaging students in writing tasks beyond their current proficiency level (Shintani & Aubrey, 2016), and mitigating linguistic errors (Sheen, 2007).

The final major theme derived from the qualitative data revealed that some students expressed a desire to continue honing their writing skills in the future. This was expected since most of them reported that good writing skills might be useful in jobs that require writing emails for example. However, it is hard to claim that their desire to keep improving is solely due to the intervention, although some students mentioned that they wished teachers in other levels would use similar strategies as their writing instructor. A delayed posttest might tell us whether students continue to encounter these strategies in other courses and whether their writing skills continue to progress.

In summary, while the quantitative analysis of motivation surveys only detected a significant effect on students' instruction-related motivation, the qualitative data underscored the noticeable influence of the intervention on students' motivation. This is an example of where the qualitative findings reinforce the quantitative findings and provided depth of understanding. As previously discussed in this chapter, understanding the direct impact of motivational strategies on students' motivation and L2 writing improvement based solely on quantitative data was challenging. However, the interviews conducted with students gave them the opportunity to talk more about how they perceived the intervention, its effects on their motivation, the motivational strategies consistently employed by the teacher, and the specific strategies that facilitated their growth as writers. This underscores the validity of employing a concurrent triangulation mixed methodology (Mackey & Bryfonski, 2018), which allows for insights to be drawn from both quantitative and qualitative data. While the quantitative analysis identified patterns, the qualitative analysis added depth and context to these patterns, as I attempted to show in a couple

of instances in this section. This approach aligns with recommendations from numerous L2 motivation experts (e.g., Boo et al., 2015; Dörnyei, 2007; Dörnyei & Ushioda, 2021; Mahmoodi & Yousefi, 2021; Ushioda, 2020, 2019), who assert that combining methodologies can yield rigorous and meaningful insights into students' motivation. The qualitative results also helped offer a different angle on the non-significant results found in the quantitative data, which Dörnyei (2007) and Ushioda (2020) mentioned is one of the advantages of using qualitative data in L2 motivation research. Ultimately, as elicited from students' interviews, I can confidently say the some of the ARCS-based motivational strategies were used consistently by the teachers, recognized by the students, and exerted a positive effect on their motivation during the course. After all, a major criticism of Dörnyei's (2001) framework of motivational strategies was that teachers do not consistently use motivational strategies in their instruction and students often fail to notice them, as Lamb (2019) claimed. However, this was not the case in the current study, which gives validation to Crookes and Schmidt's (1991) calls to bring Keller's ARCS model from educational psychology to the field of applied linguistics, emphasizing the role of classroom practices and instructional materials in shaping students' motivation. Furthermore, the qualitative data support the positive impact of the using motivational strategies on students' motivation, as evidenced in several ARCS-based studies (Chang et al., 2016; Chang & Lehman, 2002; Hung et al., 2013; Karimi et al., 2021; Kurt & Keçik, 2017; Proski et al., 2014; Ucar & Kumtepe, 2019; Wu, 2018), or other studies that used different motivational frameworks (Alrabai, 2016; Guilloteaux & Dörnyei, 2008; Moskovsky et al., 2013; Papi & Abdollahzadeh, 2012; Sugita & Takeuchi, 2014).

Teachers' Perception of the Implementation of the ARCS-based Motivational Intervention

The final inquiry of this dissertation aimed to shed light on the perspectives of the two teachers, Ray in campus A and Ali in campus B, who implemented the ARCS-based motivational intervention. It sought to understand their experience and whether they perceived it as beneficial to their students' motivation and their own growth as educators. The findings from lengthy semi-structured interviews yielded seven major themes, which will be comprehensively discussed in this final section of the discussion chapter. Additionally, it will become evident to the reader how the teachers' perceptions of certain motivational strategies align with the students' perceptions of the same strategies, as I will demonstrate in this section.

The first theme revealed how teachers perceived the utility of applying the motivational strategies recommended in the guide and how these strategies influenced their students' motivation and engagement in the classroom. Ray articulated that the use of humor at the outset of the class set a positive tone for the lesson, and he personally enjoyed employing this strategy, as did his students. This coincided with students' remarks as well, as they found humor to be a fun addition to instruction and a strategy that helped attract their attention. Interestingly, Ray expressed his intention to continue using humor in other classes because of the effect he noticed it had on eliminating boredom and making learning more enjoyable. Ali, with 17 years of teaching experience at IPA, recognized the impact of motivational strategies, such as group work and visual representations of materials, on his students' motivation and engagement in campus B. He noted that incorporating these strategies as a deliberate attempt to influence students' motivation was not a common practice at IPA. This is consistent with Crookes and Schmidt's (1991) remarks about Brophy and Kher's (1986) claim, that making efforts to motivate students was not a widespread practice in educational settings. Ali also mentioned that not relying on the textbook and instead engaging students in fun activities such as projecting their writing on the

board, both of which are themes discerned from the interviews with students in campus A, had a positive influence on students' motivation. This is noteworthy because it suggests that even though interviews were only conducted with students in the treatment group in campus A, the intervention seems to have been equally implemented by the teachers across both campuses. This was supported by my observations and the audio recording files I collected from both teachers. Furthermore, Ali observed that projecting students' writing on the board and having their peers identify strengths and weaknesses in campus B (strategy #11 in Appendix H) helped them avoid mistakes in future writing. This is remarkably consistent with how some students in campus A felt about this same activity, as they mentioned that it facilitated learning from their peers' errors and motivated them to avoid such mistakes in future writing exams. Another strategy not regularly employed in the teachers' previous teaching experiences was allowing students to work in groups. Both teachers noted that the suggestions from the intervention guide aimed at making teaching more student-centered contributed to a more interactive and engaging learning environment. In fact, they acknowledged that in previous courses, the instruction had been predominantly teacher-oriented, with students assuming passive roles in the classroom. For instance, Ray admitted that he had typically played a more active role in other classes, with few efforts to provide students with more control over their own learning. Ali also acknowledged that most of his teaching had revolved around the Grammar-Translation Method, a teacher-centered approach that heavily relied on passive learning through memorization and translation of linguistic forms, with limited emphasis on student participation. This observation resonates with Alqahtani's (2015) remarks that the Grammar-Translation Method is the predominant method of teaching L2 in Saudi Arabia. That said, both teachers noted the benefits of incorporating group work strategies in creating a more enjoyable and interactive learning environment.

Three other themes were generated based on teachers' own perceptions of the incorporation of motivational strategies into their instruction and lesson planning. In line with growing calls to conduct more studies to scrutinize teachers' motivational practices and beliefs in L2 classrooms (e.g., Glas, 2016; Henry et al., 2018; Lamb, 2017, 2019; Ushioda, 2009, 2016), I attempted to gain a deeper understanding of the two teachers' own motivations and their willingness to make changes to established teaching methods that they had adhered to for years.

The final three themes extracted from teachers' interviews revolved around the feasibility of implementing these motivational strategies and the importance of disseminating them to fellow educators. Both teachers found the intervention guide (see Appendix H), which I designed, to be pivotal in aiding the integration of these strategies into their instructional materials, including lesson plans and activities. I included instructional tactics linked to each strategy, with the primary goal of familiarizing teachers with some of the theoretical constructs that they may have found challenging to apply in practice. For example, Ali mentioned that the guide provided a fundamental understanding of each strategy and suggested practical tactics that facilitated their use in the classroom. Ray similarly noted that the guide assisted in determining how to integrate these strategies into his teaching methodology without requiring a complete overhaul. This empirical evidence substantiates my initial remarks that Keller's ARCS model can serve as a practical resource for educators seeking to implement motivational strategies in their teaching. In fact, it addresses concerns raised by Keller (2010) in his work on the ARCS model, highlighting the challenges teachers encounter in motivating students due to uncertainties about the most effective strategies, their appropriate frequency of use, and most importantly, how to integrate them in the lesson plan. It also directly answers Lamb's (2019) concerns that a core issue of motivation research in applied linguistics, mostly influenced by Dörnyei's (2001)

famous framework of motivational strategies, is to figure out what teachers understand by strategies that suggest ‘giving detailed feedback’ or ‘raising students’ satisfaction’, and how they can be effectively implemented in practice. This finding also aligns with previous claims that the ARCS model provides an additional perspective on researching motivational strategies and is regarded as a practical and comprehensive guide for teachers seeking to bridge motivational theories with classroom practice (Goksu & Bolat, 2021; Jeon, 2020; Keller, 2010; Maeng & Lee, 2015).

The teachers also expressed a need for more instructional time to adequately prepare for the implementation of various motivational strategies and to observe their tangible effects on student motivation and writing development. This request is understandable given that teachers were constrained by an 8-week timeframe to cover the curriculum mandated by the IPA administration, with the intervention itself commencing in week 3 and concluding in week 7. In my view, the limited time frame likely imposed added pressure on teachers as they sought to balance course requirements with the implementation of the intervention guide. This constraint may partially explain the absence of significant results in certain aspects of student motivation, such as intrinsic motivation, and certain facets of L2 writing development, such as language proficiency and organizational skills that were shown in the quantitative analysis. This observation is a third example showing how the qualitative data informed some aspects of the quantitative data.

Lastly, both teachers expressed a willingness to share these motivational strategies with their colleagues at IPA and beyond. They even suggested that I organize a workshop featuring various activities to demonstrate practical methods for integrating motivational strategies into instructional materials. These endorsements are encouraging and provide me with insights into

the potential dissemination of the teacher guide to a broader audience of EFL educators in Saudi Arabia and globally.

In conclusion, the findings discussed in this chapter add a valuable contribution to this line of research, as no previous study to my knowledge had scrutinized teachers' beliefs and motivation towards incorporating motivational strategies into their L2 instruction using a true experimental design, whether it is in studies conducted in the Saudi context (Alrabai, 2016; Moskovsky et al., 2013), other L2 motivational strategies studies conducted in several EFL contexts (Guilloteaux & Dörnyei, 2008; Henry et al., 2018; Lamb et al, 2016; Papi & Abdollahzadeh, 2012; Sugita & Takeuchi, 2014; Wong, 2014), or even studies that asked teachers to use ARCS-based motivational strategies (Chang et al., 2016; Chang & Lehman, 2002; Hung et al., 2013; Karimi et al., 2021; Kurt & Keçik, 2017; Maeng & Lee, 2015; Proski et al., 2014; Ucar & Kumtepe, 2019; Wu, 2018). They also justify my remark in the introduction of the dissertation that the findings of this study will enrich teacher education in Saudi Arabia and globally by suggesting pedagogical implications aimed at encouraging teachers to adopt a motivational approach to teaching and hoping that it leads to a positive impact on their students' motivation and L2 writing development.

CHAPTER 6. CONCLUSION

This study investigated the impact of teachers' utilization of ARCS-based motivational strategies on the motivation and L2 writing development of Saudi EFL students, employing a true experimental mixed methods research approach. It aimed to address a significant gap within the realm of second language education and instructed Second Language Acquisition (SLA): the specific motivational effects of L2 materials, particularly how language teaching materials can be designed to motivate students based on a motivational theory of instruction. The findings obtained from the quantitative analysis showed that the ARCS-based intervention had a small to medium effect on students' instruction-related motivation, while no significant changes were found on other aspects of motivation. It also showed that the intervention had a medium effect on students' overall L2 writing development, specifically on aspects of content and communicative achievement. Nevertheless, no significant changes were discerned in aspects related to organization, language, and fluency, despite more pronounced changes over time in the treatment group compared to the control group. The qualitative analysis of students' interviews showed that the ARCS-based intervention had noticeable effects on students' motivation and engagement in the classroom. The qualitative results also added some context and deeper insights on how students perceived the intervention, how it affected their motivation, which motivational strategies the students noticed to be used consistently by the teacher, and what specific strategies helped improve their writing. Additionally, interviews with teachers who implemented the intervention shed light on their motivational practices, revealing their personal growth as educators and their intent to continue implementing these strategies in their teaching while recommending them to other teachers.

The true experimental nature of this study, the concurrent triangulation mixed methodology followed by using various data collection methods, the treatment utilized and designed, and the careful statistical analyses conducted were all intended to obtain rigorous and unequivocal results. In fact, this is the first study to examine the effect of using motivational strategies on EFL students' motivation and L2 achievement using a true experimental design, despite closer attempts made by Alrabai (2016) and Moskovsky et al. (2013), which both utilized a quasi-experimental design. Notably, the preference for true experimental designs in classroom-based research is underscored by Polio and Lee (2019), who contend that such designs are superior for establishing causal relationships between variables, thanks to the inclusion of random assignment, which mitigates the influence of confounding variables. Therefore, an experimental design in this case makes us confident that any resulting change in students' motivation or L2 writing performance is attributed to the effect of the intervention, aligning with Rogers and Revesz's (2020) argument. In line with various calls from L2 motivation specialists (e.g., Al-Hoorie, 2018; Dörnyei & Ushioda, 2021; Lamb, 2017, 2019; Mackey, 2017) to conduct more experimental research that attempts to establish cause–effect relationships and thus truly suggest useful pedagogical implications for teachers based on empirical evidence and not just correlation, this study contributes precisely to that goal. A final remark that I would like to make on this aspect of the study's design is that all these calls for true experimental design underestimate the logistical difficulties and neglect other important aspects of classroom research design. While it is more desirable to involve a large sample size and seek statistical significance, one should consider the fact that this is challenging to do in real world classroom research that involves random assignment of participants. Another layer is getting teachers to run an

intervention that could change the way they are used to teach in their classes. This is why true experimental studies are scarce in L2 research, as Polio and Lee (2019) claimed.

In addition to the intervention's positive effect on students' motivation, this study is the first true experimental study to provide empirical evidence that motivational teaching leads to improvements in overall L2 writing performance and in aspects of content and communicative achievement. Previous research has either found an effect on overall L2 achievement (Alrabai, 2016) or on other aspects of L2 development, such as oral fluency and accuracy (Han & McDonough, 2018) and incidental vocabulary learning (Papi, 2018). The findings of the present study contribute to our understanding of the role of motivation in addressing the "more fine-grained processes of language acquisition or linguistic development" (p. 565), which according to Ushioda (2016) is the main reason why motivation research has been isolated from "the core linguistic traditions of the SLA" (p. 565).

The insights gleaned from teacher interviews are particularly exciting, suggesting that the intervention should be shared as part of teacher education workshops in Saudi Arabia and other EFL contexts. This is in fact the first study, to my knowledge, to dig deeper into teachers' beliefs and motivation towards incorporating motivational strategies into their L2 instruction using a true experimental design, responding to the various calls made by Lamb (2017) to explore teachers' personal beliefs and motivations in education and Ushioda's (2009) recommendation to treat teachers as "persons-in-context" and account for the complexities associated with their beliefs about motivating students.

In summary, the careful methodology employed in this research instills confidence that teachers' motivational practices contributed to increased motivation in certain aspects and improvements in select aspects of learners' writing. This study is expected to have far-reaching

pedagogical implications not only for L2 teaching/learning practices in Saudi Arabia but also for EFL/ESL teachers in different contexts. Nevertheless, it is essential to acknowledge that no study is without limitations, as will be discussed in the next section

Limitations

This study is subject to several limitations that warrant consideration. Firstly, the relatively brief intervention period, lasting only five weeks, may have contributed to the absence of significant results in certain aspects of students' motivation and L2 writing development. It is recognized that this duration may not provide sufficient time to observe all effects on complex psychological constructs such as motivation or substantial changes in specific aspects of students' writing, such as vocabulary acquisition or the production of complex sentences. The effect of motivation on details such as vocabulary acquisition and syntax might only be obtained through longitudinal studies such as the one conducted by Sampson (2016).

Another issue is related to controlling confounding variables other than students' differences, which was settled via the randomization process and the various pretests conducted with students that showed both groups were equivalent prior to the start of the intervention. One may argue that even though the student variable was controlled through randomization, it might be challenging to control the teacher variable (i.e., if one teacher is more skilled than the other). While that might be true, I helped mitigate this effect by observing the two teachers in the control and treatment groups in campus A, and also asking the teacher in campus B to record his instruction using a digital device (since I was not physically present in this campus). I also think the remarks made by students in the interviews, brought alongside the remarks made by the two teachers in the treatment, demonstrate that there were some consistencies between the two teachers' use of similar motivational strategies, even though they taught in two far apart

campuses. Despite these attempts, I acknowledge that it is impossible to fully control this variable and that teachers' individual characters or teaching skills might have played a role in influencing students' perception of the course.

One final limitation is related to the sample size used in this study. Even though I managed to get a decent number of students to be involved in this study, other related studies working in the same space involved a considerably larger number of participants [e.g., Alrabai, 2016 (N = 437) and Moskovsky et al., 2013 (N = 296)]. The relatively low sample size compared to these two studies might lead the ANOVA to not have sufficient power to detect a significant effect of the intervention on some aspects of motivation and L2 development, especially in the separate analysis conducted among participants in campus A only (N = 68). Consequently, caution should be exercised in generalizing the study's findings, and it is advisable to interpret them in light of both the quantitative and qualitative data. Furthermore, it is essential to heed Lamb's (2017) assertion that what proves effective in one cultural context may not necessarily yield the same results in another.

Suggestions for Future Research

Despite the noted limitations, this study has yielded promising findings regarding the impact of implementing motivational strategies based on Keller's (2010) ARCS model on students' motivation and L2 writing development. In future research endeavors, I encourage scholars to consider extending the duration of such interventions to assess potential effects on students' trait motivation, including intrinsic motivation. A lengthier intervention period may also offer more time to evaluate whether other facets of students' writing, such as language proficiency and fluency, may exhibit improvement as a consequence of the intervention.

Furthermore, expanding the participant pool may enhance a study's ability to detect significant effects, if present.

Given the value that teachers placed on the motivational strategies outlined in the guide, it would be intriguing to revisit these teachers in subsequent studies to ascertain which strategies they continue to incorporate into their teaching practices. This could be achieved through delayed posttests or observations of teachers in future classes following the conclusion of the intervention. Such follow-up investigations may open up new avenues in the realm of teacher education research and provide deeper insights into the practical utility of the pedagogical implications frequently proposed in L2 research for informing teaching practices.

APPENDICES

Appendix A

Proficiency Measures: Self-rating and CEFR Statements

Writing CEFR Grid

Which statement best describes your ability to write in English? Please only choose one option:

1. I can write a short, simple postcard, for example sending holiday greetings. I can fill in forms with personal details, for example entering my name, nationality and address on a hotel registration form.

2. I can write short, simple notes and messages relating to matters in areas of immediate needs. I can write a very simple personal letter, for example thanking someone for something.

3. I can write simple connected text on topics which are familiar or of personal interest. I can write personal letters describing experiences and impressions.

4. I can write clear, detailed text on a wide range of subjects related to my interests. I can write an essay or report, passing on information or giving reasons in support of or against a particular point of view. I can write letters highlighting the personal significance of events and experiences.

5. I can express myself in clear, well- structured text, expressing points of view at some length. I can write about complex subjects in a letter, an essay or a report, underlining what I consider to be the salient issues. I can select style appropriate to the reader in mind.

6. I can write clear, smoothly-flowing text in an appropriate style. I can write complex letters, reports or articles which present a case with an effective logical structure which helps the recipient to notice and remember significant points. I can write summaries and reviews of professional or literary works.

جدول الإطار المرجعي الأوروبي المشترك **(CEFR)** للكتابة

ما أقرب عبارة لوصف قدرتك على الكتابة بالإنجليزية؟ يرجى اختيار عبارة واحدة فقط:

1. أستطيع أن أكتب بطاقة بريدية صغيرة بسيطة، للتهنئة بالعيد مثلًا، وأستطيع أن أملأ استئمارات بتفاصيلي الشخصية، ككتابة اسمي وجنسيتي وعنواني في استئمارة التسجيل بفندق مثلًا.

2. أستطيع أن أكتب ملاحظات ورسائل قصيرة بسيطة بخصوص الاحتياجات والضرورات العاجلة، كأن أكتب خطابًا شخصيًّا بسيطًا جدًّا لأشكر شخصًا على شيء ما.

3. أستطيع أن أكتب نصًّا بسيطًا مترابطًا عن مواضيع مألوفة لي أو لها أهمية شخصية، كأن أكتب خطابات شخصية تصف تجاربي وانطباعاتي.

4. أستطيع أن أكتب نصًّا مفصَّلًا واضحًا عن مواضيع عديدة متنوعة متصلة باهتماماتي. وأستطيع أن أكتب مقالة أو تقريرًا لتقديم معلومات أو إبداء أسباب تدعم وجهة نظر معينة أو تُعارضها، أو أن أكتب خطابات تُسلط الضوء على أهمية الأحداث والتجارب بالنسبة لي.

5. أستطيع أن أعبر عن نفسي بنص واضح جيد الصياغة، مُعربًا عن وجهات نظري بشيء من التفصيل. وأستطيع أن أكتب مقالة أو خطابًا أو تقريرًا عن مواضيع معقدة، موضحًا ما أراه مهمًّا. وأستطيع أن أختار أسلوبًا يناسب القارئ الذي في بالي.

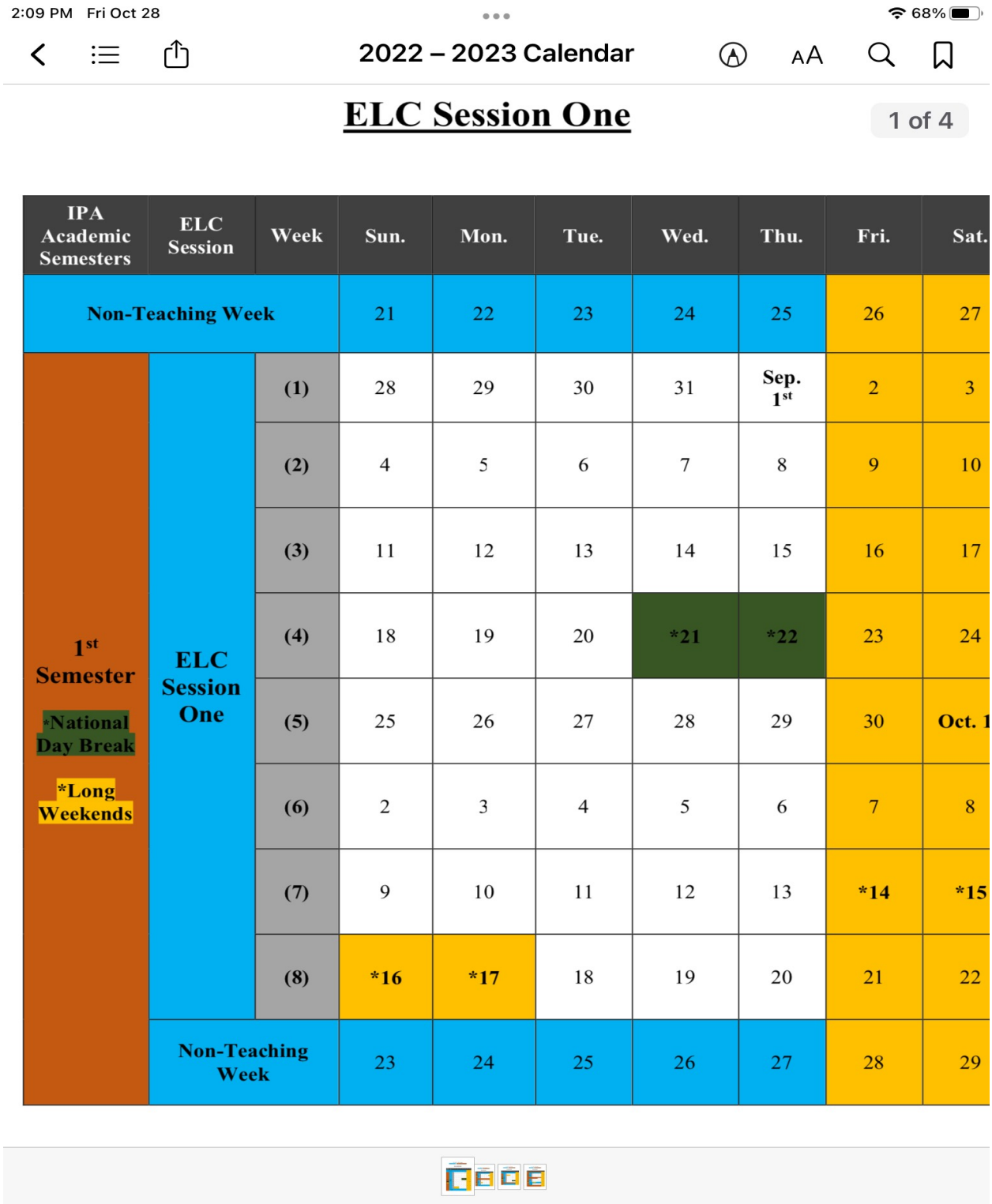
6. أستطيع أن أكتب نصًّا واضحًا سلسًا بأسلوب لائق، وأن أكتب تقارير أو مقالات أو خطابات معقدة تعرض مسألةً ما بصياغة منطقية مؤثرة، تجعل القارئ ينتبه لأهم النقاط ويتذكرها. وأستطيع أن أكتب ملخصات ومراجعات لأعمال أدبية أو احترافية.

Overall English Skills Self-rating

How would you rate your OVERALL language skills in English? (1=minimal, 10=excellent))
كيف تقيم مستواك الشخصي في اللغة الانجليزية بشكل عام؟ (١ ضعيف و ١٠ ممتاز)

Appendix B

A Timetable for the Intervention Period



IPA Academic Semesters	ELC Session	Week	Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
Non-Teaching Week			21	22	23	24	25	26	27
1st Semester *National Day Break *Long Weekends	ELC Session One	(1)	28	29	30	31	Sep. 1st	2	3
		(2)	4	5	6	7	8	9	10
		(3)	11	12	13	14	15	16	17
		(4)	18	19	20	*21	*22	23	24
		(5)	25	26	27	28	29	30	Oct. 1
		(6)	2	3	4	5	6	7	8
		(7)	9	10	11	12	13	*14	*15
		(8)	*16	*17	18	19	20	21	22
	Non-Teaching Week		23	24	25	26	27	28	29

Appendix C

Motivation Surveys

Course Interest Scale (20 items, adapted from Keller, 2010)

Statements	Not true غير صحيح	Slightly true صحيح قليلًا	Moderately true صحيح بيْن بيْن	Mostly true صحيح غالبًا	Very true صحيح جدًّا
1. The instructor knows how to make us feel enthusiastic about the subject matter of this course. A يَعرف المعلِّم كيف يحمِّسنا لموضوع مادة الكتابة.					
2. The things I am learning in this course will be useful to me. R ما أتعلمه في مادة الكتابة سيكون نافعًا لي.					
3. I feel confident that I will do well in this course. C أنا واثق أني سأُبلي بلاءً حسنًا في مادة الكتابة.					
4. Whether or not I succeed in this course is up to me. C النجاح والسقوط في مادة الكتابة بِيَدي أنا.					
5. The instructor creates suspense when building up to a point. A المعلّم يخلق حالة تشويقية أثناء تهيئة الطالب لمعلومة ما.					
6. In this class, I try to set and achieve high standards of excellence. R في هذا الصف أحاول أن أضع معايير امتياز عالية، وأن أحققها.					

7. I feel that the grades or other recognition I receive are fair compared to other students. S أشعر أن المعلم يعدل بيني وبين زملائي في تقديره لي وفي الدرجات التي يعطيني إياها.					
8. The students in this class seem curious about the subject matter. A الطلاب في هذا الصف يَبدون مهتمِّين بمادة الكتابة.					
9. I feel satisfied with what I am getting from this course.S اشعر بالرضا حيال ما سوف اخرج به من معرفة في مادة الكتابة.					
10. The content of this course relates to my expectations and goals.R محتوى مادة الكتابة موافِق لتوقعاتي وأهدافي					
11. The students actively participate in this class. R الطلاب يتفاعلون في الصف بنشاط.					
12. To accomplish my goals, it is important that I do well in this course. R لتحقيق أهدافي، يجب أن أُبلي في مادة الكتابة بلاءً حسنًا.					
13. The instructor uses an interesting variety of teaching techniques. A المعلم يستعمل أساليب تدريس متنوعة جذّابة للاهتمام.					
14. As I am taking this class, I believe that I can succeed if I try hard. C أثِق وأنا أَحضر هذا الصف بأني أستطيع النجاح إذا اجتهدت اجتهادًا كافيًا.					

15. The personal benefits of this course are clear to me. C المنافع الشخصية من هذه المادة واضحة لي.					
16. My curiosity is often stimulated by the questions asked or the problems given on the subject matter in this class. A تثير فضولي النقاشات والاسئلة التي تدور في الصف.					
17. I find the challenge level in this course to be about right: neither too easy not too hard. C مستوى التحدي في مادة الكتابة مناسب في رأيي: لا هي سهلة جدًّا ولا صعبة جدًّا.					
18. I feel that I get enough recognition of my work in this course by means of grades, comments, or other feedback. S اشعر انني احصل على تقدير كافي لعملي في مادة الكتابة عن طريق الدرجات او غيرها من الملاحظات والتعقيبات من قِبل المعلم.					
19. The amount of work I have to do is appropriate for this type of course. S مقدار الجهد المطلوب مني مناسب وملائم لمثل هذه المادة.					
20. I get enough feedback to know how well I am doing. C أحصل على ما يكفي من التعقيبات والمراجعات من قِبل المعلم لأعرف مستواي في مادة الكتابة.					

Intrinsic Motivation Scale (7 items, adapted from Alrabai, 2016)

Statements	Not true غير صحيح	Slightly true صحيح قليلًا	Moderately true صحيح بيْن بيْن	Mostly true صحيح غالبًا	Very true صحيح جدًّا
21. I am enjoying learning how to write in English. أنا مستمتع بتعلُّم كيفية الكتابة بالإنجليزية.					
22. When English writing classes end, I often wish they would continue. عند انتهاء وقت مادة الكتابة بالإنجليزية، أود غالبًا لو أنها استمرت.					
23. I would study English writing even if it were not required by IPA. كنت سأدرس الكتابة بالإنجليزية ولو لم تكن إجبارية في معهد الإدارة العامة.					
24. I would like to continue to learn English writing even after I leave IPA. أود مواصلة تعلُّم الكتابة بالإنجليزية حتى بعد تخرُّجي في معهد الإدارة العامة.					
25. My goal of learning English writing is far more than just passing exams. غرضي من تعلُّم الكتابة بالإنجليزية أكبر بكثير من مجرد اجتياز الاختبارات.					
26. Learning how to write in English is a boring activity for me. تعلُّم الكتابة بالإنجليزية نشاط أراه مملًّا.					

27. I wouldn't study English writing if I didn't have to. ما كنتُ سأدرس الكتابة بالإنجليزية لو لم أكن مضطرًّا.					

Motivational Self-evaluation Scale (7 items, adapted from Alrabai, 2016)

Statements	Not true غير صحيح	Slightly true صحيح قليلًا	Moderately true صحيح بيْن بيْن	Mostly true صحيح غالبًا	Very true صحيح جدًّا
28. I feel interested to learn how to write in English. أشعر برغبة في تعلُّم كيفية الكتابة بالإنجليزية.					
29. I feel inspired to learn how to write in English. أشعر بإلهام لتعلُّم كيفية الكتابة بالإنجليزية.					
30. I feel confused during the English writing class. أشعر بالحيرة أثناء تعلُّم الكتابة بالإنجليزية.					
31. I feel independent during the English writing class. أشعر بالاستقلالية أثناء تعلُّم الكتابة بالإنجليزية.					
32. I feel I am doing well in the English writing class. أشعر بأن أدائي جيد في تعلُّم الكتابة بالإنجليزية.					
33. In the English writing class, I enjoy doing difficult tasks that require innovation on my part. في فصل الكتابة بالإنجليزية أستمتع بأداء الأنشطة الصعبة التي تتطلب مني إبداعًا.					

34. When learning how to write in English, I easily give up learning tasks that prove hard to do. اثناء تعلُّم الكتابة بالإنجليزية، سرعان ما أتوقف عن اكمال التمارين او الواجبات التي أجدها صعبة علي.					

Open-ended Question

Talk about your motivation to learn English generally. Why are your learning English? How would you describe your motivation to learn English? Please write your answer in the textbox below in Arabic. Remember that there is now word limit, so please be honest in what you write as no one, besides the researcher, will look at your answer.

تحدث عن حافزيتك أو دافعك لتعلم اللغة الانجليزية بشكل عام. لماذا تتعلم اللغة الانجليزية؟ كيف تصف حافزيتك؟ الرجاء كتابة اجابتك في الفراغ في الأسفل باللغة العربية. لايوجد عدد معين من الكلمات، فقط اذكر ما تود ذكره بكل صدق وشفافية. لن يطلع أحد على هذه الإجابة سوى الباحث ولن يتم مشاركة اجابتك مع شخص اخر.

Appendix D

The Instructional Materials Motivation Survey IMMS)

(31items, adapted from Keller, 2010)

Statements	Not true غير صحيح	Slightly true صحيح قليلًا	Moderately true صحيح بيْن بيْن	Mostly true صحيح غالبًا	Very true صحيح جدًّا
1. When I first looked at this week's lessons, I had the impression that it would be easy for me. عندما طالعتُ دروس هذا الاسبوع، بَدت أنها ستكون سهلة لي					
2. There was something interesting at the beginning of this lesson that got my attention. كان في بداية شرح هذه الدروس شيء لافت أثار انتباهي كالبدء بشيء مضحك أو ممتع من المعلم.					
3. The teacher enabled us to work collaboratively in groups. مكننا المعلم من العمل في مجموعات في الفصل.					
4. After the teacher mentioned the lesson objectives at the beginning of every class, I felt confident that I knew what I was supposed to learn from this lesson بعدما ذكر المعلم اهداف الدرس في بداية كل حصة، كنتُ واثقًا بأني على عِلم بما يُفترض أن أتعلمه من الدرس.					
5. Completing the exercises in this lesson gave me a satisfying feeling of accomplishment. حلُّ وإكمال تمارين دروس هذا الأسبوع سواء في الفصل او في الكتاب منحني شعورًا مُرضِيًا بالإنجاز.					

6. It is clear to me how the content of this material is related to things I already know. من الواضح لي مدى ارتباط محتوى هذه المادة بأشياءَ أعلمها بالفعل					
7. The teacher uses eye-catching materials such as drawings, colors, slide show, and other diverse teaching materials. يستخدم الأستاذ في شرحه أشياء لافتة للأنظار كالرسومات والألوان والعروض التقديمية وتنويع لمصادر التعلم					
8. Completing this week's lessons successfully was important to me. كان إكمال دروس هذا الاسبوع بنجاح مهمًّا لي					
9. As I worked on this week's lessons, I was confident that I could learn the content. وأنا أعمل على دراسة دروس هذا الأسبوع كنت واثقًا بأني أستطيع تعلُّم محتواها.					
10. I enjoyed this week's lessons so much that I would like to know more about their topics. استمتعت بدروس هذا الاسبوع لدرجة أني أود معرفة المزيد عن موضوعها					
11. The handouts and worksheets shared by the teacher look dry and unappealing أوراق العمل التي يشاركها الأستاذ للمساعدة في فهم الدرس تبدو جافة غير جذابة					
12. The content of these lessons is relevant to my interests. محتوى الدروس في هذا الاسبوع موافِق لاهتماماتي					

13. The way the information is arranged in this week's lessons helped keep my attention. طريقة ترتيب المعلومات في دروس هذا الأسبوع من قبل المعلم ساعدتني على التركيز					
14. The teacher gave a lot of examples to explain the lesson. زودني الاستاذ بشروح أو أمثلة توضح الدروس أكثر					
15. The exercises in this week's lesson were too difficult. حل تمارين دروس هذا الاسبوع كانت صعبة جدًّا.					
16. There are things in the lessons that stimulated my curiosity. في دروس هذا الأسبوع أشياءُ أثارت فضولي واهتمامي					
17. I really enjoyed studying this week's lessons. استمتعت حقًّا بدراسة دروس هذا الاسبوع.					
18. The amount of repetition in this lesson caused me to get bored sometimes. كمية التكرار في دروس هذا الاسبوع أشعرَتْني أحيانًا بالملل					
19. The content and style of teaching in this lesson convey the impression that its content is worth knowing. محتوى الدرس وأسلوب توصيله من قبل المعلم يُعطيان انطباعًا بأن محتواه يستحق المعرفة					

20. I learned some things that were surprising or unexpected. تعلمتُ أشياء كانت شيقة وجديدة نوعا ما علي في دروس هذا الاسبوع					
21. After working on these lessons for a while, I was confident that I would be able to pass a test on it. بعد دراسة محتوى دروس هذا الاسبوع، صرت واثقًا بأني سأقدر على اجتياز اختبارها					
22. These lessons were not relevant to my needs because I already knew most of them. لم تكن دروس هذا الأسبوع موافقة لاحتياجاتي، لأني كنت أعرف بالفعل معظم ما فيها					
23. The wording of feedback after the exercises, or of other comments in this week's lessons, helped me feel rewarded for my effort. طريقة تعليقات الأستاذ على مشاركاتي هذا الاسبوع، أشعرتني بمكافأة على مجهودي					
24. The variety of teaching methods, including visuals, worksheets etc., helped keep my attention on the lesson. تنوُّع فقرات الشرح والتمارين والرسومات والعروض التقديمية وغيرها من طرق التعلم ساعدتني على التركيز في الدرس					
25. The style of teaching is boring. أسلوب الشرح ممل					

26 I could relate the content of this lesson to things that will be useful in my own life. يمكنني ربط محتوى دروس هذا الاسبوع بأشياءَ سوف تفيدني في حياتي الشخصية.					
27. It felt good to successfully complete this week's lessons. سَرَّني النجاح في إكمال دروس هذا الاسبوع					
28. The content of these lessons will be useful to me. سينفعني محتوى دروس هذا الاسبوع					
29. I could not really understand quite a bit of the materials in these lessons. في الواقع لم أستطع فهْم جزء كبير من دروس هذا الاسبوع					
30. The good organization of the content helped me be confident that I would learn how to write in English. حُسن تنظيم المحتوى من قبل المعلم ساعدني على الوثوق بأنني سأتعلم الكتابة بالانجليزية					
31. It was a pleasure to work on such well-designed lessons. كان من دواعي سروري العمل على دروس جيدة الإعداد كهذه التي درستها هذا الاسبوع					

Appendix E

Writing Tasks

Writing Task 1

Your first and last name:
Your ID number:
Your class number:
What IPA branch do you study at:

You should spend about **30 minutes** on this task. Write a paragraph with **6-10 sentences**. Write at least **100 words**.

In your opinion, should schools and universities have online courses? Why, or why not?

Writing Task 2

You should spend about **30 minutes** on this task. Write a paragraph with **6-10 sentences**. Write at least **100 words**.

In your opinion, should people attend college after graduating high school? Why, or why not?

Appendix F

Interview Questions

Students' Interview Questions

1. What is your background with English? What courses you have taken outside IPA?
١.ماهي هي خبرتك في دراسة اللغة الإنجليزية؟ هل سبق واخذت كورسات لغة خارج المعهد؟

2. What do you think of English learning and use?
٢. ما هو رأيك في تعلم اللغة واستخدامها بشكل عام؟

3- In general, what do you think of the writing course this semester?
٣- بشكل عام، ما هو رأيك في كلاس الكتابة هذا الفصل؟

4- What do you think of the teacher's style of teaching? Tell me something you found interesting about his teaching style.
٤. ماهو رأيك في أسلوب الأستاذ في التدريس؟ أخبرني بشيء وجدته مثير للاهتمام او ممتع وجدته في طريقة شرحه او أسلوبه في التدريس.

5- Do you think the lessons and instructions in this course are the same as usual or do you think there might be some differences? Tell me about how the lessons and instruction in this course are different from what you are used to in IPA.
٥. هل بظنك ان طريقة عرض الدروس وطريقة شرح الأستاذ مشابهه لما اعتدت عليه من مدرسين سابقين في المعهد او ربما ترى أن هنالك بعض الاختلافات؟ أخبرني ماهي بعض هذه الاختلافات.

6- What was the most interesting or memorable aspect of the teacher's style of instruction during the course? Can you give specific examples?
٦. ما هو أكثر شيء وجدته ممتع وعالق بذاكرتك عن طريقة شرح الأستاذ للدروس خلال هذا الفصل؟ هل من الممكن تزويدي بأمثلة؟

7- Can you recall anything the teacher did to keep you engaged in the lesson?
٧. هل تتذكر أي شيء فعله الأستاذ خلال الفصل وجعلك تشارك أكثر في الفصل؟

8- Do you think your writing has improved? If so, what were things a teacher used to help your writing get better?
٨. هل تظن ان مستوى كتابتك باللغة الإنجليزية تحسن؟ ماهي الأشياء التي فعلها الأستاذ وساعدت في تطوير كتابتك خلال هذا الفصل؟

9- Did the teacher make the classroom environment more interactive? Can you mention any examples?
٩. هل ساعد الأستاذ في جعل بيئة الفصل تفاعلية أكثر؟ اذكر امثلة.

10- Besides the book, what materials did the teacher use to deliver instruction in the class? What do you think of these materials?

١٠. غير الكتاب، ماهي المواد التعليمية التي استخدمها الأستاذ في الفصل لشرح الدرس؟ ما هو رأيك في هذه المواد؟

11- What do you think of the teacher's way of giving feedback on your participation, exams, or homework?
١١. ما هو رأيك في طريقة رد الأستاذ على مشاركاتك، أو تعليقاته على اختباراتك او واجباتك؟

12- Are you interested in continuing your English studies after this course and after you leave IPA?
١٢. هل أنت مهتم في اكمال تعلمك للغة الإنجليزية بعد هذا الكورس او عند مغادرتك للمعهد؟

13. Any last impressions/words you would like to share about the course?
١٣. أي كلمات أخيرة او انطباع عام تود مشاركته عن مادة الكتابة هذا الترم؟

Teachers' Interview Questions:

1- What is your overall impression on implementing the tactics in the guide?

2- How easy or difficult did you find integrating these tactics into your daily lesson planning? Were the guidelines sufficient for you to understand the strategies and develop lessons and activities that incorporated them? If not, what was problematic for you? What additional information would have helped you?

3- What effect do you think these strategies had on students' motivation and engagement during the lesson? In what ways were the students more motivated and/or engaged than students you have taught in previous years?

4- What is the possibility of you continuing to use these strategies in your future classes, or even recommending them to another teacher? What additional resources would help you do this?

Any last impressions/words you would like to share about the course?

Appendix G

Reflection Journals

Student Reflection Journal

During this course, please keep a learning journal – a kind of diary about your writing course. Remember that the teacher will not see what you will write in this journal, so feel free to write about your true feelings about what happens during the lesson.

Please note the following before starting your reflection:

- No one besides the researcher (myself) will see your reflection, including your teacher. So please focus on writing your true impressions about anything that happens in the classroom, whether you think it is positive or negative, answering the six questions you will see below.
- When answering the questions, avoid writing generic sentences that are not related to the content of the questions such as writing 'the lesson today was great/bad' or 'we have the best teacher'
- Please avoid only writing one word, try as much as possible to write at least one full sentence or more in response to each question.
- To get the full credit for this daily assignment, please follow the instructions illustrated in this page and don't forget to write your name.

Please state your first and last name:

Please state your ID number:

Please state your class number:

Please enter the date of the instructional period you are reflecting on in this format (dd/mm/yyyy):

Instructions

I'd like you to reflect on what happened in the writing class today, whether you think it is good or bad. Think back and write at least one sentence in answer to each of the following questions: **remember that you can write more than one sentence**

1- What did the teacher do that made you want to participate in the discussion?

2- What did the teacher do that made you feel like you were able to contribute to the lesson activities?

3- What did the teacher do that helped you understand the topic or language better?

4- Name an activity that you liked in the lesson. Why did you like it?

5- Name an activity that helped you interact or collaborate with your classmates. Why did you think it made you more interactive with your peers?

6- Do you feel that the teacher gave you enough feedback on your answers? Name one thing he did in response to your participation.

أثناء هذا الفصل يُرجى الاحتفاظ بمذكرة يومية (أيْ دفتر يوميات عن مادة الكتابة المستوى الثالث). تذكَّرْ أن المعلم لن يرى ما تكتبه في هذه اليومية، فلا تتردد في الكتابة عن مشاعرك الحقيقية نحو ما يحدث أثناء الدرس.

يرجى ملاحظة الآتي قبل كتابة أفكارك:

– لن يطلع على أفكارك أحد سوى الباحث (أنا)، ولا حتى مُعلمك، فيُرجى التركيز على كتابة انطباعاتك الحقيقية عن أي شيء يحدث في الفصل –سواء إيجابيةً تراها أم سلبية– عند الإجابة عن الأسئلة الستة التي ستراها بالأسفل.

– عند الإجابة عن الأسئلة، تجنبْ كتابة جُمل عمومية لا اتصال لها بفحوى الأسئلة، ككتابة «الدرس اليوم كان عظيمًا/سيئًا» مثلًا أو «لدينا أفضل معلم».

– يرجى عدم الاكتفاء بكتابة كلمة واحدة فقط، وإنما حاول قدر الإمكان أن تكتب على الأقل جملة كاملة أو أكثر.

– لتنال درجات المشاركة عن هذا الواجب اليومي، يرجى اتباع الإرشادات الموضحة بهذه الصفحة، ولا تنسَ كتابة اسمك.

الرجاء ذكر اسمك الاول والاخير باللغة العربية (مثال: بندر الشهري):

الرجاء ذكر رقم هويتك:

الرجاء ذكر اسم المجموعة:

الرجاء ذكر التاريخ الميلادي للحصة الدراسية التي تكتب هذه اليومية عنها (مثال: ٨/سبتمبر/٢٠٢٢)

الرجاء ذكر الفرع الذي تدرس فيه:

الارشادات:

أود منك أن تفكر فيما حدث اليوم في فصل الكتابة، سواء أتراه حسنًا أم سيئًا. ارجع بتفكيرك وأَجِب بجملة واحدة باللغة العربية فقط على الأقل عن كل سؤال مما يلي، ولا تنس أن بوسعك كتابة أكثر من جملة واحدة:

١. ما الذي فعله المعلم وجعلك ترغب في المشاركة في النقاش؟

٢. ما الذي فعله المعلم وجعلك تشعر بأنك قادر على المساهمة في أنشطة الدرس؟

٣. ما الذي فعله المعلم وحسَّن فهمك لموضوع الدرس؟

٤. اذكر نشاطًا أعجبك في الدرس، ولماذا أعجبك؟

٥. اذكر نشاطًا ساعدك على التفاعل أو التعاون مع زملائك، ولماذا زاد تفاعلَك معهم في رأيك؟

٦. أتَرى أن المعلم أعطاك ملاحظات كافية على أجوبتك؟ اذكر شيئًا واحدًا فعله ردًّا على مشاركتك.

Teacher Reflection Journal

You are asked to reflect on your experience implementing the intervention after the end of each class. This information will give the researcher a sense on how things went with implementing the motivational tactics and the kind of obstacles/successes you had after each lesson. Please remember that this is a form of diary, so feel free to write at any length. No one will see this diary beside the researcher. Please make sure to respond to the 5 open-ended questions you will see in this form after you fill in some personal information.

Please state your first and last name:

Please state the class number you are reflecting on teaching:

Please enter the date of the instructional period you are reflecting on in this format (dd/mm/yyyy):

1- Name the motivational tactics you used in the lesson. Include the number assigned to these tactics from the teacher guide I gave you for easy reference.

2- Reflect on how you felt as a teacher when implementing these tactics.

3- How did you find implementing these tactics? Was it difficult? Easy?

4- Did you notice any change in students' engagement or motivation?

5- What might you change/keep in future lessons?

Appendix H

The Intervention Guide

Teacher Guide for Motivational Intervention

Dear teacher,

I would like to thank you for showing interest in my research study. This work aims at making teaching more motivating at IPA by giving teachers a pedagogical manual that will systematically show them how to integrate motivational tactics into their instruction and lesson materials. It is hoped that they will find this manual easy to implement, and most importantly, notice an effect on students' motivation and engagement in EFL courses. This project does not assume that teaching is ineffective at IPA, rather it would be a collaborative effort from the teachers and the researcher to highlight motivation explicitly and intentionally in the lesson delivery process. To get a sense of what I am proposing, I would kindly ask you to pay attention to the following points:

- As you see in the table 1 below, I am suggesting some motivational components that are derived from popular constructs of major motivation theories; namely: Attention (A) Relevance (R), Confidence (C), Satisfaction (S) (see left side of table1 below). I also included some instructional tactics (right side of table1) that give you a sense of how these motivational strategies can be translated into actual instructions. To get a sense of what these ARCS components are generally about, look at information table right below this text.
- Table 1 is divided into three stages: (pre-stage, which means before or at the beginning of the lesson), (during stage, which is around the middle of the lesson), and (end stage, which is around when you sum up the lesson).
- Some tactics are designed to be used in every lesson (i.e., tactic 1 in the table), so I am not expecting you to use all these tactics in every single lesson. I included a note in blue regarding the frequency of use next to these tactics for your reference.
- To elicit noticeable results, it's essential that you use at least 5-6 tactics in every lesson. For the study to be effective, I have to be sure that the motivational tactics are actually used substantially. Not just a little, but a lot! So please help me make sure they are fully implemented.

Major Categories and Definitions		Process Questions
Attention	Capturing the interest of learners; stimulating the curiosity to learn	How can I make this learning experience stimulating and interesting?
Relevance	Meeting the personal needs/ goals of the learner to effect a positive attitude	In what ways will this learning experience be valuable for my students?
Confidence	Helping the learners believe/ feel that they will succeed and control their success	How can I via instruction help the students succeed and allow them to control their success?
Satisfaction	Reinforcing accomplishment with rewards (internal and external)	What can I do to help the students feel good about their experience and desire to continue learning?

Table 1

Lesson stage	Motivational strategies	Instructional tactics
Pre lesson stage	(1) Incorporate clearly stated, appealing learning goals into instruction (C, R)	(1) First the teacher starts by writing the lesson objectives on the board and reminds students of the relevance of these objectives to their future goals (e.g., writing a good essay will enable you to succeed in your future diploma program). Revisit these goals at the end of the lesson and invite students to talk about how you met these goals. Can be used in every lesson.
	(2) Include statements about the likelihood of success with given amounts of effort and ability (C)	(2) Remind students that to succussed in this course, you are expecting them to dedicate about one or two hours at home to do homework and prepare for the next lesson for example (this may vary depending on the course requirements). You may remind students every day or every other day.
	(3) Use humorous introductions (A)	(3) Try to start the lesson with a funny joke/fact. It could be a funny picture integrated in your presentation slides for example. Can be used in every lesson.
	(4) Find out what the learners' interests are and relate them to the instruction. (R)	(4) You can do a quick survey of students' interests by giving them a paper and asking them about the kind of topics they would like to learn about in this course. or what aspects of writing they find hard and need more practice in. keep this data with you and try to integrate them in your instruction. You don't have to change your syllabus, but you still can find some link between their interests and the syllabus. Can be used one time around the beginning of the course.

	(5) Show visual representation of an important object, and vary the medium of instruction (platform delivery, film, video, print, etc (A)	(5) Show students a YouTube video about a topic you are teaching for example. This could be a brief tutorial you find online about writing a specific kind of essay, or it could be a fun educational video about writing. Can be used occasionally where you see fit.
During lesson stage	(6) Shift interaction from student- teacher to student-student by permitting learners to work as partners on the task. (A,C)	(6) Try to make the classroom environment more interactive by doing a lot of group and peer work. It is recommended you do that in every class to minimize teacher centered instruction or lecturing.
	(7) Build in problem solving activities at regular intervals. (A)	(7) Propose a local problem such as 'soccer arguments in Saudi Arabia' and ask students to work in small groups and write some solutions for this problem in the form of a paragraph. Topic may vary depending on the lesson.
	(8) Permit learners to choose any topic they wish (A, R) and develop it in any medium they wish. (C)	(8) You may ask students to propose an issue themselves instead of you, and you may give them the freedom to write about it in any format (essay, paragraph, bullet points etc.). You may do this occasionally depending on your goals.
	(9) Give meaningful positive feedback every time an individual or group does something good, and give corrective, not critical feedback to help them improve. (S, C)	(9) In group or individual work, make sure to give praise for good points and try to share this with the rest of the class (e.g., Ahmed in group 1 had a really great idea, Ahmed would you like to share?) I recommend you do this every time you give feedback. The way of giving feedback may vary depending on your style.
	(10) Allow a student who masters a task to help others who have not yet. (R)	(10) In any group or individual work, those who finish first can help others or can be called on to demonstrate what they did in front of the whole class. (You can do this every time a student or a group finishes the task first).

	(11) Have some kind of presentation and special event, such as a ‘‘fair’’ to allow students to demonstrate their work and see what the others have done. Make it fun, not evaluative or competitive. Keep the grading activities separate from the event. (S) (12) Show examples of previous projects (A, C) (13) Use games, role plays, or simulations that require learner participation. (A)	(11) If students had to write an essay for homework, for example, organize this event where everyone can briefly share his writing and suggest tips for success. Don’t grade the way they present their ideas. (This activity can be done once if time allows and depending on what you plan for homework) (12) If you are explaining to students how to write a good essay for example, share with them a good essay written by a former student that had taken the course before. Depending on what aspects of writing you are explaining, it is better to show students examples. (13) Beside group work, try to integrate any type of games or fun activities that you might have used before to make students write interactively. You might use this as an alternative method to discussion, depending on what you plan for the lesson.
Post lesson stage	(14) Explain the criteria for evaluation of performance. (C) (15) Attribute student success to effort rather than luck or ease of task when appropriate (i.e. when you know it is true). (C)	(14) If you assigned any kind of homework or exam (essay writing for example), always make sure you provide students with a clear evaluation rubric. Dedicate some time explaining the rubric and take questions from students. It is recommended that you relate any assignment to the evaluation rubric and grade the assignment according to that rubric and show students their score based on it. (15) Send individual thank you e-mails to active participants after the lesson. This can be in the form of a brief email acknowledging the student’s effort in the classroom. You don’t have to send emails to all students, pick one or two active students every class.

	(16) Use verbal praise, real or symbolic rewards, and incentives, or let learners present the results of their efforts (‘‘show and tell’’) to reward success. (s).	(16) Instead of or besides sending emails, if possible, reward active students with extra grades, books, etc.
	(17) Give detailed informative motivating feedback on homework and exams (C).	(17) Once you grade homework or a writing test, I suggest you add a brief paragraph at the end, along with the rubric, giving some written feedback on the strengths and areas of development of students' writing. Try to start and end the paragraph with a positive statement. Detailed critical feedback can be in the middle. I suggest you do that every time you grade a homework like writing an essay for example.

Appendix I

Consent Form

Aloha! My name is Raed Alzahrani and you are invited to take part in a research study. I am a graduate student at the University of Hawai'i at Mānoa in the Department of Second Language Studies.

What am I being asked to do?
If you participate in this project, you will be asked to fill out a survey about the English writing course you are attending this semester.

Taking part in this study is your choice.
Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss to you.

Why is this study being done?
The purpose of my project is to know your perception or interest in the current writing course you are attending at IPA. I am asking you to participate because you are a student at the English Center at IPA.

What will happen if I decide to take part in this study?
The survey will consist of 34 statements, plus a text box where you will be asked to write about your general motivation to learn English. It will take you no longer than 20 minutes. Also, the survey questions will be in Arabic. The survey will include statements like, "The subject matter of this course is just too difficult for me." and "I feel that this course gives me a lot of satisfaction."

What are the risks and benefits of taking part in this study?
I believe there is little risk to you for participating in this research project. You may become stressed or uncomfortable answering any of the survey questions. If you do become stressed or uncomfortable, you can skip the question or take a break. You can also stop taking the survey or you can withdraw from the project altogether.

There will be no direct benefit to you for participating in this survey. The results of this project may help improve the course instruction methods at IPA for writing classes.

Confidentiality and Privacy:
I will keep all study data secure in a locked filing cabinet in a locked office/encrypted on a password protected computer. Only my University of Hawai'i advisor and I will have access to the information. Other agencies that have legal permission have the right to review research records. The University of Hawai'i Human Studies Program has the right to review research records for this study.

Compensation:
There will be 5 marks added to your final grade for participating in this research project. No

penalties for not participating.

Future Research Studies:
Identifiers will be removed from your identifiable private information and after removal of identifiers, the data may be used for future research studies or distributed to another investigator for future research studies and we will not seek further approval from you for these future studies.

Questions: If you have any questions about this study, please email me at raed9@hawaii.edu]. You may contact the UH Human Studies Program at 808.956.5007 or uhirb@hawaii.edu to discuss problems, concerns and questions, obtain information, or offer input with an informed individual who is unaffiliated with the specific research protocol. Please visit http://go.hawaii.edu/jRd for more information on your rights as a research participant.

By clicking on the 'next' button below and continuing to the next page, you affirm that you have read, understood, and agreed to the information provided on the consent form. You also voluntarily agree to participate in this study and allow your data to be stored and used for future research.

مرحبًا! أنا رائد الزهراني، وأدعوك إلى المشاركة في دراسة بحثية. أنا طالب دراسات عليا بقسم دراسات اللغة الثانية بجامعة هاواي في مانوا.
فما المطلوب مني؟
إذا شاركت في هذا المشروع، فالمطلوب منك ملء استبانة عن دورة الكتابة باللغة الإنجليزية التي تَحضرها في هذا الفصل الدراسي.
المشاركة في هذه الدراسة راجعة لك أنت.
مشاركتك في هذا المشروع اختيارية تمامًا، فيَسَعك أن تتوقف عنها في أي وقت، وعند توُّقفك لن يكون عليك غرامةٌ ولا خسارة.
لماذا تُجرى هذه الدراسة؟
غرض مشروعي هذا معرفة تصوُّرك أو اهتمامك بدورة الكتابة الجارية التي تحضرها في معهد الإدارة العامة (IPA). وأطلب منك المشاركة لأنك طالب في مركز اللغة الإنجليزية بالمعهد.
ماذا لو قررتُ المشاركة في الدراسة؟
ستتألف الاستبانة من 34 عبارة، مع خانة كتابة سيُطلب منك أن تكتب فيها دافعك الأساسي لتعلُّم الإنجليزية. ولن تستغرق منك أكثر من 20 دقيقة. وفوق ذلك ستكون أسئلة الاستبانة باللغة العربية، وستحوي عبارات مثل: «مادة هذه الدورة صعبة جدًّا عليّ» و«أشعر بأن هذه الدورة مُرضية جدًّا لي».
ما المخاطر والمنافع التي تنطوي عليها المشاركة في هذه الدراسة؟
لا أرى مخاطر تُذكر من المشاركة في هذا المشروع البحثي. قد تتوتر أو تتضايق وأنت تجيب عن أي مِن أسئلة الاستبانة، فيمكنك إذ حدث ذلك أن تستريح قليلًا. كما يمكنك التوقف عن المشاركة في الاستبانة، أو الانسحاب من المشروع تمامًا.
وأما المنافع، فالطلاب المشاركين فقط سوف يحصلون على درجات مشاركة بانضمامهم للمشروع والمشاركة في تعبئة البيانات التي يطلبها الباحث. نتائج المشروع ايضا قد تُحسِّن أساليب التعليم في فصول الكتابة بدورة معهد الإدارة العامة.
السرية والخصوصية:
سأحفظ جميع بيانات الدراسة في خزانة ملفات مغلقة بمكتب مغلق/مشفرة على حاسوب محمي بكلمة مرور سرية، فلن يستطيع الوصول إلى المعلومات إلا أنا ومُرشدي بجامعة هاواي. ويحق أيضًا للهيئات الأخرى التي لديها إذن قانوني أن تراجع السجلات البحثية لهذه الدراسة، وكذلك يحق لبرنامج الدراسات الإنسانية بجامعة هاواي.
المُقابل المادي:
لن يكون للمشاركة في هذا المشروع البحثي أي مقابل مادي ولكن سوف تمنح ٥ درجات لمشاركتك.

الدراسات البحثية المستقبلية:
ستُزال معرِّفات الهوية من معلوماتك الشخصية القابلة للتعريف بهويتك وتمييزها، وبعد إزالتها قد تُستعمل البيانات أو تُعطَى لباحث آخر لإجراء دراسات بحثية مستقبلية، ولن تُطلب موافقتك مرة أخرى لإجراء تلك الدراسات المستقبلية.
الاستفسارات: إذا كان لديك أي استفسار عن الدراسة، فيُرجى مراسلتي عبر هذا البريد الإلكتروني: raed69890@gmail.com. ويمكنك الاتصال ببرنامج الدراسات الإنسانية التابع لجامعة هاواي عبر 808.956.5007 أو uhirb@hawaii.edu، لتعرض مشكلاتك أو مخاوفك أو استفساراتك، أو لتحصل على معلومات أكثر، أو لتقديم بيانات بالاستعانة بفرد مطَّلع مستقل عن البروتوكول البحثي المَعنيّ. يُرجى زيارة http://go.hawaii.edu/jRd لمزيد من المعلومات عن حقوقك إذا شاركت في البحث.
بنقْر زر «التالي» بالأسفل والمُضي إلى الصفحة التالية، تكون قد أكدت قراءتك وفهمك وموافقتك على المعلومات الواردة في نموذج الموافقة المستنيرة، وتكون قد وافقت بمحض إرادتك على المشاركة في هذه الدراسة، وسمحت بتخزين بياناتك واستخدامها في الأبحاث المستقبلية.

Appendix J

Test Protocol for Campus B

Procedures for running the experiment (Pretest)

In this experiment, students will complete two tasks: (1) an English proficiency test and (2) a writing test. This should take about an hour in the lab. Inform students that this test is used to test their language abilities and it won't affect their grades in the course.

1- Before students come to the lab, I want you first to disable the spell check on the Google Chrome browser of each computer in the lab. This is important because students will complete an essay online, and spelling counts toward their grades. You don't have to do this on every computer, just the computers your students are going to use. You can do this by (1) opening the Chrome browser, (2) clicking the 3 dots in the top right corner to go to the Chrome menu, (3) click Settings. (4) on the left side, click the arrow to the right of Advanced, (5) click Languages, (6) disable Spell check by clicking the toggle. This is a link to illustrate this procedure in pictures https://support.procentive.com/hc/en-us/articles/360060890871-Enable-Spell-Check-in-Google-Chrome.

2- Once this is settled, take students to the computer lab and make sure computers are connected to the internet.

Proficiency test (Test 1) 30 mins.

3- Once students are seated in front of computers, show them the link to the proficiency test by displaying it on the projector. This is the link https://forms.gle/8bSmXiZEHkNz9jWc7
The link is case sensitive.

4- Ask them to type it in Chrome's search bar. Make sure that every student has accessed the same form.

5- Explain that they should complete their information on the first page, then hit next to start the test. Please make sure that their names are on the form.

5- Tell them that they have 30 mins to read the instructions, fill out the first page, and complete the multiple-choice English test in that Google form. Please do not help them in answering any of the questions as this test won't affect their course grades.
Note. The layout for question 13 was altered due to Google forms translation issues. Please show students the right format (you can put it on the projector) where the slot is at the **beginning** of the sentence:
13. ..... tired Melissa is when she gets home from work, she always makes time to say goodnight to the children.

6- Once the 30 mins is done ask them to hit the submit button and open another tab in Chrome.

Writing test (Test 2) 30 mins.

7- Now display the link to the writing test on the projector and repeat step 2 & 3. This is the link https://forms.gle/QQehrmT9NZFQvcBt9 Ask students to type the link in the new tab. Check that spelling errors are not underlined in Red by typing in the paragraph text in the form.

8- Time the test for 30 mins only. This time period needs to be enforced.

10- Once the 30 mins is done, please ask them to stop typing and hit submit. Make sure that their names are written on each test.

11- Once they finish completing the two tests and submitting their responses, thank them for their participation.

Thank you for taking the time to run these procedures!

Procedures for running the experiment (Posttest)

In this experiment, students will complete two tasks: (1) writing test and (2) a survey. This should take about 45 mins in the lab. Inform students that this test is used to test their language writing abilities and it won't affect their grades in the course.

1- Before students come to the lab, I want you first to disable the spell check on the Google Chrome browser of each computer in the lab. This is important because students will complete an essay online, and spelling counts toward their grades. You don't have to do this on every computer, just the computers your students are going to use. You can do this by (1) opening the Chrome browser, (2) clicking the 3 dots in the top right corner to go to the Chrome menu, (3) click Settings. (4) on the left side, click the arrow to the right of Advanced, (5) click Languages, (6) disable Spell check by clicking the toggle. This is a link to illustrate this procedure in pictures https://support.procentive.com/hc/en-us/articles/360060890871-Enable-Spell-Check-in-Google-Chrome.

2- Once this is settled, take students to the computer lab and make sure computers are connected to the internet.

Writing test (Test 2) 30 mins

Please make sure that (Writing Test 2) is displayed on their screens.

3- Once students are seated in front of computer display the link to the writing test on the projector or share it with students (whatever was working with you in previous tests). This is the link https://forms.gle/oXhpCYzZkBh6G7BD8 . Check that spelling errors are not underlined in Red by typing in the paragraph text in the form.

4- Time the test for 30 mins only. This time period needs to be enforced. Please **DO NOT** let students submit before the end of the 30 mins so we avoid students wanting to leave early or get on with the survey. This will affect how much time students actually spend on the task. Those who finish before time can review their answers and wait until the 30 mins is finished before hitting submit all together with other class members.

5- Once the 30 mins is done, please ask them to stop typing and hit submit.

Survey (10-15 mins)

6- Now ask students to access the link of the survey the same way you did with the writing test. This is the link https://forms.gle/s5cJtSeKsr4LvGBy5

7- Tell them that they have 15 mins to read the instructions, fill out the first page, and complete the survey in Arabic. As with the writing test, please time the survey task for 15 mins and let students know they can't submit until this time is over. This will help in steering students away from rushing answers, hence providing inaccurate responses.

8- Once they are done, let them know that this is the end of Mr. Alzahrani's research study and that he would like to thank them for their participation. Let them know that those who completed all data collection stages from the start of the semester are entitled to 5 extra marks that will be added to their overall score in writing, as agreed with the teacher.

Thank you for taking the time to run these procedures!

Appendix K

Cambridge B1 Analytic Rubric

(Assessing Writing for Cambridge English Qualifications: A Guide for Teachers (2020)

Writing Assessment subscales for B1 Preliminary for Schools

Writing for B1 Preliminary for Schools is assessed in terms of Content, Communicative Achievement, Organisation and Language. The detailed band descriptors are as follows:

B1	Content	Communicative Achievement	Organisation	Language
5	All content is relevant to the task. Target reader is fully informed.	Uses the conventions of the communicative task to hold the target reader's attention and communicate straightforward ideas.	Text is generally well organised and coherent, using a variety of linking words and cohesive devices.	Uses a range of everyday vocabulary appropriately, with occasional inappropriate use of less common lexis. Uses a range of simple and some complex grammatical forms with a good degree of control. Errors do not impede communication.
4	*Performance shares features of Bands 3 and 5.*			
3	Minor irrelevances and/or omissions may be present. Target reader is on the whole informed.	Uses the conventions of the communicative task in generally appropriate ways to communicate straightforward ideas.	Text is connected and coherent, using basic linking words and a limited number of cohesive devices.	Uses everyday vocabulary generally appropriately, while occasionally overusing certain lexis. Uses simple grammatical forms with a good degree of control. While errors are noticeable, meaning can still be determined.
2	*Performance shares features of Bands 1 and 3.*			
1	Irrelevances and misinterpretation of task may be present. Target reader is minimally informed.	Produces text that communicates simple ideas in simple ways.	Text is connected using basic, high-frequency linking words.	Uses basic vocabulary reasonably appropriately. Uses simple grammatical forms with some degree of control. Errors may impede meaning at times.
0	Content is totally irrelevant. Target reader is not informed.	*Performance below Band 1.*		

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