QUALITATIVELY EXAMINING SELF-REGULATION AND AFFECT OF FIRST-YEAR WRITING STUDENTS

by

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A Thesis Presented to the Faculty of the
American University of Sharjah
College of Arts and Sciences
in Partial Fulfillment
of the Requirements
for the Degree of

Master of Arts in
Teaching English to Speakers of Other Languages (TESOL)

Sharjah, United Arab Emirates

May 2021

Declaration of Authorship

I declare that this thesis is my own work and, to the best of my knowledge and belief, it does not contain material published or written by a third party, except where permission has been obtained and/or appropriately cited through full and accurate referencing.

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Acknowledgements

I wish to first thank my thesis advisors, Dr. Tammy Gregersen and Dr. Rachel Buck, of the English Department at the American University of Sharjah. Dr. Gregersen has been the source of a fount of inspiration and knowledge. Not only did she answer innumerous questions with patience and ease, but she celebrated each step of the process with exuberant enthusiasm and much needed encouragement. Dr. Buck modeled the heart of an educator who genuinely cares for her students. She was graciously available for reflection and discussion, opened up her classroom for the research study to take place, and did not hesitate to provide thoughtful, constructive feedback throughout the collection of data. Both Dr. Gregersen and Dr. Buck have served as treasured mentors in my pursuit of knowledge. Additionally, I would like to thank Dr. Ahmad Al-Issa and Dr. David Wilmsen for the time they dedicated in carefully reviewing and providing feedback on this paper.

I would also like to acknowledge my supervisor, Dr. Mehvash Ali of the Academic Support Center at the American University of Sharjah. Dr. Ali saw potential in me and empowered its fruition. She has challenged me beyond what I thought possible. It is her initial vision for the First Year Experience program that cultivated a passion in me for supporting our first-year students, who are ultimately the heart behind this study.

Finally, I must express my gratitude to my husband, for providing encouragement through tiring weeks and reminding me to seek God for wisdom and strength.

This accomplishment would not have been possible on my own.
My deepest thanks to all.

Abstract

Many first-year university students find it challenging to navigate a new environment while also managing limited time, additional responsibilities, and an increasingly rigorous course load. Current research seeks effective approaches for supporting these transitioning students. This qualitative Evidence-Based Practice (EBP) study adds to the conversation by examining a sample of first-year university students taking an introductory English academic writing course at an American-style university in the UAE. In the study, participants received training on a strategy involving a time-management tool known as the "Pomodoro Technique," which was implemented with a pre-commitment device, in which students designated a plan for using the strategy over the course of four weeks as they completed their mid-term assignment for a writing course. Using the corpus of interview data gathered via focus groups and open-ended survey questions, this study explored the impact of the combination of this strategy and intervention on first year writing students' self-regulatory abilities to monitor and control their learning, as well as their affective disposition toward tasks in their writing course. Mixed results were revealed as participants acknowledged both positive and negative responses to the strategy combination—grouped into affective and self-regulatory domains. Although respondents reported that their efficiency, time management, and focus had improved, they also described that the inherent interruptions and the irrelevance of the strategy to their ultimate grade achievement were seen as weaknesses. On an affective level, most respondents claimed to feel higher motivation, eustress that positively propelled their progress, and increased confidence in completing each task. However, a few felt somewhat frustrated by having to stop at regular intervals when they sensed they were progressing well. The study provided an easily reproducible training and intervention strategy that can be taught to first-year students, but implications suggested that its usability is limited and may need to be differentiated based on the learning styles of students and the disciplines for which the strategies are implemented.

Search Terms: first-year, self-regulation, self-efficacy, Pomodoro Technique, time management

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Chapter 1: Introduction

"Congratulations! We are pleased to offer you acceptance…." Many university graduates can remember the mix of excitement, novelty, and anticipation that a college acceptance letter brings. Entry into university is the beginning of a new adventure that provides opportunity for fruitful growth, but can also lead to a tumultuous upheaval from a previously established routine (Denovan & Macaskill, 2012). This thrilling transition from high school to university can often be the source of unwelcomed stress, insecurity, and academic obstacles.

Universities across the world recognize that first-year college students are navigating a pivotal milestone in their life. Many of these students are leaving home for the first time and taking ownership over countless new decisions that bring both excitement and anxiety. Progress in their first year "sets the tone" for how well they will ultimately succeed in their new environment (Feldman, 2005, pp. 49-50). Many first-year students find it difficult to self-regulate their learning and manage their emotions during this initial transition.

Several studies have suggested that these two entities, self-regulation and affective disposition, are actually related. Results from these studies reveal that students who learn to manage their time through self-regulation have seen improvements in their positive affective disposition, including decreases in stress levels, as well as increases in general self-efficacy (Behnam et al., 2014; Häfner, Stock, & Oberst, 2014). If this is true, universities may be able to provide support for new students, by equipping them with tools for self-regulation. The current qualitative study seeks to better understand how pairing the Pomodoro Technique with a pre-commitment device will influence first-year writing students' ability to self-regulate their learning, as well as whether it will influence students' affective disposition toward their tasks in a first-year writing course.

Chapter 2: Review of the Literature

This review begins by discussing several identified stressors encountered by first-year students followed by a synthesis of the research about the importance of maintaining a positive affective disposition, especially that of self-efficacy, in supporting the success of first-years. Subsequently, a brief overview of the value of self-regulation for transitioning students is supplemented by previous findings on the ways self-regulation nurtures a positive affective disposition. The review concludes with a description of two techniques that were combined in this study to form a training and intervention strategy that will be considered in an effort to help students self-regulate.

2.1 Stressors for the First Year Student

Lazarus (2006) described stress as that which an individual experiences when unsatisfactory life circumstances outweigh the necessary coping capacity and resources to which the individual has access. Stress associated with university life includes everything from financial pressures and academic expectations to building relationships and managing new independence (Robotham & Julian, 2006).

Not only do first-year students face an increase in academic rigor upon entering university, but they have a host of other external challenges that contribute to high stress levels. Students are entrusted with new independence and ownership that likely contrasts with their nurturing high school environment. They undergo a personal-emotional adjustment that requires navigating everyday challenges with maturity and tact (Estrada et al., 2005). Studies suggest that these emotional and personal functions are just as important as academic competence when evaluating the stress levels of a student's adjustment to university (Estrada, et al., 2005). This compounding burden of stress is often cited as a reason for both underachievement and attrition (Häfner, Stock, & Oberst, 2014). According to Denovan and Macaskill (2012), the impact of these stressors is heightened for the first-year student attempting to navigate these adjustments without an adequate supply of coping mechanisms. On the other hand, when students are adequately equipped, their stress can be optimal and productive. Mercer and Gregersen (2020) describe this type of positive stress as eustress.

2.1.1 Stress in academic writing. An additional stress, regardless of intended degree, is that students entering university for the first time must acquire literacy practices to successfully perform in higher education. Such practices are relevant not only to the institution, which demands high academic literacies, but also to the expectations of the individual disciplines that students pursue. University education is distinguished by the robust importance it places on academic writing, as the acquisition of knowledge is fundamentally mediated through written language (Hyland, 2006). Learners' achievement is assessed in their discipline as demonstrated by the production of academic writing that obeys the standards and conventions prized by their discourse communities for both form and content. Consequently, writing competence is highly esteemed and underscored by university professors as the means by which students attain and demonstrate academic success (Al-Badwawi, 2011).

Given its importance, writing is at the same time a complex expertise to master, as it demands both disciplinary and subject-related knowledge as well as linguistic, language-in-use knowledge. Therefore, one cannot presuppose that academic writing is a given skill even for those for whom English is their native language. As Hyland (2016) suggests, "Academic writing is no one's native language" (p. 16). Even if such students have the advantage of being highly proficient in their linguistic abilities, they nonetheless must learn and obey the particular linguistic conventions of academic discourse (Al-Badwawi, 2011). This often poses another difficulty for the transitioning first-year student.

2.2 Positive Affective Disposition in the First Year

In light of the challenges and stressors of first-year students, successful transitions are often linked to the affective disposition of student confidence. The seminal work of Bandura (1977) refers to this disposition as self-efficacy, or one's belief that they are able to persevere in achieving a goal or completing a task, despite challenges. Because university requires a new level of ownership and independence, self-efficacy plays a critical role in whether students succeed at negotiating this significant life transition by empowering a student to see an incoming obstacle as a challenge, rather than a threat (Chemers et al., 2001). This may enable them to overcome and persist, rather than give up and quit.

Academic self-efficacy focuses more specifically on a student's confidence in following through with school-related tasks, such as preparing for exams or writing papers (Zajacova et al., 2005). Studies have shown that academic self-efficacy has a positive correlation with higher achievement and persistence in college. For example, Chemers et al. (2001) facilitated a study that tested the role of self-efficacy in the adjustment of transitioning first-year college students and found that self-efficacy had a strong positive correlation with student performance, as well as decreased levels of student stress.

A study conducted by Zajacova et al. (2005) considered over 100 first-semester students from a diverse community in New York. Perceived self-efficacy, alongside stress, was measured through questionnaires, then student cumulative GPAs were tracked. The findings were conclusive: "self-efficacy was the single, strongest predictor of GPA" regardless of demographic background (Zajacova et al., 2005, p. 696). Adding to this research, Krumrei-Mancuso et al., (2013) conducted a correlation study with a sample of 579 first-year students and found academic self-efficacy to be a strong predictor of GPA in the first semester. This study made suggestions for university administrators to consider interventions for increasing self-efficacy in first-year university students. However, they also noted a limitation of homogeneity in their data (over 90% Caucasian American), and acknowledged a need for further research in more diverse settings.

In another study conducted by Boakye (2015), self-efficacy and student reading proficiency among first-year students were evaluated. Results revealed that when self-efficacy beliefs were high, reading proficiency was also high; when self-efficacy was low, reading proficiency was also low. Boakeye (2015), however, concluded with a word of caution, acknowledging that affective beliefs must be paired with self-regulatory processes to produce higher achievement in reading.

2.3 The Value of Self-Regulation

As first-year students navigate the complex transition into university, the skill of self-regulation acts as a metaphorical pulley, lessening the strain of stress and increasing the strength of confidence. Self-regulation can be defined as the general process by which learners utilize various tools to monitor and control their learning in

positive ways (Nückles et al., 2009). For the purpose of this paper, the focus will be primarily on the time-management strategies that fall under the umbrella term of self-regulation (Behnam et al., 2014). Strategies for effective time-management may include meta-cognitive activities such as time assessment, planning, and monitoring (Claessens et al., 2005). These strategies are most helpful because "self-control problems arise when preferences are inconsistent across time or context" (Ariely & Wertenbroch, 2002, p. 1). For university students balancing a myriad of commitments and fluctuating preferences, self-regulation is a critical pursuit (Schunk, 1990) which may lead to stronger self-efficacy (Bandura, 1977), reduced levels of stress (Behnam et al., 2014; Häfner, Oberst, & Stock, 2014; Häfner, Stock, & Oberst, 2014), and ultimately higher performance (Baker et al., 2018; Su et al., 2018).

2.3.1 Self-regulation and affective disposition. Self-efficacy increases when students view their challenging circumstances as an obstacle to conquer, rather than a discouraging setback. A key factor in cultivating this perspective is the ability to manage these situations with effective planning and self-regulation exercises (Chemers et al., 2001). Therefore, it is recommended that educators teach these elements of self-regulation and thereby nurture increased self-efficacy in students (Schunk, 1990). A very recent study conducted by Yazdizadeh et al. (2020) collected data from 120 undergraduate students studying English in Iran. Analysis of the data from this study revealed a significant symbiotic relationship between self-efficacy and perceived self-regulation. Researchers noted that not only were self-efficacious students more successful with problem solving and language skills, but they expressed more enjoyment in the learning process (Yazdizadeh et al., 2020).

Researchers have revealed that teaching strategies for self-regulation, such as planning and managing time, will have an impact on self-efficacy (Schunk & Zimmerman, 2008). For example, Behnam et al. (2014) conducted a quantitative study facilitating an intervention for 38 sophomore students studying at an Iranian university, with the purpose of investigating the significance of time-management strategies on student stress and self-efficacy. The intervention consisted of using 15 minutes of instructional time every class for interactive activities where students practiced planning, prioritizing, carrying tasks to completion, and creating time logs, based on a time-management booklet. The results of the study highlighted that the experimental

group showed a considerably higher level of self-efficacy than the control group. Student self-efficacy scores increased in comparison to previous scores before the intervention. From this, Behnam et al. (2014) concluded that the use of time-management training for self-regulation increased the self-efficacy of undergraduate university students. Although the training seemed effective, the amount of time, as well as the additional resource booklet needed for each student may create barriers to implementing this type of intervention in other settings.

Su et al. (2018) examined the relationship between self-efficacy in an English language course and online self-regulation. They conducted a study that examined 424 first-year undergraduates in China who were taking a mandatory online English as a Foreign Language (EFL) course. English self-efficacy was equated to confidence and perseverance in completing a task, specifically within the English language (Su et al., 2018). In their study, students completed online trainings as a required component of a 16-week course. The trainings included two online learning software programs used to assist in self-regulation, particularly with techniques such as self-evaluation, environmental structuring, and goal setting. Furthermore, self-evaluation was used to encourage metacognitive thinking in students as they analyzed their own strengths and weaknesses. The results indicated that these techniques, with emphasis on self-evaluation and structuring, were fundamental in developing students' English language self-efficacy. Furthermore, the structured environment created a greenhouse for self-belief to thrive and "the more sophisticated learners were in monitoring their online learning process, the more confident they were in their productive skills of speaking and writing" (Su et al., 2018, p. 34). The conclusions of this study suggested that educators might consider giving students the opportunity for self-evaluation, as a means of refining self-regulation and improving self-efficacy.

2.3.2 Self-regulation and stress. In addition to evidence of increasing self-efficacy and achievement in students, there are also indications that self-regulation has an inverse relationship with the affective nature of stress. Behnam et al. (2014) assessed stress levels using the Westside Test-Anxiety Scale (Driscoll, 2007). Prior to implementing a time-management intervention, there was no noticeable variance in the mean scores of the control and experimental groups. However, after the intervention, there was a statistically significant difference ($p = 0.00 < 0.05$) between test anxiety

scores of the control group and the experimental group (Behnam et al., 2014). Their findings confirmed a compelling hypothesis that self-regulation leads to decreased levels of stress.

Additional studies published after Behnam et al. (2014) investigated a similar topic. One of these, conducted by Häfner, Stock, and Oberst (2014), was to examine how a time-management training intervention influenced the perceived stress of university students. This time-management training lasted four hours and included "prioritization, goal setting, strategy development, and daily planning," drawing from strategies described in Häfner and Stock's study (2010), in which a one-day time-management training was tested for effectiveness with employees for a trading company. Häfner, Stock, and Oberst (2014) conducted this training for 48 undergraduate students and results confirmed the hypothesis that the training had a long-term impact of minimizing the perceived stress levels of the experimental group.

2.3.3 Self-regulation and achievement. When educators consider the well-being of their students, the affective dimension must be a priority (King & Areepattamannil, 2014; Seligman et al., 2009). Nonetheless, most often, the major concern that consumes the minds of many parents, faculty, administrators, policymakers, and students alike is that of academic performance (Baker et al., 2018). Achievement measured by grades is crucial because of the impact grades have on student eligibility for financial support, entrance into choice majors, as well as the likelihood of retention (Baker et al., 2018). Because of this, achievement should not be ignored as a critical variable when evaluating the impact of self-regulation.

Reports revealed that higher achieving students were more likely to plan and schedule designated study times (Puzziferro, 2008). In her study on first-year students taking online classes, Gray (2015) found that students who utilized self-regulated learning skills performed significantly higher than those who did not implement these skills. When evaluating the effectiveness of students scheduling their work time in advance, Baker et al. (2018) also found that initial course performance, including quiz and homework scores as well as final grades, were significantly higher.

In another study examining the impact of self-regulation learning strategy interventions on student achievement, Puspitasari (2012) conducted research with adult

participants in a distance-learning environment. Her results did not support her original hypothesis in that students receiving the intervention did not achieve higher scores on the final exam. However, Puspitasari (2012) suggested that, because the majority of participants in the study were adult learners, they might have been less inclined to change the learning strategies to which they had grown accustomed. Therefore, the results of this particular study should not be generalized to all populations.

2.4 Self-Regulation Interventions

There seems to be consensus among researchers regarding first-year students' need to be equipped with resources for effective self-regulation. In a collection of student interviews, Denovan and Macaskill (2012) identified a theme in which participants articulated that discipline and sticking to plans was necessary for coping with academic demands. One participant described herself as starting the semester in a panic. The student later noted that once she was shown a given strategy to manage her time, she felt "at ease" (Denovan & Macaskill, 2012, p. 1012). Various studies have advocated for educators to equip students with tools that would increase self-efficacy (Boakye, 2015; Chemers et al., 2001; Krumrei-Mancuso, 2013) but did not specifically suggest techniques. Other studies did propose interventions, but these required a substantial investment of time, resources, or purchased software (Behnam et al., 2014; Häfner, Stock, & Oberst, 2014, Su et al., 2018).

2.4.1 Pomodoro Technique. Because of the simplicity of the technique and the cost-effectiveness of its implementation, the Pomodoro Technique was examined as one part of the strategy and intervention used in this study. The Pomodoro Technique was inspired by a first-year student in 1987 who simply wanted to pass one of his first exams. Distracted and discouraged, Francesco Cirillo (2018) realized that it would be necessary to find a self-regulation technique if he were to attain even his smallest goals. He grabbed a kitchen timer and began challenging himself to stay focused for ten minutes at a time. Ten minutes eventually turned into 25 minutes, followed by a five-minute break. The kitchen timer shaped like a tomato became the namesake for a self-regulation technique now used by millions of people around the world and made famous by Cirillo's book, *The Pomodoro Technique* (Cirillo, 2018).

Cirillo identified how anxiety arising from an overload of tasks and an impending deadline often led to ineffective use of time and a propensity to procrastinate, contributing to the stressors of first-year students described above (Cirillo, 2018). The Pomodoro Technique was created as a simple, reproducible tool that boosts motivation for short, focused time intervals. He advised that a 20 to 45-minute interval of undistracted work, followed by a short break, capitalizes on attention span and mental activity.

Until recently, research has been limited regarding the effects of the Pomodoro Technique on university students, but it had been considered in other contexts. For example, Wang et al. (2010) implemented a shared Pomodoro Technique strategy for a software development team of professionals working together on a project. With an acknowledgement that the technique should be tailored based on specific contexts, they found that it increased productivity and time-management of the team members.

In the year 2020, during the COVID-19 pandemic, exploration of the Pomodoro Technique in the university context has since gained more traction. For example, a study conducted at the University of Jeddah, asked 15 graduate students to use a phone application version of the Pomodoro Technique while working on assignments (Almalki et al., 2020). According to their results 71.4% of the participants perceived that their procrastination was reduced while using the technique. However, the validity of the quantitative results is uncertain, due to the small size of the sample (Paltridge & Phakiti, 2015). Another recent study consisted of a quasi-experimental quantitative investigation conducted in Indonesia. In this study, Shinoda (2020) recruited 60 university students to participate in a reading assignment. Students were divided into two groups, whereby the experimental group completed the assignment using four cycles of the Pomodoro Technique, while the control group was asked to complete the assignment over the course of 100 minutes. Shinoda's findings revealed that there was a significant difference ($0.0000 < 0.05$) in results, with the experimental group scoring higher than the control. Although Shinoda's implications suggested that this tool would be effective for improving students' reading ability at home, the question remains whether the natural environment of a student's independent study sessions will lend the same results as the controlled environment of the experiment.

2.4.2 Pre-commitment devices. Pre-commitment devices have also been explored in various contexts as tools to promote self-regulation (Ariely & Wertenbroch, 2002; Baker et al., 2018; Gine et al., 2009). For this study, a pre-commitment device was paired with training on the Pomodoro Technique to provide a versatile tool aimed at improving self-regulation. The premise of a pre-commitment device lies in the nature of human preferences. Even with a genuine resolution, it is human tendency to find an excuse when a better offer is on the table (Baker et al., 2018). This is certainly the case for overloaded first-year students balancing countless engagements. To combat this, a pre-commitment device "bind[s] a person's future behavior to reduce the risk of succumbing to immediate desires" (Baker et al., 2018, p. 527). For instance, a student may sit in her writing class and think, "I should get a head start on my paper sometime this week." However, as she leaves class each day, she is inevitably distracted by a preferred invitation, such as grabbing coffee or hanging out at the student center. The original intention to get ahead is delayed. However, by making a commitment in advance and setting it into a schedule, students might be more likely to prioritize their work (Baker et al., 2018).

Although the Gine et al. (2009) study is not in the field of education, the psychological merits of its results remain relevant. Pre-commitment devices have been used to create self-regulation habits that support workplace patterns, student academic goals, and overall well-being. In a study called "Put Your Money Where Your Butt Is" (Gine et al., 2009), all participants had the intention of and were optimistic about quitting smoking. They examined a contract that called participants to pre-commit to quitting by signing a commitment contract and pledging their abstinence with a cash deposit, reimbursed only after passing a weekly urine test. Results revealed that those who were consistently utilizing the commitment contract long enough to form a new habit were more likely to stop smoking, even in the long-term. The contract was effective in motivating self-regulatory behavior that propelled participants to achieve their goal (Gine et al., 2009).

Similarly, pre-commitment devices have also been examined as self-regulation tools for students. In a study conducted by Baker et al. (2018), students who were taking asynchronous online courses were randomly selected to participate in a pre-commitment device strategy that required minimal time investment for the instructor

and no cost to the institution. Each week, the instructor emailed the students in the treatment group, suggesting that they schedule a time to watch their lecture videos. They were asked to state the day and time that they would watch the lecture. The instructor also contacted the control group of students an equal number of times, but with a neutral message that did not include a pre-commitment device. When assessing the impact of encouraging scheduling on the achievement outcomes of students, Baker et al. (2018) found that students who had self-reported poor time-management skills prior to receiving the treatment benefited greatly from the pre-commitment device.

In another study related to education (Ariely & Wertenbroch, 2002), 99 professionals participated in a degree course which included the submission of three short papers. One group of students was given free choice to set their own deadlines for submitting their papers, as long as all papers were submitted by the end of the semester. Alternatively, the other group was given evenly spaced, fixed deadlines to which they agreed to adhere. Ultimately, the number of errors noted by the professor and delays in submission were greater for the group without externally imposed, evenly spaced deadlines. Although the study of this pre-commitment device only mentioned one cohort of student professionals, the psychological implications of it are still valuable in the context of first-year students. A drawback of this study is whether self-regulatory behavior would continue when the instructor is no longer imposing deadlines.

In light of the suggested benefits of a pre-commitment device, as well as the practicality and effectiveness of the Pomodoro Technique, the current study ventured to evaluate the combination of this specific training and intervention strategy in a unique context.

Chapter 3: Research Method

3.1 Purpose and Significance

This study contributes to an evidence-based understanding of how universities can support first-year writing students. It uses a qualitative research methodology to incorporate the study of "significant problems of practice, engage with practitioners in the conduct of research studies, learn and change processes during a study, and provide expansive data sets" that help clarify educational processes (Kozleski, 2017, p. 19). Häfner, Oberst, and Stock (2014) claimed that research on this topic, especially related to university students, is still scarce. They recommended that further studies be conducted to clarify contradictory results. This particular study enhances the pool of data because of its unique setting in the American University of Sharjah (AUS), an institution among the world's top most diverse universities. Although the language of instruction is English, the student body reflects over 90 nationalities, creating a place that Al-Issa (2005) described as "an oasis of ideas, languages, cultures, and differing viewpoints". The first-year students participating in this study reflected this demographic.

Furthermore, this study addresses the gap in evaluating the effectiveness of a combination of particular self-regulation strategies. In the conclusion of their study, Häfner, Oberst, and Stock (2014) suggested that alternate interventions should be compared to show which strategies might be most effective. Macan (1996) also recommended testing various interventions, to evaluate which might be most relevant to a particular setting. Oxford (1999) suggested further research exploring how self-regulation strategies might be used as scaffolds in the classroom, as well as whether instruction on these strategies is effective. For this study, the Pomodoro Technique was supplemented by a pre-commitment device to evaluate the impact of a simple, adaptable, and reproducible training and intervention.

A final contribution of this study is its potential to enrich higher education practices. With a worldwide emphasis and investment in the "First Year Experience," a topic of particular interest to the author of this study, it is crucial that available programs be data-driven and effective (Harrington & Orosz, 2018). Although students are ultimately responsible for planning their time, universities play an important role in

helping first-year students to develop required skills for success (Harrington & Orosz, 2018). Conducting this research in the classroom provides an opportunity to consider how self-regulation might be incorporated as a co-curricular objective. The combination of self-regulation strategies used in this study involved minimal cost and time investment for the university, making it a favorable and viable option for universities to implement, if effective.

Therefore, the purpose of this study was to investigate the effects of a specific training and intervention on the affective dispositions and the ability to improve self-regulation of first-year students in an introductory writing course.

3.2 Research Questions

The study sought to address the following inquiries:

1. Does the specific strategy of the Pomodoro Technique paired with a pre-commitment device positively influence first-year writing students' ability to self-regulate their learning?

2. Does the specific strategy of the Pomodoro Technique paired with a pre-commitment device positively influence students' affective disposition (in particular, stress and self-efficacy) toward their tasks in a first-year writing course? If so, how? If not, why?

3.3 Methodology

The study at hand was conducted within the parameters of an EBP constructivist paradigm, using a subjective epistemology, and a qualitative design. This was chosen with an understanding that reality is dependent upon the social constructs of the given context in which a study takes place (Paltridge & Phakiti, 2015). According to Kozleski (2017), this study conformed to the essence of EBP because it examined what transpired in the authentic environment of students working toward the completion of their classroom assignment. Because many of the aforementioned studies were primarily quantitative, this study sought to obtain social validity by using open-ended responses and focus groups to consider not only the efficacy of a training and intervention but also its value in the social context (Kozleski, 2017). Reliability was increased through

triangulating the interviews and artifacts of participants' learning processes (i.e., the planning and tracking documents) to carry out ongoing verification of the data and to ensure that what emerged from the data converged with the lived experiences of the research participants. Prior to data collection, the Institutional Review Board (IRB) at AUS approved of the study and labeled it case number 45 CFR 46.104(d)(2).

3.4 Participants

The study participants were a convenience sample of students from three Academic Writing (WRI 101) class sections at AUS. The instructor for these classes volunteered to allow the PI to conduct this research because of the potential benefits participants could experience. WRI 101 was chosen because this course is a graduation requirement for all students, and it provided the most authentic sample of the first-year student population. The course covers introductory academic writing, including critical thinking, analysis, and rhetoric. Skills from this class are transferable to many others, which is why it is a prerequisite to higher-level classes that require writing. The three WRI 101 sections comprised of 54 students, but only 34 of them completed all tasks. The basic participant demographics of gender, school, and nationality were provided by the instructor of record. Of the group of 34, twenty-three (68%) were female and 11 (32%) were male. The students in the sample were from 12 different nationalities and representative of all major areas of study at the university.

3.5 Procedure

The study took place mid-way through the semester at AUS in the United Arab Emirates at which English is the medium of instruction and a usual first-year cohort numbers about 1,000 students. Data collection aligned with the mid-term unit assignment from the syllabus of the WRI 101 course and the PI met with students during class sessions. Data were collected over a four-week period during which students completed a Genre Analysis Paper, which was a process assignment that started with students analyzing samples of a genre, then identifying rhetorical and linguistic patterns, and finally writing a paper that interpreted these patterns to draw conclusions about the audience of the genre. The process of the assignment took place over the course of a month, and students' final drafts were expected to be around five pages long. This assignment counted as their mid-term grade.

At the beginning of the research study, all students in the three WRI 101 class sections were given a brief explanation about the study and offered the opportunity to take part. An incentive of one extra credit point was promised toward the final grade of all participants who completed each aspect of the study. Students who did not opt to participate were provided other opportunities to earn the extra credit point. Students who chose to participate signed the IRB approved informed consent document (Appendix A) via the Adobe Sign platform. These documents were stored by the PI on a password-protected computer.

In the subsequent class session, participants engaged in one 30-minute interactive workshop about the Pomodoro Technique (Cirillo, 2018), facilitated by the PI (see Appendix B). This workshop, which served as the training part of the intervention, included a brief icebreaker, background on the origin of the Pomodoro Technique, followed by five simple steps for using the Pomodoro Technique. To check their understanding, students responded to an interactive quiz using the *Kahoot!* platform. Following the workshop, students were given a downloadable softcopy of the progress planning and tracking sheet (Appendix C), adapted from the *Pomodoro Technique* (Cirillo, 2018) for their personal use. This sheet included a place for students to designate which tasks they planned to complete, the day and time they would complete it, and four check boxes for tracking their progress.

Serving as the pre-commitment device, students filled out Pomodoro Planning Forms (Appendix D) (Baker et al., 2018; Gine et al., 2009) upon which they identified the day and time that they intended to work toward completing their mid-term assignments, utilizing the Pomodoro Technique. These forms were submitted via Google Forms. To give students a chance to reflect on their self-regulation behavioral progress, they also filled out correlated tracking forms (Appendix E), where they indicated how many Pomodoro cycles they completed each week and whether they completed them during the time frame that they had planned in the previous form. There was also items with open-ended responses, for students to share further comments about their progress completing the Pomodoro Technique. For four consecutive weeks, once each week, the PI visited the classroom to remind participants to use self-regulation techniques outside of class. Each form took less than five minutes of class time to complete.

Because of the COVID-19 crisis, all classes were conducted in a remote setting via Blackboard Collaborate and visits were virtual. Each week, students filled out both the planning forms and the progress tracking forms during class time. Responses in these forms were immediately populated in an excel sheet by the PI. After the assignment submission date, which was four weeks after the intervention, the PI reviewed data to find that a final total of 34 participants had completed all aspects of the study.

As part of the data collection, focus groups were conducted with semi-structured interview questions. To recruit for the focus group sessions, an email asking for volunteers was sent out to participants who completed all aspects of the study. From those who volunteered, seven students were selected based on their common availability. Focus groups lasted 30 minutes each and took place via Google Meet. The activities of the focus groups consisted of a semi-structured interview with six open-ended questions related to the impact of the Pomodoro Technique and pre-commitment device on students' affective disposition and cognitive ability to monitor and control their learning (see Appendix F). Focus groups were recorded via the Google Meet platform, then transcribed using Otter.ai software. Students who participated in focus groups were referenced with an "S" for student and then an arbitrary number.

For further clarification, Table 1 shows the sequential process of data collection, as well as the timing of the Pomodoro Technique training.

Table 1: *Sequence of Activities of the Study*

Semester Week	Aspect of Study	Time Required
4	IRB Consent Forms Collected	5 minutes
5	Pomodoro Technique Training	30 minutes
	Pomodoro Planning Form Week 1	5 minutes
	Mid-term Genre Analysis Paper assigned by instructor	
6	Pomodoro Tracking Form Week 1	5 minutes
	Pomodoro Planning Form Week 2	
7	Pomodoro Tracking Form Week 2	5 minutes
	Pomodoro Planning Form Week 3	
8	Pomodoro Tracking Form Week 3	5 minutes
	Pomodoro Planning Form Week 4	
9	Pomodoro Tracking Form Week 4	5 minutes
	Mid-term Genre Analysis Paper Due	
11	Focus Group Interviews Conducted	30 minutes

3.5.1 Coding. The corpus of qualitative data included the transcriptions of the focus groups and the open-ended responses from the Pomodoro Tracking Forms. Approximately 9,774 words were compiled into one document for line-by-line inductive coding, adhering to holistic thematic analysis as described by Holliday (2007). The first wave of coding separated responses related to the affective influence of the self-regulation technique and responses related to its influence on self-regulation. In the second wave, codes that occurred with more frequency were separated into themes, which ultimately split the self-regulation and affective categories into four overlying themes. Finally, the third wave sought to subcategorize general trends that emerged within each of the four main themes. When determining frequency count for coding the focus group transcripts, responses to interview questions were segmented and considered a new code each time a different person spoke. Individual open-responses were counted and coded independently.

Chapter 4: Results

Findings from the data were organized based on four main themes, related to the research questions: Successful Self-Regulation, Positive Affective, Unproductive Self-Regulation, and Negative Affective. Table 2 summarizes the frequency count of the coded responses for the themes, as well as the count for sub-categories within each theme.

Table 2: *Frequency Count of Coded Corpus*

Theme	Sub-category	Code Frequency Count	Code Frequency Count Per Theme
Successful Self-Regulation	Time-Management	16	39
	Efficiency	11	
	Maintaining Focus	12	
Positive Affective	Motivation	10	28
	Positive stress	8	
	Confidence	10	
Unproductive Self-Regulation	Interruptions	16	23
	Irrelevance to Grade Outcome	7	
Negative Affective	Frustrations and Ambivalence	3	3

4.1 Successful Self-Regulation

There were 39 responses related to the ways that the paired Pomodoro Technique and pre-commitment device positively influenced students' ability to monitor and control their learning. These responses were further divided into three sub-categories. The resultant topics were the positive impacts on time-management, efficiency, and maintaining focus.

4.1.1 Time-management. In the first section of codes related to successful self-regulatory impact of the strategy at hand, students remarked on its assistance in their management of time and ability to plan. Students who recounted that time-management was especially difficult for them before the study felt it was a helpful tool. For example, S9, a student from the focus group, admitted that,

> "I wasn't the best at managing time. Like, if I had deadlines coming up….then I'd sit and finish it off for like, I wouldn't plan in advance and like, sit and do stuff….the Pomodoro method has helped me like, you know, plan in advance like, get like chunks of work done."

Another focus group student, S16, also stated that she did not usually have a plan for managing her time. "But after the Pomodoro study," she said, "it kind of gave me like, just a method to try out to help me manage my studying and stuff." In the free responses, seven students noted that the process really helped them with managing their time. One respondent commented, "The Pomodoro process helped me a lot in my discussion posts, it's really amazing when it comes to time-management." Another response mentioned that they "saw how useful it is to go over a specific plan to finish your study."

Some students found that it equipped them to manage their time particularly when they were very busy. One response stated, "The Pomodoro process helped me catch up with my essay when I had two midterms on the same day." Another response affirmed that "it helped me so much to manage my time and distribute it on my tasks" and a different respondent declared, "it is working out perfectly with my assignments."

4.1.2 Efficiency. Another trend that arose when encoding the successful self-regulatory benefits of the strategy was that students noticed a rise in their efficiency. This came up several times in the focus group discussion. S15 mentioned that she would often procrastinate, "pushing [tasks] towards the end" and that the self-regulation technique changed this. "…after the study," S15 recounted, "it's like, I'll get this done now. Now, I'll finish it, here, here, and here. And then it's gonna be over." S4 described that she "just worked more efficiently" when using the technique. Students in the open responses agreed. Three students specifically mentioned the efficiency of the technique, one stating that it was "really efficient in helping me complete my homework" and "help[ing] me finish a lot of tasks in a short time." Another student stated, "This is a good technique for those who find it difficult to complete tasks quickly." An additional comment was, "I avoided all distractions for 25 minutes which helped me complete the task quicker than what I normally would have."

4.1.3 Maintaining focus. The last cluster of codes regarding self-regulatory benefits included the ways the technique supported attention to a task. Both S6 and S16 in the focus group described themselves as having a "really short attention span" yet benefiting from the discipline of a timer. After describing an instance about losing

attention when writing papers, S6 stated that the "Pomodoro is really helpful at that time." Free response comments concur. One respondent said, "It was definitely useful in keeping myself concentrated on one task for 25 minutes." Ten students noted that the technique assisted them in finishing their mid-term paper. One student specifically mentioned the use of a timer in this response: "it was extremely helpful and turns out using a timer really kept me in place."

4.2 Positive Affective

There were 28 responses that mentioned the ways in which the training and intervention strategy had a positive impact on student affective disposition. Codes were separated into three main sub-categories including motivation, positive stress, and confidence.

4.2.1 Motivation. The first pattern that emerged when encoding in the positive affective category was the ways that the self-regulation technique actually fostered motivation in students. Five out of the seven focus group members mentioned something regarding the positive effect on motivation. S15 recounted in the focus group that "when I set the timer, I feel like okay, now I need to start working…it's a good way to set the goal." Focus group member S7 described how the structure led to a feeling of ease: "I feel that it gave me a sense of relief in some courses as it gave structure to my work. The technique made my work seem like a journey, which gave me motivation." S16 felt that this technique was most helpful as a motivational tool to complete assignments that she did not like. She stated, "The writing assignment we have right now. That one I'm very much dreading. And working using the Pomodoro really helps because I just have to do it." S9 even mentioned that if she used the technique for nothing else, it was to "get started on an assignment."

4.2.2 Positive stress. Along similar lines was a theme regarding a type of stress that helped in completing work. Four students mentioned feelings of stress before a big assignment or exam that eventually led them to get started on the work. For example, S9 said, "I feel stressed before I start my assignment. Because I'm like okay, there's something challenging to do. But once I start, it's like, okay, at least it started right now." Three students equated the Pomodoro timer to an impending deadline. S7, from the focus group said, "It's just like the Pomodoro Technique. There's a deadline that I

have to meet, so I start working." In the free responses, one student wrestled with whether the stress of the Pomodoro was a good thing, when she wrote,

> "I was able to complete my task during this week within the number of Pomodoros I had planned to complete this week. However, I felt like I was pressurizing myself to finish in that time because I was so determined to stick to the plan. Though that is good in the sense that I was able to manage my time."

4.2.3 Confidence. The last theme that arose while encoding the positive affective impact of the paired techniques is similar to the description of self-efficacy, cited by Bandura (1977). Ten responses were coded related to confidence after using the technique. In the focus groups, this topic was prevalent. S15 stated that because of using the Pomodoro Technique in Writing,

> "I usually felt a lot more relaxed than I would with other assignments, because I would take a break and that would help me…and then I'd feel like, okay, so I actually did something that would make me feel like I'm not just sitting around waiting for things to happen. So that helped me emotionally as well."

S6 had a similar comment regarding his emotions after completing a full Pomodoro cycle, "Then, after completing a whole cycle…it becomes like, wow, you, you got something you have done. It's like a great accomplishment actually." Four other students mentioned that they felt either "satisfied" or "accomplished."

4.3 Unproductive Self-Regulation

The next theme included 23 responses regarding the unproductive self-regulation effects of the training and paired intervention strategy. These responses were divided into the following sub-categories: Interruption and Irrelevance to Grade Outcome.

4.3.1 Interruption. A salient strand within this theme was that of interruption. The 25-minute alarm served to be an unwelcome distraction when students were focused on a task. In the focus group, S15 stated, "sometimes I wasn't able to use it because it would interrupt my thought process. So, if I'm writing a long paper and the timer will go off, and I'd have to come back later and try to write, I would be completely lost." S6 noted the reason that he would ignore the end of a Pomodoro session was "because [the work] was actually very interesting and it makes us like indulge in it completely…" S16 agreed with this sentiment saying, "Sometimes when an assignment

is like, a lot of fun, I would like skip the Pomodoro Technique and work overtime because I was actually enjoying it."

While some worked past the timer because of enjoyment, others felt they could not afford the break. Nine responses noted something about the distraction of the five-minute break. One respondent said, "I found it very disruptive to my thought process." Another said, "Every now and then I would get distracted by the thought that my five-minute break should be approaching soon, so I kept checking the timer." Another mentioned that they "did not really have time to take breaks since it was a stressful weekend."

4.3.2 Irrelevant to grade outcome. The other strand present in the theme of unproductive self-regulation was that students did not see the technique as something that made any difference on their grade in the class or on the designated assignment. All focus group members agreed that they did not think it affected their grade. S4 did note a unique stance, "I don't think it really impacted my grade, but I can see how it can impact other people's grades who have trouble focusing and have trouble with time-management."

4.4 Negative Affective

Overall, the category of negative affective impact of the technique did not have many responses. Only three indicated any sense of negativity in this area. From the focus group, S16 mentioned her feelings when the timer would go off unexpectedly, "When I've been working on an assignment that I'm enjoying, and like, the timer ends, I kind of get frustrated because I was in the mood for it." Another commentor in the free responses noted a negative emotion, "I feel that the pressure of the 25 minutes ticking weighed me a little." The third student commented about having a feeling of "ambivalence" toward the Pomodoro Technique because "sometimes I feel proud I was able to stick to my plan and complete Pomodoros I intended to, other times when I am not able to stick to the plan it makes me stress further about not managing my time efficiently."

Chapter 5: Interpretation and Discussion

The present investigation evaluated the effects of a specific self-regulation training and paired intervention strategy, namely the Pomodoro Technique with a pre-commitment device, on first-year university students in a WRI 101 class. Effects were analyzed in terms of the impact of the strategy on students' ability to self-regulate, as well as its influence on their affective dispositions. Results from the coding of qualitative data collected from focus group transcripts and open-ended responses helped to illuminate a greater understanding regarding the benefits and weaknesses of equipping students with this pairing of strategies. This discussion begins with an explanation of the impact of the combined techniques on self-regulatory ability and affective disposition, then concludes with interpretations for the presence of mixed results.

5.1 Self-Regulatory Ability

In response to research question number one, varied results emerged. The research gathered from the focus group and open-ended questions pointed to three clusters of key self-regulatory benefits of this training and paired intervention strategies for first-year writing students. First, students felt more confident in their ability to manage their time. Cotton et al. (2002) found that demands related to time were often the source of higher stress levels in undergraduate students. If the paired techniques support better time-management, this not only contributes to monitoring and controlling learning, but may also decrease this type of stressor. Secondly, students expressed an increase in efficiency. One open response noted, "I definitely felt more productive than usual" and another that "it really motivated me to finish my homework faster and spend my weekend homework free." This increased productivity revealed students' ability to control their learning such that they recognized the positive outcomes. Lastly, students expressed an increased ability to maintain focus. This ability to keep concentration over time is an attribute of micro level self-regulation (Weinstein et al., 2011).

The research gathered from the focus group and open-ended questions also pointed to two clusters of key weaknesses regarding the use of this strategy. The first was the interruptive nature of the Pomodoro Technique. It seemed that when an

assignment task was going well, the ring of the Pomodoro alarm was an unwelcome interruption. One student responded, “Sometimes I feel as though the 25-minute time limit also breaks my flow” and another said, “I felt that it worked better for me to sit down and finish the entire paper in one go.” Therefore, the design of the Pomodoro actually inhibited students’ ability to self-regulate because they were not able to structure their own environment based on what they self-reflectively identified as necessary to accomplish their goals (compare similar findings in Cohen, 2012). Another weakness of this particular training and paired intervention was that most students noted that they did not believe the use of the strategy had any impact on their final grades for the assignment. This contradicts several studies, including Baker et al. (2018), which saw higher final grades for students who scheduled their work time in advance. This may reveal that the simple Pomodoro training and paired interventions did not make a large enough impact on student self-regulation to reap the benefits of higher mid-term performance.

5.2 Affective Disposition

In answer to research question number two, concerning the affective impact of the self-regulation technique, the results were again mixed, with the balance tilting toward the affective advantages over the disadvantages. Participants suggested that the intervention improved their motivation, created a beneficial type of stress, and boosted their confidence. However, affectively speaking, some indicators suggested that there was also a bit of frustration and ambivalence when using the strategy.

As mentioned in the literature review, Bandura (1977) described self-efficacy as one’s motivation to persevere despite challenges. In the study conducted by Yazdizadeh (2020), students who were more self-efficacious expressed more enjoyment in learning. The results of this study revealed that many students felt a similar satisfaction that stemmed from completing their work efficiently after using the Pomodoro Technique and pre-commitment device. Students who experienced such ownership over their learning noted that they “felt a lot more relaxed,” as S15 put it, and “more accomplished” as S9 expressed. Even though students did not believe that the self-regulation technique affected their achievement in the course, many agreed that

utilizing the technique helped boost their confidence in school related tasks, which is an element of academic self-efficacy (Zajacova et al., 2005).

Another affective benefit of the self-regulation technique was the establishment of positive stress. Mercer and Gregersen (2020) considered two types of stress relevant to this study: eustress and distress. Distress connotes negativity because it typically leads to suffering performance. However, with eustress, a positive edge exists which may lead to an improvement of performance. The results indicated that the self-regulation technique may have created a type of eustress for students. Several recounted how the Pomodoro ticking established a sense of urgency similar to that of an impending deadline. "And I feel like when I'm under pressure," S16 emphasized, "it makes me work harder." When S7 described herself as "excited to take on a challenge, but also stressed," she may have been experiencing the tension of eustress, which fosters a bit of thrill, yet leads to efficient work.

Although the affective benefits of the tested paired strategies outweighed the negative in terms of the number of responses coded into each category (28 positive codes, 3 negative codes) there were two potential weaknesses that should be mentioned. First, it seemed that there was an experience of frustration when a student was highly engaged in an enjoyable assignment and faced the unwelcomed interruption of a Pomodoro buzzer. Secondly, a student mentioned the possible feeling of defeat after failing to follow through with a commitment to study at a specific time, based on the pre-commitment device. This emotion may be a result of performance pressure, which Mitchell et al. (2019) described as a "double-edged sword" that sometimes reaps the benefits of eustress and resilience, but can also potentially lead to less productive outcomes. In order to prevent this type of response, it may be important to nurture the perspective that the pressure of a pre-commitment device should be considered a challenge rather than a threat (Mitchell et al., 2019).

5.3 Rationale for Mixed Results

Two themes arose from the coding and interpreting of focus group and open-ended data sets. These themes may provide some explanation for the mixed results. The coded responses for these themes are summarized in Table 3.

Table 3: *Rationale for Mixed Results*

Theme	Coded Responses	Total
Task Specific Limited Scope	11	15
Learning Style Specific	4	

First, mixed results may have occurred due to limited scope of the paired strategies. Results suggested that students found that the Pomodoro strategy and pre-commitment device could have been more helpful on an assignment in a discipline outside of academic writing. Twelve students commented that they would use the strategy for some assignments but not others. For some, it would be more necessary in math and science subjects. S9 said, "I'd use it for something like math because after 25 minute I lose focus, like, you know, I need the five-minute break. But for subjects like reading and writing, I don't think I would use it." S15 had a similar opinion, "So I would probably use it for like, physics, where my brain hurts if I do it for a long time. But if it's something that requires reading and writing, I wouldn't use it much." Others noted that it depended primarily on the assignment itself, especially about whether it was enjoyable or not. S11 summarized what seven others noted when he stated, "it depends on the assignment. If it's fun, I'll just do it. And if it's not fun, then I can use [the strategy]." These findings align with a study conducted by Jones et al. (2003), which found that student-learning strategies were not the same across disciplines and that students often applied different strategies in order to fulfill the requirements of a specific assignment.

Another theme that arose involved whether differentiating the Pomodoro strategy and intervention based on the personality and learning style of the individual may prove more impactful. Four students noted that they would need to adjust the parameters of the strategy, especially the Pomodoro Technique, in order to make it work for them. For instance, in the focus group discussion, S4 noted, "I would apply the principles of this technique, but I would change the timeframe instead of like planning an exact specific amount of time…sometimes maybe the timer for the break should be different for everyone." A free response comment noted, "I decided to adjust the Pomodoro timings to what makes sense for each course. The goal is mainly to organize

and take short breaks." Jones et al. (2003) suggested that students with a variety of learning styles, experiences, and preferences "may require a mix of teaching and advising strategies" (p. 373). This could explain why the strategy considered in this study had conflicting results.

Chapter 6: Conclusions

6.1 Implications

First-year students experience a range of challenges as they transition to university life. The results from this investigation suggested that there is some value in introducing first-year learners to the Pomodoro Technique and a pre-commitment device. Not only did it serve to equip some of the participants with an increased level of self-regulation, but it also left some of them with confidence in the work they were able to produce, even amidst the pressure of a looming deadline. These benefits are affirmed by Weinstein et al. (2011), who stated that, "self-regulation is both the glue and the engine that help students manage their strategic learning on both a global and real-time levels" (p. 47). In light of these results, professionals in higher education may consider the following implications.

The demanding nature of an introductory academic writing course provides a feasible environment for instruction and application of self-regulation skills, which ultimately may positively influence the affective disposition of young writers. This study increased the breadth of data in the discipline by extending previous research collected on the impact of self-regulation strategies. Students found that utilizing the Pomodoro strategy and pre-commitment device was especially helpful when they were not particularly engaged in the task. For learners taking an academic writing course that requires them to use a style of writing to which they are not accustomed, this intervention might boost confidence and motivation, by helping students use their time more effectively. For this purpose, this study offers a potential tool that could be incorporated as one option for students, taught with minimal time or monetary investment. However, it is important that the strategy be implemented with caution, with the understanding that students may want to apply it differently depending on their learning style and the discipline they are pursuing.

6.2 Limitations

Although the data suggested that a self-regulation intervention was a beneficial tool for first-year students, there are limitations to consider. First, the self-regulation technique was only implemented over a four-week period, giving little time for substantial long-term effects of the treatment to surface. Following these students

through their senior year may further clarify the long-term impact of the intervention. Secondly, this study considered a convenience sample of only 34 academic writing students. Because of this, there should be discretion used before generalizing results to a larger population. Additionally, although many of the focus group responses were triangulated with the individual open-ended survey data, the evidence gathered from the focus groups may have been impacted by various biases. One example could have been acquiescence bias, which occurs if students are intimidated by having their classmates listen to their responses. Lastly, the present study took place throughout the COVID-19 pandemic, during which a host of uncontrolled stressors afflicted the participants of the study. These stressors may have affected the validity of participant responses.

6.3 Future Research

This study highlighted ways that a particular training and paired intervention supported students through the process of completing an assignment. However, it is uncertain if these results will be long lasting. It would be valuable for longitudinal studies to consider the effects of whether cultivating this skill of self-regulation, which, in some students improved their self-regulation and affective disposition, might ultimately impact their academic success by graduation. Lazarus (2006) proposed that improved affect might actually work as a coping resource to help mitigate stress. Furthermore, Chemers et al. (2001) suggested that self-efficacious beliefs are a key indicator of future performance. A long-term study might examine whether the fruit of increased confidence and motivation creates a ripple effect that ultimately contributes to decreased stressed levels and higher achievement.

Another pursuit of further research is advised by Cohen (2012), who asserted that investigations to improve the self-regulation of students should be a continued aim. Macan et al. (1990) contend that it is essential for the design of time-management techniques to be regularly evaluated, in order to tailor interventions based on the needs of the developing person, especially one engaged in the dynamic environment of academia.

The birth of the Pomodoro Technique was the byproduct of a discouraged university student choosing to utilize a simple tool to regain a sense of control and finish reading a chapter for his university exam (Cirillo, 2018). For many participants in this

study, the combination of the Pomodoro strategy with the pre-commitment intervention was an empowering mechanism that helped create structure throughout a challenging assignment. First-year students are overwhelmed with stressors related to an unfamiliar environment, greater responsibilities, and new relationships. If universities can foster confidence in transitioning first-year students by integrating a simple training and intervention, this would be a valuable investment. Centers for academic support may not be able to choose which strategies will work for each individual, but they can have a role in training students to develop self-directed learning habits. The aim of continued research should be to consider various approaches for equipping students of different learning styles with effective self-regulation tools, so that other students might eventually experience the sentiment of research participant S4 in exclaiming, “I always feel accomplished.”

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Appendix A

Approved IRB Consent Form

Institutional Review Board [IRB]
Informed Consent Form for Participation in Research Study

Project Title: Planning Pomodoros: The effects of a self-regulation intervention on stress, self-efficacy, and achievement of first-year writing students

Principal Investigator or faculty sponsor of student research:

- PI: Erica Payne, epayne@aus.edu, 06 515 2428
- Co-Advisor: Dr. Tammy Gregerson, tgregersen@aus.edu, 06 515 2435
- Co-Advisor: Dr. Rachel Buck, rbuck@aus.edu, 06 515 2637

Purpose: You are invited to participate in a research study about how self-regulation impacts stress levels, self-efficacy, and achievement of first-year writing students. The purpose of this study is to better understand ways in which we might equip students to manage their time effectively, as well as reduce the stress that often surfaces in the first year of university.

Procedures: If you decide to participate, you will be asked to do the following things during the Fall 2020 Semester:

1. Complete a multiple-choice questionnaire at the beginning and end of the study. The questionnaire will include reflections about your stress levels, self-efficacy, and perceived time-management. This will be completed during class. The questionnaire should take between 5-10 minutes each time.
2. After the questionnaire is completed, students will participate in an interactive 30-minute workshop about time-management. This will take place during class and all students will be completing this as part of the writing course.
3. For 5 consecutive weeks, you will be asked to fill out a progress tracking and pre-commitment form. The form will include selecting a time to work on a selected assignment each week, along with a question about how often you applied the technique. The form will be filled out during class and will take no more than 5 minutes to complete.
4. 6-8 students will be selected to participate in a focus group. During the focus group, you will be asked questions about your experience with the self-regulation technique. The focus group will take no more than 30 minutes.

Risks: The risks associated with this study are no more than minimal risks encountered during normal daily activities.

Benefits: The benefits that may reasonably be expected to result from participation are awareness of a new self-regulation strategy that can be applied in other classes and on other assignments. Additionally, you may feel a lower level of stress and higher level of confidence when implementing this strategy.

Incentive: After completing the study during Fall 2020, you will receive one (1) bonus point on your final semester grade for WRI 101.

Your Rights: Your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your final grade will not be affected whether or not

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Appendix B

Pomodoro Technique Strategy Presentation

HOW TO USE THE POMODORO TECHNIQUE

5 steps

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1. Choose a task you'd like to get done

- Make the task specific:
  - "Write paper for WRI 101" is not specific enough
  - What could you do to break this task down?
- Whatever the task is, it deserves your full, undivided attention

"The journey of a thousand miles begins with one step."
–Lao Tzu

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2. Set the Pomodoro for 25 minutes

- Challenge yourself to work on the chosen task uninterrupted for the entire 25 minutes.
- Silence your phone, close your door, set yourself up for a focused session
- And remember, it's only 25 minutes…You can do it!

3. Work on the task until the Pomodoro rings

- Have a blank piece of paper at your workspace
- If you suddenly realize you have to clean the fridge or text your mom back or answer an email from your professor- don't!
- Write that down for later and continue working.

4. When the Pomodoro rings, take a break

- Set a new timer for 3-5 minutes
- Breathe, grab coffee, go for a walk, respond to a text
- Rest your brain – you did it! You worked for a focused 25 minutes!

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5. Every 4 pomodoros, take a longer break

- Repeat 4 cycles of pomodoros
- Take a longer break, at least 20-30 minutes
- Watch a show, talk to a study buddy, reward yourself!

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Kahoot: What do you remember?

Go to **Kahoot.it**
For a quick quiz!

Applying the Pomodoro

Now, it's your turn!

For [insert writing assignment here], I challenge you to try out this new tool.

- Over the 4 weeks leading up to your assignment deadline, use the Pomodoro cycle 4 times each week (that's 4 25-minute cycles!)
- Fill out the form online or in hardcopy

Appendix C

Pomodoro Progress Planning and Tracking Worksheet

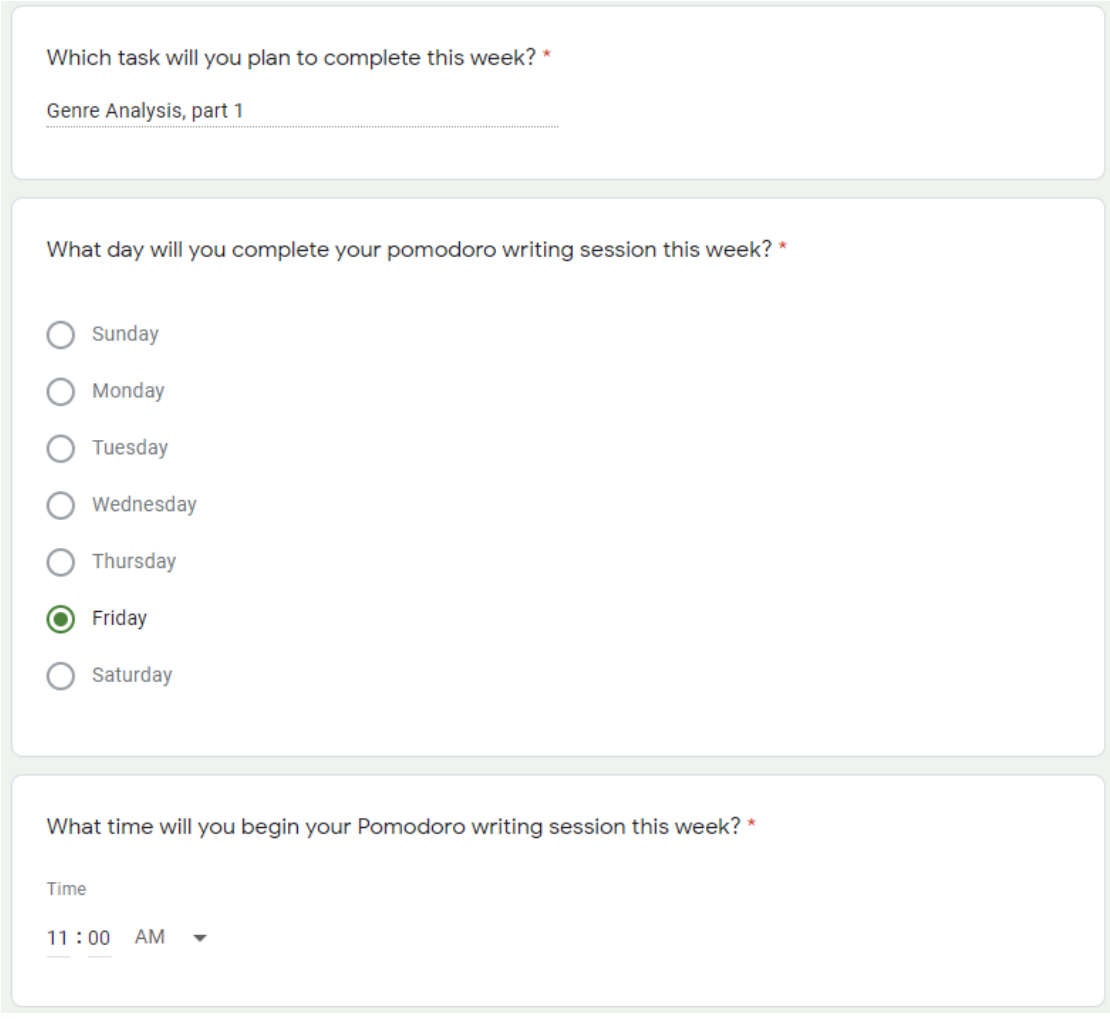
Tracking Pomodoros					
Week 1	Task:				
	Day:	Time:			
	Check the box after you complete each cycle				
		☐	☐	☐	☐
Week 2	Task:				
	Day:	Time			
	Check the box after you complete each cycle				
		☐	☐	☐	☐
Week 3	Task:				
	Day:	Time			
	Check the box after you complete each cycle				
		☐	☐	☐	☐
Week 4	Task:				
	Day:	Time			
	Check the box after you complete each cycle				
		☐	☐	☐	☐

Appendix D

Pomodoro Planning Form

1. Which task will you plan to complete this week? (Free response)
2. What day will you complete your pomodoro writing session this week?
    - Sunday
    - Monday
    - Tuesday
    - Wednesday
    - Thursday
    - Friday
    - Saturday
3. What time will you begin your pomodoro writing session this week?

Sample:



Appendix E

Pomodoro Tracking Form

1. How many Pomodoro cycles did you complete last week?
    - 0
    - 1
    - 2
    - 3
    - 4
    - More than 4
2. Did you complete them on or before the time you planned?
    - Yes
    - No
    - Other: _____
3. Share any comments you have about completing the Pomodoro process.
4. If you indicated “No” for number 2, explain why you did not complete them as planned.

Sample:

How many Pomodoro cycles did you complete last week? *

- ○ 0
- ○ 1
- ○ 2
- ◉ 3
- ○ 4
- ○ More than 4

Did you complete them on or before the time you planned? *

- ◉ Yes
- ○ No
- ○ Other: _____

Share any comments you have about completing the Pomodoro process.

It was really efficient and it worked in helping me complete my homework.

Explain why you did not complete them as planned.

Appendix F

Qualitative Interview Questions

1. Prior to this study, how would you have described your ability to manage your time?
2. When you are about to start a challenging assignment or study session, what emotions do you experience?
3. After successfully completing a Pomodoro session, how do you feel?
4. In what ways do you think using (or not using) the Pomodoro Technique impacted your grade on the Genre Analysis Assignment?
5. When you did not complete the Pomodoro as planned, how did you feel about the work that you turned in?
6. What are some reasons you would or would not continue using the Pomodoro Technique on future assignments? For which assignments would you consider it to be most helpful?

Vita

Erica Lee Payne was born in 1992, in Warwick, New York, in the United States. She was educated in local public schools and graduated with honors from the Alexander W. Dreyfoos School of the Arts in 2010. She attended the University of North Carolina at Chapel Hill in Chapel Hill, North Carolina and graduated in 2014. Her degree was a Bachelor of Education in Elementary Education.

Mrs. Payne worked as a 4th grade teacher in the Durham Public School System in Durham, North Carolina for 4 years. In August 2018, she moved to the United Arab Emirates and worked as a Grade 3 teacher at a British International School in Sharjah. In 2019, she transitioned into higher education as an Academic Advisor at the American University of Sharjah. After one semester as an advisor, Mrs. Payne accepted the First Year Experience Coordinator position. In 2021, she led the installation of the Alpha Lambda Delta First Year Honor Society at AUS and presently advises the chapter. In Spring of 2020, Mrs. Payne began a Master's program in Teaching English to Speakers of Other Languages at the American University of Sharjah.

Mrs. Payne is a member of the NACADA Global Community for Academic Advising and is a Certified Strong Interest Inventory Practitioner.