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The relationship between procrastination and intrapersonal intelligence in college students

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THE RELATIONSHIP BETWEEN PROCRASTINATION AND INTRAPERSONAL
INTELLIGENCE IN COLLEGE STUDENTS

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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

December

2009

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This dissertation meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

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ABSTRACT

Procrastination is ubiquitous, encompasses many domains of life, i.e., school, work, and home, and for many people has negative results. Therefore, researchers, educators, psychologists, and counselors need to discover ways to alleviate the problem. When Gardner's multiple intelligences are used in pedagogical implementation in elementary and high schools, researchers have found positive results. The purpose of this study was to investigate the relationships between procrastination and intrapersonal intelligence as well as the other dimensions of multiple intelligence among students in higher education in order to illuminate possible solutions to the problem of procrastination. Because intrapersonal intelligence is associated with the self, self-knowledge, self-understanding, self-monitoring, and self-correction, a relationship between procrastination and intrapersonal intelligence seemed likely.

This study surveyed 135 students from a small, southwestern university. Students were administered the Procrastination Assessment Scale-Students to determine procrastination reasons and levels, and the Multiple Intelligence Developmental Assessment Scale to determine levels of each multiple intelligence.

Descriptive statistics indicated that students procrastinate more on academic tasks than on administrative tasks. Results also revealed that college students usually procrastinate because they have task aversion, they feel overwhelmed, they have

difficulty making decisions, and they are lazy. Although multiple regression results of all eight intelligences against procrastination indicated a significant relationship, stepwise forward calculations identified linguistic intelligence as the only significant predictor of procrastination. A MANOVA indicated that students with high intrapersonal intelligence are less likely to procrastinate on studying for exams than a student with low intrapersonal intelligence. In addition, a student with high intrapersonal intelligence is less likely to display overall procrastination than a student with low intrapersonal intelligence.

CHAPTER I
INTRODUCTION

Overview

“After all, tomorrow is another day” (Selznick & Fleming, 1939). These legendary words, wistfully spoken by the most famous and yet infamous heroine of all time, Scarlett O’Hara, represent a ubiquitous and distressing problem today in America and throughout the world in the workplace, in homes, and in schools, and that is procrastination. More specifically, academic procrastination, i.e., putting off until tomorrow or a much later date reading assignments, studying for tests, preparing for projects, and/or writing papers is a growing phenomenon among university students that may create an inferior quality of work, missed deadlines, poor grades, and even college dropouts (Balkis & Duru, 2007; Jackson, Weiss, Lundquist, & Hooper, 2003; Pychyl, Lee, Thibodeau, & Blunt, 2000; Tice & Baumeister, 1997). In the work world, employees fail to receive promotions or advancements, lose jobs, and receive poor evaluations because of procrastination (Balkis & Duru, 2007). Psychologists and educators need to continue to conduct research on procrastination, so that they can discover ways for students and workers to overcome its negative effects.

Colleges and universities rely on ACT and SAT tests to determine college acceptance. However, research has shown that these tests are missing critical components in assessing students’ predicted success in college (Barrington, 2004; Diaz-Lefebvre,

2004; Gardner, 1999b; Kezar, 2001). Perhaps the problem stems from the fact that these tests only measure two areas of intelligence, linguistics and logical/mathematical intelligences (Barrington, 2004; Gardner, 1999b). These two intelligences are the first two of eight multiple intelligences (MIs) posited by Howard Gardner, a Harvard psychologist, as a better way to view a person's intelligence. Gardner viewed intelligence as pluralistic and multidimensional rather than as one unified construct (Gardner, 1999b; Kezar, 2001); this view explains the diversity and levels of performances that people display and possibly their various strengths and weaknesses (Gardner, 1993a, 1999b; Kallenbach & Viens, 2004; Kezar, 2001). It also may account for the many social and cultural factors in life that contribute to one's intelligence and to one's strength or weakness in one of the MIs (Barrington, 2004). Of course, Gardner (1993a, 1999b) also asserted that biological factors contribute to one's MI makeup or profile (Brualdi, 1998; Kallenbach & Viens, 2004). Although MI theory has been implemented in primary and secondary schools around the world since its inception in 1983 (Hoerr, 2002; Kallenbach & Viens, 2004; Kornhaber, 2004), implementation of MI in colleges has rarely occurred, nor has MI research on college students been conducted to any extent (Kezar, 2001).

Intrapersonal intelligence is the MI that appears to apply to procrastination. Gardner (1993b) describes intrapersonal intelligence as an awareness of the inner self; an understanding of one's self; and an ability to manage one's feelings, emotions, and behaviors. Research literature indicates that procrastination is related to lower levels of self-esteem, self-control, self-confidence, self-efficacy, self-regulation, motivation, and conscientiousness, yet higher levels of perfectionism, depression, anxiety, stress, and fear of failure (Balkis & Duru, 2007; Ferrari, 1991; Steel, 2007). In addition, procrastination

is associated with neuroticism, one of the components of the Big Five-Factor model of personality (Milgram & Tenne, 2000). Neuroticism is the propensity to have negative emotions, such as low self-esteem, anxiety, and depression (Costa & Widiger, 2002).

Self-efficacy is yet another factor that pertains to intrapersonal intelligence, and its role in procrastination has been researched for over 20 years since Bandura (1997) first proposed it. This theory concerns the self-evaluation of one's ability to accomplish a given task. This self-belief affects individuals' abilities to function and the outcomes of their attempts (Bandura, 1997). Research has shown that students with high levels of self-efficacy usually procrastinate less (Haycock, McCarthy, & Skay, 1998). Individuals who do not procrastinate, or at least procrastinate less, are considered to be self-regulated learners. In addition, these learners use cognitive strategies and metacognitive skills to monitor and control their learning (Wolters, 2003). Research has also shown that one element that plagues procrastinators is lack of sufficient motivation (Senecal, Koestner, & Vallerand, 1995). These terms (self-efficacy, self-regulation, and motivation) are components of self directed learning. Self directed learning is defined as:

a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (Patterson, Crooks, & Lunyk-Child, 2002, p. 1)

Statement of the Problem

Because procrastination may negatively affect college students' academic lives, educators, psychologists, counselors, and researchers need to discover ways to alleviate the problem. Recent information on intelligence has shown multiple ways to view intelligence, and MI pedagogical implementation in elementary and high schools is

having a positive effect (Barrington, 2004; Brualdi, 1998; Chen, 2004; Gardner, 1999b; Kallenbach & Viens, 2004; Shearer, 2007). However, few researchers have conducted studies on college students regarding MIs (Kezar, 2001), and I have found none who have researched procrastination and MIs in regard to relationships and other dependencies. Because of the complex interconnectedness and overlapping of the various psychological components involved in the knowledge of self and in the study of procrastination, this study sought to investigate the relationships between procrastination and intrapersonal intelligence as well as the other dimensions of MI.

Purpose of the Study

The purpose of this study was to determine levels of procrastination and reasons for procrastination in college students, to determine levels of the eight MIs in college students, and to determine if a relationship exists between intrapersonal intelligence or other MIs and procrastination in college students. Since the study and implementation of MIs in the classroom is having a positive effect, my goal was to determine if a relationship exists between procrastination and the intrapersonal intelligence and other dimensions of MI in order to illuminate possible solutions to the problem of procrastination.

Research Questions

The following research questions guided the study.

1. What were the levels of procrastination in academic tasks of the respondents?
2. What were the reasons for procrastination?
3. What were the students' levels of MI, particularly intrapersonal intelligence?

4. Was there a relationship between procrastination and intrapersonal intelligence and the other dimensions of MI?
5. Were there differences between procrastination levels on the MI scores?
6. Were there differences among the three levels of intrapersonal intelligence on the six areas of procrastination or the total procrastination level?

Significance of the Study

This study sought to determine if a relationship exists between intrapersonal intelligence and procrastination. A relationship between a weak intrapersonal intelligence and high procrastination or a relationship between a strong intrapersonal intelligence and low procrastination might be determined. If significant relationships exist, researchers, educators, counselors, and psychologists might be able to use the results to help students procrastinate less and thus improve their performance.

Definition of Procrastination Terms

Conscientiousness: “a characteristic involving goal focus, dutifulness, self-discipline, and competence” (Costa & Widiger, 2002, p. 6). A conscientious person is able to self-regulate, be self-disciplined, and set and attain goals (Lay, Kovacs, & Danto, 1998; Lee, Kelly, & Edwards, 2006).

Extrinsic Motivation: “when someone behaves for reasons outside himself or herself for something tangible like grades or a job; the rewards are not related to the action” (Covington, 2000, p. 23). Extrinsically motivated people do not engage in an activity unless they believe that they will receive some reward or positive reinforcement.

Intrinsic Motivation: when someone “engage[s] in activities for their own sake... [T]he rewards reside in the activities themselves; that is, the actions are their own reinforcement” (Covington, 2000, pp. 22-23). Fulfillment is a result of participation in the activity or experience, not from the attainment of an external reward or goal.

Locus of Control: “This construct stems from the work of Rotter (1990) and refers to a generalized belief about the extent to which a person’s behavior influences subsequent successes and failures” (Rubie, Townsend, & Moore, 2004, p. 146). Locus of control involves the extent to which people believe they can control events and circumstances in their lives through their actions and abilities (Carden, Bryant, & Moss, 2004).

Metacognition: “thoughts about thoughts, knowledge about knowledge, or reflections about actions” (Weinert, 1987, p. 8). It is a self-monitoring, self-examination, and self-reflection that leads to success.

Motivation: “forces, drives, urges, and other states of the organism that impel, move, push, or otherwise direct its behavior” (Hewitt, 1997, p. 97). In other words, motivation is a variety of factors that drive people toward goals (Brownlow & Reasinger, 2000).

Neuroticism: “chronic level of emotional adjustment and instability. High neuroticism identifies individuals who are prone to psychological distress, [including] having unrealistic ideas, excessive cravings, or difficulty in tolerating the frustration caused by not acting on one’s urges, and maladaptive coping responses” (Costa & Widiger, 2002, p. 2). It includes factors such as: “anxiety, angry hostility, depression, self-consciousness, impulsivity, and vulnerability” (Costa & Widiger, 2002).

Neuroticism has been described as a propensity to breakdown due to stress and to display inflated emotions (Costa & Widiger, 2002).

Perfectionism: “a tendency to strive for excessively high standards and is motivated by fears of failure and concern about disappointing others” (Flett & Hewitt, 2002, p. 11). Perfectionism can be positive or negative, depending upon whether the behavior, emotions, and thoughts involved in the situation are neurotic or if they are just motivational enough to produce success (Burns, Dittmann, Nguyen, & Mitchelson, 2000).

Procrastination: “the failure to get things done in a timely manner...[and] involves delaying responsibilities, decisions, or tasks that need to be done” (Haycock et al., 1998, p. 317). When people procrastinate, they delay behaviors that would lead to success or accomplishment of goals.

Self-directed Learning: “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes” (Patterson et al., 2002, p. 1). Self-directed learners accept responsibility for their learning and engage in critical reflection. They are able to make decisions, stay motivated, select learning strategies, and maintain self-discipline (Campbell, Campbell, & Dickinson, 1999). Sellars (2006) reminded readers that self-directed learners plan learning strategies, regulate their behaviors, and assess their progress, the process, and the outcome.

Self-efficacy: “judgments of personal capability” (Bandura, 1997, p. 11). This theory concerns the self-evaluation of one’s ability to accomplish a given task or how competent one feels in a given situation.

Self-esteem: “judgments of self-worth” (Bandura, 1997, p. 11).

Self-handicapping: “placing obstacles that hinder one’s own good performance” (Steel, 2007, p. 69). Self-handicapping occurs because of people’s negative beliefs about their capabilities. For example, the fear of shame procrastinators would experience at being evaluated negatively can cause them to delay the revelation of such a truth by blaming their procrastination.

Self-regulation: “refers to the exercise of control over oneself, especially with regard to bringing the self into line with preferred (thus, regular) standards... [Regulation is] *by the self* (thus, not just *of the self*)” (Baumeister & Vohs, 2004, p.2). Self-regulated learners not only monitor their learning, but the conditions surrounding the learning, their progress toward reaching the goal, and assessments about their outcomes (Driscoll, 2005). They also regulate time management, motivation, and feelings (Zimmerman, 1989b), adjust their goals and how to attain them (Bandura, 1997), and self-reflect on their learning experiences in order to make future improvements (Zimmerman, 1989b).

Definition of Multiple Intelligences Terms

In the area of MIs, the following definitions were created by Gardner (1999b):

Intelligence: “the ability to solve problems or to create products that are valued within one or more cultural settings; a biopsychological potential to process information

that can be activated in a cultural setting to solve problems or create products that are of value in a culture” (p. 33-34).

Multiple Intelligences: “a range of capacities and potentials that, both individually and in consort, can be put to many productive uses” (p. 4).

Linguistic Intelligence: “sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals” (p. 41). Because this intelligence is concerned with the verbal domain, it is sometimes referred to as verbal/linguistic. Some areas of interest for those high in linguistic intelligence are literature (professors), journalism (writers or editors), politics, reporting, and speaking, such as lecturing or newscasting (Morgan 1996).

Logical-mathematical Intelligence: “the capacity to analyze problems logically, carry out mathematical operations, and investigate issues scientifically” (p. 42). People high in this intelligence have the ability to excel in areas of math, business, computer science, and other sciences (Morgan 1996). They also have the ability to solve problems and excel in games requiring skills and strategies (Shearer, 1999).

Musical Intelligence: “skill in the performance, composition, and appreciation of musical patterns” (p. 42). People with high musical intelligence have abilities in rhythm, pitch, and tone (Shearer, 1999).

Bodily-kinesthetic Intelligence: “the potential of using one’s whole body or part of the body (like the hand or the mouth) to solve problems or fashion products” (p. 42). People high in bodily-kinesthetic intelligence often excel in coordination, movement, sports, and hand dexterity (Shearer, 1999), and may tend to choose one

of the following for a career: dance, athletics, physical education, aerobics instructing, or coaching.

Spatial Intelligence: “the potential to recognize and manipulate the patterns of wide space (those used, for instance, by navigators and pilots) as well as the patterns of more confined areas (such as those of importance to sculptors, surgeons, chess players, graphic artists, or architects)” (p. 42). People with spatial intelligence can “make, build, fix, or assemble things” (Shearer, 1999, p. 66) and also excel in mechanics.

Interpersonal Intelligence: “a person’s capacity to understand the intentions, motivations, and desires of other people and, consequently, to work effectively with others” (p. 43). People with high interpersonal intelligence tend to become counselors, teachers, managers, coaches, administrators, and social workers because of their sensitivity and empathy for others.

Intrapersonal Intelligence: “the capacity to understand oneself, to have an effective working model of oneself—including one’s own desires, fears, and capacities—and to use such information effectively in regulating one’s own life” (p. 43). In addition, people high in intrapersonal intelligence are aware of their strengths and weaknesses and are able to attain personal goals. Usually counselors, ministers, writers, and philosophers have high intrapersonal intelligence (Johnson 2006).

Naturalistic Intelligence: the capacity to recognize and classify “the numerous species—the flora and the fauna—of his or her environment” (p. 48). Those people with naturalistic intelligence are inclined toward science (a naturalist or environmentalist), cooking, hunting, horticulture, or agriculture (Johnson 2006).

Organization of the Study

This dissertation is organized into five chapters. Chapter I consists of the introduction and an overview of the problem. Chapter II covers a review of the literature on procrastination and MIs, in particular, intrapersonal intelligence, as well as a hypothesis about how they might relate. The methodology used in the study is presented in Chapter III, including a description of the subjects, a description of the instruments, the survey method, and the data analyses. Chapter IV provides a summary of the study's results and conclusions. Finally, Chapter V discusses the results and offers recommendations for practice and future research.

CHAPTER II

REVIEW OF THE LITERATURE

Overview

This chapter begins with a presentation of the theoretical framework concerning theories of learning and moves on to provide the literature review on procrastination and then on multiple intelligences (MIs), prefaced by emotional intelligence. Because many concepts of this study overlap, they are sometimes discussed in more than one section. The procrastination literature is a much larger body of research with many more conceptualizations and complexities than MIs, and, therefore, much more time and space was allocated to it.

Theories of Learning

Merriam, Caffarella, and Baumgartner (2007) define learning as “a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one’s knowledge, skills, values, and worldviews” (p. 277). However, many different theories of learning have evolved over the past 100 years, so when researchers examine adult learning theories, it is beneficial to explore the five basic philosophical perspectives that comprise the theoretical framework of adult learning. These perspectives or approaches include behaviorism, humanism, cognitivism, social cognitivism, and constructivism.

Because behaviorism, when applied to learning theory, does not involve internal thought process, but rather focuses on observable behavior, it is not as relevant to intrapersonal intelligence or the thought processes involved in it, so I will only briefly touch on it. First, Thorndike, Bregman, Tilton, and Woodyard (1928) wrote the first significant report on adult learning. In it Thorndike posited his theory of the stimulus-response connection, also known as connectionism, which noted that learners respond to a stimulus in a kind of trial and error method. He also discovered that students learn what makes them feel satisfied, what has been repeated to them, and that which they are ready for or for which they have the prerequisite skills.

Another significant behaviorist was B. F. Skinner (1974) who is known for his concept of operant conditioning, which theorized that to elicit learning one must reinforce what is to be learned and ignore what is not to be learned. Most importantly, behaviorists believe that nothing in the person is responsible for behavior, but rather some environmental factor controls behavior or in this case, learning (Grippin & Peters, 1984).

Humanist theories are applicable to intrapersonal intelligence since they are concerned with affective (as well as cognitive) aspects of learning. Examples of affective concerns are human emotions, responsibility, choice, and motivation. The humanistic perspective influenced Carl Roger's (1961) principles of significant learning, Abraham Maslow's (1954) hierarchy of needs, Freud's (1958) explanation of personality, Mezirow's (2000) transformational learning, and Knowles's (1984) theory of andragogy. One of Roger's (1961) significant characteristics was having self-initiative that comes from within. Maslow's (1954) hierarchy included self-esteem and self-actualization, which occur when a person becomes all that she is capable of becoming. Even Freud's

(1958) theory of the three part personality, the id, ego, and superego, had a foundational part in the self-directed learning of adults (Merriam et al., 2007). Mezirow's (2000) transformational learning focused on each person's growth and development while Malcolm Knowles's (1984) theory of andragogy (adult learning) included views on individualism and self-directed learning (Merriam & Brockett, 1997).

A closer examination of these humanistic approaches to learning leads one to explore Knowles's theory of andragogy in which he described motivation. "While adults are responsive to some extrinsic motivators (better jobs, promotions, salary increases, and the like), the more potent motivators are intrinsic motivators (the desire for increased self-esteem, quality of life, responsibility, job satisfaction, and the like)" (Knowles, 1989, pp. 83-84). A significant point of andragogy is the importance of involving adult students in their own learning experience and to create an environment that is conducive to learning. Learners are considered to be self-governing, free to choose, act, and think, and are focused on growing in knowledge and experience (Merriam, 2001).

Andragogy has also led to self-directed learning, which has become a major aspect of adult learning theory (Merriam & Brockett, 1997). Merriam (2001), who first generated a complete description of self-directed learning, pointed out that self-directed learners take charge of designing their learning experiences, implementing steps to reach their goals, and assessing the results. Two key concepts of self-directed learning are planning and goals; both occur via the learner's internal mental processing (Brookfield, 1985; Merriam et al., 2007). In addition, self-directed learners accept responsibility for their learning and engage in critical reflection. In fact, Mezirow (1985) believed that "self-knowledge is a prerequisite for autonomy in self-directed learning" (p. 27). More

recently, Garrison (1997) proposed an interactive model for self-directed learning. This model involves the learners in taking charge of contiguous surroundings in order to reach their goals. They also engage in self-management and self-monitoring by taking responsibility of the learning and by monitoring their thinking and self-thought processes. They think reflectively and critically in order to control their motivation to complete the task. Again, one can easily note the similarities of these ideas and Gardner's intrapersonal intelligence.

Also under the umbrella of humanistic philosophy is transformational learning, which can occur over time or in a moment. Mezirow (2000) described transformational learning as a process of interpreting and reinterpreting knowledge through critical reflection. In addition, he believed that "transformational learning requires emotional maturity—awareness, empathy, and control—what Goleman (1995) calls 'emotional intelligence'—knowing and managing one's emotions, motivating oneself, ...as well as clear thinking" (Mezirow, 2000, p. 11). Cranton (2006) believed that transformational learning can be a means for changing and empowering learners. According to Taylor (2000), "affective learning plays a primary role in the fostering of critical reflection" (p. 305). Furthermore, Taylor believed that feelings are often the spark for reflective learning and are a prerequisite to critical reflection. Processing and exploring one's feelings and emotions as related to an experience can lead to better self-awareness and expanded critical reflection which, in turn, will result in more self-confidence and feelings of self-worth (Taylor, 2000). One should remember that transformational learning proponents view learning as an individual process, and not transpiring in or through groups (Cranton, 2006). Also, Cranton (2006) asserted that not all adult education is transformative.

Gestalt psychologist, Bode, criticized behaviorism and introduced the concepts of the individual and the internal mental processes, which led to cognitive learning theories. Jean Piaget was also a pioneer in this theory (Merriam et al., 2007). He believed that the main effect on children's cognitive development was their propensity to investigate their surroundings, create models of their environment, and to contemplate on the effectiveness of them (Olson & Torrance, 1996). Cognitivists also focus on how individuals make sense of their experiences, past and present, how they process that knowledge, how they store it, and how they retrieve it. Gredler (1997) posited, "essential components of learning are the organization of the information to be learned, the learner's prior knowledge, and the processes involved in perceiving, comprehending, and storing information" (p. 143). Because cognitive theories concentrate on internal processes of how people think and learn, intrapersonal intelligence has some related concepts.

Social cognitivists combine elements from behaviorism and cognitivism and focus on observation as a means of learning. In the 1960s Albert Bandura developed social cognitive theory (first known as social learning theory), and in more recent years has focused on self-efficacy or how competent one feels in a given situation. Social cognitivism also accounts for variations or deviations of personality traits in similar circumstances and maintains that learning occurs through interaction with the environment and behavior (Merriam et al., 2007).

Self-efficacy, as posited by Bandura (1997), "is not a measure of the skills one has but a belief about what one can do under different sets of conditions with whatever skills one possesses" (p. 37). Not only are efficacy beliefs concerned with controlling an

action, but also they are concerned with “the self-regulation of thought processes, motivation, and affective and physiological states” (p. 36). Self-efficacy beliefs constitute a large part of one’s self-knowledge and “influence how people feel, think, motivate themselves, and act” (p. 110). Using self-influence and the ability to self-assess enables a person to become motivated and self-directed. Bandura (1997) also felt that people do what satisfies them and what increases their self-worth. People who have superior self-influence and insight are able to mold or create their futures. They possess the ability to imagine what they might become, either positive or negative. Ultimately, their self-efficacy beliefs determine whether they succeed or fail in each endeavor. Furthermore, Bandura (1997) distinguished between self-efficacy and self-esteem: “Self-efficacy is concerned with judgments about personal capabilities, whereas self-esteem is concerned with judgments of self-worth” (p. 11).

Self-efficacy, along with self-observation, self-assessment, and self-reaction are part of self-regulation as described by Bandura (1997). Self-regulated learners plan, decide which learning strategies to use and then implement them, and use self-efficacy and metacognition to accomplish learning activities. Pintrich (2000) defined self-regulation as learners’ ability to “set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features of the environment” (p. 453). This means that these learners not only monitor their learning, but the conditions surrounding the learning, their progress toward reaching the goal, and assessments about their outcomes (Driscoll, 2005). These learners also regulate time management, motivation, and feelings (Zimmerman, 1989b). Bandura (1997) provided the next step in the regulation model by

explaining that learners continually adjust their goals and how to attain them. In fact, Zimmerman (1989a) suggested that thinking about the results of one's success or failure can provide motivation to engage in the task at hand. The final step of self-regulation is self-reflection in which learners reflect on their learning experience in order to make future improvements.

Another social cognitivist theory is phenomenology. Phenomenologists were among the first to stress the significance of self-perception. They believe that a person can only make sense of people's actions by comprehending the perception of reality that those people hold (Hewitt, 1997). They view adult learning from the perspective that adult education uses the exploration of different phenomena with a focus on emotions, self-awareness, and experiences (Merriam & Brockett, 1997). This approach is especially relevant to this research because motivation to begin a task and to continue it, in other words, to not procrastinate, is seen as a primary role of phenomenology. In addition, phenomenology emphasizes understanding self and the task, how important the task is, how important it is to do well, how much effort is required, and what one's own expectations are (McCombs, 1989). McCombs believed that when learners reflect on what they could become, they set a goal for themselves, which serves as motivation to persist in their goals. As learners strive for their goals, they utilize a system of self: self concept, self-discipline, self-monitoring, self-determination, self-awareness, and self-evaluation in order to control their emotions, behavior, motivation, and to ultimately attain their goals. In other words, a learner's ability to self-regulate in any given learning experience depends on the development of his system of self (McCombs, 1989).

The last sociological perspective that I will examine is symbolic interactionism, which has its roots in pragmatism as espoused by John Dewey (1938) and George Herbert Mead (1934). Pragmatism is a practical approach that believes learners act based on their ideas of the world. Mead believed that the mind and behavior are unavoidably linked and suggested that awareness or consciousness of self is a key component in the human experience. People respond to situations, roles, and even themselves with emotions and reflective contemplation. Another key concept of interactionist sociology is that “human conduct is self-referential... they take themselves—their feelings, their interests, their images of self—into account as they act” (Hewitt, 1997, p. 21).

All of these social cognitivist theories seem parallel to intrapersonal intelligence because of their emphasis on self-reflection, self-awareness, self-knowledge, self-monitoring, and self-assessment.

The final philosophical approach concerned with learning is constructivism, which asserts that students construct their own meaning or knowledge from their experiences. This construction is both mental and socially interactive and can be found in transformational learning and self-directed learning (Merriam et al., 2007). Candy (1991) agreed that “the constructivist view of learning is particularly compatible with the notion of self-direction, since it emphasizes the combined characteristics of active inquiry, independence, and individuality in a task” (p. 278). Constructivists assert that learners should have awareness of the role they play in the process of constructing knowledge, that is, awareness of their thinking and learning processes which is known as metacognition (Driscoll, 2005). Driscoll defined metacognition as one’s awareness of thinking and the self-regulatory behavior that accompanies this awareness (p. 107).

Learners who use metacognition tweak their thinking and actions according to their self-thinking or in response to the realization of errors or feedback (Brown, 1987). Weinert (1987) identified metacognition as “thoughts about thoughts, knowledge about knowledge, or reflections about actions” (p. 8) while Shimamura (1994) considered “perceptions, memories, decisions, and actions” (p. 253) as part of metacognition. Metacognition, along with motivational skills are significant determinates of learning outcomes (Weinert, 1987).

Although transformative learning is described under the umbrella of humanistic perspective, Cranton (2006) situated it under constructivism because it exists within people rather than outside of them. Furthermore, people discover or construct meaning out of their experiences and that meaning is based on their perspectives that have developed through their experiences (Cranton, 2006). Candy (1991) also described some aspects of constructivist learning theory. First, people have a system of making meaning out of experiences; then they use these meanings to interpret occurrences, ideas, or situations. Piaget (1954) agreed with this when he suggested his concept of assimilation and accommodation. He posited that assimilation is the reordering of existing knowledge, while accommodation is creating new mental files of knowledge. Learners apply general concepts to various situations, and as people develop, their mental perceptions become more complex. Basically, constructivists view learning as changing and organizing knowledge in response to environmental stimuli (Candy, 1991). Finally, constructivism is comprised of concepts that are similar to intrapersonal intelligence such as metacognition, self-direction, awareness of thinking, and awareness of learning processes.

Summary of Learning Theories

Concepts of learning such as andragogy, self-directed learning, self-efficacy, self-regulation, transformational learning, and metacognition are important aspects of adult education that seem to be related to procrastination and MIs. Self-directed learning is a part of andragogy that focuses on planning, implementing, and assessing learning through self-reflection. It also concentrates on motivation, including intrinsic and extrinsic motivation. Self-efficacy is concerned with self-knowledge and self-beliefs about whether one is capable of accomplishing a task. Self-regulated learners use self-efficacy and metacognition to plan, implement, and assess learning. Transformational learning utilizes critical reflection and emotional maturity, and in addition, asserts that emotions can be a spark for reflection and self-knowledge.

Procrastination

This section of the literature review examines procrastination. First, definitions are investigated, then the prevalence and frequency of procrastination, effects, predictors and causes, types of procrastination and procrastinators, and personality variables such as depression, anxiety, and self-esteem. Finally, theoretical approaches of procrastination such as self-efficacy, self-regulation, self-handicapping, motivation, and locus of control are discussed and explored before moving on to MIs. The reader may notice that many constructs overlap in this literature review because procrastination is a very complex and multifaceted issue. In addition, it should be noted that the literature does not include a prescribed list of procrastination terms, types, or categories; instead various researchers have described their analysis of terms. I am including all that I deem important and pertinent to this research.

Definition

Procrastination has been defined in a variety of ways, but perhaps the most explicit and comprehensive definition was created by Haycock et al. (1998) as “the failure to get things done in a timely manner...[and] involves delaying responsibilities, decisions, or tasks that need to be done” (p. 317). Schouwenburg, Lay, Pychyl, and Ferrari (2004) describe procrastination as “putting off until tomorrow what one should do today” (p. xi). Merriam-Webster’s dictionary (1991) defined procrastination over four hundred years ago in 1588 using a Latin base of *crastinus* meaning “tomorrow” and the prefix *pro* meaning “forward” which together result in the definition, “to put off intentionally and habitually...the doing of something that should be done” (p. 938). Laura Solomon and Esther Rothblum (1984), researchers who developed the PASS (Procrastination Assessment Scale-Students), a behavioral measure of procrastination, described procrastination as “the act of needlessly delaying tasks to the point of experiencing subjective discomfort” (p. 388).

Prevalence and Frequency

Prevalence and frequency are important aspects of procrastination. Ellis and Knaus (1977) were among the first researchers to study procrastination and found that 70% to 95% of American college students procrastinate at one time or another. However, this does not mean that 95 % of all American college students are chronic procrastinators. Everyone procrastinates at some time in some area of their lives, but for some it is more problematic and more frequent (Ellis & Knaus, 1977). One of the most well known studies on procrastination by Solomon and Rothblum (1984) reported:

46% of subjects reported that they nearly always or always procrastinate on writing a term paper, 27.6% procrastinate on studying for exams, and 30.1% procrastinate on reading weekly assignments. To a lesser extent subjects procrastinate on administrative tasks (10.6%), attendance tasks, (23.0%), and school activities in general (10.2%). In terms of the degree to which subjects felt procrastination was a problem for them, 23.7% reported that it was nearly always or always a problem when writing a term paper, 21.2% said it was a problem when studying for exams, and 23.7% said it was a problem when doing weekly readings. (p. 505)

In 1994 Solomon and Rothblum revealed that half of students surveyed reported academic procrastination at least 50% of the time and 35% reported occasional academic procrastination. Hammer and Ferrari (2002) indicated that prevalence rates for chronic procrastinators were approximately 20% for both men and women in America. Ferrari, O'Callaghan, and Newbegin (2005) found similar rates for individuals in the United Kingdom and Australia demonstrating that chronic procrastination is common in westernized, English-speaking countries. In addition, 20% to 30% of college students interviewed felt that procrastination is a serious problem effecting both academics and quality of life (Solomon & Rothblum, 1984). Similarly, Clark and Hill's (1994) research on African-American college students found that about 30% to 35% reported serious problems with academic procrastination and 55% to 60% wanted to procrastinate less on academic work. Research has shown that procrastination increases during the college years and peaks in the mid-20s (McCown & Roberts, 1994). Hammer and Ferrari (2002) also found that people with a college degree demonstrated fewer problems in making decisions, but had similar rates for other types of procrastination. Younger students were found to procrastinate more than older students (Prohaska, Morrill, Atilas, & Perez, 2000). In 2001 Lavoie and Pychyl's study indicated that 47% of the time when people use the Internet, they are procrastinating and thus, experiencing frustration, guilt, and

depression. They even term the unhappiness associated with procrastination and Internet use as cyberguilt.

Effects of Procrastination

Studies have identified many effects of procrastination including unhappiness (Burka and Yuen, 1983), reduced productivity at work (Ferrari, 1992), depression (Pychyl, Lee, et al., 2000; Schraw, Wadkins, & Olafson, 2007; Tice & Baumeister, 1997), low self-esteem, anxiety, dejection, stress (Schraw et al., 2007; Tice & Baumeister, 1997), poor test performance (Moon & Illingworth, 2005), lower grades, inferior quality of academic work (Ferrari, 2004; Senecal et al., 1995; Steel, Brothen, & Wambach, 2001), health problems, (Senecal et al., 1995; Steel et al., 2001; Tice & Baumeister, 1997), excuse making (Knaus, 2000) and higher rates of course withdrawal (Senecal, Lavoie, & Koester, 1997). Although Schraw et al. (2007) did not find that procrastination led to lower grades and inferior work, it should be noted that their study only interviewed successful procrastinators who were specifically chosen as such. In addition, Brinthaupt and Shin (2001) surmised that the reason higher ability students procrastinate more may be because procrastination puts them in a sustained level of flow which forces them to use their time astutely. Research has also shown that procrastination correlates with academic dishonesty such as plagiarism and cheating on tests (Roig & DiTommaso, 1995). On the other hand, some students' procrastination actually causes them to feel good, especially when delaying an aversive task (Blunt & Pychyl, 2000).

Motives for Procrastination

People give many reasons for procrastination. However, most procrastination falls into two basic categories of motives or causes. First, behavioral procrastination or task

aversion occurs when people want to avoid doing something boring, difficult, or otherwise unpleasant, or sometimes they want to avoid a situation or circumstance or would simply rather do something else (Harrington, 2005; Schouwenburg, 2004). The second category of procrastination causes stems from personality traits or personality disorders such as perfectionism, anxiety, fear of failure, low self-confidence (Harrington, 2005; Schouwenburg, 2004; Van Eerde, 2004), neuroticism, anxiety, depression, low conscientiousness (Van Eerde, 2004) inability to concentrate on work (possibly due to distractions), poor time management (Milgram, Marshesky, & Sadeh, 1995) lack of self-control (Tice & Baumeister, 1997), and negative beliefs about one's capabilities, also known as low self-efficacy (Balkis & Duru, 2007). In addition, poor organizational skills, low motivation, and fear of success were identified by Burka and Yuen (1983). In 2006 Ferrari, Mason, and Hammer found two additional reasons for procrastination in students: the tasks required too much effort (some people term this laziness), and uncertainty about how to complete the task. A surprising finding by Orpen (1998) was that teacher attitudes were not responsible for procrastination. A more practical reason may be that procrastination is due to overestimation of time left to complete a task and underestimation of time needed to complete a task (Lay, 1988). Another reason students procrastinate is that they feel forced to do something as if it were a duty, but if a task is viewed as something they want to do (like a wish), they will do it (Orellana-Damacela, Tindale, & Suarez-Balcazar, 2000). Other people explain their procrastination as a need for the "rush" they experience when putting off things until the last second (Brownlow & Reasinger, 2000).

Fee and Tangney (2000) included shame and guilt as a motive for procrastination. They surmised that the fear of shame procrastinators would experience at being evaluated negatively caused them to delay the revelation of such a truth. This leads to the concept of self-handicapping (Meyer, 2000; Midgley, Arunkumar, & Urdan, 1996). Likewise, Beck, Kooks, and Milgrim (2000) reported a high correlation between self-handicapping and academic procrastination as did Ferrari and Tice (2000). Similarly, Milgram et al. (1995) surveyed 10th grade Israeli students and concluded that students were reluctant to give reasons that implied lack of ability and preferred reasons that were less threatening to their self-esteem such as time management problems. Obviously, the reasons for procrastination are multiple and complex.

Types of Procrastinators and Procrastination

Burka and Yuen (1983) identified three basic types of procrastinators: anxious procrastinators, happy-go-lucky procrastinators, and rebellious procrastinators. McCown, Johnson, and Petzel (1989) also classified three types of procrastinators: a tough-minded, extraverted, low anxiety, low time management type; a neurotic extraverted type, and a neurotic, depressed, and introverted type. Lay (1987) distinguished two types, disorganized and rebellious while Walker (2004) characterized four types of procrastinators that evolved from her clinical interviews: the perfectionist, the postponer, the politician, and the punisher. The perfectionist imagines future possibilities and sets goals, but does not follow through with action or gets bogged down in details and cannot manage time properly. The postponer enjoys having a fun time in the present time. They need structure since they lack self-discipline. Politicians are socially adept and, therefore, must allow time for their social life. Because they value the opinion of others, they

struggle setting limits and priorities. Last is the punisher who is self-critical, feels incapable, and is easily overwhelmed to the point of giving up (Walker, 2004).

In 1987, Lay classified procrastinators in two classes, optimistic procrastinators and pessimistic procrastinators. Optimistic procrastinators delay tasks without worry, underestimate the time it will take, and overall feel confident about procrastinating, but pessimistic procrastinators, on the other hand, delay tasks in order to avoid proving their incompetence (McCown et al., 1989; Milgram, Gehrman, & Keinan, 1992). Similar to the optimistic procrastinator is the wishful thinker who unrealistically believes he will be able to complete the delayed task. In addition, wishful thinkers procrastinate more, especially when the task is unpleasant (Sigall, Kruglanski, & Fyock, 2000).

Two types of chronic procrastination have been identified by Ferrari and Pychyl (2000), arousal procrastination and avoidant procrastination. Arousal procrastination occurs when an individual experiences a rush or a high during the last minute push to finish what was procrastinated. Avoidant procrastination occurs because the individual is attempting to hide his inadequacies or perceived inadequacies by providing a reason for failure (Ferrari, Johnson, & McCown, 1995). A recent study by Ferrari and Diaz-Morales (2007) found that avoidant procrastination was positively related to a feeling that the future was predestined and out of the procrastinator's control and that arousal procrastination was related to lower future orientation. Harriott and Ferrari (1996) explored these two types of procrastination along with decisional procrastination, which they described as a propensity to put off making a decision. However, Milgram and Tenne (2000) identified four types of procrastination. They, too, identified decisional procrastination, but added academic procrastination, life-routine procrastination, and

compulsive procrastination. Academic procrastination occurs when students delay doing assignments or studying (Milgram, Mey-Tal, & Levinson, 1998). Life-routine procrastinators put off scheduling and doing activities and tasks involving life routines, such as housework, repairs, or paperwork (Lay, 1986). Ferrari (1991) described compulsive procrastination as the combination of decisional and task procrastination (procrastinating doing tasks) in the same individual. Behavioral procrastination is similar to task procrastination since it is the tendency to delay many tasks on a continual basis (Lay, 1988).

Senecal et al. (1997) proposed two basic types or categories of procrastination, situational procrastination and trait procrastination. Situational procrastination focuses on the situations surrounding the procrastination and the circumstances that trigger or cause one to procrastinate. The procrastination occurs in response to the conditions the individual is faced with and occurs according to a specific situation (Senecal et al., 1997). Trait procrastination focuses on personal differences in behavior or as a result of one's personality traits and tends to be habitual and occurs in a variety of situations. Some of these traits include high levels of dejection (Lay, 1995; Lay & Schouwenburg, 1993), self-consciousness, forgetfulness, disorganization (Senecal et al., 1995), perfectionism (Ferrari, 2004; Flett, Hewitt, Blankstein, & Gray, 1998; Hewitt & Flett, 1991; Onwuegbuzie, 2000; Sherry, Hewitt, Flett, & Harvey, 2003), anxiety (Onwuegbuzie, 2000; Stober & Joormann, 2001), depression (Ferrari, 2004; Stober & Joormann, 2001), guilt, irrational thoughts, rebelliousness, indecisiveness (Ferrari, 2004), impulsiveness, (Dewitte & Schouwenburg, 2002), worry (Stober & Joormann, 2001), fear of failure

(Burka & Yuen, 1983; Ferrari, 2004; Schouwenburg, 1992), and optimism (Ferrari, 2004). Traits also include low levels of the following:

- conscientiousness (Ferrari, 2004; Lay, 1997; Schouwenburg & Lay, 1995),
- self-confidence (Burka & Yuen, 1983; Ferrari, 2004),
- self-efficacy (Burka & Yuen, 1983; Ferrari, 2004),
- motivation and intrinsic motivation (Ferrari, 2004),
- self-esteem (Burka & Yuen, 1983; Ferrari, 2000; Ferrari, 2004),
- self-control (Schouwenburg & Lay, 1995), and
- perseverance (Dewitte & Schouwenburg, 2002).

In addition, procrastination has been related to the Big Five-Factor model of personality (extroversion, agreeableness, conscientiousness, neuroticism, and openness), in particular, to low conscientiousness and neuroticism, which has been described as a propensity to breakdown due to stress and to display inflated emotions (Costa & Widiger, 2002).

Procrastination as a Personality Trait

A great deal of interest and research has been generated relating to a person's underlying personality structure in regard to individual differences. Roberts, Walton, and Viechtbauer (2006) defined personality traits as "relatively enduring patterns of thought, feelings, and behavior" (p. 1). Cantor (1990) suggested a cognitive perspective of personality that focuses on how personality traits are cognitively expressed and maintained, how a person interprets life tasks, and how his cognitive strategies are developed. Cantor pointed out that people think differently and that this potential for

“creative adjustment” (p. 736) is a phenomenon unique to human beings and furthermore, helps explain the trait approach to personality.

In 2002 Elliot found a correlation of .77 on long-term test-retest data with an interval of ten years, which demonstrated sufficient stability for procrastination as a trait. Research suggests that procrastination has shown consistency across time and situation, which is also support for trait status (Steel, 2007).

As previously mentioned, procrastination has been associated with the Big Five-Factor model of personality, which is composed of five factors: extroversion, agreeableness, conscientiousness, neuroticism, and openness (McCrae & Costa, 1999). The Big Five-Factor personality taxonomy contends that personality traits develop during childhood and reach maturity in adulthood. These stable traits are controlled by temperament or genetic factors, but not by any influences in the environment. Several studies have demonstrated that two of these factors, conscientiousness and neuroticism have especially high correlations to procrastination (Lee et al., 2006). A study by Hess, Sherman, and Goodman (2000) indicated that greater neuroticism leads to more procrastination, and those students who are more neurotic are more anxious and less confident about their ability to perform academically. They also found that trait procrastinators tend to like to study at night rather than in the morning and show more neurotic tendencies. Milgram and Tenne’s (2000) findings lead them to believe that neuroticism also leads to lower levels of conscientiousness. Costa and Widiger (2002) identified six components of neuroticism: “anxiety, angry hostility, depression, self-conscientiousness, impulsiveness, and vulnerability” (p.2). Of these six, only impulsiveness suggests a lack of reflection, vulnerability, low self-confidence, and high

anxiety, correlated significantly with procrastination. Costa and McCrae (1980) defined impulsiveness as a lack of self-control due to being overwhelmed by desires and drives which Schouwenburg and Lay (1995) felt indicated a lack of self-control.

Conscientiousness was significantly and negatively correlated with procrastination, and all six facets of conscientiousness were associated with procrastination (Johnson & Bloom, 1995; Lay, 1997). These six facets include competence, order, dutifulness, achievement striving, self-discipline, and deliberation (Johnson & Bloom, 1995; Schouwenburg & Lay, 1995). “Thus, high procrastinators may be viewed as disorganized, absent-minded, inefficient, and lacking industriousness... [with] a lack of self-confidence, resourcefulness, and thoroughness combined with carelessness and impulsivity” (Johnson & Bloom, 1995, p. 131). Also, results from Schouwenburg and Lay (1995) showed that conscientiousness was the only factor of the Big Five taxonomy that could significantly predict procrastination. Watson (2001) investigated facets of the Big Five-Factor and found that “self-discipline was the strongest facet level predictor” (p. 156).

The Affective Domain of Procrastination

Rothblum, Solomon, and Murakami (1986) examined the relationship of procrastination with affective, cognitive, and behavioral measures and demonstrated that regarding the affective measures, high procrastinators experience more test anxiety and more physical symptoms related to anxiety. Similar findings were obtained by Solomon and Rothblum (1984), indicating that depression and low self-esteem were associated with chronic procrastination, but Lay and Silverman (1995) concluded from their study that anxiety had a minor role in procrastination and was not a strong correlate of trait

procrastination. Even so, Misra and McKean (2000) posited that anxiety and academic stress correlate positively, but effective time management seems to lower academic stress. On the other hand, Milgram and Toubiana (1999) found that higher levels of anxiety produced more procrastination and that higher levels of anxiety were associated with tests more than with homework, therefore, indicating that fear of failure associated with taking a test may lead to more dilatory behavior (procrastination). Although Ackerman and Gross (2005) expected fear of failure to be an important factor in contributing to procrastination, they found no effect for fear. This was also found to be the case by Schouwenburg in 1992 when he concluded that “there is no substantial relationship between fear of failure and procrastination [and] only in specific subgroups of procrastinating students can fear of failure be a factor of importance” (p. 234). Consistent with the aforementioned findings are the results by Onwuegbuzie (2004), who concluded that in the subgroup of statistics students, anxiety may be associated with procrastination, and the delay of tasks related to statistics class was associated with fear of failure and task aversiveness. Likewise, a study by Walsh and Ugumba-Agwunobi (2002) indicated that “procrastination, like trait anxiety, also proved to have considerable power in predicting statistics anxiety, particularly interpretation anxiety, fear of asking for help and fear of statistics teachers” (p. 248).

Stainton, Lay, and Flett (2000) discovered that trait procrastinators tend to ruminate about their dilatory behavior, which could lead to dejection, depression, or anxiety. Also, Gollwitzer (1990) confirmed the rumination concept by suggesting that procrastinators reflect on a task’s aversiveness and weigh the consequences of not doing

the task against the benefits of doing it. In addition, boredom versus project enjoyment is part of this appraisal by the student (Blunt & Pychyl, 2000).

Besides anxiety, perfectionism is another affective factor prominent in the procrastination literature. Flett and Hewitt (2002) defined perfectionism as “striving for flawlessness” (p. 5). More specifically

normal perfectionism is defined as striving for reasonable and realistic standards that leads to a sense of self-satisfaction and enhanced self-esteem; neurotic perfectionism is a tendency to strive for excessively high standards and is motivated by fears of failure and concern about disappointing others. (Flett & Hewitt, p. 11)

Research suggests that perfectionism is multidimensional and comprised of three dimensions: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. Self-oriented perfectionism occurs when a person has “high personal standards and motivation to attain perfection” (Flett & Hewitt, 2002, p. 14); other-oriented perfectionism occurs when a person has “exceedingly high standards for other people” (Flett & Hewitt, 2002, p. 14); and socially prescribed perfectionism occurs when a person feels that other people are imposing a “perception of unrealistically high standards...on the self” (Flett & Hewitt, 2002, p. 14). Onwuegbuzie’s (2000) study found academic procrastination to be significantly related to socially prescribed perfectionism. When procrastination resulted from fear of failure, it was related to self-oriented perfectionism and socially prescribed perfectionism, suggesting that perfectionists are affected by fear of failure more than by a need for achievement (Onwuegbuzie, 2000). Saddler and Sacks (1993) also reported that socially prescribed perfectionism was related to procrastination, but they did not find that self-oriented perfectionism was related to procrastination suggesting that procrastinators appear to be more concerned with what

others think about them than with what they think about themselves. A positive relationship between perfectionism and depression existed as did a positive relationship between procrastination and depression (Saddler & Sacks, 1993).

The Cognitive Domain of Procrastination

Several cognitive variables have been correlated with procrastination, including low self-esteem, low self-confidence (Rothblum et al., 1986), low self-efficacy (Haycock et al., 1998), irrational thinking (Soloman & Rothblum, 1984), distorted views of time available and required time (Kachgal, Hansen, & Nutter, 2001), and inability to focus (Harriott, Ferrari, & Dovidio, 1996). Self-efficacy, as posited by Bandura (1997), “is not a measure of the skills one has but a belief about what one can do under different sets of conditions with whatever skills one possesses” (p. 37). Students with strong self-efficacy report less procrastination, which substantiates Bandura’s belief that strong self-efficacy leads to more task initiation and more persistence, but weaker self-efficacy leads to more task avoidance and less persistence (Haycock et al.). Research by Rothblum, Solomon, and Murakami (1986) found that high procrastinators reported less self-control, less self-efficacy, less delay of gratification, and less self talk for overcoming emotions related to procrastination. Furthermore, Klassen, Krawchuk, and Rajani (2008) advised that procrastinators need self-efficacy for self-regulation or the belief in themselves that they have the abilities to know what cognitive and metacognitive strategies to employ to accomplish a given task. They believed that procrastination is often “the result of a lack of confidence in implementing skills and strategies, not a lack of knowledge about the existence of these skills and strategies” (p. 928).

The Behavioral Domain of Procrastination

As with the other domains, the behavioral domain of procrastination has been linked to perfectionism, anxiety, fear of failure, low self-efficacy, and low self-confidence, but additionally the behavioral domain is linked to external locus of control, self-regulation, and lack of motivation (Ackerman & Gross, 2005). Locus of control was defined by Rotter (1990) as the degree to which a person views life's experiences and outcomes as dependent on one's own actions (internal control) or on external forces such as luck, fate, chance, or other more powerful people (external control). A study by Carden, Bryant, and Moss (2004) indicated that college students with internal locus of control procrastinated less, experienced less test anxiety, and reported higher GPAs than those with external locus of control. This may be due to the fact that students with internal locus of control understand the connection between their behavior and its consequences (Carden et al.). Furthermore, Janssen and Carton (1999) reported that college students with internal locus of control started assignments sooner and turned in assignments sooner than students with external locus of control, and the procrastination did not depend on the difficulty of the assignment.

It is important to study the self-regulation process in order to better understand how people learn and how it affects procrastination. It is helpful to remember that self-regulation has been defined as "the exercise of control over oneself, especially with regard to bringing the self into line with preferred (thus, regular) standards....[Regulation is] *by* the self (thus, not just *of* the self)" (Baumeister & Vohs, 2004, p.2). Although sometimes used interchangeably, self-regulation differs somewhat from self-control; self-regulation is concerned with goal-directed behavior whereas self-control is concerned

with impulse control (Baumeister & Vohs, 2004). Zimmerman (1998) described self-regulation as a “multidimensional process that students selectively use in specific contexts to succeed in school” (p. 84). It is a process that is acquired or learned rather than innate. Because people have the ability to self-monitor, set goals, and choose strategies for learning, they are able to affect behavioral responses and in essence, change outcomes of learning (Zimmerman, 1998; Tice, Bratlavsky, & Baumeister, 2001). The use of self-regulation has been linked to being well-adjusted, attaining good grades, and experiencing fewer abnormal conditions (Tangney, Baumeister, & Boone, 2004), whereas lack of self-regulation has been linked to personal problems such as smoking (Wills, Sandy, & Yeager, 2002). Senecal et al. (1995) studied procrastination and self-regulation and found that “the way students regulated their academic behavior was significantly associated with the extent to which they procrastinated” (p. 616). They also reported that students who were not self-regulated or self-motivated procrastinated more. In order to self-regulate effectively, a person must find a balance between speed and accuracy. A 2001 study by Ferrari indicated that chronic procrastinators were unable to self-regulate their speed and accuracy when performing under a time constraint; this destroys the chronic procrastinator’s claim of, “I work best under pressure.”

Finally, Pychyl, Morin, and Salmon (2000) reported that students can accurately estimate their study time predictions. Surprisingly, procrastinators are aware of their study habits and plan with procrastination in mind. In other words, they know how much they will study and when they will complete their tasks (at the last minute).

Motivation

Gardner (1999a) argued that any study of learning must include an examination of motivation. Wlodkowski (1993) agreed and posited “there must be some degree of motivation to formally learn anything” (p. 13). Motivation has been defined as “the process whereby goal-directed behavior is instigated and sustained” (Schunk, 1989, p. 3). More specifically, incentive motivation or achievement motivation refers to the basic need for humans to maneuver or master their surroundings (White, 1959). Cognitivists believe that cognition is a mediator of motivation, and furthermore motivation is a function of one’s thoughts about a task, one’s ability to complete it, and the results of completing the task (Driscoll, 2005). Bandura (1997) contended “most human motivation is cognitively generated” (p. 122). People use efficacy beliefs, set goals, anticipate outcomes, either positive or negative, and plan strategies for accomplishing the positive outcomes and avoiding the negative ones. This is all part of self-motivation (Bandura, 1997). Bandura (1995) also asserted that a person’s level of motivation is based more on his self-efficacy than on what he can realistically accomplish. These efficacy beliefs impact how people think, feel, act, and motivate themselves. Schunk (1989) suggested that if an individual is making adequate progress and thinks about the satisfaction felt upon completion of the task, then motivation to continue the task will be sustained. Driscoll (2005) defined attribution as “ways in which learners attempt to understand their performances” (p. 325). To increase motivation and help it continue throughout the process of completing a task, students need to learn to attribute their success or failure to their efforts and to the learning strategies selected and used (Driscoll, 2005).

Another aspect of motivation is whether the student has intrinsic or extrinsic motivation. Intrinsic motivation occurs “when someone engage[s] in activities for their own sake...[T]he rewards reside in the activities themselves; that is, the actions are their own reinforcement” (Covington, 2000, pp. 22-23). Extrinsic motivation occurs “when someone behaves for reasons outside himself or herself for something tangible like grades or a job; the rewards are not related to the action” (Covington, 2000, p. 23). A study by Senecal et al. (1995) indicated that students with intrinsic motivation procrastinate less, while those with extrinsic motivation procrastinate more. They added that students will probably procrastinate if they do not find the course content interesting. Vodanovich and Rupp (1999) found in their research that procrastinators are more prone to be bored. Senecal et al. (1995) viewed procrastination as a motivational problem. However, Tice and Baumeister (1997) believed that since procrastinators do not self-regulate well, they need extrinsic motivation to complete a task. A study by Brownlow and Reasinger (2000) on procrastination and motivation confirmed this. Furthermore, for students with amotivation or the absence of either intrinsic or extrinsic motivation (Lee, 2005), academic procrastination was likely (Brownlow & Reasinger, 2000; Senecal et al., 1995). In fact, Brownlow and Reasinger’s (2000) study indicated that a lack of extrinsic motivation in regard to academics is a strong predictor of procrastination.

What, then, motivates students to procrastinate? First, when students struggle with a motivational conflict, the appeal of an enjoyable activity may override the learning task since enjoyment is certain and the realization of the goal is uncertain (Dietz, Hofer, & Fries, 2007). Kahneman (2003) asserted that students will complete that which is certain over something that is only possible or even probable. In addition, procrastination is

highly related to impulsiveness and vulnerability to fun alternatives, which appears to explain the relationship between conscientiousness and procrastination (Dewitte & Schouwenburg, 2002; Tice et al., 2001). Jackson, Fritch, Nagasaka, and Pope (2003) agreed that procrastinators do not focus on future goals, but rather on immediate rewards. High test anxiety can motivate students to procrastinate in order to avoid the cause of the anxiety. It is not surprising, therefore, to find that students with high test anxiety procrastinate more (Milgram, Dangour, & Raviv, 2001). Closely related to this, yet somewhat different, is research by Tuckman (1996), which indicated that giving students regular quizzes provided them motivation to study. Later research by Tuckman (1998), found that spot quizzes “motivated procrastinators to study continually over an entire course. They induced students to study on a daily or weekly basis, rather than postponing studying until the middle or end of the course” (p. 145). Tuckman concluded that regular testing of assigned reading seems to be needed by procrastinators in order to create time-managed studying. He further suggested using research-based principles to train students in learning and motivation strategies. This was supported by his study that found students with this training earned significantly higher (by .48) GPAs (Tuckman, 2003). Bui (2007) termed the use of tests to increase motivation as evaluation threat and suggested that low levels of evaluation threat motivated high trait procrastinators to procrastinate less, but high levels of evaluation threat did not.

Summary of Procrastination

Although 20% to 30% of college students felt that procrastination is a serious problem that affects both academics and quality of life, almost everyone procrastinates to some extent at one time or another. Procrastination causes problems in academics and

health, low self-esteem, anxiety, and may even lead to cheating. One reason people procrastinate is due to task avoidance or aversion to the task; another reason has to do with a person's personality traits. For instance, academic procrastination has been linked to high levels of: anxiety, depression, perfectionism, neuroticism, impulsiveness, irrational thoughts, and low levels or lack of the following traits: motivation, perseverance, self-esteem, self-confidence, self-discipline, self-efficacy, self-regulation, self-control, and conscientiousness.

Emotional Intelligence

Wlodkowski (1993) proposed "emotions are always present during adult learning and are an important influence on learner motivation" (p. 180). Since emotions are so abstract and complex, it is difficult to measure and identify an exact relationship between learning and emotions, yet numerous researchers have attempted to do so. Negative emotions like fear, rejection, powerlessness, boredom, anxiety, threat, and incompetence hinder motivation in students while positive or pleasant emotions like excitement, enjoyment, and relaxation enhance learner motivation (Wlodkowski). The consideration of these aspects of emotion, learning, and motivation, leads one to an exploration of emotional intelligence.

What is emotional intelligence? To thoroughly answer this question, one must first examine the construct of intelligence. Sternberg (2000) described numerous definitions of intelligence, which can be synthesized as a combination of analytical mental processes, higher order thinking and problem solving, metacognition, creativity, and practical reasoning. Sternberg's own triarchic model of intelligence emphasized analytical thinking, creativity, and practical thinking along with metacognition and

monitoring strategies of self (2000). He also admitted that success can be attributed to numerous factors other than simply one's intelligence as traditionally defined. Johnson (2006) stated that "traditional views of intelligence conceive of it as an entity that can be defined, measured, and neatly described with a number" (p. 40), yet recently this idea has been challenged. Furthermore, researchers, psychologists, and theorists have not yet agreed upon one definitive description for intelligence, and have not even agreed upon whether it is a single or multiple construct. As early as 1920, Thorndike viewed intelligence as a combination of more than one ability, the cognitive and social abilities. He considered social intelligence to be part of one's Intelligence Quotient and an integral component of intelligence (Goleman, 1995). Before this, Binet had viewed it as a single construct when he developed the IQ (Intelligence Quotient) test as a means of measuring one's intelligence (as cited in Sternberg, 2000). Since 1920, theorists have developed various conceptualizations for intelligence including social intelligence, academic intelligence, practical intelligence, and emotional intelligence. Johnson (2006) also believed that standardized tests have mistakenly ignored significant factors such as "imagination, curiosity, individuality, and passion" (p. 41). While it is true that IQ tests and academic performance are moderately related, when they are correlated to life success, the correlation is significantly lower (Sternberg & Wagner, 1993). Shepard, Fasko, and Osborne (1999) also suggested that the abilities measured in schools are not necessarily those needed for success in life. Goleman (1995) also reminded readers that although a positive correlation exists between high IQ and success in life, exceptions also exist. In fact, he posited "at best, IQ contributes about 20 percent to the factors that determine life success, which leaves 80 percent to other forces" (p. 34). Mehrabian

(2000) found that emotional thinking was a strong predictor of life success. Mayer and Salovey (1993), who first suggested the theory of emotional intelligence, posited that “emotional intelligence—even more than social intelligence—could be operationalized and measured as distinct from previously described intelligences (and other parts of personality)” (p. 105). Indeed, emotional intelligence is not synonymous with personality or its traits, yet one cannot deny the similarities of the two. Still other researchers view emotional intelligence as a composition of mental abilities, capacities, or skills. Mayer, Salovey, and Caruso (2000) viewed emotional intelligence as using both cognitive and emotional systems of processing. One of the most popular views of emotional intelligence, espoused by Goleman (1995), included five domains: knowing emotions, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships. The first, knowing emotions, is synonymous with self-awareness or recognizing an emotion as it occurs. Second, without this self-understanding an individual cannot manage his emotions or bounce back when overcome by an emotion. Third, when a person motivates himself, he is able to delay gratification and stifle impulses while in pursuit of a goal. The fourth domain, recognizing emotions in others, occurs when an individual is able to show empathy to other people and recognize the needs others have. The final domain encompasses relationships and social abilities like getting along with others and leadership ability.

Other studies have shown that emotion or mood can contribute to self-control problems. For example, a person in a bad mood will figure out a way to feel better even if it means indulging in destructive or impulsive behavior and even at the expense of long-term success (Tice & Bratlavsky, 2000; Tice et al., 2001). In fact, when students

procrastinate, they tend to engage in activities they judge as pleasant (Dewitte & Schouwenberg, 2002; Pychyl et al., 2000). Unfortunately, when people procrastinate to regulate their moods, it very often backfires. In other words, by not doing what they should do, they may eventually suffer negative consequences, which will cause them to feel bad (Tice & Bratlavsky, 2000).

Obviously, emotions have a significant role in learning. Spada, Hiou, and Nikcevic (2006) explored the relationships between metacognitions, negative emotions, and procrastination and found that metacognitions (self-awareness) are associated to procrastination independent of negative emotions. Also, anxiety, depression, and worry were significantly related to procrastination. Their findings led them to suggest that negative efficacy leads to lack of motivation, which leads to procrastination. Dirks (2001) believed that not only are emotions important, but they can impede or motivate learning and suggested that “emotions and feelings play a critical role in our sense of self and in processes of adult learning” (p. 64). As learners perceive and understand themselves, they develop a self-knowledge that provides a means for connecting the text with life experiences. Emotions and feelings also help in the construction, storing, and retrieval of knowledge (Dirks, 2001). Ferro (1993) agreed with the notion that the affective domain has an extraordinary effect on learner motivation and further believes that “the emotions are involved in every learning transaction” (p. 32). Wlodkowski (1993) added that in recent years brain research has shown that for motivation and learning to be maintained, emotional engagement must occur. Dwyer (2002) proposed that recent brain research shows how the brain functions and learns and confirmed using strategies that incorporate MIs and emotional intelligence. Furthermore, Dwyer asserted

that optimal learning must include a safe and appropriate climate or one that encourages a feeling of relaxed alertness. He also suggested that when a student becomes personally and emotionally involved with the learning, the brain's emotional centers are engaged and learning will be enhanced. Similarly, a confident person with high self-esteem will feel better during learning experiences because the brain will produce serotonin, a neurotransmitter, which causes one's mood to improve (Dwyer). Paul MacLean (1974) of the National Institute of Mental Health and originator of the triune brain concept, asserted that positive emotions like humor or love, can assist the neocortex area of the brain in processing higher order thinking while negative emotions like fear, anxiety, or depression can inhibit higher order thinking and learning. He also posited that the emotional center of the brain, the limbic system, has a part in processing information. A research team at Virginia Polytechnic Institute and State University found that "students with higher levels of emotional intelligence had more self-efficacy...and that...in turn enhanced their academic performance" (Emotional IQ contributes, 2005, p. 32). Therefore, emotional intelligence indirectly contributes to academic success, at least for information technology students. Furthermore, Cluck and Hess (2003) implemented MIs into the curriculum of second, fourth, and fifth grade students and found that not only did motivation and enthusiasm increase, but so did assignment completion rate. Although Cluck and Hess (2003) did not specifically examine procrastination, one cannot help but notice the parallelism of procrastination and assignment completion rate.

Multiple Intelligences

Many similarities and parallels exist between emotional intelligence and Gardner's MIs, especially the personal intelligences. Gardner expounded to Goleman

(1995) on his intent for the personal intelligences (interpersonal and intrapersonal): “When I first wrote about the personal intelligences, I was talking about emotion, especially in my notion of intrapersonal intelligence—one component is emotionally tuning into yourself” (p. 41).

Gardner (1999a) believed that learners will be more apt to learn if they have strong, positive emotional reactions in connection to the learning. In fact, he added that without emotion or motivation, learning will be limited. Another reason MI is viewed favorably is because it explains the wide variety of performances and abilities in people, addresses the weaknesses and discrepancies between students, and is not culture-bound (Gardner & Moran, 2006). Indeed, each person has a unique profile of strengths and weaknesses, different abilities and interests, and different ways of learning (Gardner, 1993b). Gardner further proposed that “all humans possess certain core abilities in each of the intelligences....[and] although all humans partake of each intelligence to some degree, certain individuals are...highly endowed with the core abilities and skills of that intelligence” (Gardner, 1993b, p. 28). Barrington (2004), a professor at the University of Australia who has used MI at the college level, also agreed with Gardner that using MI pedagogy addresses the diversity and needs of students from different ethnic, cultural, or social backgrounds.

Morgan (1996) viewed MIs as “a reframing of cognitive styles” (p. 267). For instance, Gardner’s bodily-kinesthetic intelligence is synonymous with cognitivists’ sensory modalities and motor control, and interpersonal and intrapersonal intelligences are viewed as one style by cognitivists, the field dependent style. The difference seems to lie in the fact that Gardner viewed each of his constructs as a separate intelligence

whereas cognitivists viewed the individual preferences and differences of organizing and processing information and experiences as cognitive styles, not as intelligence. While formulating his theory, Gardner explored hundreds of studies and based his theory on “psychometric and experimental psychology...cognitive and developmental psychology, differential psychology, neuroscience, anthropology, and cultural studies” (Gardner & Moran, 2006, p. 227). Although rejected by some as intelligence, MI has been studied, researched, and utilized by educators around the world. The contributions, value, and successful applications MIs have made to education have established it as a theory that will continue to be explored, researched, and implemented in educational settings (Chen, 2004).

Intrapersonal Intelligence

Since the value of MI has been established, a closer look at intrapersonal intelligence is now needed. Gardner (1999b) defined intrapersonal intelligence as “the capacity to understand oneself, to have an effective working model of oneself—including one’s own desires, fears, and capacities—and to use such information effectively in regulating one’s own life” (p. 43). In *Frames of Mind*, Gardner (1993a) expanded this internal aspect of his intelligence theory:

The core capacity at work here is *access to one’s own feeling life*—one’s range of affects or emotions: the capacity instantly to effect discriminations among these feelings and, eventually, to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one’s behavior. In its most primitive form, the intrapersonal intelligence amounts to little more than the capacity to distinguish a feeling of pleasure from one of pain and, on the basis of such discrimination, to become more involved in or to withdraw from a situation. At its most advanced level, intrapersonal knowledge allows one to detect and to symbolize complex and highly differentiated sets of feelings. (p. 239)

In essence, a person with a developed or mature sense of self understands himself, his thoughts, feelings, emotions, and goals, and has the ability to manage, control, and monitor these same inner processes in order to make effective decisions that will lead to a successful life (Gardner, Kornhaber, & Wake, 1996). Furthermore, Gardner (2006) contended that a person should “distinguish one’s own feelings, needs, anxieties, and idiosyncratic profiles of abilities and to assemble them in a way that makes sense and is useful in achieving various personal goals” (p. 39).

Thomas Armstrong (2000), one of the first educators to write about MI, offered his views on intrapersonal intelligence:

Self-knowledge and the ability to act adaptively on the basis of that knowledge. This intelligence includes having an accurate picture of oneself (one’s strengths and limitations); awareness of inner moods, intentions, motivations, temperaments, and desires; and the capacity for self-discipline, self-understanding, and self-esteem. (p. 2)

Silver, Strong, and Perini (2000) asserted that a person with a mature sense of self will trust that self-understanding for direction, will be able to create realistic goals, and will be able to view self with an accurate perspective. It is also important to note that a person with a well-developed intrapersonal intelligence has knowledge and understanding of the other intelligences and is able to capitalize on strengths while minimizing weaknesses (Gardner, 1995). Gardner and Moran (2006) believed that “the interaction among these intelligences is important for understanding how people’s minds work” (p. 228). Intrapersonal intelligence also involves knowing one’s “talents, energy level, interests, and so on. Students who strengthen their intrapersonal intelligence gain a better understanding of areas in which they can expect to excel, which helps them plan and govern their own learning” (Moran, Kornhaber, & Gardner, 2006, p. 27).

Campbell et al. (1999) asserted that intrapersonal intelligence encompasses such qualities as motivation, determination, critical self-observation, ability to work independently, awareness of emotions, curiosity, ability to manage and express emotions, ability to identify and pursue goals, and ability to monitor ongoing learning. These authors also pointed out that deep self-knowledge is gained through life experiences and is a gradual process. They suggested that metacognition is a critical aspect of intrapersonal intelligence and only through self-examination can students gain the self-control needed to succeed academically and in the everyday world. Nolen (2003) added that “people with intrapersonal intelligence are usually imaginative, original, patient, disciplined, motivated, and have a great deal of self-respect” (p. 118).

Self-directed learning is intrapersonal intelligence at its highest level. Self-directed students are able to make decisions, stay motivated, select learning strategies, and maintain self-discipline (Campbell et al., 1999). Sellars (2006) reminded readers that self-directed learners plan learning strategies, regulate their behaviors, and assess their progress, the process, and the outcome. To do so, learners must have realistic and accurate self-knowledge. The Shepard et al. (1999) investigation linked high levels of intrapersonal intelligence with self-regulation, self-efficacy, self-image, other aspects of self, and to higher levels of student achievement. This was corroborated by a recent intervention program where 27 eight and nine year old students were identified as low achievers in English. After these students were assessed using a MI profile, teaching strategies and learning activities were designed to create opportunities for using their intelligence strengths. Teachers and students worked together, using the students’ self-knowledge to design the strategies. As students met goals, their self-confidence

increased, and they were able to make their goals increasingly more difficult, yet they were still able to succeed. As the time passed, they became more reflective and were able to regulate their learning, avoiding circumstances that did not enhance their learning and choosing strategies to increase their success. By increasing their knowledge of self, they were able to regulate their learning and successfully meet their goals. These results suggest that a strong intrapersonal intelligence is the foundation for all aspects of self and especially for self-directed learning (Sellars, 2006).

Summary of Multiple Intelligences

Gardner's MIs are a multiple approach to viewing intelligence rather than a single construct perspective. Intrapersonal intelligence, in particular, has similarities to emotional intelligence, is concerned with self-knowledge, and includes aspects of self-directed learning, self-regulation, self-efficacy, motivation, and metacognition.

Summary of the Literature

A review of the procrastination literature presents procrastination as a prevalent, dysfunctional behavior that relates to a number of psychological constructs. In particular, academic procrastination has been linked to high levels of: anxiety, depression, perfectionism, neuroticism, impulsiveness, irrational thoughts, and low levels or lack of the following traits: motivation, perseverance, self-esteem, self-confidence, self-discipline, self-efficacy, self-regulation, self-control, and conscientiousness. On the flip side, the collective research has demonstrated that students high in motivation, perseverance, self-esteem, self-confidence, self-discipline, self-efficacy, self-regulation, self-control, and conscientiousness procrastinate less. A student who possesses these psychological characteristics is considered to be a self-directed learner with strong

emotional intelligence. As described above, a self-disciplined and self-directed learner has high intrapersonal intelligence and is able to control and direct thoughts, knowledge, learning strategies, impulses, desires, and all that is encompassed in adult learning. Therefore, I hypothesized that a person high in intrapersonal intelligence would not procrastinate to the extent that a person low in intrapersonal intelligence would. Similarly, a person low in intrapersonal intelligence would procrastinate more.

CHAPTER III

METHODOLOGY

This chapter describes the research methods and procedures developed and used in collecting and analyzing data for this study. In particular, the following are discussed: participants in the study, the instruments, data collection method, data analyses, delimitations, and assumptions.

Participants

The participants in this study were students from a small university in the southwestern region of the United States. Participants were at least 18 years of age, mostly white, but some Hispanic-Americans and African-Americans, and a few of other ethnicities such as Native American, Asian American, and Pacific Islanders. I attempted to survey 135 students mostly freshmen and sophomores, but a few juniors and seniors were included.

Survey Instruments

Solomon and Rothblum (1994) developed the Procrastination Assessment Scale-Student (PASS), a 44-item tool, divided into two sections and used to assess procrastination in “three areas: (1) the prevalence of academic procrastination, (2) the reasons for academic procrastination, and (3) to compare scores on the PASS with behavioral indices of procrastination and other related constructs” (Solomon & Rothblum, 1994, p. 446). The scale was constructed for college students and consists of

two sections, the first “measures the prevalence of procrastination in six academic areas” (Solomon & Rothblum, 1994, p. 446). These six areas are as follows:

- Writing a Term Paper;
- Studying for Exams;
- Keeping up Weekly Reading Assignments;
- Academic Administrative Tasks such as Registering for Classes or Getting ID Cards;
- Attendance Tasks such as Meeting with Advisor or Making an Appointment with an Advisor; and
- School Activities in General.

Using a 5-point Likert-type scale, students assign a letter representing the degree to which they procrastinate on each of several tasks. Choosing an (A) meant that the student never procrastinates (1 point); (B) meant almost never (2 points); (C) meant sometimes (3 points); (D) was almost always (4 points); and (E) was always procrastinates (5 points). The PASS also assesses to what extent procrastination is a problem in each of the six areas for each student. This 5-point Likert scale ranges from (A—1 point) not a problem to (E—5 points) always a problem. The prevalence of procrastination scores are combined with the scores for the extent to which procrastination is a problem for a total procrastination score. Scores are regarded as low if they are from 18-42 and high from 66-90. The “second part assesses reasons for procrastination” (Solomon & Rothblum, 1994, p. 446) and will assess the frequency of procrastination for the various academic tasks. For each of these areas, the percentage of students who reported that they nearly always or always procrastinate is determined.

“The most recent research shows low levels of internal consistency for the PASS with split-half correlations of .58 for men and .31 for women regarding procrastination frequency... For the total score, the test-retest reliability was .80” (Solomon & Rothblum, 1994, p. 446). For the present study the internal-consistency reliability of the PASS was .67. The PASS has been judged to have very good concurrent validity with “significant correlations with” other procrastination scales (Solomon & Rothblum, 1994, p. 447).

Permission was granted from the authors to use this instrument.

The second instrument used was the Multiple Intelligences Developmental Assessment Scale (MIDAS) for college students and adults, a self-report assessment of an individual’s MIs. The eight MIs are as follows:

- Musical—ability in rhythm, pitch, and tones;
- Body/Kinesthetic—skill in coordination, movement, and dexterity;
- Math/logical—skill in numbers, problem solving, and logical thinking;
- Spatial—understanding space, patterns, and how things work;
- Linguistic—ability in verbal language using speech and writing;
- Spatial—understanding space, patterns, and how things work;
- Interpersonal—understanding other people and how to interact with them;
- Intrapersonal—understanding oneself; and,
- Naturalistic—understanding nature, science, and agriculture.

The test includes individual scales for each of the intelligences. Each MIDAS question has six response choices: A = not at all; B = fairly good; C = very good; D = excellent; E = I don’t know; and F = does not apply. Most assessment items focus on one intelligence or scale; however, a few focus on two or three scales (Shearer, 2007, 149).

The developer of the scale, Shearer, asserts “scores above 60% are considered to be in the high range and scores below 40% are in the low ability range” (p. 9). Shearer (2007) used the following general categories for scales: 100-81—very high; 80-61—high; 60-41—moderate; 40-21—low; 0-20—very low (a zero could indicate missing data or an incomplete answer sheet).

The MIDAS has been evaluated and its use is supported by the Thirteenth Mental Measurements Yearbook, which concluded that the MIDAS provides a reasonable measurement of a person’s intelligence in the eight domains (Plake & Impara, 1999). For this study Cronbach’s alpha indicated the reliability of the MIDAS was .85. Shearer (2007) found that most of the intelligences on the MIDAS related appropriately with other performance tests, e.g., I.Q. tests, and demonstrated the skills and abilities that were expected. As for construct validity, the kinesthetic scale has not been found through research to have a unique construct as have the other seven intelligences (Shearer, 2007). “The construct validity of the MIDAS has been previously supported by numerous studies of its test-retest, inter-informant and alpha reliabilities as well as criterion group and predictive validity investigations” (Shearer, 2007, p. 23). Shearer (2007) conducted research on 10,958 people, 78% teens, 12% college students, and 10% adults, who lived in multiple regions of the United States and Canada to determine construct validity. The results of this investigation along with results from several cross-cultural studies support the construct validity of the MIDAS. In addition, the MIDAS “has been previously supported by numerous studies of its test-retest, inter-informant and alpha reliabilities as well as criterion group and predictive validity investigations” (Shearer, 2007, p. 23).

Overall, these indications demonstrate that a person's MI profile can be described and measured. Shearer granted permission for the use of this instrument.

Data Collection Method

Permission to conduct the study was requested and granted by the researcher from the University of North Dakota's IRB board and from the small university in the southwestern United States, which does not have an IRB board in place. The researcher conducted the two surveys using paper and pencil methods during class periods in which the instructors granted permission. Students were assured that neither they nor their institutions would be identified in the study. The researcher described the research and the approximate time it would take for the students to complete the inventory and assessment. Students' completion of the instruments indicated their willingness to participate in the study.

Data Analyses

To show levels of procrastination and MIs, descriptive statistics were used, including means and standard deviation. To determine if a relationship exists between procrastination and MIs, particularly the intrapersonal intelligence, multiple correlation and regression were used. Procrastination was the dependent variable and was viewed as continuous; it was also divided into two variables, prevalence of procrastination and reasons for procrastination. The independent variables were the eight MIs.

Multiple correlation and MANOVA were used to study the patterns of relationship among the variables to determine how the independent variables (the MIs) were related to the dependent variable (procrastination). All statistical tests were conducted at the .05 level for type 1 error.

Delimitations of the Study

This study was conducted with the following delimitations:

1. The study only included students from a small southwestern university.
2. Data for the study were limited to the perceptions of the respondents.
3. The study was limited to 135 students, mostly freshmen and sophomore students in the fall 2009 semester.

Assumptions

The following assumptions were generated for the purposes of this study:

1. The participants in the study were assumed to answer accurately, honestly, and openly to the Procrastination Assessment Scale-Students (PASS) and the Multiple Intelligences Developmental Assessment Scale (MIDAS).
2. The survey instruments accurately reflected the procrastination levels and MI profiles of the students.

Summary

The PASS and MIDAS instruments were used to determine if a relationship exists between procrastination and the MIs, in particular, intrapersonal intelligence in college students. Descriptive statistics, MANOVA, multiple regression, and correlation were used to calculate these relationships and descriptions.

CHAPTER IV

RESULTS

The purpose of this study was to determine levels of procrastination and reasons for procrastination in college students, to determine levels of the eight MIs in college students, and to determine if a relationship existed between intrapersonal intelligence and procrastination in college students. Chapter IV presents the results of this study and is divided into two sections: demographic characteristics and research question results.

Demographic Characteristics of Respondents

Of the 135 instruments administered to students at the small southwestern university, 128 instruments were completed and deemed usable. The response rate was 94.8%. Approximately 58% (57.9) of the respondents were male, while 42.1% were female. Caucasian ethnicity was indicated by 66.9% of the respondents, African American by 7.3% of the respondents, Hispanic by 20.2%, and 5.6% of the respondents were of another ethnicity such as Asian, Native American, or Island Pacific. Of the 124 respondents who recorded their year in school, 68.5% were freshmen, 17.7% were sophomores, 9.7% were juniors, and 4.0% were seniors. The age of respondents ranged from 18 to 34. Table 1 displays the percentage in each age category.

Table 1. Age of Respondents

Age	Frequency	%
18	30	23.8
19	47	37.3
20	25	19.8
21	8	6.3
22	6	4.8
23	1	0.8
24	3	2.4
25	1	0.8
27	2	1.6
28	1	0.8
29	1	0.8
34	1	0.8

Research Question Results

Research Question One

What were the levels of procrastination in academic tasks of the respondents?

Table 2 displays the means and standard deviations for the six procrastination areas and for total procrastination. For this instrument the minimum score for the sub-scales was 3 with a maximum of 15 and a middle score of 9. The highest area of procrastination was writing a term paper with a mean of 10.5, followed by keeping up with weekly reading assignments with a mean of 10.4. Next was studying for exams with a mean of 10.3, followed by school activities in general with a mean of 7.9. The lowest two areas were attendance tasks such as meeting with an advisor or making an appointment with an advisor and academic administrative tasks such as registering for classes or getting ID cards. The means for these areas were 7.8 and 7.6 respectively. These results show that students procrastinate much more in the three areas of academic tasks than in three areas

of administrative tasks. The total procrastination scores ranged from 28 to 90 with a mean of 54.6 and a standard deviation of 10.0.

Table 2. Procrastination Levels in Six Areas and Total Procrastination

Procrastination Area	Minimum	Maximum	Mean	Average	SD
Writing Term Paper	4	15	10.5	3.5	2.2
Weekly Reading	3	15	10.4	3.5	2.8
Studying for Exams	4	15	10.3	3.4	2.2
General School Activities	3	15	7.9	2.6	2.9
Attendance Tasks	3	15	7.8	2.6	3.1
Academic Tasks	3	15	7.6	2.5	2.9
Total Procrastination	28	90	54.6	3.0	10.0

Research Question Two

What were the reasons for procrastination? Students were asked 26 questions regarding reasons for procrastination. Scores ranged from 1 to 5 with a middle of 3. A higher mean indicated that students more frequently procrastinate for that reason. Table 3 displays the means and standard deviations for the reasons for procrastination.

Means and standard deviations for procrastination reasons were ranked in order, and the five most frequent reasons are displayed in Table 4. Table 5 displays the five least frequent reasons for procrastination.

The top two reasons in Table 4 are considered task aversion and the third is being overwhelmed. Not knowing what to include in the paper is considered as having difficulty making decisions, and the last reason in the top five falls under the category of laziness.

Table 3. Means and Standard Deviations for Reasons for Procrastination (N=128)

Reasons for Procrastination	Mean	SD
<u>Laziness</u>		
You didn't have enough energy to begin the task.	3.0	1.3
You just felt too lazy to write a term paper.	3.3	1.3
<u>Difficulty Making Decisions</u>		
You had a hard time knowing what to include and what not to include in your paper.	3.2	1.2
You couldn't choose among all the topics.	2.4	1.2
<u>Low Self-esteem</u>		
You didn't think you knew enough to write the paper.	2.8	1.3
You didn't trust yourself to do a good job.	1.9	1.3
<u>Peer Pressure</u>		
You knew that your classmates hadn't started the paper either.	2.3	1.3
Your friends were pressuring you to do other things.	2.8	1.5
<u>Dependency</u>		
You waited until a classmate did his/hers, so that he/she could give you some advice.	2.1	1.2
You waited to see if the professor would give you some more information about the paper.	2.7	1.3
<u>Lack of Assertion</u>		
There's some information you needed to ask the professor, but you felt uncomfortable approaching him/her.	2.4	1.3
You had difficulty requesting information from other people.	2.1	1.1
<u>Time Management Problem</u>		
You had too many other things to do.	4.1	1.0
<u>Aversiveness of the Task</u>		
You really disliked writing term papers.	3.5	1.5
You felt it just takes too long to write a term paper.	3.0	1.4
<u>Fear of Success</u>		
You were concerned that if you did well, your classmates would resent you.	1.3	0.8
You were concerned that if you got a good grade, people would have higher expectations of you in the future.	1.7	1.1
<u>Thrill of Taking Risks</u>		
You looked forward to the excitement of doing this task at the last minute.	1.7	1.2
You liked the challenge of waiting until the deadline.	1.7	1.2
<u>Rebellion Against Control</u>		
You resented having to do things assigned by others.	1.8	1.2
You resented people setting deadlines for you.	1.5	1.0
<u>Perfectionism</u>		
You were concerned you wouldn't meet your own expectations.	2.1	1.3
You set very high standards for yourself, and you worried that you wouldn't be able to meet those standards.	2.2	1.4
<u>Being Overwhelmed</u>		
You felt overwhelmed by the task.	3.5	1.4
<u>Fear of Failure</u>		
You were concerned the professor wouldn't like your work.	1.8	1.1
You were worried you would get a bad grade.	2.2	1.3

Table 4. Means and Standard Deviations for the Five Most Frequent Reasons for Procrastination in Rank Order

Procrastination Reason	Mean	SD
You had too many other things to do.	4.1	1.0
You really disliked writing term papers.	3.5	1.5
You felt overwhelmed by the task.	3.5	1.4
You had a hard time knowing what to include and what not to include in your paper.	3.2	1.2
You just felt too lazy to write a term paper.	3.3	1.3

Table 5. Means and Standard Deviations for the Five Least Frequent Reasons for Procrastination in Rank Order

Procrastination Reason	Mean	SD
You were concerned that if you did well, your classmates would resent you.	1.3	0.8
You resented people setting deadlines for you.	1.5	1.0
You resented having to do things assigned by others.	1.8	1.2
You liked the challenge of waiting until the deadline.	1.7	1.2
You didn't trust yourself to do a good job.	1.9	1.3

The lowest reason provided by students for procrastinating is categorized as fear of success; the next two that are least often furnished are categorized under rebellion against control. The fourth least-used reason for procrastination is considered risk-taking, and the final reason, fifth from the bottom, is due to low self-esteem. Seemingly, a variety of reasons are offered by students representing several categories. No one category is prominent in the top five reasons or least-used reasons. Interestingly, fear of failure was not given as a top reason for procrastination.

Research Question Three

What were the students' levels of MI, particularly intrapersonal intelligence?

Table 6 displays the means and standard deviations for the eight MIs. The minimum scores ranged from a minimum of 3 to a maximum of 100. The means ranged from 44.2

to 64.4 with a higher score indicating a greater strength of intelligence. The intrapersonal intelligence mean ranked as the fourth highest with a mean of 56.7. The lowest score in the intrapersonal intelligence was a 14, and the highest score was a 96. Interpersonal intelligence ranked highest with a mean of 64.4, whereas naturalistic intelligence was lowest with a mean of 44.2. The second highest mean was for musical intelligence and linguistic intelligence was third. In other words, students were strongest in interpersonal intelligence, then musical intelligence, linguistic intelligence and fourth, intrapersonal intelligence. The bottom half of the rankings were spatial intelligence, kinesthetic intelligence, math/logical intelligence, and the weakest was naturalistic intelligence. It is interesting to note that spatial intelligence ranked in the bottom half. However, if the survey had been administered to students at a vocational or trade school it would be expected that spatial intelligence would rank high.

Table 6. Minimum Scores, Maximum Scores, Means, and Standard Deviations for the Multiple Intelligence Levels

Multiple Intelligence	Minimum	Maximum	Mean	SD
Musical	15	100	62.9	20.0
Kinesthetic	10	92	52.0	17.8
Math/Logical	8	99	48.1	20.2
Spatial	3	98	50.9	22.7
Linguistic	4	93	59.9	19.1
Interpersonal	3	93	64.4	17.0
Intrapersonal	14	96	56.7	15.5
Naturalistic	3	95	44.2	21.7

Research Question Four

Was there a relationship between procrastination (the dependent variable) and intrapersonal intelligence and the other dimensions of MI (the independent variables)?

This question was answered using multiple regression for the full model and stepwise forward regression. Multiple regression results of all eight intelligences against procrastination indicated significant relations at p less than .001 ($R=.470$, $R\text{ Square}=.220$, $F\text{ ratio}=4.207$, $dfs=p<.001$). Additionally, stepwise forward calculations identified linguistic intelligence, ($p<.001$) as the only significant predictor (negative) of procrastination with an F value of 20.4 ($R=.373$, $R\text{ Square}=.139$, $dfs=p<.001$). The full model had an R of .470 with an R squared of .220 with a significance level of less than .001. The effect size (.220) would be considered minimal. Because linguistic intelligence is an integral part of writing and, thus, academic work, it is not surprising to find a negative relationship between procrastination and a strong linguistic intelligence. However, it was surprising to the researcher not to find a significant negative relationship between intrapersonal intelligence and procrastination.

Research Question Five

Were there differences between procrastination levels on the MI scores? Total procrastination was divided into five levels from low to high levels of procrastination to view the relation in this fashion. A MANOVA was computed to compare the means of the procrastination levels for each of the MIs across the five levels of procrastination. The Wilks' Lambda indicated significant differences (Wilks' Lambda=.632, hypothesis $df=32$, error $df=429$, $p<.05$) among the eight MIs, in particularly linguistic intelligence and intrapersonal intelligence. After MANOVA was significant, individual ANOVAs were calculated. Table 7 displays these results. Two ANOVAs for the MIs were significant beyond the .05 level. They were linguistic intelligence and intrapersonal intelligence.

Table 7. Means and ANOVA Comparisons of the Five Procrastination Levels for the Eight Multiple Intelligences

Multiple. Intelligence	PL1	PL2	PL3	PL4	PL5	<i>F</i>	<i>p</i>
Musical	58.9	68.3	67.7	58.8	60.8	1.39	.240
Kinesthetic	51.3	57.5	55.2	46.8	49.5	1.46	.218
Math/Logical	49.4	49.8	54.5	48.7	39.7	2.09	.086
Spatial	47.4	53.1	55.7	48.0	50.1	0.59	.668
Linguistic	65.5	67.3	63.3	57.5	48.3	5.01	.001
Interpersonal	64.7	68.0	68.3	62.0	59.8	1.28	.283
Intrapersonal	57.0	59.1	62.6	58.0	48.2	3.65	.008
Naturalistic	44.9	45.4	45.0	42.0	43.6	0.10	.984

Procrastination Levels 1-5, PL1=low, PL5=high

Since linguistic intelligence and intrapersonal intelligence were significantly different for the procrastination levels, a post hoc paired-comparison was conducted to compare the mean differences of the five procrastination levels (low=1, moderately low=2, medium=3, moderately high=4, and high=5) against both linguistic intelligence and intrapersonal intelligence. For linguistic intelligence, significant differences existed between the means of low and high procrastination, moderately low and high procrastination, and medium and high procrastination. Only the differences between 1 and 5, 2 and 5, and 3 and 5 have a large size effect. For intrapersonal intelligence the only significant difference was between medium and high procrastination. Only the differences between 3 and 5 have a large size effect. Tables 8 and 9 display these results.

The significant differences between low, moderately low, and medium levels of procrastination against high procrastination in students with high linguistic intelligence indicates that students are procrastinating less when they are high in linguistic intelligence. Similar results were found for intrapersonal intelligence and procrastination levels; however, significance was only found between medium and high

procrastination levels. Again, this indicates that students are procrastinating less when high in intrapersonal intelligence.

Table 8. Post Hoc Comparisons of Procrastination Level Means for Linguistic Intelligence

Means compared	Difference	<i>p</i>	Effect Size
PL1-PL2	-1.9	ns	0.097
PL1-PL3	2.2	ns	0.115
PL1-PL4	7.9	ns	0.414
PL1-PL5	17.1	.007	0.896
PL2-PL3	4.1	ns	0.212
PL2-PL4	9.8	ns	0.512
PL2-PL5	19.0	.002	0.994
PL3-PL4	5.7	ns	0.300
PL3-PL5	14.9	.024	0.781
PL4-PL5	9.2	ns	0.482

ns=not significant

Table 9. Comparison of Procrastination Level Means for Intrapersonal Intelligence

Means compared	Difference	<i>p</i>	Effect Size
PL1-PL2	-2.2	ns	0.140
PL1-PL3	-5.6	ns	0.362
PL1-PL4	-1.0	ns	0.062
PL1-PL5	8.8	ns	0.565
PL2-PL3	-3.5	ns	0.222
PL2-PL4	1.2	ns	0.078
PL2-PL5	10.9	ns	0.704
PL3-PL4	4.7	ns	0.300
PL3-PL5	14.4	.005	0.926
PL4-PL5	9.7	ns	0.627

ns=not significant

Research Question Six

Were there differences among the three levels (low=1, moderate=2, or high=3) of intrapersonal intelligence on the six areas of procrastination or the total procrastination level? A low level of intrapersonal intelligence ranged from 14 to 40; moderate ranged

from 41 to 60, and high from 61 to 96. The six areas of procrastination were: (1.) writing a term paper; (2.) studying for exams; (3.) keeping up weekly reading assignments; (4.) academic administrative tasks such as registering for classes or getting ID cards; (5.) attendance tasks such as meeting with an advisor or making an appointment with an advisor; (6.) and school activities in general. The Wilks' Lambda indicated significant differences (Wilks' Lambda=.858, hypothesis df=14, error df=238, $p<.05$) among the three levels for the six procrastination areas. ANOVAs indicated differences for studying for exams (.043) and in total procrastination (.011). Table 10 displays these results. Since significant differences existed between the three levels of intrapersonal intelligence and studying for exams and total procrastination, a post hoc comparison was conducted to compare the means of the three intrapersonal intelligence levels (low=1, medium=2, high=3) against studying for exams and total procrastination.

Table 10. ANOVA Comparisons of Intrapersonal Intelligence Levels by Procrastination Area and Total Procrastination

Procrastination Area	Low II	Moderate II	High II	<i>F</i>	<i>p</i>
Term Paper	11.1	10.7	10.2	1.24	.294
Studying for Exams	11.5	10.3	10.0	3.22	.043
Weekly Reading	11.8	9.9	10.5	3.02	.052
Academic Admin. Tasks	8.3	7.8	7.2	1.18	.309
Attendance Tasks	9.1	8.0	7.2	2.86	.061
School Activities	0.9	8.0	7.5	1.73	.182
Total Procrastination	60.7	54.7	52.5	4.72	.011

Since significant differences existed between the three levels of intrapersonal intelligence and studying for exams and total procrastination, a post hoc comparison was conducted to compare the means of the three intrapersonal intelligence levels (low=1, medium=2, high=3) against studying for exams and total procrastination. For both

studying for exams and total procrastination, differences existed between low and high levels of intrapersonal intelligence indicating that students with low intrapersonal intelligence will procrastinate at a higher level than students with high intrapersonal intelligence. Tables 11 and 12 display these results.

Table 11. Post Hoc Comparison for Intrapersonal Level Means for Studying for Exams

Means compared	Difference	<i>p</i>	Effect Size
Low II-High II	1.5	.038	0.677
Medium II-Low II	-1.2	.122	0.549
Medium II-High II	0.3	1.000	0.128

II=Intrapersonal Intelligence

Table 12. Post Hoc Comparison for Intrapersonal Level Means for Total Procrastination

Means compared	Difference	<i>p</i>	Effect Size
Low II-High II	8.2	.008	0.814
Medium II-Low II	-6.0	.074	0.597
Medium II-High II	2.2	.731	0.217

II=Intrapersonal Intelligence

The difference between low and high intrapersonal intelligence for studying for exams had a large size effect. Also, a large size effect was indicated by the difference between low and high intrapersonal intelligence for total procrastination. In both studying for exams and total procrastination, students with high intrapersonal intelligence procrastinated less than students with low intrapersonal intelligence. It is interesting that studying for exams showed a significant difference rather than writing a term paper since earlier results indicated that writing a term paper is the area most often procrastinated. Possibly students with high intrapersonal intelligence are not high in linguistic intelligence which has been indicated as a predictor of less procrastination. Still, these results show that a student with high intrapersonal intelligence is less likely to

procrastinate on studying for exams than a student with low intrapersonal intelligence. In addition, a student with high intrapersonal intelligence is less likely to display overall (total) procrastination than a student with low intrapersonal intelligence.

Summary of Analyses

Means and standard deviations showed that students procrastinate much more in the first three areas of academic tasks than in the three areas of attendance/administrative/general tasks. Top reasons for procrastination were task aversion, feeling overwhelmed, having difficulty making decisions, and laziness, while the least-used reasons were fear of success, rebellion against control, risk-taking, and low self-esteem. The means of the eight MIs indicated that interpersonal intelligence had the highest score, whereas naturalistic intelligence had the lowest score. Multiple regression results of all eight intelligences against procrastination indicated a significant relationship (negative). However, stepwise forward calculations identified linguistic intelligence as the only significant predictor of procrastination. Since only one of the eight MIs was significant, the relationship between procrastination and MIs was only slightly linear. The relationship between procrastination and intrapersonal intelligence cannot be viewed as extremely nonlinear especially with intrapersonal intelligence and linguistic intelligence. In addition, the two MIs that were significantly different were linguistic intelligence and intrapersonal intelligence. Results indicated that a student with high intrapersonal intelligence is less likely to procrastinate on studying for exams than a student with low intrapersonal intelligence. In addition, a student with high intrapersonal intelligence is less likely to display overall (total) procrastination than a student with low intrapersonal intelligence.

CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

The previous chapters presented an introduction to and statement of the problem, the purpose of the study, a literature review, procedures, and methodology used in the study, data analyses, and results. This chapter presents a summary of the research and findings, along with a discussion and recommendations for future research.

Summary

The purpose of this study was to determine levels of procrastination and reasons for procrastination in college students, to determine levels of the eight multiple intelligences in college students, and to determine if a relationship existed between intrapersonal intelligence or other multiple intelligences and procrastination in college students. This study also sought to determine if a relationship existed between intrapersonal intelligence and procrastination such as a weak intrapersonal intelligence and high procrastination or a strong intrapersonal intelligence and low procrastination. Studying significant relationships such as these might facilitate researchers, educators, counselors, and psychologists in helping students procrastinate less, illuminate possible solutions to the problem of procrastination, and thus improve students' performance. Finally, this study indicates the need to explore other aspects of procrastination and multiple intelligences, answer questions raised, and to substantiate the current findings.

Findings and Discussion

This study was guided by six research questions, three descriptive questions involving levels of procrastination, levels of multiple intelligences, and reasons for procrastination, and three questions concerned with relationships between procrastination and multiple intelligences, particularly intrapersonal intelligence.

Research Question One

What were the levels of procrastination in academic tasks of the respondents? The results showed that students procrastinate much more on academic tasks than on administrative tasks. For example, procrastination on writing a term paper, reading weekly assignments, and studying for exams had an average mean of 10.4, while the means of administrative tasks such as registering, meeting with advisors, and general school activities averaged only 7.8. These results support earlier findings by Solomon and Rothblum (1984) who also found much higher procrastination of academic tasks (30.1% to 46.0%) compared to administrative tasks (10.2% to 23.0%). Seemingly, students today still procrastinate on academic tasks more than on administrative tasks. This leads one to speculate on the reasons behind this occurrence. Maybe students are procrastinating more on academic tasks because they feel unprepared, incapable, and overwhelmed. This research seemed to indicate that in general, students simply dislike academic tasks more than they dislike administrative tasks. However, since high linguistic intelligence was a predictor (negative) for procrastination, it may be that colleges and college professors need to spend more time training students how to write papers and how to study for and take tests. In addition, it may be advantageous for colleges to require speed-reading courses, so reading assignments might take less time and be less distasteful to students.

Research Question Two

What were the reasons for procrastination? In the present study, students reported task aversion as the top reason for procrastination. Previous researchers also found task aversion as a primary reason for procrastination (Pychyl, Lee, et al. 2000; Milgram, Mey-Tal, & Levinson, 1998). Task aversion means that students did not like the academic assignment and did not want to do it. This leads one to wonder why they were reluctant to complete the task. If the task seemed too difficult or if students felt unprepared, then students need more education on writing papers, studying, and testing. Being overwhelmed was the second reason listed for procrastination. This, too, was not surprising as Walker (2004) described one type of procrastinator, the punisher who feels so incapable and overwhelmed that that individual just gives up. Costa and McCrae (1980) defined impulsiveness as a lack of self-control due to being overwhelmed by desires and drives. This relates to my findings because lack of self-control and feeling overwhelmed (the second top reason for procrastination) are components of low intrapersonal intelligence. Also reported in the top five reasons for procrastination was difficulty making decisions and uncertainty about how to complete an academic task. Ferrari, Mason, and Hammer (2006) also found that students procrastinated due to uncertainty about how to complete the academic task. Gardner, Kornhaber, and Wake (1996) proposed that a person high in intrapersonal intelligence does not have trouble making decisions. Indeed, it may be that students high in intrapersonal intelligence procrastinate less because they have less difficulty in making decisions. In addition, the reasons of “being overwhelmed” and “having difficulty making decisions” seem to be elements of a low intrapersonal intelligence, which would account for the relationship

between low intrapersonal intelligence and high procrastination indicated by this study. The study by Ferrari, Mason, and Hammer supported the findings of the current study concerning laziness as a reason for procrastination. Their study found that students felt academic tasks required too much effort, or in other words, they were too lazy to perform the tasks. Although laziness emerged as the fifth top reason, it might be important to determine why the academic task did not seem important enough to override their feelings of not wanting to do it. In addition, what may be perceived as laziness actually may be a motivation problem. It is important to consider that a motivation problem may indicate a person is low in intrapersonal intelligence since motivation is an integral component of intrapersonal intelligence.

Although the PASS questioned students about their reasons for procrastination, it may be useful in future research to ask more questions about their emotions when procrastinating and at various stages of procrastination, such as late in the semester when many assignments are due or overdue as opposed to early in the semester. If students understand why they procrastinate, they may be able to control their problem. In addition, understanding why a person procrastinates is part of understanding oneself, which is a component of intrapersonal intelligence. Thus, a connection can be made to intrapersonal intelligence through the reasons for procrastination.

Research Question Three

What were the students' levels of MI, particularly intrapersonal intelligence? The MI with the highest score was interpersonal intelligence, indicating students are skilled in understanding other people, knowing how to interact with them, and being able to work with others. Musical intelligence was second and linguistic intelligence was third. Since

respondents were college students, it would be to their advantage to be strong in linguistic intelligence, because college students must complete assignments involving speaking and writing, which are integral aspects of linguistic intelligence. The fourth ranked intelligence was intrapersonal intelligence, which includes knowing and understanding oneself and the ability to regulate oneself to reach goals and objectives. It was surprising to this researcher that intrapersonal intelligence did not score higher. It was expected that college students would have an understanding of themselves, their goals, motivations, how to reach their goals, and reflective capability to make necessary changes to ensure that their goals are met. Gardner (2006) posited that a person with high intrapersonal intelligence has a developed or mature sense of self, understands oneself, one's thoughts, feelings, emotions, and goals, and has the ability to manage, control, and monitor these same inner processes in order to make effective decisions that will lead to a successful life. It would be interesting to know how academically successful students are who are high in intrapersonal intelligence as contrasted with those low in intrapersonal intelligence. Further research might indicate if people who do not go to college exhibit similar or different levels in intrapersonal intelligence and the other seven intelligences. Possibly students' intrapersonal intelligence helps them to realize their capabilities and abilities, and thus, increases their chances for being successful in college. In addition, it is possible that students who are not successful in college are those low in intrapersonal intelligence who do not realize that they lack certain abilities necessary for academic achievement in college, or it may be students low in linguistic intelligence who struggle to succeed in college. These are issues that should be addressed in future research.

Research Question Four

Was there a relationship between procrastination (the dependent variable) and intrapersonal intelligence and the other dimensions of MI? Multiple regression results of all eight intelligences against procrastination indicated a statistically significant relationship. However, stepwise forward calculations identified linguistic intelligence as the only predictor (negative) of procrastination and its effect size (.220) was minimal. Because linguistic intelligence is an integral part of writing and, thus, academic work, it is not surprising to find a negative relationship between procrastination and linguistic intelligence. This is especially interesting since colleges and universities rely on ACT and SAT tests that measure verbal and math abilities to determine college acceptance. Although some researchers believe that tests for predicted college success are missing critical components such as assessment of multiple dimensions of intelligence (Barrington, 2004; Diaz-Lefebvre, 2004; Gardner, 1999b; Kezar, 2001), this study suggests that linguistic intelligence may actually be indicative of college success, based on graduation. In addition, these results indicate that if students are high in linguistic intelligence, they may not procrastinate as much as students low in linguistic intelligence. Perhaps students with high linguistic intelligence are less aversive to academic tasks, less overwhelmed, and have fewer problems in making a decision on what to do (three of the top reasons for procrastination). Also, research has shown that certain components of intrapersonal intelligence such as increased self-efficacy (Ackerman & Gross, 2005; Balkis & Duru, 2007; Ferrari, 2004; Haycock, McCarthy, & Skay, 1998; Klassen, Krawchuk, & Rajani, 2007; Rothblum, Solomon, & Murakami, 1986; Shepard et al., 1999) and motivation (Ackerman & Gross, 2005; Ferrari, 2004; Senecal, Koestner, &

Vallerand, 1995; Shepard et al., 1999) result in less procrastination. Since students high in linguistic intelligence have probably already experienced a certain amount of success in academic and linguistic areas, their self-efficacy and motivation should be higher, and in turn, their procrastination levels should be lower, creating a circular path of linguistic intelligence, self-efficacy, motivation, success, and less procrastination.

Finally, it was surprising not to find intrapersonal intelligence as a predictor of procrastination. It was expected that a student with high intrapersonal intelligence would have been a predictor for low procrastination. However, this was not the case. Although amotivation (the absence of motivation) has been found to be a predictor of procrastination (Brownlow & Reasinger, 2000), low intrapersonal intelligence did not predict procrastination. It is possible that results would have indicated intrapersonal intelligence as a predictor if students had been surveyed at the end of a semester rather than the beginning or if more students had been included who were upper classmen. It is also possible that students rushed through the survey since the professors allowed them to leave when it was completed. Scheduling the survey at the beginning of a class period rather than at the end could be a possible remedy to students rushing to leave. More contemplation before answering could possibly change the results. Additional research should be conducted to investigate these issues.

Research Question Five

Were there differences between procrastination levels on the MI scores? The Wilks' Lambda statistic indicated significant differences among the eight multiple intelligences, in particularly intrapersonal intelligence and linguistic intelligence. A MANOVA was computed to compare the means of the intrapersonal intelligence levels

for each procrastination area and the total procrastination. Even though intrapersonal intelligence was not a predictor of procrastination, a significant difference was indicated for total procrastination. This was not surprising when examining procrastination and the link between components of intrapersonal intelligence and the Big Five-Factor model of personality. A study by Hess, Sherman, and Goodman (2000) indicated that those students who are more neurotic are more anxious and less confident about their ability to perform academically, which leads to more procrastination. Neuroticism can be considered the opposite of intrapersonal intelligence or similar to a low level of intrapersonal intelligence. Furthermore, impulsiveness, a component of neuroticism, suggests a lack of reflection, vulnerability, low self-confidence, and high anxiety, all of which are antithetical to intrapersonal intelligence (Costa & Widiger, 2002).

Because linguistic intelligence was a negative predictor of procrastination, additional research should be conducted to explore ways in which high linguistic intelligence can be used to lower procrastination. If educators can help students strengthen their linguistic intelligence, possibly procrastination will be decreased. Colleges and universities should consider implementing courses that teach students how to learn more about themselves, and how to understand, monitor, and assess themselves. Even if colleges do not offer such courses, teachers can discuss with students the importance of keeping up with assignments, help students monitor their course work, and facilitate discussions on why they are procrastinating and the consequences of continuing to do so. In some cases teachers may want to implement a buddy system to help keep students accountable and to encourage one another. As students gain more self-knowledge or intrapersonal intelligence through training and counseling, they should be

able to control their own behaviors in ways that will increase their motivation and lessen their procrastination. Thus, educators and psychologists need to continue to study procrastination and multiple intelligences, especially linguistic and intrapersonal intelligence, in order to illuminate and understand procrastination and its many complexities.

Research Question Six

Were there differences among the three levels of intrapersonal intelligence on the six areas of procrastination or the total procrastination level? A MANOVA comparing the means of the intrapersonal intelligence levels for each of the procrastination areas and the total procrastination indicated that a student with high intrapersonal intelligence is less likely to procrastinate on studying for exams than a student with low intrapersonal intelligence. Naturally, one wonders why studying for exams indicated a significant difference while no other area of procrastination did. Could it be that students procrastinate more on an academic task that seems more important or is studying for an exam simply more distasteful than other academic tasks? In order to answer this question, further study needs to be conducted. In addition, a student with high intrapersonal intelligence is less likely to display overall (total) procrastination than a student with low intrapersonal intelligence.

These findings suggest that intrapersonal intelligence, the understanding and knowledge of oneself, is a crucial component for decreasing procrastination. Research by Rothblum, Solomon, and Murakami (1986) also found that high procrastinators reported less self-control, less self-efficacy, less delay of gratification, and less self talk for overcoming emotions related to procrastination. Furthermore, Klassen, Krawchuk, and

Rajani (2007) advised that procrastinators need self-efficacy for self-regulation or the belief in themselves that they have the abilities to know what cognitive and metacognitive strategies to employ to accomplish a given task. In contrast, students with high intrapersonal intelligence display self-control, self-efficacy, effective self-talk, and effective metacognition, components that seem to be resulting in less academic procrastination by students.

Since this was an exploratory study conducted to determine if a relationship existed between procrastination and intrapersonal intelligence, more research should be conducted to determine if these results could be replicated. If counselors and educators can help students understand themselves, monitor themselves, and ultimately, control their own behavior, procrastination may be lessened and diminished.

Recommendations

The findings of this research have lead to several recommendations for practice and future research.

Recommendations for Practice

Since this study has confirmed previous results showing that students procrastinate more on academic tasks than on non-academic tasks, educators, psychologists, and counselors need to focus on the reasons behind this occurrence. Since task aversion was ranked as the number one reason for procrastination, deeper exploration into the reasons behind this is critical. A qualitative or mixed design would add richness to the study. Once the reasons and emotions involved are fully understood for task aversion and procrastination, then students can learn how to cope with feelings, thoughts, and behaviors. In addition, as students develop higher intrapersonal intelligence

or greater self-knowledge and self-understanding, they can further understand their reasons for procrastination and how to overcome it.

As indicated in the above findings, students with higher intrapersonal intelligence are less likely to procrastinate, and therefore, educators, psychologists, and counselors need to look for ways to help students develop their intrapersonal intelligences. As students learn how to better understand themselves, their motives, their thoughts, and behaviors, they will increase their abilities in self-monitoring, self-assessment, self-reflection, and ultimately, lessen their procrastination.

Finally, educators especially, need to focus on increasing students' strengths in linguistic intelligence since this study has indicated that students with higher linguistic intelligence procrastinate less. Possibly students with high linguistic intelligence have more confidence which together produces success. Obviously, more research should be conducted in this area, too. It would also be beneficial to examine students with high linguistic intelligence to determine if they also are high in intrapersonal intelligence and vice versa.

Recommendations for Future Research

Recommendation One

This research investigated academic procrastination and multiple intelligences in a small southwestern university in the United States. A replication of this study should be conducted in other regions of the United States and in other types of colleges, i.e., vocational/technical colleges, business colleges, community colleges, and larger universities to find out if similar results are found at these types of colleges. It is possible that students from vocational/technical colleges may score high in spatial intelligences,

and students in business colleges may score high in math/logical intelligences. It also would be interesting to discover what the procrastination levels are at these different kinds of colleges.

Recommendation Two

Research should be conducted on students in various disciplines of study and on students who have failed as well as those who have succeeded. Studies should also be conducted on people who have chosen not to go to college or have not been accepted into a college. If researchers study these types of people, it may provide more illumination on why people are procrastinating, on the psychological factors involved in the process of procrastination, and on the multiple intelligence levels of these people, and ultimately help people be more successful. It may also help confirm if the linguistic and intrapersonal intelligences should continue to be focused on for strengthening and development.

Recommendation Three

It is recommended that a qualitative study be conducted to present a different perspective and to add more in-depth information about procrastination and multiple intelligences. Interviewing students, conducting focus groups, or examining student's work could illuminate components of procrastination and/or intrapersonal intelligence that have not yet been explored. Perhaps a study including both qualitative and quantitative research would provide an even richer depiction of the many complexities and intricacies of procrastination and the eight multiple intelligences, especially intrapersonal intelligence and linguistic intelligence.

Recommendation Four

Research should be conducted on the same students at three different points in a semester: beginning, middle, and end—to determine if students display different perspectives at different points in their semester. It may be that students at the beginning of the semester feel that they will not procrastinate, yet when the middle or end of the semester is upon them, the actual occurrences may be different. Students may believe at the beginning that procrastination is not a problem for them, yet the reality at the end of the semester may be that it has become a significant problem. Research on the same students at three different points in the semester could also help confirm their procrastination levels. The three levels might even be averaged for a single procrastination score. Ultimately, this should strengthen the validity of the research.

The findings of this study indicate the need for further research in the areas of procrastination and multiple intelligences. Since relationships existed between linguistic intelligence and procrastination and intrapersonal intelligence and procrastination, additional study is needed to explore other aspects of procrastination and multiple intelligences, answer questions raised, and to substantiate the current findings.

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