The Role of Self-regulation in Doctoral Students' Status of All But Dissertation

by

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Abstract

A large amount of research has been conducted on self-regulated learning as it relates to academic achievement. Further, there is a large body of literature regarding doctoral candidates who do not complete their dissertations and are classified as All But Dissertation. However, there is a paucity of research regarding the synthesis of these two disparate bodies of research. The purposes of this study were to: (a) assess self-regulated learning as it applied to the time to completion of the dissertation, (b) determine the relationship between self-regulated learning and the intrinsic task value of the dissertation, (c) assess the impact of intrinsic task value upon time to completion of the dissertation, (d) determine whether there was a linear relationship between self-regulated learning and time to complete the dissertation, (e) assess whether differences existed between the levels of self-regulated learning strategies exhibited by those who were classified as All But Dissertation and those who had recently completed their dissertations and (f) assess whether there were differences in the time since comprehensive exams were taken for those who were All But Dissertation and those participants who had recently completed their dissertations.

The researcher developed an online survey (titled the Dissertation Enablers Scale) for this purpose. This survey included four subscales to operationalize the variables and covariates (the Self-regulated Learning Scale, the Intrinsic Task Value Scale, the Research Self-efficacy Scale and the Social Support Scale). This survey was validated through comparison with like instruments, expert review, exploratory factor analyses and reliability estimates.

The results of hierarchical regressions indicated that self-regulated learning did predict time to completion of the dissertation, yet intrinsic task value did not predict time to completion of the dissertation. Self-regulated learning was significantly correlated with task value. The findings suggest that there was a linear relationship between self-regulated learning and time to completion of the dissertation. A discriminant function analysis revealed that there were no differences in the use of self-regulated learning strategies between those classified as All But Dissertation and those participants who had recently completed their dissertations.

Additional factors that emerged as important to dissertation completion were the importance of financial support and the potential mediating role of intrinsic task value upon self-regulated learning.

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CHAPTER 1. INTRODUCTION

Statement of the Problem

The issue of doctoral student attrition remains a serious problem, having grave implications for the efficient use of resources invested by the student, the faculty, the university and the community (Malone, Nelson & Nelson, 2004). These resources include faculty time and energy, funding for graduate programs, scholarships, or assistantships for doctoral students and the valuable resource of the doctoral candidates themselves. When doctoral candidates do not complete their dissertations, their potential contributions to society and the community as teachers and researchers, are substantially minimized. According to Malone, Nelson and Nelson (2004), "Since universities invest considerable resources in doctoral preparation, attrition has significant implications for efficient use of those resources as well" (p. 34). As such, when students are classified as "all-but-dissertation" (ABD), it creates a serious issue for educators. An investigation into the contributing associated factors is essential to resolution of this issue.

Researchers estimate that up to 60% of doctoral candidates do not complete their dissertations and are thus classified as "all but dissertation" (ABD) (Bair & Hayworth, 1999; Berger, 2007; Ehrenberg, Zuckerman, Groen & Brucker, 2009, Johnson, Green & Kleuver, 2000). Teitelbaum (2004) comments that "If actual attrition is really around 50 percent, then this is a scandal.... It's a serious waste of resources and a terrible waste of time and energy on the part of the students" (p. 19).

Further, according to Berger (2007) the average time to complete a dissertation and earn a doctorate is over eight years and in the field of education the time is even longer—estimated at 12–13 years.

The Council of Graduate Schools (CGS) (2010) reported that only 57% of students had completed their Ph.D. at the ten-year point. Because the concern is immense, the CGS (2009) committed to a seven-year research project to ascertain those factors that enable or inhibit dissertation completion and to also find potential interventions for the attrition problem. There are 53 universities involved in this undertaking confirming the import assigned to the issue. This project is funded through a grant awarded by Pfizer and the Ford Foundation. The CGS has assessed ten-year completion and attrition rates by institutional type (public or private), gender, citizenship and race/ethnic identity and field of study. This research includes the broad fields of engineering, life sciences, mathematics and the physical sciences, social sciences, and the humanities. The broad field of social sciences consists of programs in anthropology and archeology, communications, economics, political science, psychology and sociology. It is interesting to note that programs in education are not generally included in this research, especially considering that completion rates in the field of education are reputed to be longer. However, according to the vice president, programs and operations for the CGS, one program in educational psychology is included (personal communication, Dr Robert Sowell, March 8, 2010). A review of the CGS website indicates that there is also one program in educational policy and leadership. As such, the statistic of 57% completing their dissertations at the ten-year point may not fully reflect the extent of this problem. Although many universities are not participants in this study, Sowell believes that outcomes have stirred other universities to

consider ABD phenomenon associated issues and begin collecting data about their students (Hernandez, 2010).

Further, the Carnegie Foundation's past president, Lee Shulman, also acknowledged the severe nature of the issue of attrition asserting that "Real improvement must be a joint venture in which faculty and students are genuine partners" (The Carnegie Foundation for the Advancement of Teaching, 2010).

Overview of Areas Studied and Interventions Proposed

The ABD phenomenon has been studied from many perspectives including the following: financial support (Bair & Hayworth, 1999; Council of Graduate Schools, 2010; Jacks, Chubin, Porter, & Connolly, 1983; 1983, Peacock, 1996), social support (Council of Graduate Schools, 2010; Fahihi, Rakow, & Ethington, 1999; Franek, 1983; Green & Kleuver, 1997; Hanson, 1992; Jacks et al., 1983; Lenz, 1995; Monsour & Corman, 1991; Rode, 1999; Sattell, 2002; Sigafus, 1998; Wright, 1991), research self-efficacy (Bieschke, Bishop & Garcia, 1996; Fahihi et al., 1999; Holden, Barker, Meenaghan & Rosenberg, 2007; Joerg, 2005; Rode, 1999; Single 2010; & Simpson, 1986), field of study (Bair & Hayworth, 1999; Council of Graduate Schools, 2010; Johnson, Green & Kleuver, 2000; Wright & Cochrane, 2000), involvement in professional organizations (Phipps, 2007) and gender (Bair & Hayworth, 1999; Council of Graduate Schools, 2010; Hanson, 1992; Hobish, 1979; Lenz, 1995). These factors all exert some influence on dissertation work and as such, are applicable to any discussion of all but dissertation.

Interventions that have been proposed include the "promising practices" of the CGS (2010), which emphasized programs and practices that might enhance the Ph.D. completion rate. These include initiatives in the area of recruitment, the transparency of departmental websites to assist prospective applicants to make informed decisions regarding enrollment, admissions

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workshops to assess "fit" of a program, expanding resources for students and faculty, regular uniform progress reviews, and early advising and mentoring. Additionally, the CGS (2010) recommends increased financial support, incentives to departments, support networks and support programs, family accommodations, preprogram research experiences, early research experiences, writing assistance, graduate professional development opportunities and dissertation bootcamps (Council of Graduate Schools, 2010). Single (2010) also recommends writing support groups to assist students in what may appear to be an overwhelming task of completing the dissertation.

Other interventions have focused upon group counseling and support groups (Franek, 1982; Stalker, 1991; Peacock, 1996; Sattell, 2002) and dissertation partners (Monsour & Corman, 1991). Some assert that a good relationship with a mentor or chair of the committee is pivotal to successful completion of a program (Bauer, 2004; Fahihi et al., 1999; Joerg, 2005). Sternberg (1994) proposed and initiated a program that included dissertation guidance, a listing of grants and role-playing to assist in resolution of this grave concern. Finally, some intervention recommendations have focused upon research self-efficacy (Bieschke et al., Fahihi et al., 1999; Simpson, 1986).

While the "promising practices" recent recommendations include dissertation support groups and early research writing assistance for doctoral students through all phases of their programs, there is no specific mention of workshops or programs to assist doctoral students in the self-regulation of their work. Although the social support that the CGS recommends is very important to completing the dissertation (Council of Graduate Schools, 2010; Fahihi, et al., 1999; Franek, 1983; Green & Kleuver, 1997; Hanson, 1992; Jacks et al., 1983; Lenz, 1995; Monsour & Corman, 1991; Rode, 1999; Sattell, 2002; Sigafus, 1998), and an aspect of self-regulation, the

personal responsibility of the individual student in self-regulation of their work has not been studied adequately. Upon completion of coursework and comprehensive exams, a graduate student is sometimes left to his/her own initiative to work on the dissertation. This marks an embarkation into new territory for many doctoral candidates.

The support groups and writing groups recommended are reflective of the Vygotskian attributed principle of "scaffolding"… that is assisting these students to move to another level of their graduate work, one which is new and in which they must take some initiative, because there are no longer classes and specific due dates to keep them on course (Vygotsky, 1978; Woolfok, 2007). In fact, as a part of the Council of Graduate School's work on doctoral attrition, an initiative undertaken at the University of Notre Dame in conjunction with Purdue University supports the idea of scaffolding doctoral candidates through the use of peer mentoring groups (University of Notre Dame, 2006).

In addition to scaffolding doctoral candidates as they progress towards dissertation work, another initiative that might be considered as an intervention is assistance in the area of development of self-regulation skills as a way for doctoral candidates to order and complete their own work. Although self-regulation emphasizes the "self" aspect of regulation, the concept is also consistent with the concept of scaffolding because an important element of self-regulation has been said to include the social aspect of "help seeking" or working with others versus entirely alone (Zimmerman & Schunk, 2007).

Purpose of this Study

The purpose of this study was to determine the levels of motivational interest and self-regulation that doctoral candidates, who have completed their comprehensive exams, but not their dissertations, exhibit. Recent research and literature suggest that motivation, interest, and

self-regulation are closely related with motivation and interest playing an important role in self-regulation and these constructs being reciprocally interactive (Hidi & Ainley, 2007; Zimmerman & Schunk, 2007). Although, motivation, self-regulation, and ABD have been studied extensively, there is a paucity of research focusing upon self-regulation as it applies to a doctoral candidates' experience in completing a dissertation.

Significance of the Problem

The National Science Foundation also collects data on Ph.D. completers but does not normally focus upon attrition. However, the extent of the problem can be realized in the National Science Foundation's 1997 workshop and publication on graduate student attrition. The summary aptly stated that "the doctoral student is a precious resource in providing the new discoveries and expert knowledge essential to the nation's future" (p. 1). This summary also invoked education policymakers to take prompt interest in reducing the economic costs of attrition to students and their institutions (National Science Foundation, 1998).

With estimates up to 60 percent of doctoral students not completing their dissertations (Bair & Hayworth, 1999; Berger, 2007; Ehrenberg et al,, 2009, Johnson, et al., 2000), clearly, doctoral program attrition is a continuing problem of immense proportions that merits the attention of educational policy makers throughout all fields of study.

Hypotheses and Research Questions

It was hypothesized that:

1. Doctoral candidates who exhibited higher levels of self-regulated learning strategies in working on their dissertations would have a shorter period of time classified as ABD than doctoral candidates who exhibited lower self-regulation, controlling for financial support, social support, research self-efficacy, field of study, and gender.

2. Doctoral candidates who indicated that their dissertations held more task/intrinsic value also exhibited the use of more self-regulated strategies in working on their dissertations task than doctoral candidates who stated their dissertations held less task/intrinsic value.

3. Doctoral candidates who exhibited more task value/intrinsic interest in completing their dissertation, would have a shorter time classified as ABD than doctoral candidates who exhibited less task value in completing their dissertation, controlling for financial support, social support, research self-efficacy, field of study, and gender.

4. Doctoral candidates, classified as ABD, would exhibit less self-regulated learning than recent Ph.Ds.

The research questions were as follows:

1. To what extent does the use of self-regulated strategies influence a doctoral candidate's time to completion of the dissertation, while controlling for financial support, social support, research-self-efficacy, field of study and gender?

2. To what extent does task value/intrinsic interest influence a doctoral candidate's use of self-regulated learning strategies in work on the dissertation?

3. To what extent does task value/intrinsic interest influence a doctoral candidates' time to completion of the dissertation, while controlling for financial support, social support, research self-efficacy, field of study and gender?

4. To what extent does a doctoral candidate's use of self-regulated strategies exhibit a linear relationship with time taken since the comprehensive examinations?

5. To what extent does doctoral candidates' level of self-regulated learning differ from a recent Ph.D.'s (dissertation completers) level of self-regulated learning?

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6.   To what extent does a doctoral candidate's time to completion of the dissertation, after comprehensive exams were taken, differ from a recent Ph.D.'s time to completion of the dissertation?

Definitions

All-but-dissertation (ABD): Within this paper, the term ABD or "years ABD" will be used to refer to those doctoral students who have completed their comprehensive exams (both oral and written), but have not completed their dissertations. Similarly, the term "ABD" or "years ABD" will be used interchangeably with the term of "time to completion."

Intrinsic interest and motivation: Intrinsic interest shall refer to the personal satisfaction one experiences while engaging in an activity, such as researching a topic or writing about that topic in the dissertation. It is closely linked to the concept of motivation, in that activities that hold intrinsic interest also serve to motivate the individual to action. As such, in this paper the terms intrinsic interest and intrinsic motivation will be used interchangeably. Intrinsic interest is also an associated component of task value as proposed in the expectancy/task value motivational theory espoused by Wigfield and Eccles (2000, 2002).

Self-regulation: There are many theories of self-regulation, however, according to Pintrich (2000c) most theories share these characteristics: the participant in an active agent, the agent has potential for control, self-regulation activities are mediators between individual and the contextual choice of achievement, and the individual measures himself/herself against goals or standards (Pintrich, 2000c). To a great extent, the focus of theories of self-regulation is upon the individual versus the role of others in reaching goals. However, Zimmerman (2000) and Zimmerman and Moylan (2009) consider the role of others in self-regulation as integral.

Pintrich defines self-regulation as " an active constructive process whereby learners 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 in the environment" (Pintrich, 2000c, p. 453). He proposes a four stage process of self-regulated learning: 1) forethought, 2) monitoring, 3) control and 4) reaction and reflection. These phases may coexist simultaneously throughout the following four areas of regulation: 1) cognition, 2) motivation and affect, 3) behavior and 4) context. The student is viewed as an active agent in the process. Additionally, Pintrich emphasizes the important role that motivation and affect play in the process of self-regulated learning. Self-regulated learning is constrained by context and self-regulated activities can mediate these constraints to some extent. Constraints may be task related and thus, differing levels of self-regulation may be exhibited within various tasks. An individual can engage the areas of self-regulation simultaneously or independently. Pintrich (2000c) also recognizes the role of learner's value beliefs and personal interest in tasks or the content domain of the task. Target goals serve as a guide to assess achievement of a specific task, whereas purpose or goal orientations reflect more general reasons an individual undertakes a task and are closely related to achievement motivation.

Similarly, Zimmerman (2000) posits a cyclical model of self-regulated learning which suggests that the contextual environment impacts the person and thus the individual's self-regulated behavior. He also theorizes a phase theory of self-regulation that includes a feedback loop consisting of three phases. The first phase is forethought (task analysis, goal setting and strategic planning and self-motivational beliefs. His theory draws heavily upon the work of Bandura (1986) in that self-motivational beliefs include self-efficacy, a belief in whether one is capable of successfully completing a task. Zimmerman also includes outcome expectations,

intrinsic interest and goal orientations as being aspects of forethought. This is reminiscent of the expectancy/task value model of motivation as proposed by Wigfield and Eccles (2000, 2002). In fact, more recently Zimmerman and Schunk (2007) and Zimmerman and Moylan (2009) have theorized an intersection between motivation and self-regulation. Zimmerman and Schunk (2007) theorize that motivation coexists with self-regulation as a precursor, a mediator, a concomitant factor of self-regulated outcomes and a primary outcome of self-regulation. Within the second phase of his theory of self-regulated learning, the performance phase, self-control and self-observation are key components. Task strategies, self-instruction imagery, time management, environmental structuring and help-seeking, interest incentives and self-consequences are factors associated with self-control. Self-observation includes metacogntive monitoring and self-recording. Zimmerman (2000) envisions this process as a feedback loop. Additionally, it is noteworthy that interest is addressed in both the first and second phases of his theory. The third phase includes self-judgment (self-evaluation and causal attribution) and self-reaction (self-satisfaction/affect and an adaptive defensive aspect of self-reflection). Because the theory is focused upon a task, his theory can also be considered a "state" theory. Like Pintrich, Zimmerman emphasizes interest, motivation and affect. Moreover, in recent years, he has emphasized motivation even more so (Zimmerman & Schunk, 2007; Zimmerman & Moylan, 2009).

Winne and Hadwin (1998) and Woolfolk, Winne and Perry (2006) theorize that self-regulated learning consists of a cyclical process that includes analyzing the task, setting goals, devising plans, and enacting tactics and strategies. Throughout the cycle, the individual engages in metacognitive monitoring and adapts accordingly. In this model the student is also an active agent, who engages self-regulated processes much in the same manner that Pintrich proposes.

Winne and Hadwin (1998) and Winne and Perry (2000) propose that information can serve as a condition, a product, an evaluation or a standard. Because they include resources, time, social context and cognitive factors etc. in their model, contextual constraints are also evident. This model focuses upon the task and might thus be termed a "state" model of self-regulation. Winne and Perry (2000) and other associates (Winne, Hadwin, McNamera, Chu, & Field, 1986b) have emphasized objective assessment of self-regulated learning in their model. Their works seeks to address concerns revolving around the accuracy and objectiveness of self-report questionnaires, such as the MSLQ.

For the purpose of this paper, self-regulation is a cyclical process in which an individual analyzes a task, sets goals, develops strategies and engages these strategies, while metacognitvely and affectively monitoring their work to assess quality and revise analysis, goals, strategies and tactics as necessary (Pintrich, 2000c; Winne & Hadwin, 1998; Woolfolk, Winne & Perry, 2006; Zimmerman, 2000). In essence, it is a personal feedback loop similar to that of Zimmerman (2000) and Zimmerman and Moylan (2009) and Woolfolk, Winne and Perry (2006).

Task value: Task value is a component of individual motivation. It includes attainment value (that value associated with attaining a goal), intrinsic value (the personal joy or satisfaction associated with the task, utility value (how might attainment of a goal prove useful to an individual) and cost (includes personal costs as time spent away from family, time and also more tangible costs as financial cost) (Wigfield & Eccles, 2000, 2002).

Time to completion: Time to completion refers to the time elapsed since comprehensive exams (written and oral exams) were taken and thereby the amount of time the doctoral candidate is classified as ABD. It is used interchangeably with "time ABD" in this paper.

Assumptions

1. Self-regulation is a state event.

2. Self-regulation is domain specific.

3. The dissertation can be considered a domain consistent with Gredler's (2005)
    assertion that a course can be a domain.

4. Self-regulation is a process focused upon the metacognitve and affective monitoring
    of goals by the individual as an agent.

5. Help seeking and the involvement of others are integral aspects of self-regulation.

6. Motivation and intrinsic interest are integral aspects of self-regulation.

7. An assumption of normality and homogeneity of variance of the sample population
    was made for this study as all students classified as ABD within the graduate school
    were invited to participate in the survey.

Limitations

The limitations of this study include the use of a self-report instrument with a

convenience sample. Self-report questionnaires have been criticized because it is not clear how

objectively a participant may respond (Winne et al., 1986b; Winne & Perry; 2000). Also, the

sample for this study is a convenience sample (in that they are not randomly selected and

responded to a query and for an online survey) and as such, may not accurately reflect

characteristics of a normal sample of the target population. Additionally, social desirability

(Edwards, 1957) may unduly influence the responses of participants, who wish to garner

approval and acceptance. For example, participants may indicate that they develop strategies to

regulate their work because they believe this is the "right" or most acceptable answer.

Participants may also self-select for participation because they are successful—those who are not

successful may not participate potentially inflating results. Finally, the instruments that will be

used in this study may demonstrate psychometric characteristics less rigorous than desirable.

CHAPTER 2. LITERATURE REVIEW

Educators estimate that 40–60 percent of doctoral students do not complete their dissertations, a phenomena commonly referred to as all but dissertation (ABD) (Bair & Hayworth, 1999; Council of Graduate Schools, 2010; Ehrenberg, Zuckerman, Groen, & Brucker, 2009; Green, 1997; Johnson, Green, & Kleuver, 2000). The average student takes 8.2 years to obtain their PhD after entering graduate school (Berger, 2007). Further, in the field of education, the National Science Foundation reports the median amount of time was 12.7 years in 2006 (The National Science Foundation, 2006). The problem is so substantial that the Council of Graduate Schools is conducting a seven-year Ph.D. Completion Project in conjunction with 54 universities to better understand the problem and propose interventions (Council of Graduate Schools, 2010). The National Science Foundation (1998) believes intervention is important because "The doctoral student is a precious resource in providing the new discoveries and expert knowledge of the future." With many doctoral students completing course work, but failing to complete their dissertation, university educators share a grave concern regarding these trends.

Researchers have investigated this phenomenon from various angles including gender, personality type, field of study, external factors and other phenomena that enable or inhibit completion of the dissertation. Identifying these trends is critical to helping us to better understand and resolve this problem. There are many factors that contribute to dissertation completion or non-completion.

Over the course of the last two decades, there has been a significant increase in the research into self-regulation and academic achievement. Although some research regarding doctoral program attrition refers to the need for personal cognitive and behavioral characteristics (such as self-direction) (Kluever & Green, 1998) that are similar to those behaviors posited as characterizing of self-regulation, these studies do not specifically address self-regulation as a distinct metacognitive and behavioral construct. Briefly, self-regulation refers to an active constructive cyclical process in which learners analyze tasks, set goals, attempt to monitor, regulate and control their cognition, motivation, and behavior in support of the goals (Woolfolk, Winne & Perry, 2006; Zimmerman, 2000). As such, it is logical that self-regulation is crucial to the metacognition and behaviors required to complete the dissertation. However, there is a paucity of research regarding self-regulation as it influences academic work, relating to dissertation completion.

In this literature review, I will first review some of the many reasons why doctoral students complete coursework, but fail to complete the dissertation and provide some of the strategies conjectured to assist in the completion of the dissertation. In the second section of this literature review, I will review several prominent models of self-regulation and several models of motivation and also discuss how they might relate to academic achievement, motivation, intrinsic interest and personal goals, such as the completion of the dissertation.

Factors Influencing Dissertation Completion

Enabling or Inhibiting Factors

In recent years, we have begun to see more research into the factors that enable or inhibit completion of the dissertation, and thus, lead to the classification of ABD. Lenz (1995) researched enabling and inhibiting factors for dissertation completion with academically able

women. She also examined academic perfectionism and the self-in-relation theory. Inhibiting

factors appeared to be the absence of: 1) a strong dissertation topic, 2) a solid advisor-advisee

relationship, and 3) an active support network. Her findings suggest that a stimulating and

exciting topic, a caring advisor and family and peer support are all enablers. She believes that

this support reflects the proposition that females develop through their relationships. In a study

comparing doctoral students within a Professional Development Program (having a higher

number of completers) and traditional doctoral programs, Rode (1999) identified eight factors

which she believed served as enablers to completion, and seven factors that served as inhibitors

to completion. The factor most reported as enabling was cohort and community support. She

also proposes that work, friends, family, expert support, advisor access, favorable program

structures, faculty/committee access and financial support all provided enabling support.

Conversely, personal/family changes, problems and illness, job demands, problematic

relationships, inadequate research and writing skills, and deficient program structure hindered

dissertation completion.

  Green and Kleuver (1997) constructed and administered the Dissertation Barriers Scale

to doctoral student graduates and ABD doctoral students. Similar to others, their findings

suggest that the participants thought that poor time management, task structure, and external

pressures were significant barriers to completion. Good personal organizational skills were also

rated as important enablers to completion. Advisor and committee functioning, as well as

research skills were also seen as being significant enablers or inhibitors to completion.

Other studies have focused more upon the external factors (although there is some

overlap between internal and external) that serve as inhibitors or enablers for the completion of

the dissertation. The external factors that researchers most frequently address are financial

factors, employment, family issues and support, and the emotional support of peers and the advisor and committee. Jacks et al. (1983) surveyed doctoral candidates regarding their lack of persistence and found the most frequent rationale given were financial difficulties, relationships with advisors or committees, research problems, employment interference, family demands, peer support and loss of interest and employment patterns. Similarly, in the seven year funded Ph.D. Completion project, the Council of Graduate Schools found that financial support, selection, mentoring, program evaluation, program environment, research mode of the field and processes and procedures as instrumental to dissertation completion (Council of Graduate Schools, 2010).

Researchers interviewed students regarding persistence in the dissertation process and found that students thought that the lack of structure in the dissertation-writing phase was a significant issue. They recommended the careful choice of advisors, course work on dissertation writing, support groups, persistence, good communication with advisors, and good time management as factors that contribute to persistence (Kluever & Green, 1997).

Additionally, Peacock (1996) found that dissertation completion rates were related to changes in working hours/conditions, retirement, change in residence, change in the number of family get-togethers, change in financial circumstances, age and a strong adviser/committee relationship. Sigafus (1998) studied the experiences of professional educators who were also doctoral students and identified four themes: structure, pressure, support and authority. Additionally, in all cases, she noted that student's perspectives shifted from expressions of satisfaction with school to dissatisfaction with the doctoral experience at some point.

Bair and Haworth (1999) employed a meta-synthesis to integrate the findings of a substantial number of studies to try to synthesize findings from the literature. Their findings suggest that persistence varies widely depending upon institution, field of study, departmental

culture, dissertation difficulties, academic achievement indicators, employment and financial factors. They assert that employment and financial factors were poor indicators of persistence.

Are doctoral students really prepared for the work involved in the dissertation process? Simpson (1986) proposed that a combination of inadequate preparation and misconceptions about the process of research contributed to the attrition of many social science doctoral students. Similarly, Faghihi, Rakow, and Ethington (1999) found that research self-efficacy and students' perceptions of their research training significantly contributed to whether or not doctoral candidates completed the dissertation. Rode (1999) also identified inadequate research skills as a factor that inhibits doctoral completion in her research. It seems fairly logical that the lack of research aptitude could negatively impact the completion of the dissertation.

In summary, the most common reasons from the enabler/inhibitor perspective for non-completion appear to relate to financial support; faculty and advisor/committee support; peer, social, and familial support; interest and excitement with the topic; organizational ability; and research competence.

Gender

Hanson (1992) demonstrated some inequities in the education of female doctoral students as compared to male doctoral students and suggested that these serve as inhibitors for female doctoral students. In addition to Lenz (1995) reporting some issues that might serve as barriers to female doctoral students, several others have investigated the aspect of gender in an effort to determine whether this is in some way related to the completion of the dissertation.

 Hobish (1979) researched the psychological predictors of attrition in doctoral study. His research indicated that there was a significant relationship between gender and degree status and independence, level of masculinity and level of socialization. Although the results of these

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studies are somewhat mixed, as new gender roles and expectations emerge, this might alter the role of gender as a factor in dissertation completion as compared to findings of previous years. Further, he concluded that the dissertation process might be a more difficult process for females, as compared to males.

In summary, there does not appear to be a highly significant difference with respect to the gender of the doctoral candidate, although, gender may be a factor relating to preferences in the field of study (Bair & Haworth, 1999).

Field of Study

What is known about the field of study and ABD? In a study focusing upon persistence in the doctoral program, Bair and Hayworth (1999) found that attrition and persistence rates vary widely depending upon the field of study and more widely between programs of study. Wright and Cochrane (2000) studied the submission rates of Ph.D. theses by 3759 doctoral students from 1984 through 1993. In this study, they found the only reliable predictor of successful submission of the thesis (our dissertation) was whether the student engaged in a science based, or an arts and humanities based field of study, with science students more likely to complete their theses.

Consistent with this, Johnson, Green and Kleuver (2000) assert that attrition in doctoral programs in the field of education is approximately 50% as compared to 10% for business and law programs. More recently, as part of the Ph.D. Completion Project, the Council of Graduate Schools found that those students in sciences and engineering had higher completion rates (59%) at the ten-year point than those students in the social sciences and humanities (53%) (Council of Graduate Schools, 2010). However, this project did not include doctoral students in the field of education (with the exception of one educational psychology program) who are reputed to have

the lowest and longest completion rates (National Science Foundation, 2006). In summary, the field of study appears to be a highly correlated to completion of the dissertation.

Personality Variables and the Psychology of the Self

Looking at internal factors, some research focuses upon personality variables and psychology of the self. Weiss (1988) administered the Myers Briggs Type Inventory (MBTI), to determine what, if any, impact MBTI types had upon the dissertation process. Her findings suggest that faster completion of the dissertation was related to sensing versus intuition. Although, further study is required, perhaps there is a correlation between the MBTI type "S" and the personality type selecting science based courses of doctoral study.

Research also yields some support for the personality factor of independence (Hobish, 1979) as positively relating to successful degree candidates. Likewise, others have also found that completers were more likely to rate themselves as independent and resourceful (Kluever, 1995). This is consistent with self-determination theory posited by Deci and Ryan (1985) and Ryan and Deci (2006), in that the self-determined learner is autonomous although not a loner, because interactions with others are considered crucial to the process of learning (Vansteenkiste, Lens & Deci, 2006; Wigfield & Eccles, 2002). Socialization (presumably an outgoing social personality and good social support) was found to be a significant factor by Lenz (1995), Peacock (1996), and Sattell (2002).   Sattell (2002) also posits the importance of emotional support needs of students within a self-psychology frame of reference.

A construct similar to self-determination, self-direction, was found to be significant (within the personal organization and skills subscale) in the Dissertation Barriers Scale (Green & Kleuver, 1997). It is difficult, however, to determine exactly what functions or attributes are under exploration in these studies because there is not a clear definition of the term

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"independent" or "self-direction." Further examination and synthesis of data and terminology regarding these constructs is needed.

Green (1997) reported that ABD predictors include childhood loss, high dependency needs, an inability to strategize, low levels of masculinity, low frustration tolerance, low levels of persistence, procrastination and perfectionism. Lenz (1995) found that both completers and ABDs exhibit perfectionism, however, completers were able to block their tendencies for perfection with the committee support they did receive. Those candidates, classified as ABD, did not seem to have that same level of support. Acknowledging perfectionism as a relevant issue for further study of the ABD phenomena, Johnson, Green and Kluever (2000) modified the Procrastination Inventory to include a measure of perfectionism. In summary, personality variables, such as personality type, socialization and the emotional needs/ability to receive support from peers, advisors/committees, level of independence, and resourcefulness appear to have an impact upon the ability to complete the dissertation.

In review, the many barriers, enabling factors and other factors (field of study and personality) all offer an explanation as to why so many students remain classified as ABD. Understanding the associated issues and the complexity of these issues as they pertain to each individual doctoral candidate suggests that there is no single factor that can explain the "why" of ABDs (Bair & Hayworth, 1999).

All but dissertation students consume our educational resources without benefit of productive results, that is, they are not successful doctoral graduates teaching and performing research in our schools, communities and universities. Malone, Nelson and Nelson (2001) state that "selection, admission and enrollment of students into such programs constitute sizeable investments of university resources in terms of faculty, library holdings, and other support

services" (p. 4) and at stake is the "institutions academic reputation and of utmost importance to society, preparation of leaders for the educational challenges of the 21st century" (p. 4).

In summary, this section outlined the many enabling or inhibiting factors toward the completion of the dissertation including: gender, field of study and personality variables. Having completed a brief exploration of reasons for ABD, I will now shift focus to the strategies that researchers have advanced or implemented in an effort to prevent the attrition of doctoral students and aid in their dissertation completion.

Strategies to Reduce ABDs and Intervention

With estimates of up to 60 percent of doctoral students not completing their dissertations (Bair & Haworth, 1999), research and recommendations for intervention are critical. Some research addresses the efficiency issue created by the high percentage of students classified as ABD. Germeroth (1991) viewed ABD from an efficiency perspective also and surveyed people holding doctorates in speech communication to discover the forms of emotional support that were perceived as most useful for success. Hanson (1992) recommends development of dissertation seminars and clubs for support to efficient completion.

Franek (1982) suggests the need for group counseling and facilitation of dissertation completion for doctoral candidates. Stalker (1991) also recommends models for dissertation support groups. Similarly, Peacock (1996) addresses the need for good social and advisor support groups to assist in dealing with the stress. Monsour and Corman (1991) recommend a dissertation partner as supplementing the advisory process.

Sternberg (1994) developed a Faculty Advancement Project to encourage completion of the dissertation. The project included guidance for the disseminating and mounting a dissertation group, listing of grants, workshop materials and syllabi. He also used completer group role-

playing within his project. Of the seven programs initiated, some programs appeared to have success, while others faltered. Sternberg concluded that it might be more effective (and probably more efficient also) to work with ABD doctoral students who are still on the faculty, and therefore available for individual assistance or facilitation.

Several studies discuss the need for more faculty involvement and attention to the emotional needs of doctoral students. In this context, Sattell (2002) recommends doctoral programs tackle the ABD issue by making faculty more aware of the emotional needs of students, training faculty to be committee members and chairs, and that psychotherapy might be valuable for supporting students. Consistent with this, other research found that doctoral students view the mentor as a key contributor to the dissertation process (positive or negative). These students also felt that mentors should provide psychological support, in addition to the traditional role of advising (Joerg, 2005). Faghihi et al. (1999) also found that good relationships with advisors and committee members significantly contributed to the dissertation progress. Advisors might also infuse an element of creativity within the process to enhance the attractiveness of dissertation writing and make this hard work more stimulating (Kiely, 1982). In an Australian project, researchers examined 60 items related to Ph.D. completion and constructed a grid of supervisory styles that might be matched to individual candidates depending upon their personal needs to increase dissertation completion (Gatfield, 2005).

Finally, some strategy research focuses upon the skills that candidates bring to the doctoral program. Several studies suggest that the ability to do good research is fundamental to completion (Bieschke, Bishop, & Garcia, 1996; Faghihi et al., 1999). Strategies to address this aspect of the issue involve library and research instruction to better prepare the candidates (Simpson, 1986) and dissertation writing seminars (Single, 2010).

Much of the research reviewed within the discussion of intervention strategies focused upon the need for supportive advisor and committee support and faculty responsibilities, but what about the responsibilities of the doctoral student?

Personal Responsibilities

Kleuver (1995, 1997, 1998) and various associates have explored the ABD issue extensively. Their research addresses the role of student persistence, procrastination, motivation and responsibility. They created and evaluated the Responsibility Scale (Kleuver & Green, 1998). The scale is based upon four models of responsibility: the moral model in which students take responsibility for the problem and the solution; the compensatory model in which students are not responsible for the problem but are responsible for the solution; the medical model in which the student is not responsible for the problem or the solution; and the enlightenment model in which the student is responsible for the problem but is not able or not willing to produce a solution for the problem (Brickman, Rabinowitz, Karuza, Coates, Cohn, & Kidde, 1982). The moral model reflects completers, whereas, the enlightenment model and the compensatory model reflect the students who fail to complete the dissertation.

Kleuver and Green (1998) administered the scale to doctoral and master's degree students to identify their perceptions concerning who was responsible for 16 distinct tasks associated with the completion of dissertation and degree process. Each item asked students who the responsibility for the specific task rests with on an "is" and a "should be" scale with the student at one end and the university at the other end of the scale. They reported that two factors underlie student's responses to a responsibility scale—those factors representing responsibility for organization and preparation of the dissertation (this includes self direction, although exactly what is meant is not detailed), and the university quality control and evaluation of the work.

They suggest that this scale can be useful in determining the level of responsibility an individual student has with respect to completion of the program (Kleuver & Green, 1998).

Those doctoral candidates surveyed recommended that they should take course work in dissertation writing, attend support groups, make careful choice of advisors, be persistent, have regular communication with committee members and discipline themselves to use time management effectively (Green & Kleuver, 1997). These recommendations all address student responsibilities in completing their dissertations.

Shaver (1985) and others assert that completion of a task is dependent upon one's motivation, the intention to complete the task and the level of exertion put forth. Additionally, Weiner (1995) posits that these elements of task completion involved individual responsibility. Bencich, Graber, Staben, and Sohn (2002) also suggest that ultimately, the student must take ownership of the dissertation process. How does the student gain ownership of the dissertation process and become a responsible agent?

Self-regulation and Motivation — Research and Theory

Many of the aforementioned studies have alluded to such constructs as self-direction, self-discipline, etc. and have noted that the doctoral students (Kleuver et al, 1997) reported that candidates must be self-motivated, self-disciplined and self-directed to complete their dissertation. Further, others have supported the idea of requirements for independence, self-motivation and self-direction. Despite this emphasis on the "self" factors that are critical to dissertation completion in the literature, it is interesting to note that the role of self-regulation has not been specifically addressed in all of this research. When applied to learning, there is a large body of evidence suggesting that self-regulation enhances academic learning and achievement (Glenn, 2010, Paterson, 1996; Pintrich, 2000c; Schapiro & Livingston, 2000; Zimmerman &

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Martinez-Pons, 1986, 1990; Zimmerman & Schunk, 2007). Although self-regulation has been studied as a component of academic achievement, it has not been specifically addressed in the literature as it might relate to dissertation completion.

There are a number of theories or models of self-regulation. Some are based upon motivational perspectives, while others are founded upon hierarchical theories. Theorists propose that although there are common elements in existing models of self-regulation, they should include the element of motivation (Pintrich, 2000c; Zimmerman, 2000). Some models specifically reference education, while others are better suited for fields of psychology or health (Boekerts, Pintrich & Zeidner, 2000). Other models emphasize assessments of self-regulated activities (Winne & Perry, 2000; Winne, 2005). Also, some models appear to consider self-regulation as a trait, whereas other models view it from a state perspective. For the purposes of this writing, the researcher will provide an overview of some of the more prominent models of self-regulation, before outlining the specific theory of self-regulation, from which my research on all-but dissertation (ABD) and self-regulation was conducted.

As previously mentioned, self-regulation refers to an active constructive process in which learners analyze tasks, set goals, attempt to monitor, regulate and control their cognition, motivation, and behavior in support of the goals (Forbes, Ross, Salisbury-Glennon & Strom, 2006; Pintrich, 2000c; Winne & Hadwin, 1998;   Zimmerman, 2000). Personal characteristics and environmental experiences guide and constrain self-regulation (Wigfield & Eccles, 2002).

Schapiro and Livingston (2000) conjecture that self-regulated learning includes a natural dynamic aspect that reflects curiosity, enthusiasm, willingness to take risks, and persistence. This implies intrinsic interest and motivation as an aspect of self-regulation. Others (Ryan & Deci, 2000; Vansteenkiste, Lens & Deci, 2006) assert that intrinsic motivation is essential to

self-determination (a construct similar to self-regulation). Shaver (1985) asserts that completion of a task (such as a dissertation) is dependent upon motivation, task completion intention, and the level of exertion put forth.

Zimmerman and Schunk (2001) outlined six theoretical perspectives of self-regulated learning. These are the operant, phenomenological, information processing, volitional, Vygotskian, constructivist and social cognitive viewpoints. They contend that operant views emphasize delaying gratification for long-term goals, but critics have argued that self-reinforcement is under the control of the individual and is therefore not true reinforcement. Phenomenological views focus upon self-monitoring feedback loops based upon the learner's sense of identity. However there is great variation in how identities are defined and evaluated. Informational processing models describe self-monitoring as a feedback loop, in which self-evaluations are contrasted with standards and adjusted as required. Critics have argued that the information processing model does not address human affect in response to positive or negative feedback. Although volitional models have been critiqued for the lack of account of the dynamic nature of self-efficacy beliefs, these models do focus upon willpower and persistence. Self-verbalization and social dialogue encompass a Vygotskian perspective of self-regulation, while constructivist models center upon individual personal skill in the development of strategies. A social cognitive perspective of self-regulation focuses upon cognitive goals and expectancies or outcomes of achieving those goals (Zimmerman & Schunk, 2001).

Zimmerman's Model of Self-regulation

Zimmerman proposed a social cognitive perspective self-regulation perspective. He maintains that seeking assistance from others is an aspect of self- regulation. He asserts that self-regulation is a dynamic triadic process that includes the person, behavior and the environment as

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Figure 1 presents. He defines self-regulation "in terms of the context-specific processes that are used cyclically to achieve personal goals" (Zimmerman, 2000, p. 34).
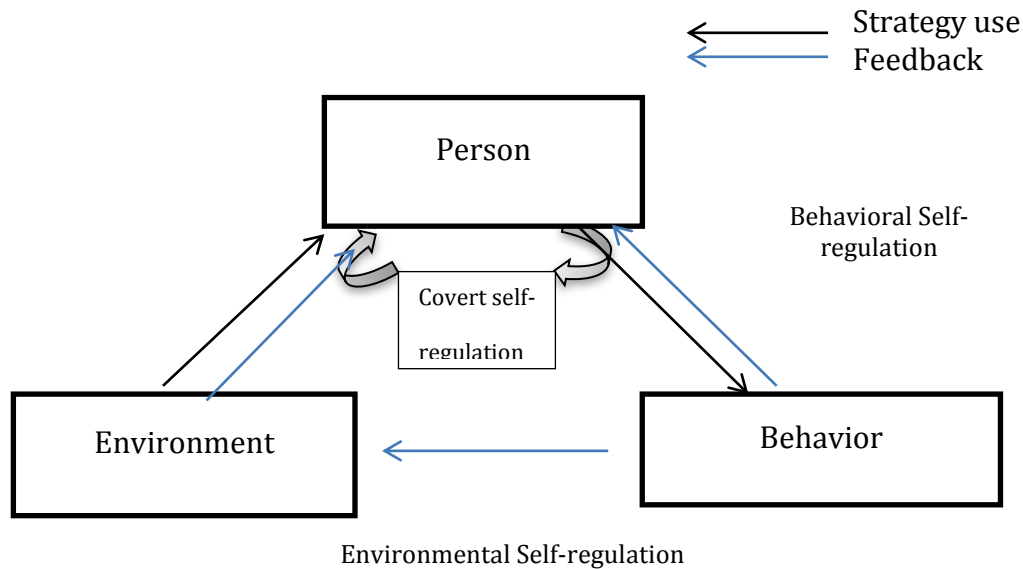
Figure 1. Zimmerman's (2000) Triadic forms of self-regulation (Boekerts, Pintrich & Zeidner,

(Eds.). (2000). *Handbook of self-regulation* (p. 15). San Diego, CA: Academic Press).

The influence of Bandura's (1986) triadic model of reciprocal determinism is evident in Zimmerman's theory. He believes that self-efficacy is basic to one's ability to self-regulate task activities (Zimmerman, 2000).

Because Zimmerman believes that self-regulation is a process embedded in the context of an environment and one's own proactive or reactive influence upon the environment, his model reflects more of a state or event theory. The state or the current context impacts the self-regulatory processes. For example, some persons can regulate one process (e.g., school work) but perhaps not another (e.g., diet). Zimmerman maintains that self-regulation is more than a metacognitive process (also includes the behavioral and environmental self-regulation), and he

also suggests that there is a "covert self-regulation" that functions somewhat similarly to metacognition in that it monitors and adjusts cognitive and affective states during processing. He also theorizes that there are three phases or subprocesses of self-regulation: 1) forethought (includes task analysis and self-motivation beliefs), 2) performance or volitional control (includes self-control and self-observation), and 3) self-reflection which includes self-judgment and self-reaction (Zimmerman, 2000).

In recent years, Zimmerman and Schunk (2007) and Zimmerman and Moylan (2009) have emphasized the importance of motivation and intrinsic interest as a part of the process of self-regulation. He asserts that they are very closely aligned constructs; that interest may precede self-regulated processes, be concomitant with and also be an outcome of self-regulated processes.

Zimmerman (2000) also conjectures that it is possible to assist individuals in developing self-regulation through the processes of observation, emulation, asserting self-control and finally being able to self-regulate with little assistance. Development as such demonstrates the importance of others in self-regulated learning (through observation and emulation). Further, Zimmerman and Schunk (2007) state that help seeking is essentially an element of self-regulation. It is not the antithesis of self-control, but rather "a social form of information seeking" (Zimmerman & Molyan, 2009, p. 303).

Similar to Zimmerman, other theorists support the social aspect of self-regulation. For example, in several motivational and self-regulatory inventories, participants are asked questions about whether they sought help (Pintrich, Smith, Garcia & McKeachie, 1991, 1993; Martinez-Pons, 2003; Ryan & Deci, 2000, 2006; Zimmerman & Martinez-Pons, 1986).

Assessment

Zimmerman and Martinez-Pons (1986) created the Self-Regulated Learning Interview Schedule (SRLIS), an open ended self-report instrument to assess self-regulation. Additionally Zimmerman and his colleagues have employed microanalytic event type (state) measures and cyclical analyses to assess self-regulated learning (Zimmerman & Moylan, 2009). These measures encompass the assessment of responses before, during and after learning and provide both qualitative and quantitative data about learning. Moreover, assessments as these have successfully differentiated high and low achievers (Zimmerman & Risemberg, 1997).

Winne, Hadwin and Perry's Model of Self-regulation

Like Zimmerman, Winne and Hadwin (1998), Winne and Perry (2000), and Winne (2005) believe that the individual is an active agent in a cyclic process of self-regulation. They suggest a cognitive information-processing model of self-regulation, in which the individual makes cognitive choices, monitors cognitive operations and adjusts as necessary. Woolfolk, Winne and Perry (2006) and Winne and Hadwin (1998) propose a four-stage model of self-regulation, in which the four stages of self regulation (definition of the task, goals and plans, studying tactics, and adaptations) are embedded in the cognitive process as products. Other informational and influential aspects of the cyclic model include task conditions, cognitive conditions, evaluations or standards. Winne and Perry (2000) assert that monitoring and control are central to an individual's self-regulatory processes. They also discriminate between self-regulated learning as associated with a particular event and that which might be viewed as an enduring trait.

Assessment

Winne and Perry (2000) and Winne (2005) have written extensively about issues associated with the assessment of self-regulation. These issues are: measurement intervention

(how the intervention of the measure influences the learner's response), internal validity, construct validity and external validity. They maintain that assessment has not been adequately addressed through many of the existing instruments and self-report questionnaires. Winne and Perry (2000) argue that assessments have not been empirical and have not encompassed all potential information. They posit that measures of self-regulated learning should incorporate multi-trait, multi-method studies to assist the field in more accurate assessment. This would include self-talk, observations, interviews, an error detection method in reading, and trace methodologies (in which there are observable indicators of self-regulatory activities) (Winne, 2005; Winne & Perry, 2000) to provide a more comprehensive assessment.

In effort to provide a more accurate assessment of self-regulation, Winne, Hadwin, McNamera, Chu and Field (1998b) developed "CoNotes" which can administer and score questionnaires and record traces of self-regulated learning as students engage tasks. Further, Hadwin and Winne (2001) developed "CoNotes2" to both promote and examine learning. Recently Beaudoin and Winne (2009) (Winne, personal communication, January 2010) developed an Internet tool (nstudy) to support learning, collaboration and researching learning strategies. Winne (personal communication, January 2010) did state that this tool does not explicitly assess self-regulated learning, but does record data that can support inferring qualities of self-regulated learning.

<center>**Pintrich's Model of Self-regulation**</center>

Pintrich (2000c) maintains that most models of self-regulation share common features, consisting of the participant being an active agent, the assumption that the agent has potential for control, that self-regulation activities are mediators between the individual and the contextual choice and achievement, and finally, the individual measures himself-against goals or standards.

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Pintrich (2000c) defines self-regulation as "an active constructive process whereby learners 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 in the environment" (p. 453). This model is similar to Zimmerman's in that it encompasses the contextual environment and goal orientations. The phases of self-regulation that he suggests are forethought, planning and activation; monitoring, control and reaction and reflection. These are similar to Zimmerman's (2000) and Zimmerman and Moylan's (2009) model, although in years past, Pintrich seems to have emphasized the element of motivation to a greater extent, breaking motivation out into a separate area.

Specifically, Pintrich advocates a goals orientation motivational perspective. The motivational-affect aspect of self-regulation consists of a goal orientation, self-efficacy, task value and intrinsic interest, monitoring of motivation and affect, selection and adaption of strategies for management of the motivation and affective reactions and attributions. Additionally, within the behavioral area, Pintrich (2000c) includes the element of choice within the phase of reaction and reflection. This is reflective of Deci and Ryan's (1985) construct of self-determination and the important role of motivational interest. Table 1 identifies the key components in Pintrich's model of self-regulation.

Table 1

Pintrich's Phases and Areas of Self-Regulated Learning

| Phases | Areas for Regulation | | | |
	Cognition	Motivation/affect	Behavior	Context
Forethought, Planning & Activation	-Target Goal setting	Goal orientation adoption	Time and effort planning	Perceptions of task
	-Prior content knowledge activation	Efficacy judgments	Planning for self-observation of behavior	Perceptions of context
	-Metacognitive knowledge activation	Ease of learning judgments		
		Task value activation		
		Interest activation		
Monitoring	Metacognitive awareness & monitoring of cognition	Awareness and monitoring of motivation and affect	Awareness and monitoring of effort, time use, need for help	Monitoring changing task and context conditions
			Self-observation of behavior	
Control	Selection and adaptation of cognitive strategies for learning, thinking	Selection and adaptation of strategies for managing motivation and affect	Increase/decrease effort	Change or renegotiate task
			Persist/give up	
			Help seeking behavior	
Reflection and reaction	Cognitive judgments Attributions	Affective reactions and attributions	Choice behavior	Evaluation of task Evaluation of context

Note. From Pintrich, P. R. (2000). In Boekerts, Pintrich and Zeidner (Eds.), *Handbook of self-regulation* (p. 454). San Diego, CA: Academic Press.

With respect to goal orientations, Pintrich (2000c) states "a general goal of approach on mastery, improvement, and learning should be propaedeutic for learning." (p. 479). He also asserts that mastery goals, as related to motivational regulation, are linked to other motivational constructs such as efficacy, value and interest. Other research has suggested that these latter constructs are central to completing a dissertation (Bieschke et al., 1996; Fahihi, et al., 1999; Kiely, 1982; Lenz, 1995; Rode, 1999; Simpson, 1986). It is further interesting that Pintrich (2000c) briefly discusses the concept of avoidance mastery goals and states that there has been little research in this area. Perhaps, avoidance mastery goals (working to maintain mastery in an area) might be associated with perfectionism and a prominent characteristic for those students who are classified as all but dissertation.

Assessment

As a way to assess levels of self-regulation, Pintrich, Smith, Garcia, and McKeachie (1991, 1993) created the MSLQ. This self-report instrument is derived from a cognitive view of motivation and related learning strategies. The questionnaire also includes a social cognitive aspect in the "help-seeking" scale. There are two sections of the MSLQ. The first focuses upon motivation and the second section addresses learning strategies. The instrument was designed to assess college students' self-regulation. There are fifteen separate scales on the questionnaire and they can be administered and used together or separately to assist students in better understanding their own motivation and learning strategies (Pintrich et al., 1991, 1993).

Self-regulation and Motivation: The Relationship

Individual academic motivation is thought to be a complex interaction between environmental and genetically predisposed factors (Wigfield & Eccles, 2002). Zimmerman and Moylan (2009) posit an intersection and close links between metacognition, motivation and self-

regulation and state that there is "currently an extensive effort to include motivational constructs along with metacognitive processes in models of self-regulated learning" (p. 299). Motivation in learning is the student's willingness and desire to learn. Zimmerman and Schunk (2007) propose four sources of motivation in self-regulated learning: motivation as a precursor, a mediator, a concomitant, and a primary outcome of self-regulated learning.

With respect to motivational theories, Zimmerman and Moylan (2009) also state that goal orientation theories address the purpose of learning, attribution theories address the causes for learning or not learning and task value theories focus upon the liking of learning. To determine a frame of reference for this study of self-regulation and the dissertation process, an examination of these three prominent academic motivational theories and factors associated with self-regulation is in order. Each of these will be summarized briefly below.

Motivational Theories

Goal Orientations

Research suggests a strong relationship between goal orientations, self-regulation and academic achievement (Ames, 1992; Elliott, 1999; Fisher, 1999; Pintrich, 2000b, 2000c; Pintrich & Schunk; 1996). In fact, much of Pintrich's theory of self-regulation addresses goal attributions, motivation and achievement.

A number of theorists have studied and written specifically about goal orientations (Ames, 1992; Dweck & Leggett, 1988; Elliott, 1999; Pintrich, 2000b, 2000c). Elliott and McGregor (2001) proposed a 2 by 2 framework of goals orientations as depicted in Figure 2.

Mastery-Approach	**Mastery-Avoidance**
Performance-Approach	**Performance-Avoidance**

Figure 2. Elliott and McGregor's 2 by 2 Framework of Goals Orientation.

Four academic goal orientations have been posited. They are the mastery-approach, mastery-avoidance, performance-approach and performance-avoidance orientations (Elliott & McGregor, 2001; Pintrich, 2000c). Mastery-approach orientations are thought to correlate highly with deep learning, intrinsic motivation and self-determination and have also been termed "learning" goals (Dweck & Leggett, 1988, Pintrich, 2000b, 2000c). Mastery-approach goal orientations are the orientation that educators endorse and the one that we would hope that doctoral students would employ. Mastery-avoidance goal orientations revolve around sustaining abilities previously achieved in order to maintain competence. Elliott (1999, p. 181) provides the following concrete examples of mastery avoidance goals: 1) Michael Jordan striving to maintain his best performances as he ages, and 2) elderly persons trying very hard to preserve cognitive and physical abilities as they experience age-related decline.

In comparison, performance-approach goals tend to correlate more with extrinsic motivation, surface learning, and positive outcomes. An example is a student who exerts a great amount of academic effort may do so in order to earn good grades, an extrinsic reward, versus learning the material. In contrast, performance avoidance goals employ self-defeating strategies to avoid looking incompetent, wherein the focus is upon the ego versus learning (Elliott and McGregor, 2001; Forbes, et al, 2006). A student who holds performance avoidance goals might not study for an exam, perform poorly and then tell his/her friends that he/she is not surprised with the poor performance because he/she did not study. A doctoral student might not work on his/her dissertation for any number of reasons and then relate that it could have been completed months ago had they expended the effort.

Anderman, Austin and Johnson (2002) assert that domain differences and domain specificity in goal orientations have received minimal attention to date. They maintain that goal

orientations are sensitive to instructional context and assert that research has identified important differences in achievement goals across domains.   Researchers have studied goal orientations in some domain specific areas (English, writing, social studies, math and psychology) (Anderman & Johnston, 1998; Anderman & Midgley, 1997; Harackiewicz, Barron, Carter, Lehto & Elliott., 1997; Pajares, Britner, & Valiante, 2000; Wolters & Yu, 1996). Gredler (2005) also includes a "course" such as a class as a possible domain.   If a course is a domain, then enrolling in credit hours for the dissertation might be likened to a course. However, researchers have not specifically studied goal orientations as they relate to dissertation completion.

If we can consider the dissertation to be designated the task or a domain (based upon the specific subject matter explored in the dissertation, e.g. math, and its course-like characteristics) then, perhaps differences in goal orientations might be a relevant focus for further examination with respect to being classified as ABD. As such, a mastery-goal orientation may be necessary and domain specific to the task of completing the dissertation. Also, the role of intrinsic interest in the mastery approach orientation may be essential to dissertation completion.

Attribution Theory

In contrast to futurist perspective of the goal orientation theory of motivation, attribution theory is based upon previously experienced outcomes. In fact, the process is said to start with an outcome. Three assumptions are foundational to attribution theory. First, individuals are motivated to search for meaning through their cognitive and behavioral activities. Second, an individual's personal beliefs and their analyses of the causes of outcomes influence their future behavior, and third, attributions for achievement outcomes are a complex process. This complex process also contains three dichotomous dimensions: stability, locus of control and controllability (Forbes, et al, 2006; Gredler, 2005; Weiner, 1980b, 1985a, 2000). Stability refers

to whether a student believes a personal attribute is stable or changes. Weiner (1985a) asserted that individuals viewed abilities as relatively stable. The locus refers to whether the individual believes the attribute is intrinsic to himself/herself or extrinsic and controllability refers to whether the person believes that he/she has any control over the attribute. Weiner (1985a) asserts that the most commonly held attributes for success and failure are ability and effort (Gredler, 2005).

Attributions impact the student in two ways. Stability influences expectancy and attainment of goals (Gredler, 2005). All dimensions impact an individual's emotions. Future behaviors are determined by perceptions of prior outcomes (Forbes et al., 2006; Weiner 1980b). For example, if the outcome of a student's exam is a bad grade, then the student may feel badly about himself/herself (emotions) because he/she may believe she does not have the ability to achieve at a higher level, or did not exert the effort. If the student believes that ability is stable and not controllable, the student may not even attempt to prepare for an exam in the future (future goals). On the other hand, the same student may feel that he/she does have control and the ability to achieve and thus study much harder for the next exam. Combinations of any three dimensions of an individual's attributional beliefs may thus have varied individual influences and outcomes.

Expectancy Task Value

The expectancy task value model of motivational achievement focuses upon social and psychological reasons that motivate student choices of and engagement in tasks (Gredler 2005; Wigfield & Eccles, 2000, 2002). These theorists assert that individuals' choices, persistence, and achievement are based upon their expectations regarding how well they will perform an activity and also what value that activity holds for the individual (Wigfield & Eccles, 2000, 2002). This

construct of achievement motivation is based upon achievement in a domain (such as a course subject) frequently referred to also as a "Task."

Individuals base their expectations upon ability beliefs derived from the social and cultural milieu, aptitudes of the individual, previous achievement experiences, self-beliefs, goals, affective memories, and values. Figure 3 provides a summary of the expectancy task value model as currently conceived and depicted by Gredler (2005). According to Wigfield and Eccles (2002), task or domain value has four components: attainment value, intrinsic value, utility value and cost. These four components explain how and why an individual is motivated. Attainment value relates to how important it is to perform well in the task. Intrinsic value, similar to intrinsic interest, is the personal joy (positive psychological consequences) a person gains from engagement in the task (Wigfield & Eccles, 2000). For example, successfully completing the Ph.D. would be the attainment value. Intrinsic value would be associated with whether the task was personally satisfying (e.g., enjoying learning new theories of learning). Completing a Ph.D. might also be of utility value in future plans for employment (Wigfield & Eccles, 2000) such as getting a job that is desired or implementing a new theory of learning in a classroom. Associated costs can vary from financial costs, to personal costs (time spent away from family, personal time or stress, etc.). A person must weigh cost and effort in their expectancy for achievement.
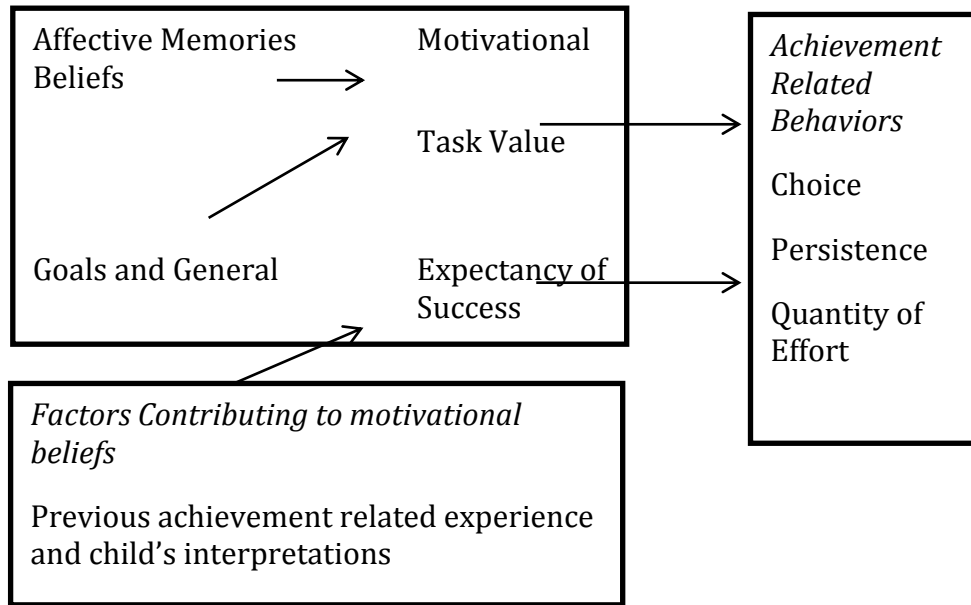
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┌─────────────────────────────────────────┐        ┌──────────────────┐
│ Affective Memories        Motivational   │        │ Achievement      │
│ Beliefs            ──────→                │        │ Related          │
│                                           │   ───→ │ Behaviors        │
│                          Task Value ──────┼────┐   │                  │
│                  ↗                        │    │   │ Choice           │
│                                           │    └──→│                  │
│                                           │        │ Persistence      │
│ Goals and General         Expectancy of ─┼────┐   │                  │
│                           Success         │    └──→│ Quantity of      │
│                   ↗                       │        │ Effort           │
└───────────────────────────────────────────┘        └──────────────────┘
┌─────────────────────────────────────────┐
│ Factors Contributing to motivational     │
│ beliefs                                  │
│                                          │
│ Previous achievement related experience  │
│ and child's interpretations              │
└──────────────────────────────────────────┘
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Figure 3. A summary of key components of the expectancy-value model (Gredler, 2005, p. 384).

While attainment value, utility value and cost are most generally considered to be extrinsic factors, intrinsic value is, in and of itself, the inherent value (enjoyment) of the task to the individual (Gredler, 2005; Wigfield & Eccles, 2000, 2002). Deci and Ryan (1985) and others (Deci, Vallerand, Pelletier & Ryan, 1991; Harter, 1981; Schiefle, 2001; Wigfield & Eccles, 2000) have written similarly of the importance of a construct similar to intrinsic and extrinsic interest in what they refer to as intrinsic or extrinsic motivation directed towards an individual's achievement.

Applied to work on a dissertation, this suggests that if the topic of the dissertation contains the four components of task value or any therein, the student may be more motivated to work on the dissertation and complete it. It is my supposition that task value and specifically the intrinsic value of the task, are decidedly valuable to assisting a student, who is working on a dissertation. Intrinsic value is the aspect of the expectancy/task value model of motivation that I

will focus upon in this study of self-regulation. In the following paragraphs, I will provide support for my conjecture that intrinsic interest, as an aspect of task value, is an essential element for academic achievement and I propose also for completing a Ph.D.

Factors Relating to Self-regulation, Intrinsic Interest and Task Value

Intrinsic Interest and Self-determination and Choice

Within the theory of self-determination, Deci and Ryan (1985) and Ryan and Deci (2000) define intrinsic motivation (similar to intrinsic interest) as referring to an area, topic or subject in which a student has personal interest and curiosity. Intrinsic interest generates motivation to engage in tasks for the sheer pleasure that the task brings (Vansteenkiste, Lens & Deci 2006). Deci and Ryan (1985) and Ryan and Deci (2006) assert that autonomous (self-determined, making autonomous choices) self-regulating students demonstrate greater initiative and persistence.

Similarly, Winne (2005) posits that learners are agents who choose behaviors versus engaging in activities randomly. He maintains that choices are based upon the cognitive analysis of many factors including incentives and values and, especially affective states that the learner envisions will be experienced upon attainment of a goal. These affective states that Winne discusses are reflective of the expectancy value aspect of Wigfield and Eccles (2002) motivational theory.

Additionally, the research of Vallerand, Blais, Briere and Pelletier (1989) and Vallerand, Pelletier, Blais, Briere Senecal and Vallieries (1992, 1993) suggests that more autonomous intrinsic self-regulation has been associated with enjoyment of academics, enhanced feelings of competence, better concentration, better grades and more time spent on academic tasks.

Similarly, in a self-report study depicting situations of motivational conflict, Hofer, Schmid, Fries, Dietz, Clausen and Reinders (2007) found that value orientations were positively related to choice of activities.

Persistence and Intrinsic Interest

The task of completing the dissertation must have value to the individual for him or her to persist in the hard work associated with completion. Researchers support the important role of interest in persistence (Hidi & Ainley, 2007; Smith, Sansone & White, 2007). In fact, Smith, Sansone and White (2007) assert that an individual's experience of interest in the domain may be one of the best predictors of long-term persistence in a particular educational domain or task. Additionally, Vallerand and Bissonnette (1992) found that higher levels of autonomy were positively related to long-term persistence in an academic program with college students.

Persistence is imperative to completing the dissertation. I suggest that a doctoral candidate who does not persist, but procrastinates working on the dissertation, may find himself or herself continually further from completion potentially resulting in attrition and ABD.

Procrastination and Intrinsic Interest

Procrastination may be a significant factor in the completion of the dissertation because candidates no longer have the structure of classes and assignments due, the interest, social support, etc. Green and Kluever (1997) completed a study of dissertation barriers and found that dissertation barrier scores were highly correlated with scores on the Procrastination Inventory (Johnson, Green & Kluever, 2000). Moreover, procrastination may be a product of becoming overwhelmed by the amount of work to be completed on the dissertation, a distal goal.

Some research advocates that students set proximal task specific goals that are challenging (stimulate interest) versus distal goals, which appear to offer less satisfaction and are

more difficult to regulate (Bandura, 1986; Locke & Latham, 1990; Schunk, 1994; Zimmerman & Kitsantas, 1999). Completing a dissertation is a long-term educational undertaking or a challenging distal goal and as such, it may that may stem procrastination, if not viewed in perspective with the associated proximal goals.

Senecal, Koestner, and Vallerand (1995) asked college students why they were pursuing academic activities and reported that students who held intrinsic reasons for pursuing their studies were less likely to procrastinate. They posit that students who procrastinate are unable to maintain their initiative (persist) in pursuing academic goals. Senecal et al. (1995) conclude that no matter how important distal goals or future life goals may be, students are more likely to procrastinate if they are not genuinely interested in the material.

Multiple Competing Goals and Intrinsic Interest

Family issues, health, and money have been found to be barriers for completing the dissertation (Green & Kleuver, 1997; Lenz, 1995; Rode, 1999). They can be viewed as competing goals, that is, each may require more or less focus and resources at certain times. Shah and Kruglanski (2000) describe our lives as juggling acts with multiple competing goals. According to Sansone and Smith (2000), tasks may be fluid and change in meaning and value and this may explain some task engagement outcomes, such as ABD (Sansone & Smith, 2000; Smith, Sansone & White, 2007).   Perhaps task values assigned to goals can be described as state or event because they are not always fixed or persistent. What happens to the dissertation if there are competing goals? For example, a doctoral student might state that at the current time, the dissertation has fallen to priority number four behind other pressing family matters. If completing the dissertation loses task value or intrinsic interest and other competing goals attain greater task value, then less progress will be made on the dissertation completion. If however,

the subject matter of the dissertation task remains intrinsically rewarding, perhaps, the priority will again emerge to a higher level.

Schmidt and DeShon (2007) researched factors that influence the pursuit of multiple goals over time using incentives. They found that incentives offered for goal attainment moderated influence of discrepancies (time to complete) for each goal. Although the incentives were extrinsic (the subject of much controversy) (Ryan & Deci 2000), viewing this from the expectancy task value perspective may make some sense. Within the expectancy task value model of motivation, utility value and attainment value may be viewed as extrinsic goal orientations in some respects. For example, earning the Ph.D. and getting a job that pays well offers extrinsic incentive. Schmidt and DeShon's (2007) findings also suggest that progress made towards meeting one's goals (discussed as goal performance discrepancies) were related to time allocation as a function of distance to completion. The greater the distance to meeting the goal, the more time was given to progress in order to balance these competing goals or tasks. However, his appears to conflict in some ways with the work of Bandura (1986), Locke and Latham (1990), Schunk (1994), and Zimmerman and Kitsantas (1999) that suggests that distal goals are more difficult to self-regulate and, thus make progress in an academic task.

Additionally, Shah and Kruglanski (2000) depict a goal network in which goals are organized hierarchically with relatively few abstract goals supported by many concrete goals and sub-goals. Finally, Schmidt and Deshon (2007) address an important issue, which may relate to intrinsic interest—the relative weight given to goals in a multiple goal self-regulation model. The relative weight that the student assigns to goal of dissertation completion is certainly an important aspect of whether the dissertation is completed and may be a function of the intrinsic

interest in the task. Which goal or task does an individual weigh the most heavily and allocate the most resources and focus?

If we consider concrete goals as proximal goals or tasks in the dissertation process, completion of class work, papers, comprehensive exams and even chapters of the dissertation, these concrete goals support the abstract goal or distal goal of attaining the doctorate. Viewed from this perspective, perhaps there is no conflict with the proximal/distal goal motivational theory. The final goal (dissertation completion), may be distal but the steps to get there (chapters, data collection) are proximal goals and this time is allocated to completing those proximal goals in order to balance competing goals, while working towards the distal goal. Shah and Kruglanski (2000) also assert that goal commitment may be dependent upon the qualities of the goal and the strength of that goal's relationship to other goals. In summary, multiple goals are indeed a complex interaction of phenomena.

Commitment to completion of a doctoral program then may depend upon the quality, task value and intrinsic interest and the relationship to other goals (goals as getting a job, paying bills) involved in attaining the doctorate. Although their theory does consider multiple goals, self-regulation, individual differences in motivation and self-regulatory processes, it does not clearly identify how a goal might attain superior status (as an abstract goal) in the hierarchy and how individuals may succeed in goal attainment (dissertation completion) even amidst many other imperative competing goals.

Perhaps the complementary variable missing and the overarching reason for goal achievement amidst competing goals has to do with personal intrinsic interest and the value of the task to the individual, those important components of expectancy value-domain task model.

Focus and Attention, Intrinsic Interest and Self-regulation

The ability to remain focused upon the task at hand can make a very big difference in the outcome. If the doctoral candidate cannot focus or stay on task, he will certainly never finish the dissertation. Theorists maintain that interest influences attentional processes and that further, persistence and is strongly associated with interest (Hidi & Ainley, 2007). Diehl, Semegon and Schwarzer (2006) examined attention control in young, middle aged and older adults as it relates to goal pursuit. They assert that individuals draw upon their prior experiences in goal pursuit but express different goal attainment behaviors due to innate temperamental differences. They contend that individuals have fairly stable attention control, self-efficacy beliefs, emotion regulation and behaviors with which to respond to situations. Their research found predictability of a student's grades in class based upon academic self-efficacy and ability to focus attention upon a required task. Additionally, they found that an individual who scores highly on the self-regulation scale also tended to be more determined to complete goals with greater energy and more resources allocated. Attention control was a significant predictor of goal commitment in this study. If goal commitment is a result of personal choice and task value, then intrinsic interest may also an important factor in attention control.

The work by Green and Kleuver (1997) on dissertation barriers supports the importance of attention control in that some of the statistically significant items on the Dissertation Barriers Scale (lack of structure of the dissertation process, difficulty with time management, setting aside time for completion of the dissertation, setting aside a space for the dissertation work, organization skills, persistence and sticking to a schedule) may also be viewed as aspects of the ability to focus upon the task at hand. Malone, Nelson and Nelson (2004, p. 33) state that, "Completion of a doctoral program involves intensive study, concentration, and sacrifice on the

part of the student…" In summary, there seems to be agreement among most educators that attention control or concentration is necessary to intensive study and task completion.

However, if attention control as correlated with self-regulation, and is a stable personality characteristic as Diehl et al. (2006) assert, how do you explain those individuals who are able to focus and regulate upon some aspects of their lives while not others? For example, some people may regulate their academic studies, and personal responsibilities well, but are unable to focus the required attention to regulate their physical fitness and thus, remain unhealthy. Is the ability to focus attention domain specific (Math, Psychology) or a stable trait? Does it involve the personal value or intrinsic interest of the task? Is the doctoral candidate who is classified as ABD, no longer interested in the task of completing the dissertation and thus does not focus to complete the work? If, as Diehl, et al. (2006) assert, the focus of attention on the task at hand is indicative of a person's commitment to the goal, then perhaps the doctoral candidates who cannot focus upon the dissertation, self-regulate or commit to its completion are unable to do so because the task is no longer intrinsically interesting or deeply valued.

Investment of Time and Resources, Intrinsic Interest and Self-regulation

Examining motivational conflict, Hofer et al. (2007), found that value orientations were positively related to choice of activities and time invested in learning. To focus attention, an individual must invest time and resources. As Malone, et al. (2004) noted, completion of the dissertation requires intensive study and sacrifice. There are always costs associated with investing time and resources. Pintrich and Zusho (2002) suggest that interest may downplay costs, such as the investment of time, associated with goals.

For what reasons would the doctoral candidate invest those time and resources? It would seem that the task associated with dissertation completion would have to offer exceptional

intrinsic interest, attainment value, and utility value to commit the personal resources to regulate the academic work required and complete the dissertation.

All of the factors examined herein suggest stable factors—task value and specifically intrinsic interest. In the next section I will specifically address intrinsic interest, as a factor that I believe is important to self-regulation, doctoral study and completion of the dissertation.

Motivation, Intrinsic Interest/Task Value and Self-regulation: A Fit for a Doctoral Study

Intrinsic value is an element of task value in the expectancy/task value of the Wigfield and Eccles motivational model (Gredler, 2005; Wigfield & Eccles, 2002). Further, Hidi and Ainley (2007) suggest that the development of self-regulation is integral to interest development. This section of the paper will focus upon the plethora of research that suggests that interest in essential for self-regulation and achievement. Additionally, the overview of the research will make a case that interest as an element of task value and the expectancy task value model of motivation and a combination of the self-regulation theories of Zimmerman (2000) and Woolfolk, Winne and Perry (2006) are the theories of best fit for this study of doctoral candidates who are classified as ABD.

Pintrich and Zusho (2002) discuss the development of academic self-regulation and motivational factors, focusing upon three factors: efficacy-competence judgments, interest and value beliefs as goal orientations. Pintrich et al. (2002) assert that students who are more personally interested in a task as well as those who see the task as having more value are more likely to use self-regulated strategies. Additionally, they suggest that high interest and value beliefs can stimulate students to develop goals for learning, downplay associated costs with undertaking the task and underscore the benefits of self regulation.

Zimmerman and Schunk (2007) and Zimmerman and Moylan (2009) assert that there is a very close association between the constructs of motivation and self-regulation. He also posits that there are two forms of interest associated with self-regulated learning, situational and individual interest. The latter form is considered relatively stable. Zimmerman also suggests that both forms of interest are positive precursors to self-regulation and that interest can play a concomitant and outcome role also. This suggests that whether interest in dissertation work is situational or individual, it can have significant impact upon the regulation of work and positive outcomes or completion of the dissertation.

Further, Sunger and Tekka (2006) state that education researchers report that belief that tasks are interesting is related positively to metacognitive strategy use or self-regulation, similar to the findings of other research (Ames & Archer, 1998; Hidi & Ainley, 2007; Pintrich & Degroot, 1990). Minnaert (1999) studied college freshmen and also found that task value and achieving success were positively related to self-regulation. Scheifle (2001) reported that interest predetermines intrinsic motivation and is most likely the core condition of intrinsic motivation to learn. Sansone and Harackiewicz (1996) presented a model that links research on self-regulation and intrinsic motivation. They assert that in some conditions doing what an individual feels like doing (intrinsically interesting or joyful) may be the most compelling determinant of action. Others (Deci & Ryan, 1985; Ryan & Deci, 2000; Wigfield & Eccles, 2000, 2002; Zimmerman, 2000; Zimmerman & Moylan, 2009; Zimmerman & Schunk, 2007) also affirm the importance of intrinsic interest in self-regulation and similar constructs relating to academic achievement.

Applied to the dissertation process, perhaps intrinsic interest would be the most compelling reason to complete the dissertation. In a study of factors related to student

motivation and effort, Hellman (2000) found that strategies that motivate students include tasks that are valued by the students. VanZile-Tamsen (1996) researched college student's expectancy of success and task value for self-regulated strategy use. She found that task value shared 49 percent of its variation with self-regulated strategies use. Task value was then a fairly strong predictor of self-regulation. In another study of self-regulation, goal orientation and academic success, Mitiadou (2001) found that task value, self-efficacy and learning goal orientation were significant predictors of course completion or attrition. Finally, in a study of relationships among doctoral program components, dissertation self-efficacy and dissertation progress, Varney (2003) asserts that students who held high value for doctoral program components also had the highest dissertation self-efficacy and made the most dissertation progress. In summary, the research reviewed herein overwhelmingly supports the significance of task value and intrinsic interest to academic achievement and possible dissertation completion.

If intrinsic motivation and high task value lead a student to engage self-regulation more frequently as a tool in the academic setting, and self-regulation is a significant predictor of academic success, then it seems likely that doctoral candidates who are intrinsically interested in the subject matter of the dissertation (value the task) will complete the dissertation and in a more timely manner.

<div align="center">**Summary**</div>

There are multiple theories of self-regulation and differing factors that may be involved in the process of self-regulation (Boekaerts, et al., 2000). Completing a dissertation involves an extensive amount of work, focus, persistence and sacrifices. For an individual to commit to this task (which can in some respects be viewed as a distal task, sometimes taking up to four years or more to complete the coursework and potentially even longer if the student is working fulltime),

there must be a very compelling reason. To persist in that undertaking, it would appear that the task value must be very high—that the individual has personal or intrinsic interest in the material or the challenge of attaining the doctorate.   Additionally, a review of how some of the factors relating to self-regulation (self-determination and autonomy, procrastination, focus and attention, competing goals, and persistence) suggest an apparent relationship between these factors and the role of intrinsic interest and task value as factors which may contribute significantly to goal pursuit in completion of the dissertation.

Having examined the factors which have been found to influence dissertation completion and secondly having reviewed those factors which enhance academic achievement (namely task value, intrinsic interest and self-regulation), I have chosen to examine self-regulation and the phenomenon of being classified as ABD based upon the motivational framework of Wigfield and Eccles (2000, 2002) expectancy-value model and both the self-regulation theories of Zimmerman (2000) and Woolfolk, Winne and Perry (2006) which embrace the importance of motivation, intrinsic interest, self-regulated learning and outcome expectations (consistent with the Wigfield and Eccles model). These theories provide the best fit to my hypotheses regarding dissertation.

For this paper, self-regulation was viewed as a "state, event or domain" characteristic versus a more stable personality characteristic. Additionally, self-regulation has most frequently been studied from a goals orientation perspective (Wigfield & Eccles, 2000) versus an interest or task value orientation. I chose to conduct my research from the expectancy/task value model because there is minimal research related to the area of self-regulation and intrinsic interest and also because I believe that personal interest and task value are critical to the goal of completing the dissertation successfully.

It was hypothesized that:

1. Doctoral candidates who exhibited higher levels of self-regulated learning strategies in working on their dissertations would have a shorter period of time classified as ABD than doctoral candidates who exhibited lower self-regulation, while controlling for financial support, social support, research self-efficacy, field of study, and gender.

2. Doctoral candidates who indicated that their dissertations held more task/intrinsic value also exhibited the use of more self-regulated strategies in working on their dissertations task than doctoral candidates who stated their dissertations held less task/intrinsic value.

3. Doctoral candidates who exhibited more task value/intrinsic interest in completing their dissertation would have a shorter time classified as ABD than doctoral candidates who exhibited less task value in completing their dissertation, controlling for financial support, social support, research self-efficacy, field of study, and gender.

4. Doctoral candidates, classified as ABD, would exhibit less self-regulated learning than recent Ph.Ds.

Within the frame of reference of motivational theory of expectancy/task value and the role of self-regulation in completion of a dissertation, I conducted research to answer the following questions:

1. To what extent does the use of self-regulated learning strategies influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research-self-efficacy, field of study and gender?

2. To what extent does task value/intrinsic interest influence a doctoral candidate's use of self-regulated learning strategies in work on the dissertation?

3.　　　To what extent does task value/intrinsic interest influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research self-efficacy, field of study and gender?

4.　　　To what extent does a doctoral candidate's self-regulation exhibit a linear relationship with time taken since the comprehensive examinations?

5.　　　To what extent does a doctoral candidate's level of self-regulated learning differ from a recent Ph.D.'s (dissertation completers) level of self-regulated learning?

6.　　　To what extent does a doctoral candidate's time to completion of the dissertation, after comprehensive exams were taken, differ from a recent Ph.D.'s time to completion of the dissertation?

CHAPTER 3. METHODOLOGY

This is a quasi-experimental mixed methods study that examined the time to complete the dissertation as predicted by differences in self-regulation, while controlling for financial support, research efficacy, social support (support of the committee, family and friends), field of study and gender.

Review of the Problem

Doctoral students who complete all course work, but fail to complete their dissertation remain a serious concern for educators. It is estimated that up to 60 percent of doctoral candidates do not complete their dissertation and are classified as all-but-dissertation (ABD) (Bair & Hayworth, 1999; Berger, 2007; Council of Graduate Schools, 2010; Ehrenberg, Zuckerman, Groen, & Brucker, 2009; Johnson, Kluever & Green, 2000)**.** The purpose of this study was to determine the levels of motivation, interest and self-regulation that doctoral candidates, who have completed their comprehensive exams, but not their dissertations, exhibit. Recent research and literature suggest that motivation, interest and self-regulation are closely related with motivation and interest playing an important role in self-regulation and being reciprocally interactive (Hidi & Ainley, 2007; Zimmerman & Schunk, 2007)

This chapter provides an outline and discussion of the research design and sample selection employed to assess levels of self-regulation in doctoral candidates classified as ABD as well as those students that have recently completed their dissertation. The chapter also includes

descriptions of the assessments and procedures used in the study, as well as identifying the

independent variables, the dependent variables and also the covariates assessed.

Using a quasi-experimental mixed methods approach, both quantitative and qualitative

survey questions were used to gather data. The mixed methods approach allowed the researcher

to examine data from a quasi-experimental stance and also from a qualitative personal

perspective. The latter permitted the researcher to further explore any outliers that would

become apparent. This mixed methodological approach enabled the researcher to more fully

elucidate the findings her research questions posed.

The research design is depicted in Figure 4.
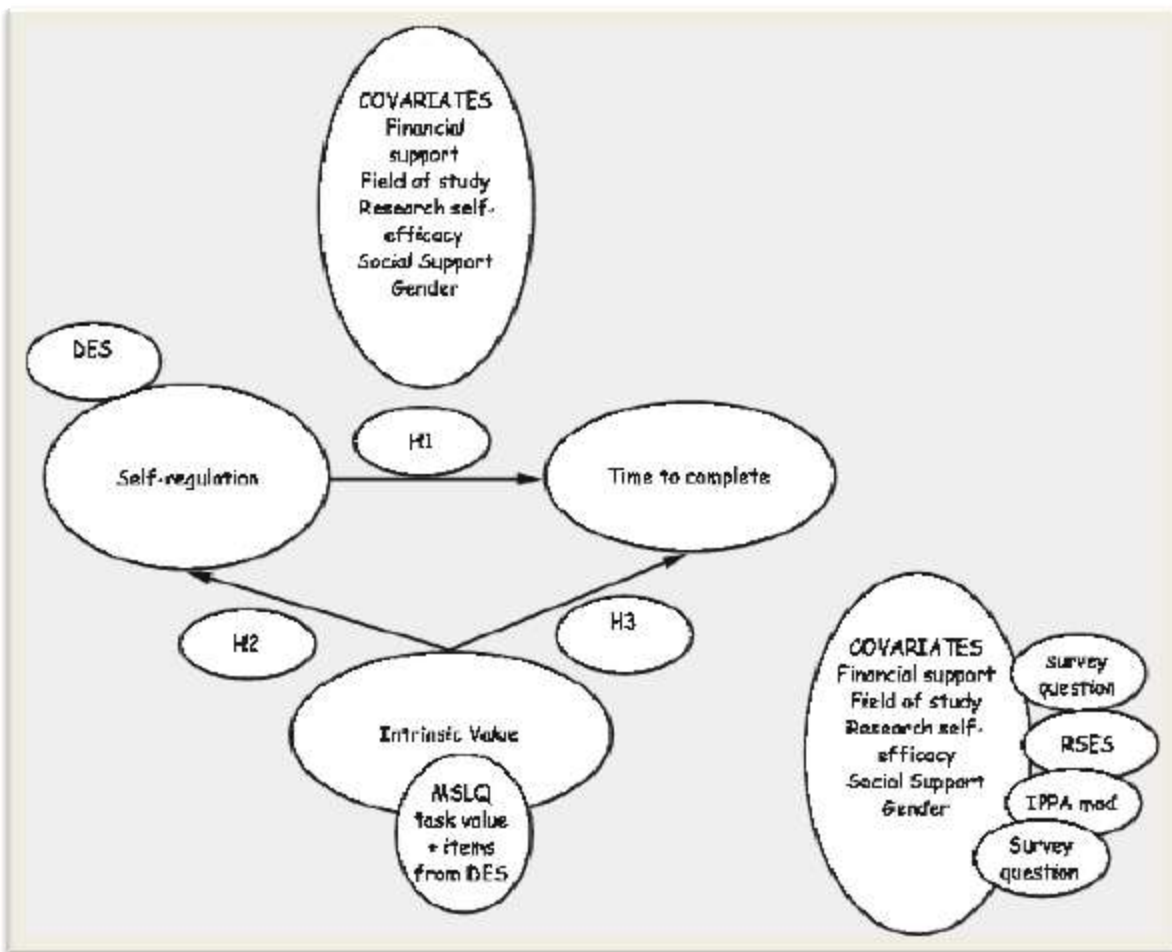
Figure 4. Research Design

Hypotheses and Research Questions

It was hypothesized that:

1. Doctoral candidates who exhibited higher levels of self-regulated learning strategies in working on their dissertations would have a shorter period of time classified as ABD than doctoral candidates who exhibited lower self-regulation, controlling for financial support, social support, research self-efficacy, field of study, and gender.

2. Doctoral candidates who indicated that their dissertations held more task/intrinsic value also exhibited the use of more self-regulated strategies in working on their dissertations task than doctoral candidates who stated their dissertations held less task/intrinsic value.

3. Doctoral candidates who exhibited more task value/intrinsic interest in completing their dissertation, would have a shorter time classified as ABD than doctoral candidates who exhibited less task value in completing their dissertation, while controlling for financial support, social support, research self-efficacy, field of study, and gender.

4. Doctoral candidates, classified as ABD, would exhibit less self-regulated learning than recent Ph.Ds.

The research questions were as follows:

1. To what extent does the use of self-regulated learning strategies influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research-self-efficacy, field of study and gender?

2. To what extent does task value/intrinsic interest influence a doctoral candidate's use of self-regulated learning strategies and time to completion of the dissertation?

3.   To what extent does task value/intrinsic interest influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research self-efficacy, field of study and gender?

4.   To what extent, does a doctoral candidate self-regulation exhibit a linear relationship with time taken since the comprehensive examinations

5.   To what extent does a doctoral candidate's level of self-regulated learning differ from a recent Ph.D.'s (dissertation completers) level of self-regulated learning?

6.   To what extent does a doctoral candidate's time to completion of the dissertation, after comprehensive exams were taken, differ from a recent Ph.D.'s time to completion of the dissertation?

Participants

The primary participants for this study were 140 doctoral candidates identified through the graduate school at a large Southeastern university. Students were defined as participants for this study, if they had completed their comprehensive exams, but not their dissertations and they were thus classified as doctoral candidates who were ABD. Additionally, a second group of participants included those individuals who had recently completed their dissertations for further comparisons. There were 76 females (54% of the participants) and 63 males (45% of participants) who completed the survey. One participant did not disclose his/her gender.

Ninety-five participants (68%) identified themselves as being ABD and 45 participants (32%) indicated that they had completed their dissertations and were Ph.Ds. Of those who identified themselves of being ABD, 57 (60 %) were male and 38 (40%) were female. Of the Ph.Ds., 19 (43%) were male and 56% were females.

The participants included those from both the hard sciences ($n = 59$, 42% of the participants) such as math and physical sciences, engineering, life sciences and the social sciences ($n = 81$, 58% of the participants) such as humanities, education and psychology.

There were 42 participants (30%) who identified that they were part time students while working on their dissertations and 95 (68%) who indicated that they were full time students when working on their dissertation. Three participants did not identify their student status.

Additionally, 19 (14%) participants indicated that they received no financial support while working on their dissertations, while 120 (86%) indicated that they did receive some form of financial support while working on their dissertations. The predominant form of financial support was having a graduate assistantship. Other forms of financial support that participants reported were working as an adjunct at another school, tuition waivers, university benefits, on-campus jobs, savings and grants.

For this study, the graduate school notified the doctoral participants via email that an online survey was being conducted for research and educational purposes, should they choose to participate. Thus, the participation was voluntary and anonymous.

The primary motivation for participation was provided in the initial notification and stated that the most important reward would be the knowledge that the candidates were participating in research that could potentially be applied to future intervention strategies to assist doctoral candidates in successful dissertation completion. Additionally, the first twenty participants who completed surveys were rewarded with a $5 Amazon gift certificates redeemable at Amazon.com.

An assumption of normality and homogeneity of variance of the sample population was made for this study as all students classified as ABD within the graduate school were invited to

participate in the survey, in addition to all those Ph.Ds. that the graduate school was able to notify.

<div align="center">**Instrumentation**</div>

Independent and Dependent Variables

For this study, the primary independent variable was self-regulation as operationalized by scores of the Self-Regulated Learning (SRL) Scale of the Dissertation Enablers Scale (DES). The other independent variable was intrinsic task value as operationalized by the Intrinsic Task Value Scale administered as part of the DES. For the first independent variable, self-regulation, the dependent variable was the amount of time that had elapsed, since the doctoral candidate had completed comprehensive examinations, calculated in years. For the second independent variable, intrinsic task value, the dependent variables were the level of self-regulation and the time to complete the dissertation.

Based upon a comprehensive review of the literature presented in Chapter 2, some other variables that have been researched as aspects of successful graduate work include financial support (Bair & Hayworth, 1999; Council of Graduate Schools, 2010; Jacks et al., 1983; Peacock, 1996), social support (Council of Graduate Schools, 2010; Fahihi, Rakow, & Ethington, 1999; Franek, 1983; Green & Kleuver, 1997; Hanson, 1992; Jacks et al., 1983; Lenz, 1995; Monsour & Corman, 1991; Rode, 1999; Sattell, 2002; and Sigafus, 1998), research self-efficacy (Bieschke, Bishop & Garcia, 1996; Fahihi et al., 1999; Holden, Barker, Meenaghan & Rosenberg, 2007; Joerg, 2005; Rode, 1999; Single 2010; Simpson, 1986), field of study (Bair & Hayworth, 1999; Council of Graduate Schools, 2010; Johnson, Green & Kleuver, 2000; Wright & Cochrane, 2000), and gender (Bair & Hayworth, 1999; Council of Graduate Schools, 2009; Hanson, 1992; Hobish, 1979; Lenz, 1995). These factors may also influence work on this

dissertation and were also be assessed in this study.   Covariates included financial support, research self-efficacy, the support of others (social support), field of study, and gender. Financial support was operationalized through questions in the demographic section of the questionnaire as was field of study and gender. Research self-efficacy was assessed through a modified Research Self-Efficacy Scale. A modified scale of social support of the survey assessed the level of social support the participants indicated they experienced. In Table 2, data are presented regarding all of the variables employed within this study and the reliability of instruments used to assess the variables as compared with those instruments that were modified for development of the present survey.

Table 2

Summary of Variables Employed in the Study

Variable	Description	Instrument/Scale	# items	Response Scale	Reliability of instruments employed in this study and original instruments
SRL	Independent variable	DES	45 quantitative 5 qualitative	Likert scale 1-7	DES Cronbach's alpha = .92 MSLQ SRL scale Coefficient alpha = .79
Intrinsic Task Value	Independent variable	Intrinsic Task Value Scale	10 quantitative 1 qualitative	Likert scale 1-7	Cronbach's alpha = .91 MSLQ task value scale, Coefficient alpha = .90
Time elapsed since comps	Dependent Variable	DES question	2 questions -year and months elapsed	0 – X years 0-12 months	NA
Financial support	Covariate	Demographic questions	5 questions, 2 quantitative 3 qualitative	Questions and Likert Scale 1-7	NA
Field of study	Covariate	Demographic question	1	Open question	NA
Research Self-efficacy	Covariate	Research Self-efficacy Scale (RSES) (modified)	9 quantitative 1 qualitative	Likert Scale 1-7	Cronbach's alpha = .91 for this modified instrument. - RSES Cronbach's Alpha = .94
Social support Inhibitors Family/friends Program support	Covariate	Social Support Scale	24 quantitative 1 qualitative	Likert Scale 1-7	Cronbach's alpha .90 .85 .83 IPPA reliability .87 .89 .92
Gender	Covariate	Demographic question	1	Female/male question	NA

MSLQ = Motivated Strategies for Learning Questionnaire (Garcia & Pintrich, 1995; Pintrich et al., 1991, 1993)
RSES = Research Self-efficacy Scale (Holden, Barker, Meenaghan & Rosenbery, 2007),
IPPA = Inventory of Parent and Peer Attachment (Armsden & Greenberg, 2009; Greenberg & Armsden, 2009).

The survey (Appendix A) consisted of four scales and demographic data that were

employed to assess the impact of self-regulated learning and additionally to assess the covariates

of financial support, field of study, research self-efficacy, social support and gender upon the

time to complete the dissertation. The survey was referred to as the DES. The first scale, the

SRL Scale was developed specifically for doctoral candidates by the researcher for this study.

This scale was compiled by reviewing theories of self-regulation and creating survey questions

that reflected the process of self-regulation as theorized by Martinez-Pons (2003), Pintrich

(2000c), Woolfolk, Winne and Perry (2006), Zimmerman (2000), and Zimmerman and

Martinez- Pons (1986) and also the expectancy task value theory of motivation as posited by

Wigfield and Eccles (2000, 2002). Within this instrument, the researcher asked questions

focusing upon the analysis of the dissertation task, the goal setting associated with working on a

dissertation, strategy planning to successfully engage the goals, the engagement tactics enacted

to complete the goals and the metacognitive monitoring processes that the student employed in

order to revise outcomes to the desired goal. The scale was a self-report questionnaire consisting

of 45 questions divided equally among the five areas previously defined (task analysis, goal

setting, strategy development, tactics engagement and metacognitive monitoring). Thus, there

were 9 questions per each aspect of self-regulation. The responses were based upon a seven

point Likert-type scale, in which participants responded as follows: "Strongly Disagree 1"; "2;

"3"; "4", "5", "6"and "Strongly Agree 7." In addition to these 45 questions, there were 5

qualitative questions with spaces provided for comments. These questions each addressed one of

the 5 areas of SRL, to further understand and elucidate upon the Likert-type responses.

It is important to understand that SRL is both a cognitive process and behavioral activity

and as a construct, although some of the behavioral activities may be observable (e.g., getting a

study carrel at the library to complete work, going to the study carrel and working on the dissertation), many of the cognitive processes of the construct may not be readily observed. For this study, these metacognitive processes can only be inferred through self-report of activities and behaviors that reflect SRL. Because of the anonymous nature of the survey, the researcher did not have access for personal observation or access to any other instrumentation that might assess self-regulation from a technological perspective.

Exploratory Factor Analyses

The validity of the SRL scale of the DES survey were established using comparisons with like instruments, expert review, and a exploratory factor analyses (EFAs). These EFAs were utilized to determine the component factor structure of the DES items (including all four scales: the SRL scale, the intrinsic task value, the research self-efficacy and the social support scales). Eigenvalues with a value greater than 1.0 were considered in the analysis. It was decided that those items extracted would have a factor load greater than .30.

The EFA of the SRL Scale used a principal component extraction method and an oblimin rotation of a 45 item self-report survey that was administered to 140 doctoral candidate participants and recent dissertation completers. The Kaiser-Meyer-Olkin Measure of Sampling adequacy ranges from 0-1 and indicates the interrelatedness and whether items will yield an acceptable factor analysis. The minimum value is normally considered .70. (Meyers, Gamst, & Guarino, 2006). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .804 indicating that the data were appropriate for analysis. Additionally, the Bartlett's test of sphericity was significant ($p = .000$) demonstrating that there was significant correlation between the variables to go forward with the analysis.

Although the Kaiser-Guttman retention criterion of eigenvalues greater than one, for the

SRL Scale, in this study the EFA identified one highly dominant factor (as per the scree plot,

Figure 5) with an eigenvalue of 12.94 which accounting for a variance of 28.75%. Because this

factor was so dominant, it was decided to go with this single factor. It was titled "self-regulated

learning" because it contained all of the subcomponents of the SRL scale of the DES: analysis of

the task, setting goals, developing strategies, engaging tactics and metacognitive follow-up.

Twenty-four items from the survey were retained as identified in Table 3. The corrected item

total correlation ranged from -.045 to .282. Figure 5 depicts the scree plot.
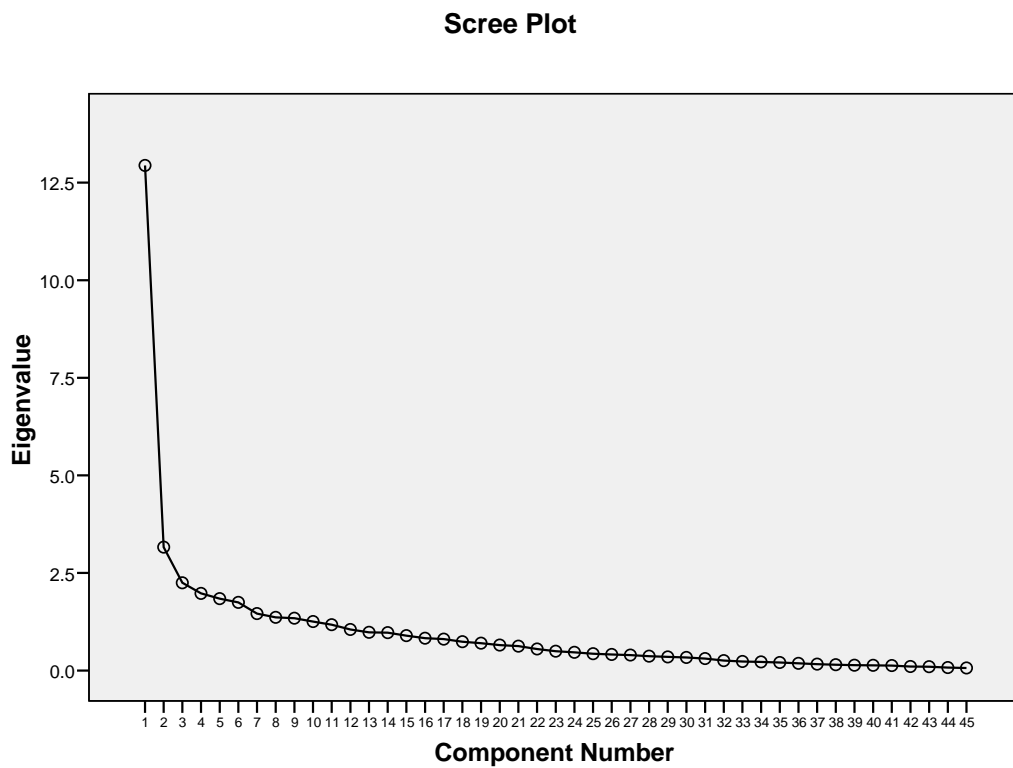
Scree Plot

Figure 5. Scree plot for the Self-regulated Learning Scale.

Table 3

Items Retained for the Self-regulated Learning Scale

Item #	Item	Factor Coefficients	Item Total Correlation
43.	If I get/got confused when working on my dissertation, I always sort(ed) it out.	.784	.468
37.	I adjust(ed) my schedule when I do/did not meet my goals for completing work on my dissertation.	.624	.635
21.	I develop(ed) a plan to organize the different tasks that need to be accomplished to complete my dissertation.	.593	.629
29.	While working on my dissertation, I engage(ed) the plans and strategies that I developed regarding my dissertation work	.529	.681
18.	I do/did set short-term goals to motivate me to complete my dissertation.	.505	.672
1.	I think/thought about the various tasks that need(ed) to be completed on my dissertation.	.491	.723
32.	Even when my work feels/felt like drudgery, I manage(ed) to keep working until I finish(ed) the specific task I was working on.	.471	.587
12.	I want(ed) to complete my literature review by a set date.	.447	.406
4.	I do/did consider the amount of work it will/would require to complete my literature review.	.444	.552
13.	I do/did set short-term goals that I will need to achieve to complete my dissertation.	.425	.701
25.	I am making/made a timeline which identifies goal completion due dates.	.411	.571
11.	I do/did set goals for the completion of the sections of my dissertation.	.411	.691
16.	I have/had a target date to complete my research on my dissertation.	.409	.541
7.	I think/thought about my ability and skills required to complete my dissertation.	.405	.356
33.	I work(ed) on my dissertation during the blocks of time I have/had scheduled for this work.	.399	.655
19.	I develop(ed) strategies to manage anxiety, when working on my dissertation.	.376	.422
42.	I review(ed) my goals to assess whether I am meeting/have met them in a timely manner.	.373	.564
3.	I do/did think about the time frame for completing the required study associated with my dissertation.	.367	.577
14.	I do/did set goals to obtain necessary resources to work on my dissertation.	.367	.622
2.	I think/thought about how much time it will take/took to complete the introduction to my dissertation.	.362	.458
9.	I consider(ed) which subject matter would realistically make a good dissertation topic.	.360	.400

(table continues)

Item #	Item	Factor Coefficients	Item Total Correlation
28.	I regularly write/wrote down all thoughts I have/had regarding my dissertation.	.359	.458
5.	I expect/expected to be successful in completing my dissertation why starting my work on my dissertation.	.343	.491
15.	I do/did set realistic goals for my dissertation work.	.324	.515

Content validity and face validity of the SRL scale were established via an independent expert review and comparison of the items for similarity with those on the Motivated Strategies for Learning Questionnaire (MSLQ; Pintrich, Smith, Garcia & McKeachie, 1991, 1993) and the Self Regulated Learning Interview (SRLI; Zimmerman & Martinez-Pons, 1986) and the Martinez-Pons Five component Scale of Academic Self-Regulation. The reliability of the SRL scale was found to be very good, calculated as Cronbach's alpha = .92.

In addition to the SRL scale of the DES, the participants were also administered three other scales. The second section of the survey also was developed to assess intrinsic task value of the dissertation similar to the Task Value scale of the Motivated Strategies for Learning Questionnaire (Pintrich et al., 1991, 1993). Additionally, the questions were formulated to reflect the Wigfield and Eccles (2000, 2002) achievement motivation theory of expectancy/task value, with specific emphasis on the area of intrinsic interest or motivation (as espoused by Ryan and Deci, 2000). The Intrinsic Task Value Scale of the DES was derived through modification of the Task Value scale within MSLQ, developed by Pintrich et al. (1991, 1993). This scale was included in the DES to assess intrinsic task value as, considered to be a specific element of self-regulation by the researcher.

The MSLQ self-report instrument was designed to assess college students' self-regulation from a cognitive view of motivation and related learning strategies. The data sources for the MSLQ were gathered from a sample of 380 Midwestern college students, who primarily, were

attending a public four-year university, although some students attended a community college.

The initial research and study began in 1982, and formally commenced under a grant when the

National Center for Research to Improve Post Secondary Teaching and Learning was founded in

1986 (Pintrich et al., 1991, 1993). Several waves of data were collected from 1986–1987 to

revise and construct the 15 subscales. According to Benson (Mental Measurements Yearbook

13), the scales were derived through item and factor analysis.

Within the two sections of the MSLQ, the first focuses upon motivation and the second

section addresses learning strategies. The sections can be used together or independently. There

are fifteen separate scales on the questionnaire and they can be administered and used together or

separately to assist students in better understanding their own motivation and learning strategies

(Pintrich et al., 1991). The MSLQ can also be self-scoring as students rate whether statements

are like themselves on a Likert-type Scale. Item responses are averaged for each subscale. The

scale can thus be administered in a class, and an instructor can describe how to score (especially

reversed items) and explain the meaning of the scores. Pintrich et al. (1991, 1993) assert that the

questionnaire is not normative but for the use with individual students in the classroom, to assist

in determining their learning strengths and weaknesses.

Pintrich et al. (1991, 1993) maintain that the instrument has internal consistency

estimates ranging from .52 to .93. The task value scale is reported to have internal reliability

(coefficient alpha) of .90. Subscale intercorrelations range from .00 to .70 with over half of the

correlations between .00 and .30, indicating a fairly weak relationship (Benson, 2009). A

confirmatory factor analysis was used to establish the validity. Gable (2004) reports that content

validity of the MSLQ is confirmed through a great amount of literature regarding college student

learning. Criterion validity is established through correlations with student final grades in the

course and for the motivation scales, they range from .27 for the test anxiety to .41 for the self-efficacy scale. For the learning strategies scales, the correlations ranged from -.06 to .32 (Gable, 2004).

Validity of the intrinsic task value scale of the DES was established by comparison with the Task Value scale of the MSLQ and expert review. Additionally, a direct oblimin EFA was calculated to assess construct validity. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .860 indicating that the data were appropriate for analysis. Additionally, the Bartlett's test of sphericity was significant (p = .000) demonstrating that there was significant correlation between the variables to go forward with the analysis. The scale consisted of 10 items and results indicated that there was one dominant factor with an eigenvalue of 5.95 accounting for 59.46% of the variance. It was determined by the researcher that factors extracted with a factor-loading coefficient over .3 would be retained. This included all 10 Intrinsic Task Value Scale items. Figure 6 depicts the scree plot calculated for the Intrinsic Task Value Scale of the DES. The reliability of the scale was computed using Cronbach's alpha, which was a .91.

In addition to these scales, a modified version of the Research Self-Efficacy Scale (RSES) (Holden, Barker, Meenaghan & Rosenberg, 2007) was used to assess the covariate of research self-efficacy. The reliability of the Holden et al. (2007) RSES as originally designed was reported to be high, Cronbach's alpha was. 94. The face validity appeared good and the construct validity was moderate to good based upon predictions and observed behavior (63% no difference). Originally developed for social work graduate students, this scale was modified for use with doctoral candidates by the researcher. Both the Holden et al. (2007) RSES and Varney Dissertation Appraisal Inventory (Varney, 2003) were used as references for this modification.

An EFA was calculated to assess construct validity of the modified RSES and the scree plot for this scale is depicted in Figure 6. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .858, with a Barteltt's Sphericity of 848.754, df 36, p = .000. These statistics indicated that it was appropriate to continue with the analyses. It was determined that only one factor would be retained for the RSES, since there was a highly dominant factor evident in the oblimin rotation yielding an eigenvalue of 5.249 which accounted for 58.324% of the variance. The structure matrix indicated that all nine items loaded upon this one component. This component was named "research self-efficacy" since all items' factor loadings upon this factor were above .3. The modified RSES demonstrated good reliability with a Cronbach's alpha of .91. This scale was considered suitable for use in the study. Figure 7 depicts the scree plot for the modified RSES.
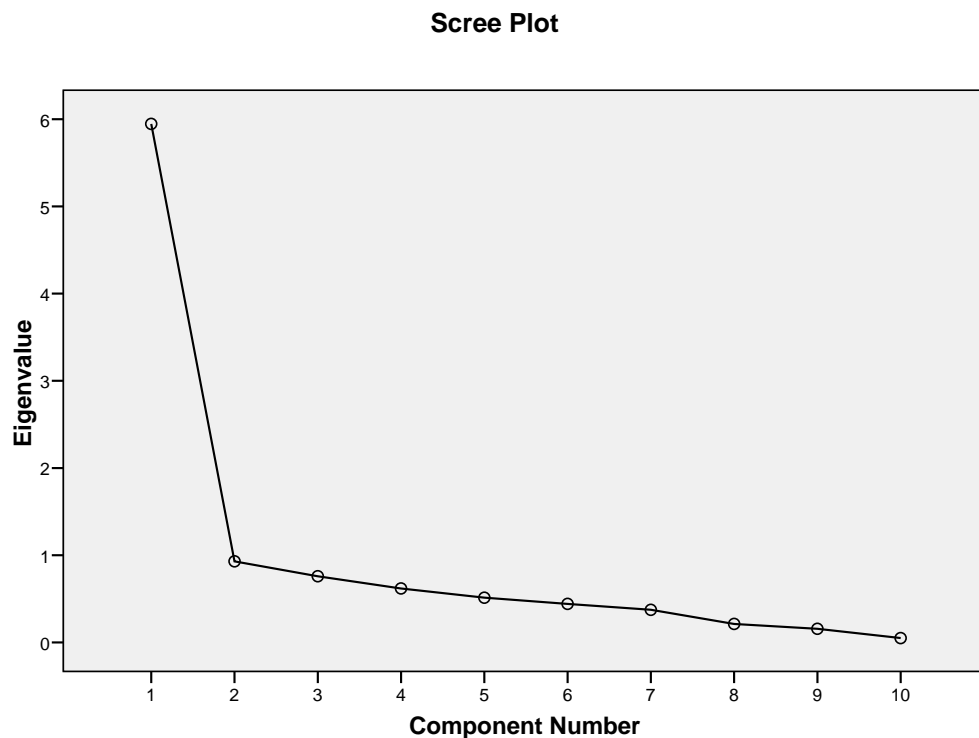
Scree Plot

Figure 6. Scree plot for Intrinsic Task Value Scale

Scree Plot
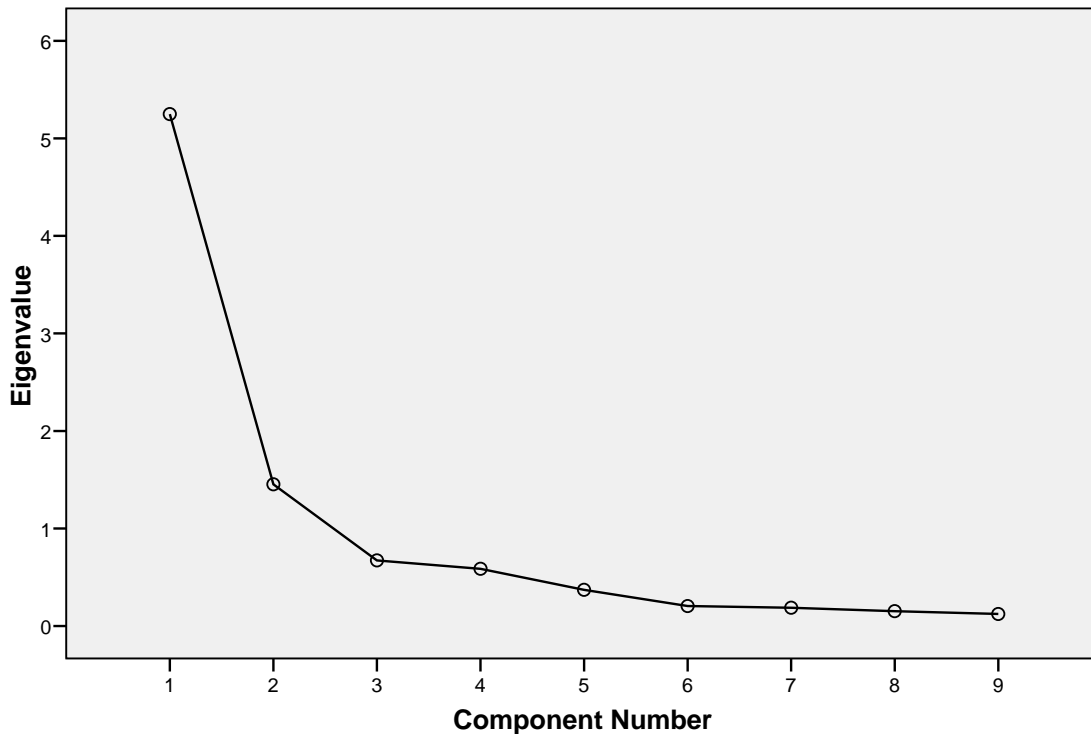
Figure 7. Scree Plot for the Research Self-efficacy Scale

A final scale of the DES assessed the social support that participants indicated they experienced when working on their dissertations. Social support has been identified as an important factor in dissertation completion (Council of Graduate Schools, 2010; Fahihi, Rakow & Ethington, 1999; Franek, 1983; Green & Kleuver, 1997; Hanson, 1992; Jacks et al., 1983; Lenz, 1995; Monsour & Corman, 1991; Rode, 1999, Sattell, 2002). Social support was operationalized through responses to family constellation questions in the initial demographic section of the survey and using a researcher modified questions from the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987; Greenberg & Armsden, 2009). The IPPA is a self-report questionnaire with five point Likert-type scale response options. It is based upon

attachment theory and measures how well those persons who are close to an individual provide psychological security. The three dimensions assessed are mutual trust, communication quality and the extent of alienation. A three-week test-retest reliability for a sample of 27 18–10 year olds was .93 for parent attachment and .86 for peer attachment. Internal reliabilities for the newest revision using Cronbach's alpha were mother attachment, .87, father attachment, .89 and peer attachment, .92 (Greenberg & Armsden, 2009). With respect to validity, the IPPA questions are moderately to highly related to family and social self scores on the Tennessee Self-Concept Scale and to most scales on the Family Environmental Scale created by Armsden and Greenberg in 1987. Greenberg posits that it is also moderately correlated with scores on the FACES and with the degree of positive family coping (communication). Further, the authors state that "Peer attachment is positively related to social self-concept as assessed by the Tennessee Self-Concept scale and family expressiveness on the Family Environment Scale and is strongly negatively correlated with loneliness" (Greenberg & Armsden, 2009, p. 2). The IPPA was modified to assess family, peer and committee support versus "mother", "father" and "peers" as the IPPA assesses. The modification of the IPPA for the social support scale of this study reflected more specifically the doctoral experience.

An EFA was conducted to assess the construct validity of the modified IPPA and results yielded three dominant components with eigenvalues of 6.89, 4.06, and 2.69, which accounted for 56.86% of the variance. These components were identified as "inhibitors (those factors which inhibit dissertation completion), family and friend support and program support (department and committee support), respectively. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .79 indicating that the data were appropriate for analysis. Additionally, the Bartlett's test of sphericity was significant ($p = .000$) demonstrating that there was significant correlation between

the variables to go forward with the analysis. Of the three factors, the reliability for inhibitors

was calculated via Cronbach's Alpha to be .90. For the family and friends factor, the Cronbach's

alpha was .85, and for the program support, the reliability was .83. Eleven items were retained

from the inhibitor factor, seven items from the second factor, friends and family, and five scale

items were retained from the program support factor. Figure 8 depicts the scree plot for the

Social Support Scale. Table 4 displays items retained for the EFA dominant factors for social

support. Table 5 displays the results of the EFA for all DES scales administered online.

Scree Plot
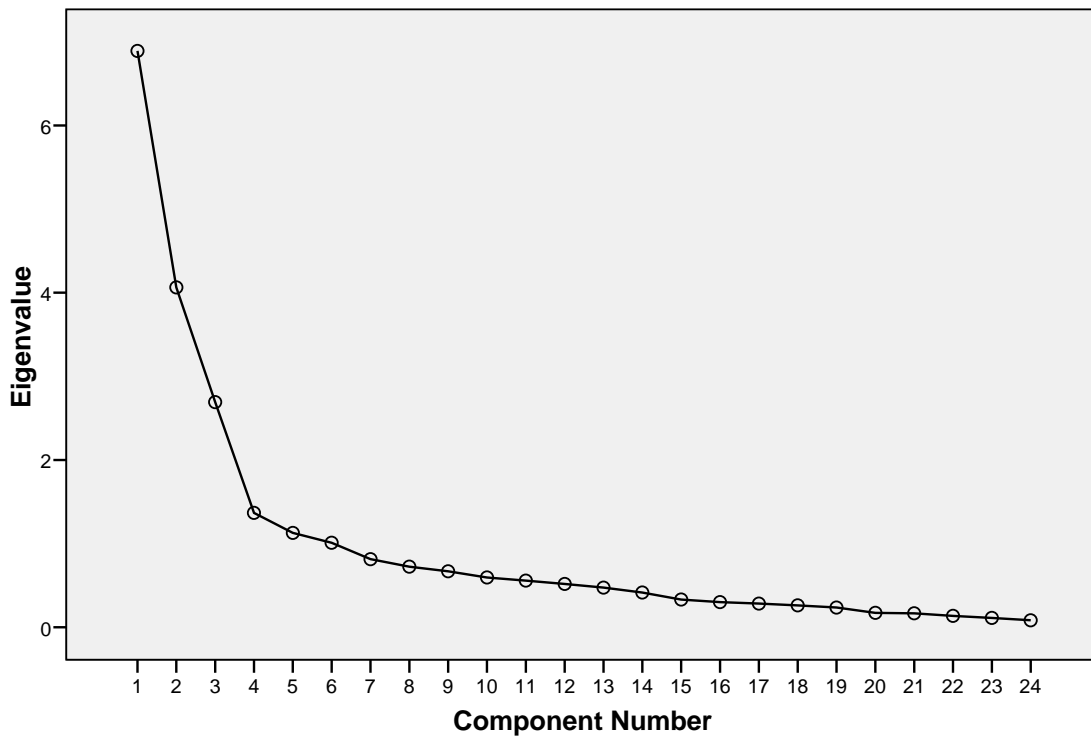
Figure 8. Scree Plot for the Social Support Scale

Table 4

Items Retained for the Social Support Scale

Scale Factor	Item #	Item	Factor Coefficients	Total Item Correlations
Inhibitor	8.	When working on my dissertation, my committee expects/expected too much of me.	.932	.730
	22.	My committee expects/expected too much of me when working on my dissertation.	.916	.617
	9.	When working on my dissertation, my department expects/expected too much of me.	.811	.766
	10.	When working on my dissertation, my employer expects/expected too much of me.	.732	.678
	7.	My friends/peers expect/expected too much of me when I was working on my dissertation.	.625	.678
	6.	When I am/was working on my dissertation, my family expects/expected too much of me.	.528	.688
	11.	My family obligations require/required more time than I expected during the dissertation.	.449	.727
	16.	My work obligations prevent/prevented me from spending as much time on my dissertation as I would like/have liked when working on my dissertation.	.394	.556
	15.	My family doesn't/didn't understand what I am/was going through when working on my dissertation.	.357	.550
	12.	My family obligations prevent/prevented me from spending as much time as I would like/have liked on my dissertation.	.350	.639
	19.	My friends don't didn't understand what I am/was going through when working on my dissertation.	.317	.469
Friends/ Family	2.	My friends/peers are/were very supportive of my completing my dissertation.	.882	.750
	14.	My friends/peers offer/offered me the social emotional support I need/needed during work on my dissertation.	.849	.756
	20.	My friends care(d) about how I am/was feeling, when working on my dissertation.	.845	.743
	18.	My friends encourage(d) me to talk about my difficulties, when working on my dissertation.	.730	.457
	13.	My family offers/offered me the social emotional support I need/needed during work on my dissertation.	.468	.624
	1.	My family is/was very supportive of me completing my dissertation.	.311	.532
	5.	My employer is/was very supportive of me in completing my dissertation.	.307	.440
Program Support	23.	When discussing things, my committee cares/cared about my point of view when working on my dissertation.	.896	.803
	4.	My department is/was very supportive of me in completing my dissertation.	.802	.664

Table 4 (continued)

Scale Factor	Item #	Item	Factor Coefficients	Total Item Correlations
Program Support (cont'd)	3.	My committee is/was very supportive of me in completing me dissertation.	.798	.619
	21.	I like(d) to get my committee's point of view on things I am concerned about when working on my dissertation.	.720	.495
	24.	My committee trusts/trusted my judgment when working on my dissertation.	.702	.565

Table 5

Exploratory Factor Analysis of the DES Survey Scales

Scale Name	Initial Eigenvalues	Variance	
	Total	% of Variance	Total Variance
SRL	12.94	28.75	28.75
Intrinsic task value	5.95	59.46	59.56
RSES	5.25	58.32	58.32
Social support			
Inhibitors	6.89	28.74	28.74
Friends/family	4.06	16.93	16.93
Program	2.69	11.22	11.22

Procedures

Prior to entering the actual DES online, the doctoral candidates were provided a letter explaining that the survey was anonymous, the purpose of the survey, the assistance it might provide to future interventions in assisting doctoral students to complete their dissertations and thanking participants for their time and contribution to the research (Appendix B). Additionally,

this letter contained information regarding the reward for participation and how to access the site upon completion of the survey.

Those who chose to complete the survey scales were informed that by submitting the survey online, they were giving their consent and agreement to participate. The second page of the survey asked the participants if they were 19 years old or older (requirement for participation) and if they answered "No" page logic directed them to a page that thanked them and directed them to close their browsers. Participants who responded that they were 19 years of age were directed to the first page of the survey, which queried whether the participant had completed his/her comprehensive exams. If the answer was "No", then page logic directed them to a final page that thanked them and directed them to close their browser. For those who answered "Yes", the next page asked if they had completed their dissertation. If the participant had completed their dissertation, they were directed to a page to collect demographic information for dissertation completers. The remaining participants were directed to a page to gather demographic information for all who were classified as ABD.

The demographic questionnaires included questions regarding the current number of months and years of dissertation work elapsed, since completing their comprehensive exams. Additionally, demographic data was collected regarding financial support, the participants' gender, family constellation and his/her field of study.

Two follow-up emails requesting participation were sent through the graduate school two weeks and four weeks after the initial notification to assist in obtaining maximum participation (Appendix C). The surveys were administered during November 2010 through January 2011. Survey Monkey was used to administer all components of the survey anonymously online, with

the university graduate school notifying candidates via email that the survey was available for online access should they choose to participate.

Two trial runs of the survey were conducted in order to ensure functionality of the instrument and correct any errors in logic or otherwise. One was conducted in the fall of 2008 (sent out online but not through survey monkey) and the second trial study was initiated during June of 2010. Data sources for the trial studies of the Dissertation Enablers Scale were from a convenient sample of volunteer students in a survey research class and other classes in a college of education at a large Southeasterrn university. Upon revision, a second trial study was conducted. Sources for the second trial study were from a convenience sample of graduate students and committee members primarily to ensure that the online survey was functioning logically and also to correct any errors that might result in confusion to the participant.

Data Preparation

Raw data from the online survey was reviewed and transcribed into appropriate format for data analysis for use with the Statistical Procedures for the Social Sciences (SPSS), Version 18**.**0**.** The DES consisted of 96 questions to assess SRL, intrinsic task value, research self-efficacy and social support. All data was reviewed to determine if there was missing information or items not marked. Those items showing large numbers of missing data within the five sections (analysis, goal setting, strategy making, engaging tactics, and follow-up) of the Dissertation Enablers Scale were eliminated from the statistical analysis.

Comments from the qualitative survey questions were coded consistently with emerging themes. These comments were then also transcribed into appropriate format for further analysis manually. Comments were not only coded but, also examined word for word from the qualitative comment questions for further elucidation of the meanings of the quantitative data and to study any outlier responses.

Statistical Treatment of Data

The Statistical Procedures for the Social Sciences (SPSS), version 18.0 was used to analyze the data. The following descriptive statistics were calculated: frequencies, descriptive statistics, means and standard deviations for the levels of SRL.

Research Question One

For research question one, the primary independent variable was self-regulation and the dependent variable was time since comprehensive exams were completed. A hierarchical linear regression procedure is used to assess, predict and or explain the relationship between the variables, although it is most frequently used for prediction. Additionally, regression can be viewed as a statistical procedure for determining the best fitting straight line for a set of data involving two variables (Gravetter & Wallnau, 2004; Huck, 2008). In this study for the first research question, a hierarchical regression analysis of statistical data was conducted to determine what contribution SRL made to the amount of the time elapsed since the completion of the comprehensive exams, based upon self-regulation exhibited, while controlling for the covariates of financial support, social support, research self-efficacy, field of study and gender. The R squared and R squared Change statistics were assessed for significance of the contributions of the independent variable and the covariates.

Research Question Two

For the second research question, the independent variable was intrinsic task value. A correlation procedure was used to assess the relationship between intrinsic task value and self-regulated learning (identified as the dependent variable in this case).

Research Question Three

Additionally, to investigate the third research question, a regression analysis employed intrinsic task value as an independent variable to assess its impact upon time to completion of the dissertation, while controlling for the covariates.

Research Question Four

To determine if the regression was linear (as per the fourth research question) a curve fit regression procedure was conducted.

Research Questions Five and Six

Further to answer research questions five and six, the researcher conducted a discriminant analysis to assess differences between dissertation completers Ph.Ds. and non-completers (ABDs). The grouping variable was ABD or Ph.D. Variables examined for comparisons were the time elapsed since comprehensive exams were taken and the levels of SRL.

<div align="center">

Qualitative Question Analysis

</div>

In addition to these questions, the researcher further explored comments received from the qualitative questions included in the online survey. These questions were created to assess the phenomenological experience of being classified as ABD or having completed the dissertation as Ph.D. A coding system was developed to assess emerging themes stated by doctoral candidates or recent completers. Codes were created for each of the five aspects of the SRL scale as responses were reviewed and studied. This included all remarks made in the comments section of the Dissertation Enablers scale. Additionally, the other three scales were also analyzed and statements classified as per the coding. Results were classified according to the coded developed. These themes from the qualitative questions were compared with the results of the online surveys. Outliers' responses were also examined to better understand their

doctoral experience. Outliers were examined to explore the doctoral experience more deeply for doctoral candidates and dissertation completers. All data sources were then analyzed as a whole to gain further insight into self-regulated learning and the doctoral experience.

Limitations

Because this was a quasi-experimental design using a convenience sample, results may not reflect the normal population distribution. Additionally, students who have been classified as ABD for a longer period of time, may not have chosen to participate in the survey because of personal embarrassment (survey was anonymous, however) or guilt. Further, the graduate school may not have been able to contact all potential participants due to a lack of current email addresses, especially if they had been ABD for an extensive period of time. Alternatively, the goal of completing the dissertation and thus the survey may have been superseded by higher priority personal goals of the participants. Additionally, because the instruments were self-report, doctoral candidate responses may be tainted by social desirability factors (Edwards, 1957). Moreover, there may have been other unanticipated confounding variables that influenced results such as unexamined covariates or attrition.

Summary and Overview of Remaining Sections of the Dissertation

The analysis of construct validity and reliability of the instrumentation indicated that the DES was of overall good construction and worthy of use in the study. The next sections of this paper will describe the results of the survey, discuss implications and compare the results with other similar research to the extent possible. This was done due to the paucity of research addressing self-regulation as it relates to dissertation completion. Finally, the researcher will discuss the overall implications of the work as it applies to doctoral candidates in all fields of study, while synthesizing the results of this research with existing research and suggesting ways in which the present study extends our current knowledge in this area.

CHAPTER IV. RESULTS

Introduction

This research was conducted to answer six questions regarding the role that self-regulated learning (SRL) plays in the status of being all-but dissertation (ABD). The research questions were:

1.   To what extent does the use of self-regulated learning strategies influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research self-efficacy, field of study and gender?

2.   To what extent does task value/intrinsic interest influence a doctoral candidate's use of self-regulated learning strategies?

3.   To what extent does task value/intrinsic interest influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research self-efficacy, field of study and gender?

4.   To what extent does a doctoral candidate's self-regulated learning exhibit a linear relationship with the time taken since completion of the comprehensive exams?

5.   To what extent does a doctoral candidate's level of self-regulated learning differ from a recent Ph.D.'s (dissertation completers) level of self-regulated learning?

6.   To what extent does a doctoral candidate's time to completion of the dissertation, after comprehensive exams were taken, differ from a recent Ph.D.'s time to completion of the dissertation?

In review, both the demographic data collected and the four subscales of the Dissertation Enablers Scale (DES) were used to operationalize both the levels of SRL, task value and the covariates. The four subscales of the DES included the Self-Regulated Learning (SRL) Scale, the Intrinsic Task Value Scale, the Research Self-Efficacy Scale and the Social Support Scale. The DES was created specifically for this study and can be found at Appendix A. The SRL Scale was based upon previous work of Pintrich et al., 1991, 1993) as was the Intrinsic Task Value Scale. The former assessed the level of self-regulation a participant exhibited and the latter aimed to determine the intrinsic task value that the dissertation held for the participant. Additionally, a Research Self-Efficacy Scale was included in the DES to assess research self-efficacy. This instrument was based upon the work of Holden, Barker, Meenaghan and Rosenberg (2007). Finally, the researcher included a social support scale to assess levels of social support that doctoral candidates and recent Ph.D.s experienced during dissertation work. This instrument was modified from the Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1987; Greenberg & Armsden, 2009).

From the data collected a hierarchical regression analysis was conducted to determine the relationships between participants' level of SRL and the time elapsed since the comprehensive exams were taken, controlling for the covariates of financial assistance, research self-efficacy, field of study, social support and gender. Further correlations were conducted to assess the relationship between SRL and intrinsic task value. An additional hierarchical regression tested the hypothesis that task value might predict time elapsed since the comprehensive exams were taken, controlling for the same covariates as identified in the first regression procedure. A curve fit regression procedure was employed to assess whether the relationship between the independent variable and the dependent variable was linear. Additionally, a discriminant

function analysis was used to compare both the levels of SRL for participants identified as ABD with levels of SRL exhibited by the recent dissertation completers (Ph.Ds) and also the duration of time elapsed since comps were taken for both groups.

Organization of the Chapter

In this section of the paper, the results of the statistical analyses conducted will be reported. This will include data as to the participants' characteristics and the results of the statistical procedures conducted for each of the research questions. Additionally, the researcher will review the findings and meaning resulting from the analysis of the qualitative questions in the survey. Finally, a summary of findings will conclude the chapter.

Participant Characteristics

The sample used in this study consisted of 95 (68%) doctoral candidates and 45 (32%) recent completers for a total of 140 participants. Because the questions in the surveys were voluntary, differing numbers of participants answered various questions as per their choosing. The voluntary nature of the survey was designed to encourage individuals to participate freely.

The majority of participants identified themselves as being married or married with children or other obligations. The next largest group of participants were those who identified themselves as being single. A few reported that they were single with other obligations or in a relationship with others to whom they had obligations. Table 6 represents family constellation as reported by participants.

Table 6

Frequencies of Participants' Family Constellations

Family constellation	Frequency	Percent
Married with children or other obligations	46	32.90
Single	43	30.70
Married	39	27.90
In a relationship with others to whom I have obligations	6	4.30
Single with children or other obligations	5	3.60
Missing	1	.70
Total	140	100.00

Seventy-six (54%) of the participants were female and 63 (45%) were male. One participant did not identify their gender.

The participants' fields of study were reviewed and categorized as one of the following: engineering, life sciences, math and physical sciences, social sciences, humanities, education and medical. The frequencies and percentages for participants' fields of study are identified in Table 7.

Table 7

Frequencies of Participants' Field of Study

Field of Study	Frequency	Percent	Valid Percent	Cumulative Percent
Education	34	24.30	25.60	25.60
Social Sciences	31	22.10	23.30	48.90
Engineering	20	14.30	15.0	63.90
Life Sciences	17	12.10	12.80	76.70
Humanities	16	11.40	12.00	88.70
Math and Physical Sciences	11	7.90	8.30	97.00.
Medical	4	2.90	3.00	100.50
Missing	7	5.00		
Total	140	100.00		

These fields of study were further delineated as hard sciences such as engineering, life sciences, math and physical sciences: 59 participants (42%) and social sciences such as education, social sciences, and humanities: 81 participants (58%).

Forty-two participants (30%) stated they were part-time students, whereas 95 (68%) indicated they were full-time students. Three participants did not identify whether they were full-time or part-time students.

Data Analysis Results

The data was downloaded from Survey Monkey and formatted for analysis with SPSS 18. Those areas of the DES which showed large numbers of missing responses or data were deleted as was one outlier who indicated nine years had elapsed since their comprehensive exams were

taken. The following section will summarize research results as applicable to each research question.

Research Question One

1. To what extent does the use of self-regulated learning strategies influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research self-efficacy, field of study and gender? Overall descriptive statistics, means, and standard deviations for the study are reported in Table 8.

Table 8

Variable Descriptive Data

Variable	n	Mean	Standard Deviation
How many years after comps were taken?	139	2.32	1.23
Financial Assistance is essential to me to complete my dissertation	134	5.53	1.96
RSES	123	52.59	8.44
Inhibitor	107	49.83	15.82
Program Support	122	28.20	5.68
Friends/family support	105	37.58	7.96
Task value	127	60.91	8.78
SRL	111	129.48	22.08
Valid number	77		

Financial assistance was rated on a scale of from one to seven. The maximum score for the RSES was 63 and the maximum scores for the social support scales (inhibitor, friends and

family support, and program support) were 77, 49 and 35 respectively. The maximum score on the task value scale was 70 and the maximum value on the SRL scale was 168.

To address research question number one, a hierarchical regression analysis indicated that the level of SRL did predict the duration of time elapsed since comprehensive exams were taken at a level of statistical significance ($R^2 = .315$, R^2 Change $= .086$, $F_{(1, 68)} = 8.49$, $p = .005$). This means that SRL contributed above and beyond the covariates of "financial assistance being essential", "field of study", "research self-efficacy", "social support" and "gender" at a level that was statistically significant. The ANOVA presented a good regression model $F_{(8, 68)} = 3.90$, $p = .001$. The regression coefficient equaled -.023 meaning that for every unit increase of SRL, there would be an accompanying decrease in the time elapsed since the comprehensive exams were taken. The t statistic was also statistically significant (t = -2.914, $p = .005$). The VIF was 1.802 indicating that there was not an undue level of variable relatedness and the Durbin-Watson was 2.028 meaning that there was no autocorrelation. The regression results for research question number one are summarized in Table 9.

Table 9

Research Question One Regression Results

Variables	Beta	R^2	R^2 Change
Covariates		.229*	.229
Financial Assistance	-.400***		
Field of Study	-.080		
Research Self-Efficacy	.169		
Social Support Inhibitor	-.309**		
Friends/Family Support	.263*		
Program Support	.186		
Gender	-.002		
Independent Variable			
SRL	-.393**	.315**	.086**

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

The strongest covariate predictor was "financial assistance is essential for me" as identified by the regression coefficient equaling -.258, with a t statistic of -3.669, $p < .001$.

Nineteen participants reported that they did not receive any financial support, whereas 120 reported that they had received financial support. The types of financial support received were identified as scholarships/stipends, graduate assistantships, student loans, employer financial support, veterans educational benefits and others that included family benefits for employees of the university, adjunct instructor work, research grants, university benefits, retired pay, on campus jobs, two part-time jobs and savings. Table 10 identifies the number of students

who indicated that they received support and what type of support received. By far, graduate

assistantships were the most common form of financial support participants received. Sixty

percent of the participants reported having a graduate assistantship. Also, some participants

appear to have received more than one type of financial support. The data in Table 10 depicts

the sources of financial support that the study participants reported.

Table 10

Frequencies of Participants' Sources of Financial Support

Source	Participant *n*	Percentage
Graduate assistantship	84	43.30
Student loan	41	21.10
Scholarship/stipend	24	12.40
Employer support	17	8.80
Family financial	13	6.70
Veterans benefits	4	2.10
Other	11	5.70
Total	194	

Research Question Two

2. To what extent does task value/intrinsic interest influence a doctoral candidate's use of self-

regulated learning strategies?

Task value and SRL were correlated with a Pearson Product Moment Correlation of

.527, $p < 0.01$ (two tailed). Table 11 depicts the correlations among all variables.

Table 11

Intercorrelations among independent variables and covariates

	1	2	3	4	5	6	7	8	9
1. Finess	1	.114	-.087	.273**	-.122	.052	.216**	.281**	.266**
2. Field		1	.021	.109	-.088	.121	.057	.106	-.090
3. Gender			1	.044	-.086	-.162	-.094	-.019	-.156
4. RSE				1	-.082	.099	.342**	.306**	.257**
5. Inhibit					1	.242*	.109	.151	.072
6. FFsup						1	.257**	.261*	.264**
7. Prosup							1	.471**	.323**
8. SRL								1	.527**
9. Task									1

Note. "Finess" = financial support is necessary; "field" = field of study; "RSE" = research self-efficacy; "inhibit" = inhibiting social factors, "FFsup" = friends and family support; "Prosup" = program support including the chair, committee and the department; "SRL" = self-regulated learning; "Task" = task value. ** Correlation is significant at the .01 level (2 tailed) * Correlation is significant at the 0.05 level (2 tailed)

Research Question Three

3. To what extent does task value/intrinsic interest influence a doctoral candidate's time to completion, controlling for financial support, social support, research self-efficacy, field of study and gender?

The third research question (task value predicts time to completion, controlling for covariates) did not yield statistically significant results [R^2 = .191, R^2 Change = .001, $F_{(1, 81)}$ = 2.40, p = .763. The procedure did reflect a good regression model [$F_{(8,81)}$ = 2.40, p = .023]. Because SRL and task value were highly correlated variables and task value did predict SRL in research question number two, this finding suggests that task value may act as a mediating

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variable to self-regulation in the process of completing the dissertation. The researcher

summarized the regression results of research question number three in Table 12.

Table 12

Research Question Three Regression Results

Variables	Beta	R^2	R^2 Change
Step 1 – Covariates		.190*	.190*
Financial Assistance	-.360**		
Field of study	-.056		
Research Self-Efficacy	.049		
Social Support			
Inhibitor	-.294**		
Family/Friends Support	.112		
Program Support	-.019		
Gender	-.049		
Step 2 – Independent Variable			
Intrinsic Task Value	-.035	.191	.001

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

Research Question Four

    4. To what extent does a doctoral candidate's self-regulated learning exhibit a linear

relationship with the time taken since completion of the comprehensive exams?

Self-regulated learning did exhibit a linear relationship with time to completion or time since comprehensive exams were taken (question 4), (R^2 = .055, *df* 1,107 *p* = .014). Higher levels of SRL were observed with shorter periods of time since comprehensive exams were taken. Thus, as a participant moves further away from the comprehensive exams, the level of self-regulated learning decreases.

Research Questions Five and Six

5. To what extent does a doctoral candidate's level of self-regulated learning differ from a recent Ph.D.'s (dissertation completers) level of self-regulated learning?

6. To what extent does a doctoral candidate's time to completion of the dissertation, after comprehensive exams were taken, differ from a recent Ph.D.'s time to completion of the dissertation?

A discriminant function analysis was conducted to determine whether the two variables, SRL and time elapsed since completion of the comprehensive exams were taken could predict whether participants classified as ABD differed from those who were recent Ph.Ds. Prior to the analysis, one outlier was eliminated. The grouping variable was ABD or Ph.D. The group statistics for the discriminant analysis are presented in Table 13, including the means and standard deviations for both the SRL scores for each group and also the number of years since the comprehensive exams were taken for each group.

Table 13

Group Statistics for Discriminant Analysis

	ABD Sample (n= 73)	Ph.D. Sample (n = 35)		
	Mean (SD)	Mean (SD)	*F* (univariate *F* from DFA)	
SRL	126.70 (23.97)	134.83 (17.44)	3.204 (1, 106)	*p* = .076
Years since comps	2.17 (1.26)	2.92 (1.11)	9.123 (1, 106)	*p* = .003

The analysis did yield a statistically significant difference for the number of years elapsed after the comps were taken (Λ = 855, x^2 (2, *N* =108) = 16.40, *p* < .000, (accounting for 17% of the variance) indicating that the predictors differentiated between those who were ABD and those Ph.Ds. For function 1, the standardized canonical discriminant function coefficients revealed that the variable of "time elapsed since the comprehensive exams were taken" was most associated with the function. The correlation coefficients and standardized function coefficients are presented in Table 14. The classification results indicate that for ABDs, 65.8 % were classified correctly, whereas for Ph.D.s, 74.3% were classified correctly. These same percentages applied to the cross-validated grouped cases. Overall, 68.5% of the original grouped cases were classified correctly and 68.5% of the cross-validated grouped classes were correctly classified. This is a fairly low percentage.

Perhaps, the variable "How many years after comps?" was found to be statistically significantly different because of the fact that those classified as ABD were classified for a period of time ranging from one month to over five years, with many of those responding being

newly classified as ABD. Thus, it might be expected that there would be differences in the time since comps were taken.

Table 14

Correlation Coefficients and Standardized Function Coefficients

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
SRL	.423	.743
How many years after comps?	.714	.961

Further, this analysis comparing ABDs to Ph.D.s did not yield statistically significant differences with respect to the predicted levels of SRL for each group. The mean SRL score for those classified as ABD was 126.70 (75% of total possible) and the mean score for Ph.D.s was 134.05 (80%).

Qualitative Analysis

Each of the scales of the DES contained open-ended questions categorized as qualitative type questions. For the SRL scale, there were five qualitative response questions to be completed in a space providing for the response. There was also one final question asking if there was anything else that was not asked or any other comments that the participant wished to make. Further, a similar question (asking about anything else) was placed at the end of all other scales, the intrinsic task value scale, the research self-efficacy scale and the social support scale. Participant responses were gathered and analyzed for each of these scales to better understand

the phenomena of doctoral experience for those classified as being ABD and the recent

dissertation completers. The many comments revealed multiple themes for analysis.

For the SRL Scale, there was a qualitative type question for each of the different aspects

of SRL used as a model for this study. These five aspects of SRL were: task analysis, goal

setting, strategy development, tactics engagement and metacognitive follow-up. Analysis of

these participant responses was conducted by reviewing and studying responses for meaning,

coding those responses and thereafter, considering emerging themes and how those themes

compared or related to the quantitative portion of the DES. Many comments fell into multiple

categories and were thereby coded in all of those categories.

Qualitative Research Question One—SRL Scale

For the first aspect of the SRL Scale (task analysis), the question asked was "How did

you prioritize the tasks that need/needed to be completed for your dissertation?" This question

reflected how a participant might prioritize tasks in the analysis of what needed to be done.

Predominant themes apparent were the use of a specific methodology, coded "methods".

Methodology generally included the employment of an organizational system, logical order,

sequentially based upon what seemed to come next, using a timeline or deadline for items due,

and to do lists. Subcategories of "methods" were identified as a regular pattern of work (coded

"pattern"); work to be completed each day, work to be completed for each week, or prioritization

by work to be completed for each chapter. Another subcategory involved prioritizing the

dissertation work by determining which aspects of the work were easier and harder to complete.

This was coded "taskdiff". Timelines, deadlines, backward timelines and due dates were

identified by participants as another means of prioritizing the dissertation work and were coded

"due". Since many participants identified their primary means of prioritizing the work as

through a sequential method, this was also identified as a subcategory of "Methods" and coded "Seq".

Another predominant theme regarding the prioritizing of tasks was through discussion and guidance of the committee or the chair of the committee. This theme was coded "Comm". Although most of these responses referred to the positive impact of the committee or chair, one did not as reflected in the following comment:

> I am the product of a poor advisor. My advisor should have been more proactive in helping me to focus and get more organized. There is an inherent conflict between an advisor finding time for students and finding time for research for promotion and tenure; students are the losers.

Within the category of "Other" responses, a few other participants indicated that although they followed the best laid plans, other obligations conflicted; prioritization based upon research and publications and the use of examples and other dissertations. Additionally, five participants responded that they used no system of prioritization.

Qualitative Research Question Two—SRL Scale

The second open-ended question pertained to the kinds of goals the participant established in order to complete the dissertation work. This question was "What kinds of goals do/did you establish when working on your dissertation?" Similar to responses for the task analysis, the predominant responses were through the use of timelines, deadlines and due dates. This was coded "due". In addition to this a large number of participants indicated that they set mini-goals reflective of the "Pattern" code that was evident in the first question regarding analysis of the task. This included daily goals, weekly goals, section goals and chapter goals. The role and guidance of the committee was also mentioned as being an important element in

setting goals for completion of the dissertation. Again, this was coded "Comm". One participant indicated that "the main goal was "...to keep my committee engaged with my research and progress. I did not want to be put in the position of out of sight, out of mind…"

Other comments relating to goals that participants had established were: "Finish it", "Breathe", "Take breaks", "work until it is complete", "stay focused and do not get discouraged", and the goal "to be finished by December of 2009, but that didn't happen." Many comments also had multiple codes as comments fell into more than one category.

Qualitative Research Question Three—SRL Scale

The third question within the qualitative responses was "What strategies do/did you use to organize your dissertation work?" Strategies identified by the participants were categorized as those of a manual nature or the use of high tech programs to assist in writing and analyzing the information gained. Manual strategies were coded "Methorghard" and included the use of binders, stacks, boxes and folders and making outlines.

Strategies that reflected the use of high tech programs to assist in completing the dissertation were the specific use of jump drives, and programs titled, LaTEX, Google calendar, Endnote and Atlas TI. LaTEX is a document preparation system and is described as a "high quality type setting system for production of technical and scientific documentation" (http://www.latex-project.org, 2011). Endnote is a software program that assists in the creation of references and bibliographies and the website indicates that you can "cite while you write", developed by Thomson Reuters (http://www.endnote.com/, 2011). Atlas TI is a software program that assists in the analysis of qualitative data and research (http://www.atlasti.com/, 2011). Google calendar (https://www.google.com/accounts/ServiceLogin?service=cl&continue= http://www.google.com/calendar/render&followup=http://www.google.com/calendar/render,

2011) allows you to share your calendar, get your calendar when you are not in your home or work place, and can be employed as a strategy to identify due dates.

In addition to these strategies, many participants also employed strategies using mini-goals coded as "Ministrat" and outlines, which were considered as a subcategory of "Methorghard" and coded as "Outlines".

The recurring theme of the role of chair and committee also was evident in the analysis of the strategies to organize dissertation work. This was coded "Comm". One participant comment representative of work with the committee was "…I worked closely with my committee chair/major professor to get feedback throughout the process and incorporate his feedback as I wrote."

Other comments regarding the strategies used included the assistance provided by therapy, "self-talk for a focus upon consistency", the use of strategies to reduce stress, the use of peers for consultation, and the strategy to organize work in accordance with articles to be published.

Qualitative Research Question Four—SRL Scale

Engagement of the strategies developed is important to following through on the dissertation work. The fourth question in the SRL Scale was "Do/did you engage the strategies you develop(ed) to complete your dissertation?" Most of the participants indicated that they did employ the strategies they had developed to organize and complete their dissertation work. This was coded "Yesen". Others indicated that they did not engage these strategies at all times or on a regular basis (coded "Notal").

Other comments regarding engagement of the strategies were:

1. "Somehow I did manage to get on a roll and just kept writing. The main thing is to get topics that interest you and mine did."

2. "I got stuck in two situations going into much higher detail than was appropriate to the project."

3. "Yes, mainly be flexible and organize my argument around my hypothesis and results."

4. "Not really, it is hard to work on a dissertation when you have another job that is unrelated.

5. "I had no strategy to engage…had to be modified on the fly."

6. "Sometimes difficult to stay on task when having employment responsibilities because those job responsibilities and deadlines often come first before working on my dissertation."

A couple of comments suggest that without the financial assistance to allow a student to study full time, the dissertation process becomes more challenging, especially when one must work and also undertake doctoral studies simultaneously.

Qualitative Research Question Five—SRL Scale

The question in the SRL Scale of the DES that addressed the use of metacognition to assess progress, goals and ineffective strategies as stated was "When you are/were not making progress or meeting the goals you had established to complete your dissertation, do/did you assess what ineffective strategies you had engaged?" Many participants indicated that they did employ metacognitive follow-up to assess their progress. This was coded "MCyes". Others indicated they did not but simply moved forward (coded "MCno"). One participant stated that

they reviewed their progress and although they acknowledged that their strategy might have been ineffective, they made no changes.

Similarly to responses to other questions regarding SRL of the dissertation work, many participants commented upon the importance of their committee in metacognitive follow up and revision of dissertation work. This was coded as "Comm" as in other sections of the SRL. One participant commented as follows: I realize it is ineffective to try to do a dissertation with little or no guidance from the committee." Others referred to the importance of a support system to help them stay on task and evaluate their work, coded as "MCsupport". One participant response though indicated that most of the lack of progress had to do with dependence upon others.

A couple of participants also referred to being reflective in their work and a couple indicated that they had to give up other activities. Some also indicated that they needed to take a break and walk away from their work in order to gain a renewed perspective. Finally, one participant indicated that "One of my most failed strategies was expecting support and dedication from my friends and family…this is an independent journey."

Qualitative Research Question Six—SRL Scale

The final question of the SRL Scale asked if there was anything else that might be important to understanding the doctoral experience, especially if not asked in another question. Within this section, participants made many comments about the role of the committee/chair (coded "Comm). Although predominantly positive, one participant clearly had a negative experience as stated: "If I had known what I know now, I would have entered another discipline and ensured I would have had a caring, motivating advisor who would have time to spend with me. My first advisor was a 2nd year assistant who was more focused on promotion and tenure than his students." The importance of peers and friends was underlined in comments made is

portrayed by the following comment: "If you find someone outside of your committee to help you through your dissertation process, cherish them." These comments were coded "Peer/friends". Although only a few, several participants also mentioned the role that family played in terms of additional responsibilities and commitments that might hinder the dissertation process. Two participants also indicated that there was much stress and anxiety associated with completing the dissertation ("Stress") and four mentioned the importance of financial support (coded "Finance").

A number of participants also mentioned work organization (coded "Org") and also the importance of minigoals or completing smaller "chunks" of the work. A couple of participants also mentioned the use of prayer and spirituality (coded "prayer") and one commented that "One has to understand his/her ability and capacity to complete a dissertation. Then use that information to tailor the tasks to fit their needs." The latter reflects an SRL scale question reflecting analysis of one's skills and abilities. Another interesting comment related to intrinsic interest in the subject matter of the dissertation.

> For me, the key was not as much to be passionate about my subject as to be curious about it. When things did not go as I expected or data did not materialize, I was more interested in why it was not what I wanted expected rather than being upset that it was not what I wanted or expected.

Qualitative Research Question—Intrinsic Task Value Scale

Similar to the last question of the SRL scale, a question at the end of the Intrinsic Task Value Scale of the DES asked participants if there was anything else they would like to comment upon. The majority of respondents reported that their dissertation did hold intrinsic task value

for them and that they were interested in the subject of their dissertation. This was coded "+intrinsic".

1. One participant stated: "A candidate should not do a dissertation on a subject that they are not extremely interested in."

2. Another related that " I work in the same field as my dissertation topic (tree seedling quality and nursery management). It's important to me."

3. One respondent reported: "Although extremely interested in the subject matter of my dissertation, the details of the drudgery of the process were distracting."

4. Another reported: I believe I have colleagues who are "playing the game" when it comes to writing the dissertation, but I have pursued my own interests in the plague, and my committee has been very supportive of my subject and my work. I believe that my work is important, and I am excited at the possibility of publishing it."

A few others indicated that the topic of their dissertation and research did not hold intrinsic task value for them. The following comment is representative of this perspective: "I did not have a strong feeling for the importance of my project to my discipline." One other comment is worthy of mention because it speaks to the great amount of effort required to complete the dissertation. "I gave up everything I enjoy to complete my dissertation. I may have even lost my marriage because of my dedication to it." These responses suggest that intrinsic task value of the dissertation appears to be an important element in completing the dissertation.

Qualitative Research Question—RSES Scale

With respect to research self-efficacy, participants were also asked to provide any additional comments to the Research Self-Efficacy Scale. The predominant response dealt with the perception that the data analysis portion of the dissertation was difficult. This was coded

"Analnot". The following comments were representative of this perspective: 1. "The design and analysis were quite difficult for me." 2. "While my statistics profs knew their materials, I could never understand how all those statistics courses played into my dissertation. There is a major disconnect between statistics courses and application in the dissertation…" Others responded that qualitative research is also important and should be considered in studies (coded Qual).

Qualitative Research Question—Social Support Scale

The last scale of the DES (the Social Support Scale) contained questions regarding the social support that participants received for their committee, peers/friends, family, employer and department. Similar to the responses in other sections of the dissertation the most prevalent theme related to the level of support of the committee. Some comments were very positive and coded "+Comm". One participant stated: "Your committee chair should be your most common contact while writing. He/she will have a wealth of information and assistance. Choose someone that will have high expectations, but also someone you like and respect…you will be talking with him frequently."

Others were more of a negative nature and coded "–Comm". One rather poignant comment representative of a negative committee relationship was: "My major professor/committee chair went 3 months without answering my calls or emails. I feel he is more interested in his spouse's doctoral program. His attitude has been extremely apathetic toward my program it seems to me. I have been very frustrated by a lack of guidance, communication and interest by my major professor." Overall, these comments clearly suggest the critical role that participants feel the dissertation committee and chair play in completion of the dissertation.

Several comments in this scale of social support related to the stress (coded "Stress") and difficulty encountered in completing a dissertation and the need for other kinds of support: peers,

friends and the university counseling and psychological services. Also, a couple of participants

mentioned the impact of the family (coded "Family"), one acknowledging that they were aware

of the responsibilities prior to entering a doctoral program, while a couple of other participants

spoke of multiple issues imposed by having family responsibilities. This latter was not a

predominant theme, however.

Another participant related: "It is very hard to complete your dissertation." And it

appears that support of the committee friends and family and other resources can provide much

needed assistance for those who chose to complete a doctoral program.

Outliers

There were several outliers with respect to the duration of time elapsed since

comprehensive exams were completed. These were examined closely in the qualitative portion

of this research. Four participants indicated that the time elapsed was greater than five years.

 At the farthest end of the spectrum, one participant reported that 9.08 years had elapsed

since the comprehensive exams were completed. This participant was female Ph.D. in the field

of secondary education. She also identified herself as being single and a part-time student. She

indicated that she had gotten loans to fund her education. Her SRL score was midrange 131/168

(78%) and her intrinsic task value score was high 63/70 (90%). Her research self-efficacy score

was 54/63 (85%). Scores on the Social Support Scale indicated a fair number of questions were

answered indicating she did experience a number of inhibiting social factors (scored 53/77,

69%). She did report a fairly positive experience with friends and family social support (scored

42/49, 86%) and a fairly low score on the program committee support 21/35 (60%). Her

responses to qualitative questions were as follows: For task analysis, she stated: "I completed

the tasks in sequential order proposed by my committee and the graduate school." The comment

that she made regarding goal setting was: "I made mini-goals to get a specific chapter done and set deadlines for myself, with the assistance from my committee members." It is interesting that she exhibited a low program support score, but mentions her committee as providing her guidance in response to questions. With respect to strategies used, she indicated that she "kept work organized in multiple folders on my jump drive and in notebook binders." She indicated that she did engage those strategies and also that she used metacognitive follow-up strategies to assess her work as reflected in the following statement. "Yes. It is very important to think what went wrong and why that is." When asked if there was any other comment she would like to make, she stated: "Persistence I never gave up!"

A second participant classified as an outlier based upon the duration of time elapsed since comprehensive exams were completed indicated that he was a male Ph.D. and that six years had elapsed between his comprehensive exams and his dissertation completion. He indicated that he was married with obligations and a part time student. He indicated that he received no financial support for his work and did not rate the need for financial support highly. He scored a 139/168 (83%) on the SRL, a 70/70 (100%) on the Intrinsic Task Value Scale a 55/63 (86%) on the Research Self-efficacy Scale. He scored quite highly on the Inhibitor Subscale of the social support scale 74/77 (96%) indicating he experienced many negative or inhibiting social factors in the work on his dissertation. Despite this, he scored moderately high on the support of friends and family 43/49 (88%) and very highly 35/35 (100%) on the support of the committee or department. The Inhibitor Subscale questions reflected primarily excessive expectations from the family, committee and employers. This participant indicated that his chair helped him to prioritize his work as a part of task analysis. He also related that his goals were related to chapters and chapter iterations and that his strategy for work on the dissertation was to complete

outlines. He reported that he engaged these strategies and that interaction with other graduate students was helpful during the process.

Another participant who reported that 5.92 years had elapsed since completing comprehensive exams indicated that he was a male Ph.D. His field was chemical engineering and he was single. He also reported that he did receive financial aid in the forms of a scholarship, loans, and a graduate assistantship. He felt strongly that financial assistance was essential to completion of the dissertation. He scored 117/168 (70%) on the SRL Scale of the DES and 36/70 (60%) on the Intrinsic Task Value scale indicating low intrinsic task value for the dissertation topic. His research self-efficacy score was moderate 52/63 (82%) and he did not respond to the questions pertaining to social inhibiting factors. He provided no further responses to the qualitative questions.

The final participant, categorized as an outlier, was a female, also classified as ABD. Her time classified as ABD was 5.92 years. She indicated that she was married with obligations and that she received no financial assistance. She was a counseling student. Her score on the SRL Scale was low 97/168 (58%), while her intrinsic task value score was 62/70 (86%). She scored a 33/63 (52%) on the research self-efficacy scale, which was also low. Her scores on the social Inhibitors Support Subscale indicated 48/77 (62%), indicating that she experienced low to moderate social factors which would inhibit progress on the dissertation). She scored very high 49/49 (100%) on the Family and Peer Support Subscale of the Social Support Scale and very low on the department chair subscale 9/35 (26%). This would indicate that she did not feel she received great support from her committee and chair. The participant indicated that she analyzed the task and prioritized her work methodically and set goals using a timeline. Her strategies to organize her work were: "things were done only in the order to which they came in the

paper/study. I spent a great deal of time categorizing, making notes, making references and cross reference charts of my literature." She indicated that she did follow through on the use of these strategies and that when she related that with respect to metacognitive follow-up and assessment: "Yes, I discovered that if I allowed myself to work in an environment with any distractions, I would not work efficiently. I also had to deprive myself of any pleasurable activities until I completed the necessary work." This one outlying participant may reflect the most accurately defined pool of ABD participants we are trying to assess as she is in a category of doctoral candidates who are far removed from the completion of their comprehensive exams.

In summary, the outliers presented a varied picture of Ph.D. completers and a doctoral candidate classified as ABD. Their scores on the SRL Scale were not particularly high and they seemed to experience greater problems with inhibiting social factors. They were both single and married with obligations. A couple of them indicated that they felt fairly comfortable with their research abilities and skills, while one did not. Therefore, a consistent picture of factors regarding longer time to completion of the dissertation does not emerge. This does, however, allow the researcher insight into individual unique doctoral experiences that may impact time to completion of the dissertation.

Summary

A hierarchical regression analysis suggested that self-regulated learning contributes above and beyond the covariates of "financial assistance is essential to me" and the impact of inhibiting social factors for doctoral candidates and recent dissertation completers. Further, a hierarchical regression did not suggest that intrinsic task value would predict time to completion of the dissertation, when controlling for covariates. However, task value was significantly correlated with self-regulated learning. This finding is consistent with the research of Pintrich

and DeGroot (1990) and Wolters and Pintrich (1998) as summarized by Wigfield, Hoa and Klauda (2009). There was a linear relationship between the variables of self-regulation and time elapsed since comprehensive exams were taken. Further, a discriminant function analysis did not show statistically significant differences in levels of SRL between doctoral candidates and recent Ph.D. completers, although there was a significant difference in the amount of time that had elapsed since the comprehensive exams were taken.

Additionally, some of the factors identified as covariates were also supported through the qualitative analysis of open-ended questions: financial concerns, research self-efficacy, and social support (particularly support of the committee.) Other comments reflected the anxiety and stress associated with the process and the need to manage the process using smaller goals versus focusing upon the long-term goal of completing the dissertation. A majority of participants who responded, indicated that the dissertation held intrinsic task value for them. A number or respondents did not feel comfortable with their skills and abilities to conduct research.

The next section will discuss these results in more detail and in light of previous research. Additionally, limitations of the study will be identified and recommendations for future research will be suggested.

CHAPTER 5. SUMMARY, DISCUSSION AND RECOMMENDATIONS

Self-regulation has been studied extensively, frequently as it relates to learning termed "Self-regulated Learning" (SRL). As defined by Paul Pintrich (2000c), self-regulated learning refers to "an active, constructive process whereby learners 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 in the environment. (p.453)" Doctoral candidates who have completed their comprehensive exams, but not their dissertations are classified as all but dissertation (ABD). The ABD phenomenon has also been the subject of much research because of the immense waste of the valuable resources of the both the doctoral candidates and higher education (National Science Foundation, 1998; Teitelbaum, 2004). Doctoral candidates who do not complete their dissertations are less able to contribute fully to their community or to other educational pursuits (Malone, Nelson & Nelson, 2004). However, there is a paucity of research focusing upon these two subjects as they might interrelate. Self-regulated learning has not been studied as it might impact the doctoral experience of being ABD or completing the dissertation.

Purpose of the Study

The purpose of this study was to assess how SRL strategies impact the time elapsed since comprehensive exams were taken. In other words, would a doctoral candidate's use of SRL strategies result in a shorter time being classified as ABD?

Further, task value has been studied as an aspect of motivational theory (Wigfield and Eccles, 2000, 2002). Zimmerman (2000) and Zimmerman and Moylan (2009) propose that task value is an inextricable component of self-regulated learning. As such, this study also sought to determine whether task value contributed to the levels of SRL and also to the time elapsed since comprehensive exams were taken (ABDs) and for Ph.D.s time elapsed until the dissertation was completed.

This research also sought to assess whether self-regulated learning would act as a linear variable meaning that doctoral candidates and recent completers would exhibit higher levels of self-regulated learning initially and that those levels would decrease over time.

Finally, in this study, the researcher examined and compared both the levels of SRL and time elapsed since comprehensive exams were taken for those classified as ABD and Ph.D. to determine if group differences existed.

This study served to answer six research questions pertaining to the experiences associated with earning a doctorate and the use of self-regulated learning strategies. The questions were as follows:

1.   To what extent does the use of self-regulated learning strategies influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research self-efficacy, field of study and gender?

2.   To what extent does task value/intrinsic interest influence a doctoral candidate's use of self-regulated learning strategies?

3.   To what extent does task value/intrinsic interest influence a doctoral candidate's time to completion of the dissertation, controlling for financial support, social support, research self-efficacy, field of study and gender?

4.   To what extent does a doctoral candidate's self-regulation exhibit a linear relationship with the time taken since completion of the comprehensive exams?

5.   To what extent does a doctoral candidate's level of self-regulated learning differ from a recent Ph.Ds.' (dissertation completers) level of self-regulated learning?

6.   To what extent does a doctoral candidate's time to completion of the dissertation, after comprehensive exams were taken, differ from a recent Ph.D.'s time to completion of the dissertation?

Exploratory Factor Analyses

In order to assess levels of self-regulated learning and the covariates, the principal investigator created a survey that was titled the Dissertation Enablers Scale (DES). This survey included the collection of demographic information and four subscales: a SRL scale, an Intrinsic Task Value Scale, a Research Self-efficacy Scale and a Social Support Scale. All scales were developed based upon previous research of others. The SRL scale was created based upon the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia & McKeachie, 1991, 1993), the Zimmerman and Martinez-Pons (1986) Structured Interview and the Martinez-Pons (2003) Continuum of Self-regulated Learning. The Intrinsic Task Value Scale was developed based upon the Task Value Scale of the MSLQ and the Research Self-efficacy Scale was developed as a modification of the work of Holden, Barker, Meenaghan and Rosenberg (2007) in the development of a Research Self-efficacy Scale for social work graduate students. Finally the Social Support Scale was modified from questions of the Inventory of Parent and Peer Attachment (Armsden and Greenberg, 1987, Greenberg & Armsden, 2009) to reflect the social support and attachment of others as a factor in the doctoral experience. In order to proceed with a study, an exploratory factor analysis was conducted for each of these scales.

The SRL scale demonstrated a good Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.804) and using a direct oblimin rotation yielded one extremely dominant component with an eigenvalue of 12.939, accounting for 28.754% of the variance. Using this component and a structure matrix, twenty-four items met the criteria of a factor loading coefficient of .3 or over. The reliability of the scale was very good (.920). These 24 items were retained for use in the research analysis.

For the Intrinsic Task Value Scale, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .860 and using a varimax rotation, again there was one dominant component yielding an eigenvalue of 5.964. All ten items demonstrated a factor loading coefficient of over .3 and were retained for further statistical analysis within the study. The scale demonstrated good reliability (Cronbach's alpha, .905).

The EFA for the Research Self-efficacy Scale resulted in a worthy Kaiser-Meyer-Olkin Measure of Sampling Adequacy (.858). Using a varimax rotation, there was again one highly dominant component with an eigenvalue of 5.249 accounting for 58.324% of the variance. All nine items of this scale loaded upon that component and so they were retained for further statistical analysis in the study. Cronbach's alpha was .909

Finally, using a varimax rotation, the EFA of the Social Support Scale indicated three major components. These were labeled "inhibitors", "friends and family" and "program support" with eigenvalues of 6.891 (28.714% of the variance), 4.067 (16.933% of the variance) and 2.692 (11.216 % of the variance) respectively. Eleven items were retained for factor one (inhibitors), seven were retained for factor two (friends and family) and five items were retained for program support. There were a total of 23 items of the original 24 items retained. The

Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .789. Reliabilities were considered good: "Inhibitors" (.903), "Friends and Family" (.846) and "Program Support" (.837).

Based upon the results of the EFAs for scales used, the items retained in the DES were deemed worthy to operationalize self-regulated learning, intrinsic task value, research self-efficacy and social support that those classified as ABD and Ph.D. reported they experienced. This process served to validate the instrument.

Summary of Findings and Discussion

Self-regulated learning strategies were found to predict time elapsed since the comprehensive exams were taken, controlling for the covariates of financial support, social support, research self-efficacy, field of study and gender (R^2 = .315. R^2 Change =.086, p = .005).

Of the covariates, financial support specifically stated as "financial support is essential for me to complete my dissertation" appeared to be the strongest covariate, as indicated by the regression coefficient equaling -.258, with a t statistic of -3.669, p = .000. This is consistent with other current research by the Council of Graduate Schools (2010) wherein financial assistance and support reigned as the top factor impacting doctoral candidates' success as per the Ph.D. Completion study. Additionally, the research of Jacks et al. (1983), Rode (1999) and Peacock (1996) also suggested that financial support as a factor inhibiting completion of the dissertation. As the cost of an education becomes more expensive, doctoral candidates will continue to struggle to fund their education and financial assistance can clearly be a determinant as to whether a doctoral candidate might be able to continue and finish the dissertation. Working while pursuing dissertation work can strain family relationships and also the time allocated dissertation work. The majority of participants in this study indicated that the financial assistance that they received was in the form of a graduate assistantship. However, this involves

teaching or research responsibilities and thus, may also have a negative impact upon dissertation work and result in longer times to completion as suggested by the Council of Graduate School, 2010. Within the qualitative analysis of questions, finances were also mentioned a couple of times as was the toll that having to be employed took on the dissertation process. This suggests how critically important financial assistance is to a successful doctoral experience. Clearly, finding ways to fund a graduate education that do not detract from the focus upon learning and completing a dissertation is an area for further research.

The average score for SRL was 129 (out of 168). This is equivalent to a score averaging 77%. The average score for the outliers examined was 121 0r 72%. These are both moderately low scores. Perhaps, most participants did not fully understand SRL as a technique or methodology for carefully, analyzing work, setting goals, developing strategies to achieve those goals, engaging those strategies, while using metacognition to continually assess progress and regroup and revise as necessary.

The study suggested that intrinsic task value did contribute to levels of SRL. The two variables were shown to have a high level of correlation (Pearson correlation coefficient of .527, $p = .01$). The qualitative survey question regarding intrinsic task value suggested that most participants thought that their dissertation did hold intrinsic task value for them. This was also true for those participants who were identified as outliers. Intrinsic value is one element of task value within the Wigfield and Eccles (2000, 2002) model of motivation. Therefore, experiencing intrinsic task value associated with the dissertation may serve as a motivator, providing that other costs are not too high to outweigh the motivational aspects of intrinsic task value. If task value is a motivator and an integral element of SRL as this study suggests, then logically, it seems that

what may be useful for those categorized as ABD is the knowledge of how to implement SRL strategies.

This finding is also consistent with the work of Pintrich (2000c), Zimmerman (2000) and Zimmerman and Moylan (2009), in that they assert that motivation is an essential aspect of self-regulated learning. Potentially, this means that encouraging a doctoral student to select an intrinsically interesting and valuable topic can contribute to their ability to employ self-regulated learning strategies while working to complete their dissertation.

Intrinsic task value and motivation are important aspects of one's completion of the dissertation and again bring up the question "Do all doctoral candidates understand what self-regulated strategies are and what metacognition is?" Perhaps many engage in these activities, but not methodically or regularly over the course of their work. Some research has suggested library and research instruction (Simpson, 1986), and some suggest courses in writing the dissertation (Single, 2010). Maybe offering courses or workshops associated with SRL techniques and the importance of incorporating a structured process involving continuous metacognitive follow-up throughout the process might be worthwhile. Based upon the researcher's assumption that self-regulated learning is a state (which might be altered) versus a trait, it may well be worthwhile to offer such guidance throughout a doctoral program.

The third research question was not proven statistically significant. That is intrinsic task value did not predict duration or the time elapsed since comprehensive exams were taken. Task value is highly correlated to SRL, but unlike SRL it did not predict the time elapsed since comprehensive exams controlling for the covariates of "finance is essential to completing my dissertation", "field of study", "research self-efficacy" "social support" and "gender". Again, the key may be to instill structured practices of self-regulation. Most of the individual comments

participants made, were consistent with the perspective that the intrinsic task value of the dissertation was an important element. It was noted that although participants may have agreed that intrinsic task value was important, that did not always mean that their SRL scores were high. This suggests that intrinsic task value may function as a mediator to SRL.

The statistical analysis did suggest that there was a linear relationship between self-regulation and years elapsed since the comprehensive exams were taken. The linear relationship depicted suggests that participants exhibited more SRL shortly after completing the comprehensive exams and that this level of SRL declined with time. This may be due to the high level of SRL and "Other" regulation necessary to successfully complete classes, generally prior to the comprehensive exams. As time passes, the burden of the work is not as delineated; that is, due dates are not made so obvious, no other may impose expectations that work will be turned in at certain points in time. At this point, the responsibility of the dissertation work is the sole responsibility of the individual, as one participant commented that this is a sole journey. This is consistent with the research of Kleuver (1995, 1997) and Kleuver and Green (1998) in the development and validation of the Responsibility Scale. Also Bencich, Graber, Staben and Sohn (2002) asserted that the ultimate responsibility is with the student. Teaching or working with students to develop SRL skills might allow them to make better progress in their independent journey towards completing the dissertation.

As per the last research questions, a discriminant function analysis comparing the levels of SRL between recent Ph.D.s and ABDs did not yield any significant differences. This is curious and it may be that the sample of ABDs that was available for this study is not truly representative of those for whom educators have concern. Of greatest concern, are the ABDs who do not finish their dissertation or have allowed an extensive period of amount of time to

elapse since their oral and written comprehensive exams. The email addresses of these individuals may not have been available to the graduate school because they are not maintained for longer periods of time. Additionally, since remaining classified as ABD carries a stigma, these persons may have preferred not to participate in the survey. According to comments made in the survey qualitative questions, it is very hard to get back into the work of the dissertation, once a large amount of time has gone by. How to reach these individuals remains an issue requiring further research. If a few of these persons are located, perhaps qualitative interviews might yield further detailed information.

Qualitative comments generally fell into the following categories

1. Use of a specific methodology or system (high or low tech), including deadlines, timelines and due dates.

2. Working on the dissertation in chunks or mini-goals

3. Employing a pattern of work (daily, weekly etc.).

4. Work based upon task difficulty.

5. Support and guidance or lack of support from the committee.

6. Support of family, friends or others.

7. Financial support.

8. Having good research skills

9. Spirituality and Prayer also mentioned by a couple of subjects.

Many of these comments are consistent with the covariates mentioned, financial support, support of the committee and friends and are reflective of the research of the Council of Graduate Schools (2010), Jacks et al. (1983), and Rode (1999). The many comments regarding committee support previous research of indicating that social support is important to a successful

doctoral experience (Council of Graduate Schools, 2010; Fahihi, Rakow & Ethington, 1999; Franek, 1983; Green & Kleuver, 1997; Hanson, 1992; Jacks et al., 1983; Lenz, 1995; Monsour & Corman, 1991; Rode, 1999; Sattell, 2002). The more negative comments made about the committee members emphasize in a poignant manner, the key role these individuals play in a successful doctoral experience.

Limitations

The limitations of this study were the use of a self-report instrument which may not yield results as objective as preferable (Winne et al., 1998b; Winne & Perry, 2000). Additionally, the sample was a convenience sample obtained anonymously through the author's graduate institution. If all potential participant email addresses were not available, they might not have been contacted or offered an opportunity to take the survey. Because the participants self-selected to take the survey (it was voluntary) and answer questions of their choosing, the results may not reflect a representative sample. Additionally, participants may have stated that they developed strategies and engaged those strategies because they thought it was the "right" answer (although it was explained that there were no right answers). This is reflective of the social desirability factor as theorized by Edwards (1957).

Recommendations

Based upon the findings of this study, further study is required to assess the role that SRL plays in relationship to classification as ABD for long periods of time and doctoral attrition. The researcher recommends instruction in and the incorporation of SRL strategies into the doctoral curriculum. Additionally, workshops might be offered to assist doctoral candidates in fully appreciating the methodology and value that SRL strategies might offer to doctoral candidates. This may afford those who would be potentially classified as ABD (after long periods of time have elapsed since their comprehensive exams were taken) opportunities to become more self-

determined, independent and self-regulated to complete the "individual journey" and earn their Ph.D. It is also suggested that because each individual is unique, that chairs and committees are encouraged to make great effort to assist doctoral candidates in their efforts. Communicating high expectations and being supportive are not mutually exclusive behaviors. Hadwin, Oshige, Gress and Winne (2010) propose that the social element of SRL or the "social context" theorized by Zimmerman (1989) in the triadic process is more appropriately at the core of SRL. They assert that co-regulation of learning is gradually transferred to the individual and that this occurs through the employment of two processes: scaffolding (as influenced by Vygotsky, 1978) and intersubjectivity. As such, Hadwin et al. (2010) have explored and designed software tools that promote a collaborative regulation of learning, titled gStudy. Although, this system relies upon direct collaborative interface via a computer software program that might not be practical for doctoral candidates and committee members, the model is relevant in that the collaborative perspective or co-regulation of the dissertation by doctoral candidates, committee members and peers appears to be a sound strategy assisting dissertation completion. Mentors, chairs and committee members might employ similar types of scaffolding (Vygotsky, 1978) questioning and support of metacognitive processes and even use a similar chat function to the "Guided Chat" that Hadwin et al. (2010) propose in gStudy. By consciously employing such techniques and co-regulating the dissertation process, doctoral candidates (especially those who feel that their committee is not responsive) might be further encouraged to complete their work versus remaining ABD.

Further focus and research upon alternate preventative measures is recommended. The Ph.D. Completion Project through the Council of Graduate Schools (2010) has taken a major step in this direction involving universities in their study of the ABD phenomenon. It is highly

recommended that all universities make themselves aware of this research and incorporate the "promising practices" that the Council of Graduate Schools recommend (2010).

Additionally, continual effort must be made to assist with student finances. If this is critical to completion of a Ph.D., as this study suggests, then universities must exert effort to explore all avenues of potential student financial support. This is an essential step to ensuring the efficient operations of universities and the retention of doctoral students selected for admission. Some potential sources might be grants for specific fields of study, and capitalizing upon employers who might assist with tuition reimbursement, although these sources may require more intense research during the current economic downturn.

Finally, this study suggests that task value may serve as a mediating or moderating variable to SRL in the completion of the dissertation, although it did not predict time to completion or time elapsed since the comps were taken. Task value may serve as a motivator to the completion of the dissertation. Since remaining classified as All-But-Dissertation (ABD) can have long-term psychological, social and economic implications, it is suggested here that much further research be conducted in this relatively unexplored area.

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Appendix A

Dissertation Enablers Scale

Dissertation Enablers Scale 1

1. Letter to participants

Dear Student/Graduate,

I am writing to ask for your help in a study on self-regulation as it relates to completing one's dissertation. This study is part of an initiative to assess what strategies and behaviors might assist doctoral students to complete their dissertations. This study is being conducted by Martha Kelley, a graduate student, under the direction of Dr Jill-Salisbury-Glennon, Associate Professor, in the Auburn University Department of Educational Foundations, Leadership and Technology. This survey will take about 30 minutes to complete. After completion, you will be redirected to a third party website and the first twenty participants will have a chance to win an Amazon gift certificate.

I selected you as a participant because you have completed your written and oral exams and are working on or have completed your dissertation. The purpose of my study is to learn more about the strategies that doctoral candidates use when completing a dissertation.

Since the number of students who do not complete their dissertation (termed All-But Dissertation (ABD)) has been estimated to be up to 60% in some fields of study, this a critical issue in higher education. Knowing more about the factors that serve as positive enablers to doctoral candidates in completing their dissertations may result in proactive changes to help resolve this issue.

Your answers will be confidential and your participation in the survey will be anonymous. Taking the survey is voluntary. There is no risk or cost associated with taking the survey. Your decision to participate, not participate, or quit taking the survey will not influence your relationship with Auburn University.

Information gathered in the anonymous survey will be used in fulfillment of an academic requirement, presented at a conference or published in an academic journal.

I genuinely appreciate your time and assistance in completing the survey. If you have any questions, please call me at 1-334-514-7514 or email me at kellemj@auburn.edu. Additionally, you can contact the Auburn University Office of Human Subjects Research or the Institutional Review Board at 334-844-5966, if you have further questions about your rights as a participant.
The Auburn University Institutional Review Board has approved this document from October 27, 2010 to October 26, 2011. Protocol #10-301 EP 1010".

YOU MUST BE 19 YEARS OLD OR OLDER TO PARTICIPATE IN THIS STUDY. IF YOU ARE NOT 19 OR OLDER, DO NOT PROCEED TO THE SURVEY. SUBMITTING THE SURVEY REPRESENTS YOUR AGREEMENT AND CONSENT TO PARTICIPATE IN THE STUDY

Having read the information provided in this letter you must now decide if you want to participate in the study. You may print a copy of this letter. If you enter the survey and participate, the information that you provide in the submission of the survey will be considered as your consent to participate. To participate, click the next button to begin.

Sincerely,

Martha Kelley
College of Education
Department of Educational Foundations, Leadership and Technology
4013 Haley Center
Auburn University, AL 36849
(334)844-8682

Dissertation Enablers Scale 1

2. Age and Consent

You must be 19 years old or older to consent to taking this survey. If you are not 19 years old or older, please click on "No" and exit the survey at this time. If you do not want to take the survey, please click on exit (at the upper right corner of the page) and you will be redirected to another page, after which you can close your browser.

* Are you 19 years old or older?

○ Yes   ○ No

Dissertation Enablers Scale 1

3. Thank You

Thank you so much for participating in the survey. Your responses and comments are valuable to me as a researcher in better understanding successful strategies in completing the dissertation.

You may now close your browser window.

Dissertation Enablers Scale 1

4. Thank You

Thank you so much for participating in the survey. Your responses and comments are valuable to me as a researcher in better understanding successful strategies in completing the dissertation.

You may now close your browser window.

Dissertation Enablers Scale 1

5. Comprehensive Exams

* Have you completed your comprehensive exams?

○ Yes

○ No

Dissertation Enablers Scale 1

6. Dissertation Work

The following questions are being asked to better understand the background of doctoral candidates and those who have completed their dissertations.

* What is the status of your dissertation?

◯ I have not completed my dissertation.

◯ I have completed my dissertation.

Dissertation Enablers Scale 1

7. Demographic information for those who have not completed their dissertation

CURRENT DOCTORAL CANDIDATES.

If you have completed your oral and written exams as a doctoral student, but not your dissertation, please complete this section.

Survey Progress: You have 4 pages to complete after this page.

If you are a doctoral candidate, what is your field of study?

How many years and months have elapsed since you completed your comprehensive exams?

	Years	Months
The number of years and months elapsed since completing your comprehensive exams.	▼	▼

What is your gender?

○ Female   ○ Male

What is your family constellation?

☐ Single

☐ Single with children or obligations to others

☐ Married

☐ Married with children or obligations to others

☐ In a relationship with others to whom I have obligations

While working on your dissertation, are you a full time student or a part time student?

○ Part Time Student

○ Full Time Student

Do you receive any type of financial support while working on your dissertation?

○ 1 Yes

○ 2 No

Dissertation Enablers Scale 1

If you do receive financial support, what type of support do you receive? Check as many as apply

☐ Scholarship/Stipend

☐ Graduate Assistantship

☐ Student Loan

☐ Employer Financial Support

☐ Family Financial Support

☐ Veterans Educational Benefits

☐ Other

If the answer to the previous question was "Other", please specify what type of other financial support you receive.

[text box]

Having financial assistance will help me to complete my dissertation within the expected time frame. Using the scale below the statement, select the answer that best describes you.

○ Strongly Disagree 1   ○ 2   ○ 3   ○ 4   ○ 5   ○ 6   ○ Strongly Agree 7

Financial assistance is essential for me to complete my dissertation. Using the scale below the statement, select the answer that best describes you.

○ Strongly Disagree 1   ○ 2   ○ 3   ○ 4   ○ 5   ○ 6   ○ Strongly Agree 7

If there is any other factor that you believe is important to working on your dissertation, that you feel I should have asked, please add comments in the space that follows and then proceed to the survey.

[text box]

Dissertation Enablers Scale 1

8. Demographic information for those who have completed their dissertations

FOR THOSE WHO HAVE COMPLETED THEIR DISSERTATION.

If you have completed your oral and written exams and your dissertation, please answer the following questions.

Survey Progress: You have 4 pages to complete after this page.

If you have completed your dissertation, what was your field of study?

How many years and months did you complete your dissertation after you completed your comprehensive exams?

	Years	Months
The number of years and months elapsed between completing your comprehensive exams and your dissertation.	▼	▼

What is your gender?

◯ Female

◯ Male

What was your family constellation when you were working on your dissertation?

◯ Single

◯ Single with children or other obligations

◯ Married

◯ Married with children or other obligations

◯ In a relationship with others to whom I have obligations

When working on your dissertation, were you a part time or a full time student?

◯ Part time student

◯ Full time student

Did you receive any type of financial support while working on your dissertation

◯ 1 Yes

◯ 2 No

Dissertation Enablers Scale 1

If you received financial support while working on your dissertaiton, what type of support did you receive? Check all that apply.

☐ Scholarship/Stipend

☐ Graduate Assistantship

☐ Employer Financial Support

☐ Family Financial Support

☐ Student Loan

☐ Veterans Educational Benefits

☐ Other

If you received "Other" financial assistance, please describe what type of assistance.

Having financial assistance enabled me to complete my dissertation within the expected time frame. Using the scale below the statement, select the answer that best describes you.

○ Strongly Disagree 1   ○ 2   ○ 3   ○ 4   ○ 5   ○ 6   ○ Strongly Agree 7

Financial assistance was essential for me to complete my dissertation. Using the scale below the statement, select the answer that best describes you.

○ Strongly Disagree 1   ○ 2   ○ 3   ○ 4   ○ 5   ○ 6   ○ Strongly Agree 7

If there is any other factor that you believe is important to completing your dissertation, please add any comments that you would like to make in the space that follows.

Dissertation Enablers Scale 1

9. Dissertation Enabler Scale items

Survey Progress: You have 3 pages to complete after this page.

Please select the best answer. If you strongly disagree, select "1" and if you strongly agree, select "7", or the number in between that best describes how applicable the question is to you. Skip any question that does not apply to you.

	Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
I do/did set realistic goals for my dissertation work.	○	○	○	○	○	○	○
I plan(ed) to seek additional information and assistance from my friends when I am stuck on one part of my dissertation.	○	○	○	○	○	○	○
I have/had determined where there is/was a good place to work on my dissertation that is free of distractions.	○	○	○	○	○	○	○
I adjust(ed) my schedule when I do/did not meet my goals for completing work on my dissertation.	○	○	○	○	○	○	○
I expect/expected to be successful in completing my dissertation when starting my work on my dissertation.	○	○	○	○	○	○	○
I am making/made a timeline which identifies goal completion due dates.	○	○	○	○	○	○	○
I visit(ed) my committee chair frequently, while working on my dissertation.	○	○	○	○	○	○	○
I think/thought about my ability and skills required to complete my dissertation.	○	○	○	○	○	○	○
I develop(ed) strategies to manage anxiety, when working on my dissertation.	○	○	○	○	○	○	○
I do/did set short-term goals to motivate me to complete my dissertation.	○	○	○	○	○	○	○
I think/thought about the subject I propose/proposed for my dissertation as it relates to recent literature and information I come across.	○	○	○	○	○	○	○
I develop(ed) a plan to organize the different tasks that need to be accomplished to complete my dissertation.	○	○	○	○	○	○	○
I regularly write/wrote down all thoughts I have/had regarding my dissertation.	○	○	○	○	○	○	○
If I do not/did not know when my literature review is/was sufficient, I ask my committee to review my work and to offer guidance.	○	○	○	○	○	○	○
I want(ed) to complete my literature review by a set date.	○	○	○	○	○	○	○
I do/did set short and long term goals that I will need to achieve to complete my dissertation.	○	○	○	○	○	○	○
When I am/was working on my dissertation, I try/tried not to think about other things that might distract me.	○	○	○	○	○	○	○
I do/did think about the time frame for completing the required study associated with my dissertation.	○	○	○	○	○	○	○
I have/made a plan to review other dissertations to assist me with work on my dissertation.	○	○	○	○	○	○	○
I do/did consider the amount of work it will/would require to complete my literature review.	○	○	○	○	○	○	○
I have/had a target date to complete my research on my dissertation.	○	○	○	○	○	○	○

Dissertation Enablers Scale 1

Statement							
I do/did set goals to obtain necessary resources to work on my dissertation.	○	○	○	○	○	○	○
I use/used the study place that I set up to work on my dissertation work.	○	○	○	○	○	○	○
I seek/sought assistance from my committee when confronted with a problem in working on my dissertation.	○	○	○	○	○	○	○
I evaluate(ed) literature that I read to assess how it relates/related to my dissertation.	○	○	○	○	○	○	○
I recheck(ed) my work to insure that I have/had actually fixed problems identified.	○	○	○	○	○	○	○
I have/had a plan to set aside funds needed to conduct research for my dissertation.	○	○	○	○	○	○	○
If I feel/felt that I am/was at a standstill in my dissertation, I gain(ed) a refreshed perspective by completing an unrelated task, and then returning to my work.	○	○	○	○	○	○	○
Even when my work feels/felt like drudgery, I manage(ed) to keep working until I finish(ed) the specific dissertation task I am/was working on.	○	○	○	○	○	○	○
I review(ed) my writing as I continue(ed) to work to assess the flow of my writing.	○	○	○	○	○	○	○
If I get/got confused when working on my dissertation, I always sort(ed) it out.	○	○	○	○	○	○	○
I review(ed) my goals to assess whether I am meeting/have met them in a timely manner.	○	○	○	○	○	○	○
I think/thought about the various tasks that need(ed) to be completed on my dissertation.	○	○	○	○	○	○	○
I ask(ed) for peer reviews of my work to gain feedback regarding whether my writing flows/flowed logically, even if my peers are/were not associated with my discipline.	○	○	○	○	○	○	○
I am/was certain I will/would complete my dissertation within the allotted time.	○	○	○	○	○	○	○
I consider(ed) which subject matter would realistically make a good dissertation topic.	○	○	○	○	○	○	○
I do/did set goals for the completion of the sections of my dissertation.	○	○	○	○	○	○	○
I think/thought about how much time it will take/took to complete the introduction to my dissertation.	○	○	○	○	○	○	○
While working on my dissertation, I engage(ed) the plans and strategies that I developed regarding my dissertation work.	○	○	○	○	○	○	○
I work(ed) on my dissertation during the blocks of time I have/had scheduled for this work.	○	○	○	○	○	○	○
I will/did reward myself when I accomplish(ed) the goals I have set for my dissertation.	○	○	○	○	○	○	○
I use/used an outline I developed, when working on sections of my dissertation.	○	○	○	○	○	○	○
I expect(ed) to complete my dissertation within four years of completing my comprehensive exams.	○	○	○	○	○	○	○
I review(ed) my committee's comments regarding my dissertation and consider(ed) how I might revise my work.	○	○	○	○	○	○	○
I think/thought about researching a dissertation topic, proposed by my employer.	○	○	○	○	○	○	○

Dissertation Enablers Scale 1

How do/did you prioritize the tasks that need/needed to be completed for your dissertation

What kinds of goals do/did you establish when working on your dissertation?

What strategies do/did you use to organize your dissertation work?

Do/did you engage or use the strategies you develop(ed) to complete your dissertation?

When you are/were not making progress or meeting the goals you had established to compete your dissertation, do/did you assess what ineffective strategies you had engaged?

In the space provided below, please identify other ways in which you might manage your dissertation work. Also, if there is anything I did not ask about your dissertation work that you believe is important, make any comments here

Dissertation Enablers Scale 1

10. Intrinsic Task Value

Survey Progress: You have two pages to complete after this page.

This section refers to how interesting, important and useful the task of working on the dissertation is/was to you. Skip any questions that do not apply.

	Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
I think/thought I will/would be able to use the work that I have completed on my dissertation in other work, in which I will be involved.	○	○	○	○	○	○	○
It is/was important to me to learn the material that is the topic of my dissertation.	○	○	○	○	○	○	○
I am/was very interested in the content area of my dissertation.	○	○	○	○	○	○	○
I think/thought that the dissertation subject matter is/was useful for me to learn.	○	○	○	○	○	○	○
I like/liked the subject matter of my dissertation.	○	○	○	○	○	○	○
Understanding the subject matter of my dissertation is/was very important to me.	○	○	○	○	○	○	○
I am/was confident that the subject matter of my dissertation may make an important contribution to my profession.	○	○	○	○	○	○	○
I consider/considered my dissertation to be a very important priority, when managing my other responsibilities.	○	○	○	○	○	○	○
I am/was very curious about the subject matter of my dissertation.	○	○	○	○	○	○	○
I am/was willing to give up my favorite activities so I can work on my dissertation.	○	○	○	○	○	○	○

If you have any further comments that you would like to make regarding your intrinsic interest in your dissertation, please make them in the space provided below.

Dissertation Enablers Scale 1

11. Research Self-Efficacy Scale

Survey Progress: You have 1 page to complete after this page.

In this section of the survey, items relate to your feelings regarding your research skills and ability needed to complete your dissertation. Skip any questions that do not apply

I AM/WAS CONFIDENT IN MY ABILITY TO...

	Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
conduct effective electronic database searching of the scholarly literature.	○	○	○	○	○	○	○
use various technological advances effectively in carrying out research (e.g.) the internet.	○	○	○	○	○	○	○
review a particular area of theory within my discipline and write a balanced and comprehensive literature review.	○	○	○	○	○	○	○
formulate a clear research question or testable hypothesis.	○	○	○	○	○	○	○
choose a research design that will/would answer a set of questions and/or test a set of hypotheses about some aspect of my field of study.	○	○	○	○	○	○	○
design and implement the best sampling strategy possible for my study.	○	○	○	○	○	○	○
design and implement the best measurement approach possible for my study.	○	○	○	○	○	○	○
design and implement the best data analysis strategy possible for my study.	○	○	○	○	○	○	○
effectively present my study and its implications.	○	○	○	○	○	○	○

In the space that follows, please make any other comments regarding your thoughts about the research ability and skills needed to complete your dissertation.

Dissertation Enablers Scale 1

12. Social Support Scale

Survey Progress: This is the last page to complete.

In this section of the survey, please indicate the extent to which you agree(d) or disagree(d) with statements characterizing the support that you receive(d) from peers, family, your committee, department and employer with respect to working on your dissertation. Skip any questions that do not apply to you.

	Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
My friends/peers are/were very supportive of my completing my dissertation.	○	○	○	○	○	○	○
My family understands/understood when I need/needed to spend more time on my dissertation.	○	○	○	○	○	○	○
When I am/was working on my dissertation, my family expects/expected too much of me.	○	○	○	○	○	○	○
My committee is/was very supportive of me in completing my dissertation.	○	○	○	○	○	○	○
My committee trusts/trusted my judgment, when working on my dissertation.	○	○	○	○	○	○	○
My family obligations prevent/prevented me from spending as much time as I would like/have liked on my dissertation.	○	○	○	○	○	○	○
My friends care(d) about how I am/was feeling, when working on my dissertation.	○	○	○	○	○	○	○
When we discuss(ed) things, my committee cares/cared about my point of view, when working on my dissertation.	○	○	○	○	○	○	○
When working on my dissertation, my employer expects/expected too much of me.	○	○	○	○	○	○	○
I like(d) to get my committee's point of view on things I am concerned about, when working on my dissertation.	○	○	○	○	○	○	○
My family offers/offered me the social emotional support I need/needed during my dissertation.	○	○	○	○	○	○	○
My friends/peers expect/expected too much of me when I was working on my dissertation.	○	○	○	○	○	○	○
My family doesn't/didn't understand what I am/was going through when working on my dissertation.	○	○	○	○	○	○	○
My friends don't/didn't understand what I am/was going through when working on my dissertation.	○	○	○	○	○	○	○
My family obligations require/required more time than I expected during the dissertation phase.	○	○	○	○	○	○	○
My department is/was very supportive of me in completing my dissertation.	○	○	○	○	○	○	○
When working on my dissertation, my department expects/expected too much of me.	○	○	○	○	○	○	○
My family is/was very supportive of me completing my dissertation.	○	○	○	○	○	○	○
My friends/peers offer/offered me the social emotional support I need/needed during work on my dissertation.	○	○	○	○	○	○	○
My work obligations prevent/prevented me from spending as much time on my dissertation as I would like/have liked, when working on my dissertation.	○	○	○	○	○	○	○
My friends encourage(d) me to talk about my difficulties, when working on my dissertation.	○	○	○	○	○	○	○
	○	○	○	○	○	○	○

Dissertation Enablers Scale 1

When working on my dissertation, my committee expects/expected too much of me.	○	○	○	○	○	○	○
My committee expects/expected too much of me, when working on my dissertation.	○	○	○	○	○	○	○
My employer is/was very supportive of me in completing my dissertation.	○	○	○	○	○	○	○

If you have any further comments or information that you believe is relevant to the social support you receive(d) while working on your dissertation, please type them in the space provided below.

Dissertation Enablers Scale 1

13. Thank You

Thank you so much for participating in the survey. Your responses and comments are valuable to me as a researcher in better understanding successful strategies in completing the dissertation.

If you would like a chance to win an Amazon.com gift card, please click here.

You may now close this window.

Thank you

Appendix B

Email Letter to Participants

Proposed email from the Auburn University Graduate School

Dear doctoral student,

A graduate student is studying strategies that doctoral students use to complete their dissertations and has created a survey online.

This survey is voluntary and independent from the operations of the Auburn University Graduate School. Your responses will remain anonymous. The attached letter explains more about the details and purpose of the survey. If you choose to enter the survey, click on the link below.

https://www.surveymonkey.com/s/8687GKB

Dear Student/Graduate,

I am writing to ask for your help in a study on self-regulation as it relates to completing one's dissertation. This study is part of an initiative to assess what strategies and behaviors might assist doctoral students to complete their dissertations. This study is being conducted by Martha Kelley, a graduate student, under the direction of Dr Jill-Salisbury-Glennon, Associate Professor, in the Auburn University Department of Educational Foundations, Leadership and Technology. This survey will take about 30 minutes to complete and if you are one of the first 20 to take the survey, you will win a $5.00 gift certificate from Amazon.

I selected you as a participant because you have completed your written and oral exams and are working on or have completed your dissertation. The purpose of my study is to learn more about the strategies that doctoral candidates use when completing a dissertation.

Since the number of students who do not complete their dissertation (termed All-But Dissertation (ABD)) has been estimated to be up to 60% in some fields of study, this a critical issue in higher education. Knowing more about the factors that serve as positive enablers to doctoral candidates in completing their dissertations may result in proactive changes to help resolve this issue.

Your answers will be confidential and your participation in the survey will be anonymous. Taking the survey is voluntary. There is no risk or cost associated with taking the survey. Your decision to participate, not participate, or quit taking the survey will not influence your relationship with Auburn University.

Information gathered in the anonymous survey will be used in fulfillment of an academic requirement, presented at a conference or published in an academic journal.

I genuinely appreciate your time and assistance in completing the survey. If you have any questions, please call me at 1-334-514-7514 or email me at kellemj@auburn.edu. Additionally, you can contact the Auburn University Office of Human Subjects Research or the Institutional Review Board at 334-844-5966, if you have further questions about your rights as a participant.

The Auburn Institutional Review Board has approved this document for use from October 27 2010 through October 26 2011. Protocol #10-301 EP1010".

YOU MUST BE 19 YEARS OLD OR OLDER TO PARTICIPATE IN THIS STUDY. IF YOU ARE NOT 19 OR OLDER, DO NOT PROCEED TO THE SURVEY. SUBMITTING THE SURVEY REPRESENTS YOUR AGREEMENT AND CONSENT TO PARTICIPATE IN THE STUDY

Having read the information provided in this letter you must now decide if you want to participate in the study. You may print of copy of this letter. If you enter the survey and participate, the information that you provide in the submission of the survey will be considered as your consent to participate. To participate, click on the link provided in this email.

Sincerely,

Martha Kelley

Martha Kelley
College of Education
Department of Educational Foundations, Leadership and Technology
4013 Haley Center
Auburn University, AL 36849
(334) 844-8682

Appendix C

Follow-up Email to Participants

Dear Doctoral Candidate or Recent Completer,

Just as a reminder, the survey concerning, study strategies that doctoral candidates employ is still open if you would like to participate.

This survey is voluntary and independent from the operations of the Auburn University Graduate School. Your responses will remain anonymous. The attached letter explains more about the details and purpose of the survey. If you choose to enter the survey, click on the link below.

https://www.surveymonkey.com/s/8687GKB

Marte Kelley