The Effects of Reflective and Reflexive Writing Prompts on Students' Self-Regulation and Academic Performance

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THE EFFECTS OF REFLECTIVE AND REFLEXIVE WRITING PROMPTS ON
STUDENTS’ SELF-REGULATION AND ACADEMIC PERFORMANCE

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ABSTRACT

The study investigated the effect writing prompts designed to elicit reflection on short-term, academic goals have on participants’ self-regulated learning strategies and on their academic performance, and it investigated the effect writing prompts designed to elicit reflexive thinking about future-oriented, career goals have on participants’ self-regulated learning strategies and on their academic performance. Academic performance was measured using two skills test and the overall final grade for the course.

Seventy-nine undergraduate students, all pre-service teachers, in four sections of an educational technology course participated in the study. All four sections of the course were hybrid and were taught from a common syllabus. They participated in the Journal Project, which asked them to respond to a series of four prompts over a period of eight weeks, then complete an exit survey and the Motivated Strategies for Learning Questionnaire (MSLQ). Each of the four sections was assigned, in tact, to one of four sets of journaling prompts: reflective prompts only, reflexive prompts only, both prompts, and no prompts.

The results of the pre-planned data analysis revealed that the group receiving only the reflective prompts performed significantly better on the final grade score than the group receiving only the reflexive prompts. This finding did not support any of the hypothesis, but it does confirm that reflective prompts can have a positive effect on student performance. A posteriori analysis revealed four more findings of significance, specifically on the Excel test, the extrinsic goal orientation, rehearsal, and organization subscales of the MSLQ. Again the reflection prompt only group was significantly higher on the Excel test, the rehearsal subscale, and the organization subscale as compared to the both prompt group, the no prompt group, and the no-prompt and reflexive groups, respectively. On the extrinsic goal orientation subscale, however, the significant difference was between the no prompt group and the reflexive group with the reflexive group being significantly less extrinsically motivated than the no prompt group.

The findings of the study support the literature on the positive effect reflection, especially reflective journaling, can have on outcomes. In contrast, however, the role of reflexivity was not shown to have an effect in this study. It is recommended that future research should consider changes to the Journal Project architecture and course selection to better map the possible effect and role of reflexive thinking in learning and instruction.
CHAPTER I

INTRODUCTION

Research Questions

Self-regulation has been in the spotlight of researchers from many fields, ranging from sociology to education. The interest lies in discovering what makes some people more self-regulated than others with the general hope of learning how to increase the self-regulation of particular populations, especially students. Self-regulated learning strategies have been examined primarily in terms of processes such as planning, monitoring, and regulating (effortful attention). Most of the learning situations investigated have encompassed short term goals related directly to the closed learning environment of a course or a class. This study investigated the following questions:

1. What effect will writing prompts designed to elicit reflection on short-term, academic goals have on participants’ self-regulated learning strategies and on their academic performance?
2. What effect will writing prompts designed to elicit reflexive thinking about future-oriented, career goals have on participants’ self-regulated learning strategies and on their academic performance?

But why should these questions be researched?

Rationale

In recent years, the topic of self-regulation has been receiving an increasing amount of attention as it seems to be an essential element of learner motivation and learner achievement. Discussions of self-regulation are frequently found along side of discussions about metacognition. Metacognition has been defined by educational psychologists and instructional designers as 1) knowing about cognitive processes, and 2) controlling how one knows (Flavell,
1979). Brown (1987) asserted that, “although knowledge and regulation of cognition are
incestuously related, the two forms of activity have different roots and different attendant
problems” (p. 68). Theorists and researchers in metacognition have spent the twenty-five years
since Flavell’s (1979) article trying to develop models and interventions to promote
metacognition by way of self-regulation. The two terms are becoming synonymous in the
literature, but it is important to remember that metacognition is the umbrella term for both
reflecting on and regulating cognition.

Self-evaluative reflection and hermeneutic reflexive thinking are two ways to critically
engage with the two imbricated features of metacognition: self-evaluative reflection challenges
learners to objectify their cognitive processes so that they can make regulatory decisions while
hermeneutical reflexivity challenges learners to be in conversation with internal and external
aspects of their socially constructed identity. The former has been at the center of much
investigation in learning environments, usually as part of the exploration of self-regulation,
specifically self-regulated learning strategies. The latter is a new offering to the field of
Instructional System Design (ISD) research; a type of philosophically based thinking that has
begun to permeate researchers’ practice—the idiom “reflective practice” has become fairly
common in fields ranging from teaching to medicine (Kupier, 2002). What is commonly meant
by reflection? What role do reflection and reflexivity play in self-regulation? After a definition of
self-regulation, specifically self-regulated learning, is articulated, definitions and contrasts are
offered between self-regulation and the two ways of critically engaging with metacognition, self-
evaluative reflection and hermeneutical reflexivity.

Self-Regulation

Boekaerts (1999) offered a definition of self-regulated learning, conceiving of it as “a series
of reciprocally related cognitive and affective processes that operate together on different
components of the information processing system” (p. 447). She further presented a three-
layered model of self-regulation based on what she has identified as the three main schools of
influence on self-regulation research: learning style research, metacognition and self-regulation
research, and “theories of the self” (p. 455). Some time later, Pintrich (2004) presented a model
that breaks self-regulated learning into four distinct phases: 1) forethought, planning, and
activation; 2) monitoring; 3) control; 4) reaction and reflection. His model is based on four core
assumptions undergirding self-regulated learning: learners are active participants in the
collection of knowledge; learners are capable of metacognition, regulation, and control;
evaluative comparisons are made against tangible criteria, goals, or standards; and learners
mediate the complex interplay of their internal characteristics, environmental characteristics, and
the application of self-regulated learning strategies in the course of performance or for the
purposes of achievement (Pintrich, 2004).

Self-Evaluative Reflection

Reflection, it seems, is an inextricable part of self-regulation. But what is meant by the
term? For educators and learners, the consideration of the importance of reflection can be traced
to Dewey (1933), who offered the most frequently quoted definition of reflection: the “active,
persistent and careful consideration of any belief or supposed form of knowledge in the light of
the grounds that support it and the further conclusions to which it tends” (p. 9). A more recent
definition, offered by Boyd and Fales (1983) focuses on the learners’ experience as foundational
for reflective thought: “Reflective learning is the process of internally examining and exploring
an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of
self, and which results in a changed conceptual perspective” (p. 100). Rodgers (2002) read
Dewey to say that “reflection is a systematic, rigorous, disciplined way of thinking, with its roots
in scientific inquiry” (p. 851). When Rodgers broke down the systematic process of reflection
into phases, the following six emerge from her readings of Dewey:

1. an experience;
2. spontaneous interpretation of the experience;
3. naming the problem(s) or the question(s) that arises out of the experience;
4. generating possible explanations for the problem(s) or question(s) posed;
5. ramifying the explanations into full-blown hypotheses;
6. experimenting or testing the selected hypothesis (p. 856).

These phases of Dewey’s defined activity, “reflection,” seem to fall under the definition
of critical thinking as Facione (1998) offered it: “As to the cognitive skills here’s what the
experts include as being at the very core of critical thinking: interpretation, analysis, evaluation,
inference, explanation, and self-regulation” (p. 4). Contextualized this way, it becomes clear
that Dewey’s (1933) and Boyd and Fales’ (1983) definitions both imply other kinds of thinking
than just reflective, namely critical thinking. What Dewey called “reflection” we seem to have come to know interchangeably as “critical thinking.” A more apt descriptor for Dewey’s “reflection” and Boyd and Fales’ (1983) “reflective learning” might be “critical reflective learning.”

Pintrich (2002, 2004) included reflection on the process of learning as a stage in self-regulated learning, claiming that students exhibiting self-regulated learning reflect—think critically and engage in metacognitive thinking; examine goals and beliefs about one’s own ability; regulate effort and seek help; evaluate the task and the content. He subsumed both critical and metacognitive thinking into the reflective sub-process of self-regulation in contrast to Facione (1998) who included self-regulation as part of his definition of critical thinking. Clearly, the field—the collection of fields—interested in metacognition, critical thinking, self-regulation, and reflection have not agreed upon the nature of the relationship of these terms. Instead, the combined fields offer nested and mobius-strip-like descriptions of the relationships of the ideas represented by these terms. Using the term “self-evaluative reflection” is an attempt to separate the Dewian notions of reflection about content from the more contemporary self-regulatory notions of the act of thinking about the process of learning.

Hermeneutical Reflexivity

Pintrich (2002) also asserted that three types of metacognitive knowledge are of importance to education: strategic knowledge, knowledge of tasks, and self-knowledge. Simply put, learners need to know ways to be successful learners, need to know which of those ways applies to the task at hand, and need to know what personal resources they have available to them to complete the task. He explored this last factor in terms of students’ strengths and weaknesses and of their motivations—self-efficacy, goals, and interest/value in the task (Pintrich, 2002). Noticeably absent from his definition of self-knowledge is any engagement with how students’ have come to possess this set of personal resources—a more introspective exploration of the construction of these aspects of the self. Martin and Sugarman (1997) asserted that “true social constructionism suggests that knowledge does not reside exclusively either in the minds of individuals or in the environment but rather in the social processes of symbolic interaction and exchange” (p. 308). Where is the symbolic interaction and exchange that constructs and deconstructs knowledge and the self in the self-regulated learning sub-process of
reflection? Thus far in the literature reporting theories and research into self-regulation, it’s absent.

Philosophical hermeneutics offers a way to incorporate reflexive thinking into the process of self-regulation. “Reflexive” means to turn back on oneself, or in grammar, it describes a sentence that has the same subject in both the nominative and objective cases (e.g. The learner caught herself daydreaming). Doing philosophical hermeneutics means being engaged with one’s self while at the same time understanding that one can never be fully engaged with everything that constellates to create self at the moment of reflexivity. Doing philosophical hermeneutics doesn't stop with being aware of oneself critically, it is a conscious effort to explore, contemplate, and create one's own critical consciousness through language. To what end with regard to self-regulation? Miller and Brickman (2004) have created a model of self-regulation that includes future-oriented goals—long-term goals, not just short-term academic goals, arguing that these long-term goals influence the prioritization and execution of short-term goals that lead to a desired long-term goal. Thus, hermeneutical reflexivity as a self-regulatory sub-process offers learners the space to critically think about themselves as constructing and constructed social entities that are moving along trajectories—some chosen and some imposed—toward their future goal.

In field of metacognition, self-evaluative reflection is understood as the act of discovering about one’s cognition—that it exists and the ways in which it can be regulated. Self-regulation, specifically self-regulated learning, is the host of processes involved in learners’ directing and developing the ways in which they go about learning. Until now, this is where the forays into metacognitive research have stopped. Reflexivity is becoming commonly expected from researchers and practitioners, but it is absent from much of the work in self-regulation. This type of thinking, specifically interpretive or hermeneutical reflexivity, has the potential to become an important element of the metacognitive process that students can engage in and would benefit from—claims that must be evaluated by way of rigorous research into the effect of hermeneutical reflexivity on metacognitive awareness and skills.

I argue that getting learners to think about future-oriented goals and make the connections between these longer-term goals and their current, short-term, academic goals requires a different kind of thinking. Inquiry into introspective, critical thinking about the constitution of the self in society has not been included thus far in ISD research as this more philosophical line of thinking.
seemed to have little place in the social-science based investigations. This study hopes to contrast the impact of reflective thinking and reflexive thinking on self-regulated learning strategies and potentially begin the work of incorporating more philosophical thinking into the systematic design of instruction.
CHAPTER II
REVIEW OF LITERATURE

Introduction

This review of literature begins with a close examination of the terms “reflection” and “reflexivity” insofar as they are found in extant ISD literature, specifically their roles in the study of self-regulation. Next, theoretical papers on self-regulated learning that have emerged in the last fifteen years are surveyed, with the primary goal of identifying some of the theoretical directions self-regulation research is headed. Academic studies into self-regulation, specifically in the areas of language arts, motivation, and learner characteristics, are surveyed. The studies are discussed in terms of their results and more significantly, their contributions to understanding self-regulation as a part of the complex dynamic of learning.

This exploration of the literature continues with an examination of aspects of self-regulation in a particular learning environment – computer mediated. This section begins with a review of some of the issues and elements of supporting metacognition (aka self-regulation) in computer mediated learning environments (CMLE), and then moves into a discussion of the constraints inherent in any learning support based in Vygotskian notions of social learning and scaffolding. Lastly, the potential confounding variables that emerge when researching metacognitive support in CMLE are discussed. The next section delves deeply into philosophical hermeneutics, specifically the role of language and discourse in Heidegger’s work as it relates to conception of the reflexive individual. The literature review then moves to a discussion of Miller & Brickman (2004)’s model of future-oriented motivation and self-regulation, specifically the potential role journaling—both reflectively and reflexively—might be able to play in learners’ manifestation of it. Finally, a detailed discussion of measurement of self-regulation concludes the literature review.

Reflection, Reflexivity, and ISD

Learner reflection and learner reflexivity are both types of thinking about the self, but they focus on different attributes. Learner reflection in the field of ISD has come to represent
both the traditional Dewian notion of deep consideration of ideas and experiences as well as the processes involved in metacognition, specifically self-regulation. Being reflexive means being conscious of and critically engaged with one’s subject position in a given place at a given time and with the social discourses that construct the self and the place. Learner reflexivity is not formally addressed by the field, except for the call for researchers and theorists to see themselves as learners and to be reflexive. The following section traces the relationship of these two terms within and outside the field of ISD.

Reflection

While not formally in the field of ISD, preservice teachers do constitute some of the undergraduate students in ISD courses and, in consideration of their future roles as educators, it is important to acknowledge the tension in terminology between ISD and research into preservice teacher preparation. Common in preservice teacher preparation literature is a tendency toward a Dewian-based definition of reflection (1933); Hatton & Smith (1995) and Rodgers (2002) have offered interpretations and readings of Dewey’s work on reflection, showing how Dewian reflection has evolved in the practice of preservice teacher preparation.

Research into reflection and preservice teacher preparation has focused on using Schon’s (1987) concepts of reflection-in-action and reflection-on-action along with Dewey’s foundational concepts as a training method to help pre-service teachers raise their self- and other-awareness (Swain, 1998; Freese, 1999; McMahon, 1997). Spalding (2002) concluded that preservice teacher preparation needs to teach preservice teachers how to be reflective, not simply assign them to be reflective, but Fendler (2003) cautioned the field to examine its own definitions and assumptions about the role of and type of reflection in preservice teacher preparation and in teacher practice—to be reflexive.

Theories and research into reflection in more traditional ISD research tends to focus on reflection’s role in self-regulation, specifically how reflection and self-regulation play out in supporting metacognition in learners. Much of the literature on metacognition, thus self-regulation and reflection, in ISD is found in studies testing theories of motivation. Many of the key self-regulatory skills are defined as attributes of motivation such as goal orientation, efficacy, and affect; furthermore, reflection is frequently used to elicit thinking about elements of self-regulated learning and motivation, especially self-evaluation (Pintrich, 1990; Pintrich 2004;
In research into self-regulation and CMLE, metacognition and self-regulated learning seem to be used interchangeably indicating that metacognition appears to be collapsed with one of its two defining features. Reflection in this body of research and literature usually refers to self-evaluative activities (Lin, 1999; White, Davis & Shimoda, 1999; Davis, 2000; Palmer, 2003), but Lin (2001) offered ISD a design framework that attempts to incorporate both 1) reflection on self-as-learner, a more metacognitive/self-regulation-oriented definition, ) reflection on content—more along the lines of Dewian or Schonian definitions. Cann & Seele (1999) also discussed designing for content-based reflection in CMLE. The tension between these two meanings of the term continues as evidenced by Davis’s (2000) use of reflective self-monitoring prompts and Palmer’s (2003) reflective (content-focused) journaling prompts. Reflection has come to mean two things at once. Researchers and theorists need to be very careful, perhaps developing newer, more precise language to describe these two distinct functions—reflecting for content-based learning and reflecting as a learning strategy.

Reflectivity

Introducing “reflectivity” has the potential to tangle the terminology further, but it is another type of “reflective” thinking that merits attention. Unlike the modernist theories from which educational psychology and ISD were derived, reflectivity relies on a more post-modern understanding of the self. The impact of post-modern philosophies is highly evident in some academic fields, such as composition theory and critical theories, and emerging in others, such as psychology and ISD. The needed yet slow turn in ISD toward a more post-modern sense of the self—the individual learner—is evidenced by the impact and acceptance of theories of social cognition wherein individuals are a product of the dynamic exchange between environment and the self (Bandura, 1986). Christopher, Richardson, and Christopher (2003) argued for the field of psychology to shift toward philosophical hermeneutics as a way to move past the modernist
emphasis on objectivity. Reflexivity is a kind of thinking that asks individuals to consider themselves as both objects and subjects, to see their identities in light of their social context. Hermeneutic reflexivity puts an emphasis on interpretation of that socially constructed self (Jones, 1997).

What good are these critically interpretive acts of contemplation in the field of ISD? Hermeneutic reflexivity seems a logical next step toward understanding the complexity of who “the learner” is and what s/he brings to the learning situation. In their article addressing reflexivity and lifelong learning, Edwards, Ranson, & Strain (2002) contended that “it is through self and social questioning (reflexivity) that people are able to engage with and (en) counter—be affected by but also affect—contemporary uncertainties” (p. 527). Curtis (2003) drew parallels between post-modern self-referentiality and metacognition by demonstrating a commonality in underlying meaning not frequently acknowledged. Adding hermeneutic reflexivity as a third defining feature of metacognition—self-awareness about cognition and self-regulation of that cognition—would allow ISD to expand on its current metacognitive-based exploration of learners’ successful navigation of communities of practice. Hermeneutic reflexivity could do this by becoming a cognitive tool to facilitate students’ developing agency to engage with the communities of practice in which they are ensconced and that socially construct them which may impact a whole host of motivational elements, like efficacy and achievement.

Is this the role of ISD? Miller & Brickman (2004) have recently developed a model of self-regulation that includes future-oriented goals, a feature that distinguishes it from previous models that focus only on short term goals, such as learning goals. Miller & Brickman (2004) argue that the longer-term goals guide the prioritization of and engagement with shorter term goals and that the relevance of short-term goals to long-term goal(s) must be explicit if the long-term goals are to be maintained and eventually reached. Imagining one’s future requires seeing oneself as an actor in a personal narrative taking place in the future. Hermeneutic reflexivity may offer space for guided inquiry—interpretive contemplation—into learners’ future-oriented goals, goals which are derived from the socially constructed self and the social context constructing that self.
In the first article of the special issue on self-regulation published in 1999 by the *International Journal of Educational Research*, Boekaerts (1999) offered an updated definition of self regulated learning, conceiving of it as “a series of reciprocally related cognitive and affective processes that operate together on different components of the information processing system” (p. 447). This definition reflects the evolution of theory from a cognitive to a social cognitive one. Recall the three-layered model of self regulation referenced in the introduction: it is based on what she has identified as the three main schools of influence on self-regulation research: learning style research, metacognition and self-regulation research, and “theories of the self” (p. 455). This reconceptualization of self regulated learning emphasizes the importance of self regulation skills to both the construction of and best uses of powerful learning environments (Boekaerts, 1999).

In the same issue and along a similar—but not parallel—trajectory, Pintrich (1999) foreshadowed his 2004, four-part conceptual framework for assessing motivation and self-regulated learning with a presentation of three categories of strategies essential for self regulated learning: cognitive learning strategies, metacognitive and regulative strategies, and resource management strategies. Further, he reported empirical data that support the affective components much researched in self-regulation studies. The data demonstrate positive relationships between self regulation and self-efficacy and task value, and it shows that a master goal orientation is the most adaptive for self regulated learning (Pintrich 1999). Lemos (1999) continues on the vector of goal orientation with her discussion of the sequential versus segmental behavior of students exhibiting more and less intentionality, respectively. The existence of personal goals is at the heart of her theory; these goals determine the students’ levels of intentionality and influence their self regulatory behavior (Lemos, 1999).

The first new theoretically based model to emerge representing the self regulated learning of college students presents a synthesis of “aspects of contemporary social-cognitive theory, primarily Bandura’s thinking, and aspects of theory focusing on future goals” (Miller & Brickman, 2004, p. 13). This model expands on the research into motivational aspects of self-regulation, claiming that the research has limited itself to understanding the impact of short range goals only; the authors call for “attention to the future goal triumvirate: development of
personally valued future goals that include schooling as part of their path, development of a system of proximal subgoals (a path) to the future goal, and explicit indicators of the instrumentality of schooling for future goal attainment” (Miller & Brickman, 2004, p. 26). In short, Miller and Brickman (2004) proposed that self-regulated learning behaviors are positively impacted by the existence of long-term goals that must be attained via formal schooling.

In apparent response to an explosion of studies on self-regulation in far ranging fields, contemporary researchers challenged the field to raise the standards for rigor and validity in research, to synthesize and make available the insights and research, and to embrace new (and more rigorous) ways to gain access to the actual cognitive processes of students—be they more qualitative or technological in nature (Karoly, Boekaerts, & Maes, 2005; Karoly, 2005; Winne 2005).

Self-Regulation Studies in Review

Language Arts

A series of seminal studies based in social cognitive theories, Zimmerman & Kitsansas (1997), Zimmerman & Kitsansas (1999), and Zimmerman (2002), investigates writing skill acquisition. Zimmerman et. al developed and then tested the relationships between four stepwise levels of attaining self-regulation; results indicate that his four level model has merit. These steps are observation, emulations, self-control, and self-regulation (Zimmerman & Kitsansas, 1999). In all of his writing studies, and in one pre-cursor to these studies, a motor-skills study (Zimmerman & Kitsansas, 1997), the results have supported the hypothesis that students who see then do with emphasis on the process perform better than students who do not observe, observe a master vs. a more advanced learner, or are told to focus on outcome (the result) not the process (getting the result) (Zimmerman & Kitsansas, 1997; Zimmerman & Kitsansas, 1999; and Zimmerman, 2002).

Other significant results from Zimmerman & Bandura’s (1994) work include the finding that “students need to be taught skills and strategies for managing not only the cognitive aspects of managing learning but also methods in which to motivate themselves for academic pursuits in the face of difficulties or attractive alternatives” (p. 858). Having self-regulatory skills and using self-regulatory skills are entirely different cases; self-efficacy seems to be at the heart of
whether a student uses the self regulatory skills s/he has. Zimmerman & Bandura (1994) specifically found both significant direct and indirect effects of perceived academic self-efficacy on performance.

The four levels of self-regulation acquisition and the role of self-efficacy become clear in Zimmerman & Kitsansas (1999); the researchers concluded that students need socially based guidance through the early levels of the socially cognitive model if they are to become fully prepared to engage in solely self-regulatory behavior. Zimmerman and others (e.g., Kitsansas, Reiser, Doster, 2004) have looked more closely at the relationship between self-efficacy and self-regulation.

Motivational Aspects of Self-Regulation

Many of the key self-regulatory skills are included in studies of motivation, and much of the research that investigates self-regulation is based in motivational theory. Pintrich (1990) investigated the relationship between motivational orientation, self-regulated learning, and academic performance. He defined self-regulation as the interaction of metacognition, self-management, and cognitive strategies; further, he posited that self-regulation and expectancy-value theory are related. His results confirm that the students with higher self-regulation reported higher value assessment of the task, and he concluded that self-regulation is the best measure of academic performance.

Much like Zimmerman et. al’s conclusions, Pintrich (1990) also concluded that students need to be taught self-regulatory strategies; however, he went further by saying that knowing these strategies isn’t enough: students need to be taught how to use them. When students know how to apply self-regulatory strategies, these strategies can mediate the influences of past academic performance. Self-efficacy played a huge role as well: students who thought themselves capable of self-regulation were more confident about their academic abilities (Zimmerman, Bandura, & Pons, 1992).

Kupier (2002) approached the study of self-regulation from the area of metacognition. She found that nursing students who received prompts designed to elicit self-regulatory, reflective journal entries demonstrated metacognitive growth, suggesting that the critical thinking elements inherent in directed (self regulatory) reflection should be further investigated as a possible well-source for future instruction. Part of what Kupier (2002) and other researchers
Kitsansas, 1997; Zimmerman & Kitsansas, 1999; Zimmerman & Bandura’s, 1994; Zimmerman, 2002; Kitsansas, Reiser, & Doster, 2004) identified as key in building self-regulation is self-evaluation. The critical thinking prompts Kupier (2002) used, she asserts, acted much like self-evaluative exercises. Kitsansas, Reiser, & Doster (2004) examined the effect of goal setting, self-evaluation, and organizational signals on student achievement, self-efficacy, satisfaction, and attributions of success or failure, finding that self-evaluation is a powerful tool both in terms of achievement and in terms of self-efficacy which aligns with Zimmerman findings discussed earlier.

Spiegel, Grant-Pillow, Higgins, (2004) took the question of motivation and self-regulation to a more detailed level, basing their work on Higgins (2000) theory of regulatory fits which states that the way in which a person is motivated to work and works toward a goal should be aligned with that person’s regulatory orientation—promotion or prevention. Drawing from expectancy value theory and the theory of regulatory fit, Spiegel, Grant-Pillow, Higgins, (2004) rhetorically framed the goal of eating more fruits and vegetables in either a promotion or prevention manner, finding that the behaviors of the participants changed but only if the regulatory orientation matched the rhetorical packaging of the behavioral goal. While this study took place in an informal learning situation, it has much to offer those researching formal instruction. The dictum, “Know your learner,” is minimally reinforced and hopefully expanded to include studying the ways—processes, strategies, preferences—in which learners come to know things, not just what they know. The next section looks more closely at learner characteristics, as they have been discussed in the literature on self-regulatory learning behaviors.

Learner Characteristics

Achievement, self-efficacy, and self-regulation are positively related, according to Zimmerman & Pons (1990) who looked at elementary school students’ use of regulatory strategies, their self-efficacy in terms of math and language tasks, and their achievement. They concluded by calling attention to the need for incorporating self-regulatory skills training in academic lessons, and suggesting that ways to develop students’ self-efficacy also be considered in designing K-12 instruction.

specifically examining discipline of study, academic performance, knowledge, self-regulation, and motivation. They found that differences do exist by discipline: knowledge, self-regulation, and motivation mark the differences between high and low achievers, but only in natural science and social science; students in humanities courses demonstrated no significant relationship between the variables under question. Vanderstoep, S. W., Pintrich, P. , Fagerlin, A. (1996) joined Zimmerman & Pons (1990) in calling for specific consideration of the requirements of learners in content-specific learning environments.

Studies on self-regulatory skills have also focused on developmental students, or students who under prepared for college. Ley & Young (1998) found that developmental students used fewer strategies and used them inconsistently; they also found that self-evaluation was the highest indicator in highly self-regulated students, while goal-setting was the lowest. This last finding is interesting in light of Kitsansas, Reiser, & Doster’s (2004) results which highlight the importance of goal-setting in self-regulation. Part of the reason for this difference might lie in the study design: Ley & Young (1998) surveyed incoming college students while Kitsansas, Reiser, & Doster (2004) performed an intervention that included goal-setting. The potential relationship between goal setting and self-regulation is discussed in more detail after the following discussions of self-regulatory (aka metacognitive) support specifically in computer mediated learning environments (CMLE) and of the relationships of reflexive thinking, language, and hermeneutic philosophy.

**Self-Regulatory Learner Support in CMLE – Issues, Constraints, and Affordances**

**Reflection as Self-Regulatory Support**

Specific interventions and studies investigating self-regulation that are focused in CMLE speak directly to the need for understanding self-regulated learning processes of students engaged with this mode of learning. Young (1996) completed one of the first explicit studies on self-regulated learning strategies (SRLS) in computer mediated environments; he found that when learners have more control over their instruction—are not led stepwise through a lesson but have choice in the amount or type of instruction or support—they need to have higher levels of self-regulated learning strategies. Learners with high levels of self-regulated learning strategies who were in learner controlled environments demonstrated higher academic performance than all
other groups; learners with limited SRLS in the learner control condition demonstrated the worst academic performance (Young, 1996). A later study reinforced the relationship between learner control and SRLS: Azevedo & Cromley (2004) found that in hypermedia environments, ones that inherently have high levels of learner control, students who received training on SRLS performed better than students who did not. This finding supports the conclusion drawn by Rogers & Swan (2004) that SRLS are indeed learned and can become automated.

Whipp & Chiarelli (2004) offers the conversation a qualitative look at SRLS in CMLE, finding that the students in the web-based course used many of the traditional SRLS but modified them for the environment; for example, they used peer feedback but were able to select peers—typically choosing peers demographically similar to themselves. Online students have to navigate technical and especially social issues not found in traditional learning environments, issues which can affect their efficacy. Whipp & Chiarelli (2004) found that early success, encouragement, and modeling support students’ self-efficacy but called for a more detailed investigation into the specific motivational factors operating in online courses.

Studies on SRLS in CMLE examined specific attributes of SRLS, self-evaluation and process-goals, finding that self-evaluation had a positive effect on achievement but only when the evaluation focuses on process vs. goal attainment (Schunk & Ertmer, 1999) and that post-task reflective self-evaluation is a useful way for students to self-monitor, and self-analyze, and reinforce effective strategy use (Rogers & Swan, 2004). King, Harner, & Brown (2000) pointed out that while process goal evaluation is effective, the connection between the process goals and the overall course goals must be made explicit in order for students to fully benefit from process goal self-evaluation. Metacognitive support, especially in CMLE, must be relevant to learners.

Reflection is frequently another way in which metacognition is supported in CMLE. A number of authors have attempted to describe the conditions under which reflection might happen. Cann and Seale (1999) pointed out that while computer-based tutorials are frequently cited as good opportunities for promoting reflection, there is little agreement on what types of tutorials should be used. Their article explores the role of reflection in computer-based instruction; they concluded that both the design and implementation of computer-based instruction will influence students’ ability to successfully reflect. This is supported by Baylor (1999) and Baylor & Kitsansas (2005), who found that the type of metacognitive development—process monitoring or cognitive flexibility—depended on the design of the learner support tool.
Seale & Cann (2000) studied reflection in on- and off-line environments and conclude from their research:

The evidence for reflection is not overwhelming however, and the data provide some evidence for a number of factors that may influence how successful learning technologies are in facilitating reflection. These factors are the way the learning technology is used; the nature of the student groups; the role of the tutor [instructor or teacher—not pedagogical agent]; [learner] preference for ‘off-line’ reflection” (p. 316-17).

Further, Lin, Hmelo, Kinzer, & Secules (1999) have articulated four design characteristics that multi-media designers should incorporate to promote reflection in problem solving scenarios: process display features; process prompt[s]; process modeling features; and reflective social discourse features s (p. 58). Boud, Keogh, and Walker (1985) also included interacting with others as part of their definition of reflection. Herrington & Oliver (2000) argued that an authentic learning situation necessarily provides for this learner-learner discourse. It could be argued, however, that the first three of these four characteristics are, in fact, more related to promoting self-regulation rather than reflection specifically – again highlighting the inconsistency and interchangability of the terms “reflection” and “self-regulation” in the field of ISD.

Social Learning and Scaffolding: Complicating Metacognitive Support

Social learning—learners working together to mutually negotiate and create both group and individual meaning—is a key element to Vygotskian-based theories of learning. Interaction with fellow learners allows for the recantation of new perspectives; learners get to try out their new positions in order to refine them. This is supported by the literature; recall Lin, Hmelo, Kinzer, & Secules’ (1999) fourth characteristic, learners should be able to interact with each other and that this interaction should be designed into metacognitive support, but Whipp (2003) has demonstrated that learners have to be taught to interact on more critical levels.

What about learners interacting with the metacognitive support mechanism? Can that type of interaction support reflection? Researchers designing and evaluating tools to support
metacognition, such as SCI-WISE and animated pedagogical agents, have shown that it can (Linn, Clark, & Slotta, 2003; White, Shimoda & Frederiksen, 1999; Bell & Davis, 2000; Linn, 2003; Baylor, 2005; and Lee & Baylor, 2005). While most agents are interactive, the agents used in the SCI-WISE environments are designed to interact with students to support self-regulation and reflection, but they are also able to be modified by the students, meaning that the learners can control the amount, type, and frequency of interactive support they receive. But are learners the best decision makers when it comes to issues of amount, type, and frequency?

Designing for any kind of self-regulatory learner support in CMLE requires providing the right kind of support at the right time, making scaffolding a key issue. Vygotsky's notion of scaffolding is that it acts as the more experienced or capable peer, allowing learners to move forward in their thinking (1978). Metacognitive scaffolds “may support students’ self-regulation or self-management, or could be used to provide assistance to students in evaluating tasks or products prior to submitting them for assessment” (Brush & Saye, 2001). Brush & Saye (2001) claimed that “more recently, the concept of scaffolding has been broadened to include a multitude of different tools and resources that can be used by students to assist them with instructional activities” (p. 335). For Jonassen (1999), scaffolding occurs when the system manipulates any part of the task—either by completing part of it for the student, providing help for the student to complete the task by changing it or adding cognitive tools, or by changing the difficulty of the task.

Vygotskian scaffolding also includes the notion of fading. van Merrienboer, Kirschner, & Kester (2003) described fading as the process by which support “gradually diminishes until it is no longer needed” by students who are achieving the desired goals (p. 5). Recall that Rogers & Swan (2004) concluded that SRLS can be learned and automated. The need for metacognitive support to fade is supported by cognitive load theory which says the more germane the load, the better the performance (van Gog, Paas, & van Merrienboer, 2003) and by the expertise-reversal effect which demonstrates that overly supported experts will under-perform (Kalyuga, Ayres, Chandler, & Sweller, 2003). Unneeded scaffolding imposed an extraneous cognitive load on the learner.

The effectiveness of scaffolds on learning outcomes is frequently studied with no clear answer coming to the fore: “we propose that the assessment of effectiveness of different types of instructional scaffolds depends on the learning goals” (Lin & Lehman, 1999). Designing
effective, particularly interactive and scaffolded, metacognitive support should be of particular interest to researchers investigating learning in CMLE, especially in light of the findings by Baylor & Kitsansas (2005) regarding the affiliation between the design orientation of metacognitive support and the type of metacognition developed and those of Cates & Bruce’s (2000) who contended that metacognitive support—scaffolded or not—is limited by the preconceptions of the designer.

Confounding Variables

Researching metacognition often means wading through a web of confounding variables, variables the researcher may not be able to isolate, but ones that they must consider when interpreting data. Some of the issues are design and access: metacognitive support is shaped by design orientations (Baylor & Kitsansas, 2005; Cates & Bruce, 2000) and depends on students knowing how to use it as it was intended (Oliver & Hannafin, 2000). Other issues involve *a priori* knowledge, skills, and attitudes of learners such as efficacy, computer literacy/efficacy, cognitive ability, goal orientation. Lee & Baylor (2005) cautioned researchers to consider that learners all come to the CMLE with different levels of established metacognitive abilities which may impact findings.

Course content also matters when it comes to metacognitive support. The findings by Vanderstoep, S. W., Pintrich, P., Fagerlin, A. (1996)—that student SRLS differ across disciplines—are supported by the contrasting findings of Chen (2002) and King, Harner, & Brown (2000). Chen (2002) found that peer interaction had a negative effect on learning computer science concepts while King, Harner, & Brown (2000) found that a group of accountants benefited greatly from not only peer interaction but contact with the instructor. This means that metacognitive support might need to be tailored not only to the kind of learning task at hand, but the subject matter as well.

Cates (2000) defined learner supports as “additional material available to all learners but not required in order to learn the content or complete the learning tasks involved (p. 3). Does metacognitive support fall under this definition? The answer depends on the kind of support and the type of CMLE the learner is working in. It is the issue of “not required” that is at the heart of the scaffolding constraint: who decides if the help is required—the learner, the CMLE, or the teacher? The constraints of social learning in CMLE are evidenced in designing metacognitive
support: learners need to engage with each other in critical discussion to build and learn knowledge, but when what they’re learning is specific to their unique metacognitive needs and outside of their usual learning lexicon, it becomes difficult to design for meaningful conversation.

From the field of psychology, Baumeister, DeWall, Ciarocco, & Twenge (2005) investigated self-regulation and social exclusion in a face-to-face setting, finding that—in brief—self-regulation is an effortful activity and that people are more likely to make the required effort when they are a part of a social context. This finding puts the research into computer mediated learning environments into a wholly different light, creating different shadows and illuminating heretofore unseen issues around alienation, isolation, socialization—not just socially based interaction.

Metacognitive support in CMLE does afford learners the opportunity to engage with the critical process of examining and developing their unique learning processes, even if that engagement is confined to an inner dialogue. Ultimately, metacognitive support, be it focused on SRLS or on reflection specifically, offers learners the opportunity “to develop conscious, explicit theories of the cognitive and social processes need for learning” which White, Shimoda, Frederiksen (1999) argued students need to do to become lifelong, continuous learners. That students’ lifelong learning goals are being considered by educators indicates a growing turn toward more overtly connecting students’ classroom experiences to their future possibilities. But this requires a conception of their present selves. The next section discusses a post-modern understanding of self and ways to critically conceive of and engage with that self.

**Reflexive Thinking, Language, and Philosophical Hermeneutics**

As ISD has begun to embrace contemporary, constructivist theories of learning and instruction, the field has begun to conceive of learners as socially constructed members of societies. Ultimately, this means that ISD can move away from the notion of learners as a faceless homogenous class, a notion replete with problematic implications of generalization and/or essentialization, and toward a notion of the learner as a constituted self that is flush with creative tensions. The biological human is born with genetic potential that is fostered by environment; environment is determined and configured by tangible and intangible social forces.
The socially constructed self, then, is a unique expression of biological potential at a given time and place. But is that all? Consciousness, it seems, is the dividing line between being human and non-human. Throughout time, questions of and about consciousness have guided and continue to guide philosophy worldwide, particularly philosophical hermeneutics. Consciousness is expressed by and interrogated with language. Philosophical hermeneutic inquiry into questions of being—one’s own being—requires reflexive thinking.

Reflexive thinking requires learners to engage with themselves as socially constructed products of their unique historical moments. It further requires an understanding of one’s self as a text constructed by social and historical forces. The hermeneutical problem, according to Gadamer, is one of interpretation: the interpreter must at some point determine what is being interpreted and by what means that interpretation occurs: “If the heart of the hermeneutical problem is that one and the same tradition must time and again be understood in a different way, the problem, logically speaking, concerns the relationship between the universal and the particular” (p. 312). Gadamer's notion of the relationship between the universal and the particular is a key: the individual who interprets is the unique and ungeneralizable starting place. Critically engaging with oneself and the nature of one's existence is a philosophical hermeneutic endeavor.

Philosophical hermeneutics recognize the temporality of existence and the import of the concept of social constructionism. Social constructionism is traceable in large part to the work of both Vygotsky (1983) and Piaget (1953). The focus of Vygotsky (1983)’s (social constructivism) and Piaget (1953)’s (cognitive constructivism) psychological theories, and many of the subsequent educational theories, are the learning and developmental processes of children. Key to these theories is language: its acquisition, its role in cognition, and its role in learning. The basic difference between the two schools is in the perception of the relationship between language and thought. Piaget (1953), a biologist first and a psychologist second, contended that thinking cannot happen without language. The biological capability for language is inherent, but language itself is both external insofar as it is an acquired skill and based in commonly accepted meanings. Children acquire experience, then the language to understand and communicate that experience (Rieber & Voyat, 1987 p. 112).

Vygotsky (1983), on the other hand, proposed that language is a product of culture; therefore, learning is a social process of enculturation as well as the cognitive activities of
knowledge building and language acquisition. For Vygotsky (1983), communication is as much a process of interpretation as it is an exchange of signs. The context of experience, language choices, and learning environments influences the intentions of the speaker; resultantly, the listener must be aware of these elements and must interpret the communication in light of them (Bruner 6). In the case of reflexive journaling, the speaker and the listener are the same person: the learner. Reflexive journaling is a type of individual philosophical hermeneutic activity.

**Heideggerian Philosophical Hermeneutics and Critical Consciousness**

Heidegger (1962) ’s revolutionary work, *Being and Time*, attempted to uncouple philosophical hermeneutics from the established notions of “being.” He asserted that the established pattern of not questioning being is traceable to Platonic thought, which has remained unchallenged after centuries, and that this situation is insufficient. Thus he undertook the questions of “being and time,” redirecting philosophical hermeneutics via his explorations. Of particular importance is his concept “Dasein”; he explains:

Thus to work out the question of being means to make a being—one who questions—transparent in its being. Asking this question, as a mode of being of a being, is itself essentially determined by what is asked about in it—being. This being which we ourselves in each case are and which includes inquiry among the possibilities of its being we formulate terminologically as Da-sein. (6)

Dasein is the instance of being, experienced by a being, and understood as a process of being continuously reconstituted.

Heidegger (1962) ’s reconception of what it means to be “human being,” makes a distinct turn away from the long held Cartesian view; philosopher Guignon (1993) aptly described the Cartesian mind/body split:

According to the Cartesian view, we are at the most basic level minds located in bodies. And this is indeed the way we tend to think of ourselves when we step back and reflect on our being. The binary opposition between mind and matter colors all our thinking in the modern world, and it leads to a kind of Cartesian extortion which tells us that if we ever question the existence of mental substance, we will sink to the level of being crude materialists who can never account for human experience and agency. (7).
This long held subject/object split, philosophers claim, has led to a sense of alienation. Heidegger (1962) attempted to move the conversation away from dichotomous thinking toward a notion of continuous thinking. In *Being and Time*, Heidegger provided a host of terms and concepts that allows these sorts of new conversations about human existence to happen. The aforementioned term *Dasein*, for example, indicates all the activities of being human in a context; and *forestructure* which is akin to ideology but it goes deeper into the ever-unfolding situatedness of both the individual interpreting and that which is being interpreted. The concept of "being thrown" describes Dasein's historical situation and the dialectic involvement of Dasein in that situation.

Guignon (1993)'s encapsulation of Heidegger (1962) 's notion of the philosophical hermeneutic endeavor summarized three key elements of his work:

When we think of a human being as the temporal unfolding of a life course, we can identify three structural elements that make up human existence. First, Dasein always finds itself "thrown" into a concrete situation and attuned to a cultural and historical context where things already count in determinate ways in relation to a community's practices. . . Second, agency is "discursive" in the sense that in our activities we are articulating the world and interacting with situations along the guidelines of interpretations embodied in our public language. Third, Dasein is "understanding" in Heidegger (1962)'s special use of this term: it has always taken some stand on its life insofar as it has undertaken [all] that give[s] content to its lifetaking a stand is said to be a "projection" of possibilities of meaningfulness for things and ourselves. (8-9)

What makes Heidegger (1962) 's thoughts radical is his placing physical being—actually being constituted of flesh and blood—on equal footing with intellectual knowing. Furthermore, he placed this flesh and brain being in time at a certain place. Dasein only exists in the present but is constantly thrown and projecting. Thowness, or being thrown, is the more complex relationship between time/place and the self. Dasein finds itself knowing where it is because it understands where it has been. Where it has been has helped to determine where it will go. This circular thinking is actually spiral thinking as these circles are rolling through time. Thus Dasein projects what it will encounter because of its ongoing state of being thrown.
This ongoing cycle of interpretation and projection of a situation is but part of what Heidegger (1962) intended by defining agency as discursive. He identified the special role of language in Dasein's discursive articulation. Language controls articulation at any time or in any place:

Discourse is existentially equiprimordial with attunement and understanding. Intelligibility is also always already articulated before its appropriative interpretation. Discourse is the articulation of intelligibility. Thus it already lies at the basis of interpretation and statement. *We called what can be articulated in interpretation, and thus more primordially in speech, meaning* As what is articulated of what can be articulated, significations are always bound up with meaning. If discourse, the articulation of the intelligibility of the there, is the primordial existential of disclosedness and if disclosedness is primarily constituted by being-in-the-world, *discourse must also essentially have a specifically worldly mode of being*. The attuned intelligibility of being-in-the-world is expressed as discourse. The way in which discourse gets expressed is language. (Heidegger 1962, p. 150-51, emphasis mine)

Concluding that discourse is a worldly phenomenon controlled by language and that language is constituted of significations which are bestowed rather imbued with meaning, Heidegger (1962) included discourse as part of the worldly phenomena that both constitute Dasein’s existence and Dasein’s ability to function—understand, interact, and interpret—in this articulated world. Contemporary philosopher Rorty (1991) saw Heidegger (1962) ’s work this way: “he would like to recapture a sense of contingency, of the fragility and riskiness of any human project. . . By contrasting powerful reality with relatively impotent appearance, and claiming that it is all-important to make contact with the former, our tradition has suggested that the fragile and transitory can safely be neglected” (p. 34). Heidegger (1962) attempted to put being human (back) into a definition of human being.

Philosophical hermeneutics has the potential to help ISD push some of its focus to inquiries into the uniquely embodied self situated in the shared sociocultural forces that produce individuals in society. Many academics have looked to Heidegger (1962) to inform pedagogy. Composition scholar Kinneavy (1987) explored Heidegger’s (1962) concept of forestructure: "[Heidegger] contends that all interpretation must begin with the mental structure which the
interpreter brings to the object being interpreted. It means, for instance, that every interpretation must be unique, since every interpretation, even by the same person, is made from a somewhat different perspective" (p. 9). Kinneavy further examined the usefulness of a constantly evolving individual forestructure to the writing process: "The original forestructure, made up of an intended whole, a unity, and a structural complexity, is continually modified as the richness of the object [being written about and interpreted] causes the writer to change his or her original views of his or her intention, unity, and structure. Continually, these modifications are made up against the changing background" (p. 13). As students journal reflexively during the semester, they are challenged to rearticulate their views, to refine them.

Each learner undergoes individual modifications of perception against the changing background produced in the classroom, but that is not the only background of which they must be aware. Furthermore, because there is always something up against which what is made visible is limned, the term background poses the paradox of defining that which it can never fully articulate. Contemporary philosopher Taylor (1993) commented further on the philosophical hermeneutic notion of background:

It can be explicited, because we aren’t completely unaware of it. But the expliciting itself supposes a background. The very fashion in which we operate as engaged agents within such a background makes the prospect of total explicitation incoherent. The background cannot in this sense be thought of quantitatively at all. (329)

Background can be made explicit momentarily, but not entirely or continuously over time. Given the acknowledged heterogeneous make-up of classrooms, it is not realistic to expect learners to see themselves as homogeneous products of a common society and culture.

Because America is a growing collection of individuated cultures, the “melting pot” metaphor popular in last part of the 20th century no longer works. Composition theorist Pratt (1991) has coined the term “contact zone” in response to the growing multi-ethnic make-up of America: by it she “refer[s] to social spaces where cultures meet, clash, and grapple with each other“ (34). The individuals in the contact zone are unlike those conceived of by Heidegger (1962). His being-in-event was conceived of in a predominantly homogeneous society which means that ISD would benefit from Taylor (1993)’s conception of the learner as “engaged agent with background,” a phrase with which he attempts to capture the unique historicity and

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awareness of being. The usefulness of Heidegger (1962) ’s philosophical hermeneutics to reflexive journaling is in his attempt to combine the ambiguity of Dasein’s existence with the effects of articulating that existence; it is the intersection and the relationship of two unfolding and evolving notions of the self: understanding "self" as a socially constructed product of a series of historical moments and understanding "self" as unique and embodied.

Future-Oriented Goals, Journaling, and Self-Regulation

Miller & Brickman (2004) have proposed a new model of future-oriented motivation and self-regulation that introduces and emphasizes the importance of personally valued future goals, namely ones that can be directly related to school experiences, to successful self-regulated learning by learners. They explain their model by exploring the relationship between future goals and proximal goals: proximal goals are prioritized in terms of future goals (Miller & Brickman, 2004). The analysis of the relationship between task value and self regulation in the proposed model is anchored in achievement goal theory, intrinsic motivation theory, achievement motivation theory, instrumentality and incentive value, and instrumentality and task engagement.

Miller & Brickman (2004) concluded that, “students must see the personal value of their efforts in order for them to expend effort to learn from (not simply complete) the tasks presented in school” ( p. 19). This analysis is supported by a theoretical assertion by Bembenutty & Karabenick (2004) who explored the relationships between delay of gratification, future time perception, and self-regulation as evidenced by extant studies. Specifically, they found that students’ future time perception has an effect on their academic success and that task-value impacts willingness to delay gratification (Bembenutty & Karabenick 2004).

Learners’ ability to imagine the future, be it in terms of time or in terms of goals, is essential to performance that is not bound by the learners’ immediate realities. If students cannot envision a future self, their actions are governed by current circumstances (Brorokowski & Tharpe, 1994). It is this type of imaginative thinking that invites ISD scholars to consider reflexive thinking as an important part of learning, namely self-regulated learning. Reflexive journal prompts have the potential to tease out and make visible the sociocultural contexts – Miller & Brickman (2004) defined four arenas: home, school, peers, and media – from which
past experiences emerge. These socioculturally based past experiences together with both personal values and knowledge of one’s own possibilities comprise the three locations where disruptions in the development of personally valued, future-oriented, school-related goals (Miller & Brickman, 2004). While they suggest that interventions attend to this trifecta, Miller & Brickman (2004) do not give specific design guidelines.

Journaling has been used to promote reflection which has been demonstrated to be a part of self-regulated learning and a part of critically engaging with content (Rodgers, 2002; Dewey’s, 1933; Boyd and Fales, 1983; Schon, 1987). Expanding this accepted approach to include reflexive prompts, designed to promote students’ thinking about their future self in terms of their current historicity, may begin to address Miller & Brickman’s (2005) desire to expand self-regulation to include future-oriented goals. The following chapter outlines the methods for a study that attempts just that: promoting self-regulation by way of reflective prompts and reflexive prompts.

Self-Regulation Instruments in Review

How are SRLS currently being studied, assessed, and measured? The next section reviews a portion of the literature addressing these issues. First, three specific instructional tools are presented and discussed, tools designed to elicit, develop, and self-evaluate SRLS. Then the main issues regarding interventions of these types, assessment of SLRS, and methodology beleaguering research into SRLS are presented through the lens’ of two leading researchers in their respective articles.

Tools

In a special issue of *Theory into Practice*, Horner & Shwery (2002) and Harris, Graham, Mason, & Saddler (2002) presented two methods for bringing about self-regulated readers and writers respectively. The first, to develop self-regulated readers, describes direct classroom application of cognitive and socially cognitive theories of learning and instruction, such as cognitive apprenticeship and scaffolding, on the tutoring of students who are low achieving readers. This case-study like narrative offers the classroom teacher an example of the successful
development of self-regulated readers, but it is not a validated instrument like the second tool, the Self-Regulated Strategy Development method created by Harris & Graham (1996) (Horner & Shwery, 2002). This method is a flexible and modifiable approach to teaching writing to elementary school students, one that takes into consideration both the learner and the instructor’s needs and styles; it has been empirically shown to help students become “fluent, independent, self-regulated, goal-oriented learners” (Horner & Shwery, 2002, p. 111). The six stage process involves overtly emphasizing the acquisition of content and processes and the scaffolded support by the instructor (Horner & Shwery, 2002).

Another tool that overtly presents elements of SRLS is Achacoso’s (2005) post-test analysis questionnaire, a self-evaluation tool she uses to guide student self-evaluation and analysis of student effort and performance on tests. The tool has the students categorically break-out their incorrect responses, both in terms of the source of the correct information and the strategy used to study the information; she has experienced—but not empirically shown—an increase in metacognition, achievement, motivation, and positive attitude (Achacoso’s 2005).

For the practitioner, these articles offer a clear sense of what it means to be a self-regulated learner and gave some examples and guidance about building self-regulation strategies into instruction. But what of the research into the SRLS theories and factors from which these practices are derived? Practice must be distilled from rich, reliable research.

Issues

Self-regulation in the classroom is a topic that has gained enough momentum in the last thirty years that is has developed areas of divergence and perhaps even friction. Boekaerts & Corno (2005) article discussing assessment and intervention of self-regulation shortly followed the publication of Pintrich’s (2004) article presenting his “conceptual framework for assessing motivation and self-regulated learning” (p. 1). These two articles approach very nearly the same topic from two different perspectives. Boekaerts & Corno (2005) offered the reader a deep and comprehensive review of the research while Pintrich (2004) presented a framework for SRLS that is a culmination and continuation of one vein of the research into SRLS.

Boekaerts & Corno (2005) first distinguished self-regulation, the umbrella concept, from self-regulated learning. They then presented a chronology of the assessment procedures and tools, discussing how those tools reflected the at first static, trait-based conceptualization of
SRLS then developed into ones that attempt to reflect the current, dynamic conceptualization of SRLS—but frequently don’t. They called for more triangulation of results via multiple investigatory perspectives, hinting at the need for a qualitative component to augment the historically preferred empirical, quantitative research; and they pointed to issues of validity regarding the quantitative instruments that are in use (Boekaerts & Corno, 2005).

Pintrich (2004) first distinguished student approaches to learning from self-regulated learning strategies, a point he considers crucial to the overall organization of the entire field of research. The latter is fodder for model-driven, empirical research, while the former is more typically approached from a phenomenological perspective (Pintrich, 2004). The model he presented breaks SRL into four distinct phases: forethought, planning, and activation; monitoring; control; and reaction and reflection and is based on the four core assumptions under girding SRL: learners are active participants in the construction of knowledge; learners are capable of metacognition, regulation, and control; evaluative comparisons are made against tangible criteria, goals, or standards; and learners mediate the complex interplay of their internal characteristics, environmental characteristics, and the application of SRLS in the course of performance or for the purposes of achievement (Pintrich, 2004).

By parsing out the phases and the assumptions of SRLS, Pintrich hopes to provide a concrete conceptualization and model that can be empirically tested and used to provide valid data to the field. Like Boekaerts & Corno (2005), he called for more rigor in the research, but unlike Boekaert (1999) who included of the “theories of the self” in her construct of self-regulation research, Pintrich does not see the more post-modern approaches offering rigor to the growing corpus of research unless attempts are made to connect these frequently qualitative findings with psychological models, models such as the future goal-orientated motivation and self-regulation Miller & Brickman (2004) developed.

It is difficult not to put Pintrich (2004) and Boekaerts & Corno (2005)’s articles next to each other and imagine them in conversation. They agree and disagree, but they ultimately converge in their desire for consolidated, rigorous, well-developed, methodologically sound research into SRLS that is consolidated and easily accessible to researchers who envision themselves as a community of peers, regardless of the seemingly divergent theoretical underpinnings and purposes of their individual research interests.
Research investigating self-regulation will continue to proliferate, if history is any indicator. Ultimately, researchers in self regulation need to at minimum heed the call to be more rigorous both in defining the field of research and the distinguishing characteristics of both the topic of interest and the purpose/methodology with which to pursue that interest. The research is of no long-term use if it faces questions of validity and rigor or is too diffuse.

Conclusion

Because reflection in self-regulation is a metacognitive skill, educators have increasingly been exploring metacognition and learning to learn more about reflection and learning. Pintrich (2002) pointed to the “need to teach for metacognitive knowledge explicitly” (p. 223) as his research indicates that students with well developed metacognition perform better. By parsing out the phases and the assumptions of SRLS, Pintrich (2004) hoped to provide a concrete conceptualization and model that can be empirically tested and used to provide valid data to the field. Like Boekaerts & Corno (2005), Pintrich (2004) called for more rigor in the research, but unlike Boekaert (1999) who included of the “theories of the self” in her construct of self-regulation research, Pintrich does not see the more post-modern approaches offering rigor to the growing corpus of research unless attempts are made to connect these frequently qualitative findings with psychological models. Models such as the future goal-orientated motivation and self-regulation Miller & Brickman (2004) have developed may have room to accommodate these approaches if that post-modern inquiry is self-directed, purposeful, and part of a larger curricula designed to develop critically reflective and reflexive lifelong learners.
CHAPTER III
METHOD

Research Participants

The study drew participants from an undergraduate technology course that is targeted at pre-service teachers at a large southeastern university. Of the thirteen sections of the undergraduate course offered, four sections participated in the study. This course was selected largely because of the intersection of their majors – all education majors – and the structure of the class – a hybrid one. The course used a common syllabus to teach students how to use and apply a variety of software in a hybrid setting; that is, half of the class takes place in a computer lab with an instructor on hand and half of the class takes place electronically according to each students’ personal scheduling. Each student is responsible for dedicating the time necessary to complete the work outside of the face-to-face portion of the class. The course syllabus is available in Appendix C.

Students at this university are typically white (70%) and from varied social economic backgrounds. Study participants were 77% female, 23% male, and 82% of them were in their second or third year of college. For appropriate power, between 75 and 65 students were needed. The final number, n = 79, of participants was determined based on the enrollment in the four participating sections.

Each of the four participating sections of the course was randomly assigned to one of four treatment groups. All the students in these four sections were required to participate in the study activities for class credit. They were required to complete all of the components of the Journal Project and the survey instruments to earn credit, and they were explicitly told that the content of the journal entries would not be examined to assess credit; all that was required was completion of the study activities. Participants were solicited for permission to use their data for this study and completed the Human Subjects form accordingly (Appendix B).
Research Design

The design for this study was a 2 x 2 factorial with the two variables being reflective prompts and reflexive prompts and the levels being absent or present. The hypotheses being tested were:

1. Groups receiving reflexive prompts or both reflexive and reflective prompts will perform better academically than groups who received the reflective-only or no prompt.
   a. on a PowerPoint test
   b. on an Excel test
   c. on their final grade for the course
2. Groups receiving reflexive prompts or both reflexive and reflective prompts will have higher metacognitive self regulation scores than groups who received the reflective-only or no prompt.
3. Groups receiving reflexive prompts or both reflexive and reflective prompts will have higher effort regulation scores than groups who received the reflective-only or no prompt.
4. Groups receiving reflective-only prompts will perform better academically than groups receiving no prompt.
   a. on a PowerPoint test
   b. on an Excel test
   c. on their final grade for the course
5. Groups receiving reflective-only prompts will have higher metacognitive self regulation scores than groups receiving no prompt.
6. Groups receiving reflective-only prompts will have higher effort regulation scores than groups receiving no prompt.

Materials

Blackboard Site

Each treatment group used a separate Blackboard (BB) site that was specifically created for the study. These sites were separate from the students’ normal class website. Each Blackboard site had common instructions posted in the announcements sections, which was set
as the point of entry to every BB site. These directions told students how to find the link to their private area, how to post a message, and what weeks to respond to prompts (See Appendix D).

Using the Blackboard system created a sense of privacy for the students’ journaling experience. Each student was set up with a private discussion forum using the Groups function – making each student the sole member of her/his own “group.” The rest of the BB site was unavailable to the students. The individual, private group areas gave participants access to a private discussion area that was preloaded with journal prompts for the study. Each prompt was a separate thread to which the student replied.

Table 3.1
Schedule of Activities by Week Due

<table>
<thead>
<tr>
<th>Week</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Prompt 1</td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Prompt 2</td>
</tr>
<tr>
<td>9.</td>
<td>Prompt 3</td>
</tr>
<tr>
<td>10.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Prompt 4</td>
</tr>
<tr>
<td>13.</td>
<td>SRLS Questionnaire</td>
</tr>
<tr>
<td>14.</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Academic performance</td>
</tr>
</tbody>
</table>

Prompts

Four each of the reflection prompts and the reflexive prompts were used in the study (Appendix E). The reflection prompts asked the students to think about the way they were working for class and to identify important elements from the content, while the reflexive prompts asked the students to engage with an imagined future self, attempting to draw connections between that imagined future self and the class. Participants were asked to respond
to one prompt, then wait for two weeks before responding to the next two prompts over the next two weeks. Participants waited two weeks and then responded to the fourth and final prompt. The schedule for the study can be found in Table 3.1. The prompts that students found in their private discussion forum depended on the treatment group to which they were assigned (see Table 3.2).

<table>
<thead>
<tr>
<th>Reflexivity</th>
<th>Reflection present</th>
<th>Reflection absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>Both Prompts</td>
<td>Reflexive Prompts Only</td>
</tr>
<tr>
<td>absent</td>
<td>Reflective Prompts Only</td>
<td>No Prompt</td>
</tr>
</tbody>
</table>

**Reflection Prompts.** The two treatment groups that received prompts to elicit reflection were asked to respond to the same type of questions each week. These questions asked the students about what they worked on that week, how the student went about it, if the process was working and how the student would evaluate that fact, and what the student would do if s/he desired to find a new way to approach a study task. These questions were intended to elicit thinking about specific elements of self-regulatory behavior. As such, they were carefully worded to be open-ended and general versus asking students to respond to specific strategies to guard against inadvertently imbedding training into the prompt. Each reflective prompt included a question about content as well as process. A sample of the reflective prompt is below.

**Prompt #2**

How well did your work for this class last week pay off? What will you do the same this week? What will you change? Why?

What is the most important thing you got out of class this week? Relate it to what you got of class last week.

What is the relationship between understanding this class and how you do your work for it?

**Reflexive Prompts.** The two treatment groups that received the prompts to elicit reflexive thinking were asked to respond to a series of questions designed to critically engage with an
imagined future self. The prompts are based in both philosophical hermeneutics, a body of work concerned with the self-interpretive processes based in the understanding of the self as a constructed and co-constructing element in a social reality, and in the work of Miller and Brickman (2004) who have created a model wherein future-oriented goals guide more proximal goals. Thus, the reflexivity prompts asked students to describe a future self in three ways and for each of those ways to interpret that future reality from a different vantage point. The invention of these prompts was based on the segment of Miller & Brickman’s (2004) model called “past sociocultural experience.” They identify four contexts—home, school, media, and peers—in which sociocultural experiences occur. The reflexive prompts also asked participants to link the “most valuable” (their determination) learning outcome from the course to each of their future goals. A sample of the reflexive prompt follows.

Prompt #3
Write a short article that gives an update of your life for any alumni newsletter (you pick the organization); make sure to highlight your successes and accomplishments. Use the 5W’s (who, what, where, when, why) to help get started if you need to.

What role did school play in creating the life you just described?

Write a few sentences to finish following thought:
If I want to seek out information, I . . .

The group that received both prompts first read the reflective then reflexive prompt. A sample of the combined prompt follows:

Prompt #4
Have you learned any new ways to approach studying this semester? From who? Do they work for you?

What are the differences between reading for fun and reading for learning?

How do you make sense of what you’re reading when you get confused?

Describe a night out – ten years from now. Use the 5W’s (who, what, where, when, why) to help get started if you need to.

How did this class make that night possible?
Write a few sentences to finish following thoughts:
Compared with the people I hang out with right now, the people in my future are . .

Most of the people I meet at college. . .

The next time I take a class that requires me to do a great deal of work outside of class time. .

The group that received no treatment prompt were simply asked to write a journal entry about the class. Any journaling completed by the fourth group during this time would be undirected and completely voluntary in nature.

The design of the journal prompts was considered from a semiotic perspective since their effectiveness as an intervention relies on assumptions about their interpretation. Gee (1999) identified six tasks people use to construct meaning in language-mediated situations, such as conversations, reading texts, or possibly writing journals in response to their interpretation of written prompts. These tasks, semiotic building, world building, activity building, socioculturally-situated identity and relationship building, political building, and connection building, are activated by linguistic clues and work together via unseen internal cognitive processes to build individual meaning (Gee, 1999). The linguistic clues bring to the fore specific social languages—specialized vocabularies tied to particular social discourse communities—that will help shape participants’ responses to journal prompts.

So how do researchers design journal prompts that take into consideration the types of specialized social languages that are intentionally and might be inadvertently activated when participants engage with the journal? Just as with open-ended surveys, researchers need to make sure to keep written prompts clear and to keep the participants’ perspectives in mind (Neuman, 2003). Some general guidelines for designing surveys apply: use specific (no jargon, abbreviations, or unfamiliar specialized) vs. vague language without being overly exacting in terms of requesting detail, avoid modifiers, avoid imbedding assumptions and biases in questions, include all the necessary information for the participant to respond, and personal or incriminating prompts need to be worded in non-threatening ways (Talylor-Powell, 1998; Walonick, 2004; Wiersma, 2000; Patton, 2002). With these guidelines in mind, the journal prompts for this study underwent a formative evaluation in a small group setting comprised of
participants with similar demographics to the study participants. Because of this group’s input, language and wording were changed, refining the intention of the unclear or misleading prompts.

**Variables Studied**

**Independent Variables**

The two independent variables in this study were reflection and reflexivity. Reflection is defined as a critical self-evaluative process involving examining one’s process toward a short-term goal, specifically an academic goal. Reflexivity is defined as a critical introspective process that challenges thinkers to see themselves both in dialogue with and as creators of the world around them and of their place in it. For this study, the reflexive thinking prompted for focuses on long-term (future-oriented) goals.

**Dependent Variables**

Academic performance, metacognitive self-regulation, and effort regulation were measured after the journaling was completed.

**Academic performance.** Academic performance is defined as the students’ performance in the class on two skills test – PowerPoint and Excel – and the students’ final grades in the course. The PowerPoint and Excel tests are automated, skills based tests that are standardized across all sections of the course. Each student purchases computer-based training software that prepares them for the computer-based test over required software applications, like PowerPoint and Excel. Tests were administered by the Testing Center on campus, which creates a standardized testing environment across all sections. The final grade score is based on the attendance (5%), skills tests (20%), essay tests (20%), and assignments (55%). The three points earned for the Journal Project fell under the assignments portion of their grade. These three sets of data were obtained from the course instructors.

**Metacognitive Self-Regulation.** Metacognitive self-regulation is defined as the awareness, knowledge, and control of cognition (Pintrich, 1991). It was evaluated using a self-report questionnaire (Appendix F), the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, 1991). While the complete survey was given, only the two subscales metacognitive self-regulation and effort regulation were examined in the primary data analysis. Cronbach’s
alpha for the metacognitive self-regulation subscale of the MSLQ, as computed by the instrument authors, is .79. Confirmatory factor analyses conducted by the MSLQ authors tested the factor validity of the MSLQ scales, and while the cut point of .8 was not consistently met, the authors conclude, “overall, the model shows sound structures, and one can reasonably claim factor validity for the MSLQ scales” (Pintrich, 1991).

**Effort Regulation.** Effort regulation is defined as the ability to control effort and attention (Pintrich, 1991). It was evaluated using a self-report questionnaire (Appendix F), the Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, 1991). While the complete survey was given, only the two subscales metacognitive self-regulation and effort regulation were examined in the primary data analysis. Cronbach’s alpha for the effort regulation subscale of the MSLQ, as computed by the instrument authors, is .69

**Procedure**

After receiving Human Subject Approval (Appendix B), the researcher attended four of the sections of the course to introduce the study to the participating sections. The students were told that they would be asked to journal four times over the semester in a Blackboard Website, to take a survey at the end of the semester, and to allow the researcher access to their academic performance. They earned three points toward their grade if they successfully completed the study requirements with success being defined as writing a response to all of the prompts and taking the survey.

Each section was randomly assigned to one of four treatment groups: The first group received just the reflection prompts; the second group received both prompts; the third group received just the reflexive prompts, while the last group received no-prompts but had the same environment in which to journal as the other groups. The participants were loaded into a Blackboard site to which only the researcher, her dissertation director/committee, and the students had access.

The researcher then assigned each participant to a private group area in which to work. The group area was set up with only one member, the assigned student, and one functioning feature, the discussion board. The prompts were pre-loaded into the only forum created in the discussion board area and were labeled by the week the prompt should be read and replied to.
Students could access only their own writing and were able to reply to posted prompts. They were not able to add new threads to the forum.

During the study, the researcher monitored the BB sites for technical difficulties and responded to any technical needs of the participants. At each journaling point, groups were emailed to remind them to journal. Toward the end of the study, all students in all treatment groups were emailed by the researcher in order to remind them to respond to the last week’s prompt and to make up any missing prompts. During week 15, at the end of the semester, the researcher attended all four sections participating in the study to administer the MSLQ (Appendix F).

Constraints

This study may have been affected by factors not considered at its inception; namely, course elements such as content, pedagogy, and architecture; the fact that the instructors are fluent, non-native speakers of English; and perhaps most importantly, test fatigue. Since the course assignments were developed to be problem-based and learner-centered, the course seemed appropriate to a study asking students to think and write about class. As the semester unfolded, it became apparent that the instructional approach in both classes tended more toward instructor-led. This more direct style of instruction may have influenced how students self-regulated and even how they perceived of the added work of journaling. Lastly, participants may have suffered from test-fatigue as they were participants in this study and two others during the course of the semester.
CHAPTER IV
RESULTS

This chapter reports the results from an analysis of data collected during this study. Before the pre-planned data analysis is presented, an overview of the journaling completed by the students will be given. Then, the preliminary data analysis and the primary data analysis will be reported. The presentation of the primary data analysis is organized around the six hypotheses and reports the results of the analysis of variances. An alpha level of .05 was used for all statistical tests. A Posteriori results are reported in the next section, and the results are summarized in the last section.

Participants’ Journal Entries: Contextualizing the Pre-Planned Data Analysis

Although an analysis of the rhetorical content of the journal entries written by the participants in this study is outside the scope of this study, a description of those entries is important to set the context for interpreting the results. First, the process of journaling is presented, then some of the entries are presented to help illuminate the kinds of thinking and writing the journal prompts elicited.

Journal Responses: Descriptive Overview

Journaling started Week 5 of the semester, the same week the researcher visited the courses, and it ended Week 12. However, some of the students completed the journal entries after that date. These entries were included, primarily because the labeling of the prompts by week confused many students, as was vocalized by them during the final data collection session.

As seen in Table 4.1, all but one of the groups had a 100% completion rate. The group that received both prompts had a 95% completion rate, because one participant did not complete every journal entry. The groups varied with respect to the extent to which students responded late on their journal entries: the group with the lowest percentage of late responses was the reflexive only group with 33%, 33%, 17%, and 39% late responses for each of the four journaling
episodes respectively, and the reflective only group had the highest percentage of late responses across the set of responses with 35%, 50%, 45%, and 45%.

The length of the entries is a key element in a numerical picture of the Journal project. To ensure accuracy of comparison, the following process was used. All of the responses were examined to determine if the participant copied over the prompt and a word count was conducted. Adjustments were made to the entries that included the entire original prompt: the number of words for each prompt, respectively, was deducted from the “included prompt” total. The result was a collection comparable word count tallies. Next, each set of responses for each group was averaged. The determination of “short,” “medium,” or long response was based on that average: the average was doubled, then multiplied by .33 and .66 to determine cut points.

What was revealed? A consistent ranking among the groups in terms of the average length of the responses: the group receiving no prompt always wrote the least, the group receiving both prompts always wrote the most, and the groups receiving either the reflective or reflexive prompt held the middle two positions. Only one time did the reflexive group write more than the reflective group, by 57 words. The other three prompts yielded a 15 – 20 word difference in the averages between the groups, always favoring the reflective group. The both group had the highest overall average word count with an average of 260 words on the final prompt and the no prompt group the lowest with an average of 58 on the third prompt.

Also of note is the distribution of the lengths of the entries. The reflective group had an equal percentage of short and long responses for every prompt, as seen in Table 4.1. This numerical symmetry did not occur for the other groups; however, in all but two instances, the highest percentage of responses were medium length for all prompts for all groups. In the two instances that weren’t, 1) the reflexive group’s responses to the fourth prompt were equally short and medium at 39% each and 2) the both group’s short responses to the third prompt were 10% higher than the medium at 42% and 32%, respectively. Both of these groups showed a change in their pattern of completion times during the same weeks the instances of irregular distribution occurred. The reflexive only group had 11% late entries – the first time any late entries were posted, and the both group had no late entries, the only time during the Journal Project that occurred. Deep analysis of the prompts from those particular journaling responses might highlight any connection between the length of journal responses and the timing of those responses.
Table 4.1
Descriptive Data for Journal Entries

<table>
<thead>
<tr>
<th>Group</th>
<th>Prompt 1</th>
<th>Prompt 2</th>
<th>Prompt 3</th>
<th>Prompt 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Prompt</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>percent completed</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>percent late</td>
<td>33%</td>
<td>14%</td>
<td>43%</td>
<td>29%</td>
</tr>
<tr>
<td>average - word count</td>
<td>88</td>
<td>63</td>
<td>58</td>
<td>68</td>
</tr>
<tr>
<td>percent short</td>
<td>33%</td>
<td>38%</td>
<td>33%</td>
<td>19%</td>
</tr>
<tr>
<td>percent medium</td>
<td>43%</td>
<td>43%</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>percent long</td>
<td>24%</td>
<td>43%</td>
<td>14%</td>
<td>33%</td>
</tr>
<tr>
<td>Reflective</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>percent completed</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>percent late</td>
<td>35%</td>
<td>50%</td>
<td>45%</td>
<td>45%</td>
</tr>
<tr>
<td>average - word count</td>
<td>102</td>
<td>112</td>
<td>100</td>
<td>127</td>
</tr>
<tr>
<td>percent short</td>
<td>20%</td>
<td>15%</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>percent medium</td>
<td>60%</td>
<td>60%</td>
<td>70%</td>
<td>55%</td>
</tr>
<tr>
<td>percent long</td>
<td>20%</td>
<td>25%</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>Reflexive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>percent completed</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>percent late</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>average - word count</td>
<td>159</td>
<td>97</td>
<td>94</td>
<td>147</td>
</tr>
<tr>
<td>percent short</td>
<td>33%</td>
<td>33%</td>
<td>17%</td>
<td>39%</td>
</tr>
<tr>
<td>percent medium</td>
<td>50%</td>
<td>44%</td>
<td>56%</td>
<td>39%</td>
</tr>
<tr>
<td>percent long</td>
<td>17%</td>
<td>22%</td>
<td>28%</td>
<td>22%</td>
</tr>
<tr>
<td>Both</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>percent completed</td>
<td>100%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>percent late</td>
<td>65%</td>
<td>45%</td>
<td>0%</td>
<td>35%</td>
</tr>
<tr>
<td>average - word count</td>
<td>206</td>
<td>181</td>
<td>222</td>
<td>260</td>
</tr>
<tr>
<td>percent short</td>
<td>30%</td>
<td>37%</td>
<td>42%</td>
<td>37%</td>
</tr>
<tr>
<td>percent medium</td>
<td>40%</td>
<td>42%</td>
<td>32%</td>
<td>32%</td>
</tr>
<tr>
<td>percent long</td>
<td>30%</td>
<td>21%</td>
<td>26%</td>
<td>32%</td>
</tr>
</tbody>
</table>

short, medium, and long determined using the average number of words for each prompt to determine cut points
short < .33 x (2*average words)
.33 x (2*average words) < medium < .66 x (2*average words)
long > .66 x average words

Journal Responses: Characterizing Participants’ Entries

Looking at the numerical representations of the Journaling project begins to create the backdrop against which the statistical data analysis can be understood. Looking at the text of the
participants’ responses helps to complete that backdrop by offering more detail to it. While the following in no way represents a comprehensive qualitative analysis, it does help to find the answer to a critical question: Did the participants seem to understand what was expected from them in terms of exploring the ideas each prompt intended them to?

In short, yes. The participants didn’t “write off-topic”; they either ignored part of a prompt, wrote a cursory response, or engaged with the prompt. The participants’ responses excerpted and presented below illustrate this answer. For each group, an example of short, medium, and long responses has been selected to represent a typical response. For reasons explained below, two short responses were selected, for a total of four responses selected per group – each in response to a different prompt. The sixteen responses selected as examples are given in their entirety in Appendix G; only excerpts are presented in the discussion below. Also, the prompts to which the entries reply are summarized as the full text of the prompts appears in Appendix E.

The selection of prompts was driven by word count parameters determined earlier; prompts close to the highest range in the category were selected when possible. While selection was not driven by a particular rhetorical filter in general, when selecting the short entries to include in this section, a determination was made regarding the potency of the short entry. Subsequently, two short entries for each group were selected; one that is more potent – displaying engagement and one that is less potent – displaying minimal engagement with the prompt. While less potent examples exist in the medium and long categories, the majority of them fell into the short category, thus the bifurcation of that category only.

The reflective group received prompts written to encourage reflection on self regulatory behavior and specifically on class content and learning processes. The first two excerpts show the contrast between less and more potent responses. The first respondent ignored many of the parts of the prompt, like the question about reading, and simply provided a cursory overview of what s/he learned. The second respondent below, while terse, demonstrated an understanding of the prompt that asked her/him to discuss time management techniques by offering an example and a self-evaluation.

**Short – less potent:**

Subject: Re: Prompt 4 - during Week 12
i learned numerous educational tools that can aid me in a class such as this.

Short – more potent:
Subject: Re: Prompt 3 - during Week 9
Basically I prioritize my class work responsibilities, the more important and or
difficult a task the sooner it will be started. And I have been doing well in this manner.

The medium and long excerpts from the reflective group both show an engagement with the intent of the prompts. The excerpted medium response to Prompt 2 - which asked participants to contemplate their work in the course this week and relate it to last week’s work – clearly fulfills that request. The participant made connections between the skills training in the class (SAM) and the application of those skills by way of the class assignment (scenario). Likewise, the response to the first prompt, a long response, shows an engagement with the prompt, which asked participants to describe an assignment and their approach to that assignment.

Medium:
Subject: Re: Prompt 2 - during Week 8
the most important thing i got out of class this week was working on my own
power point presentation, it allowed me to use the things i learne using sam last week and made it easy for me to use them in a typical scenario showing that i actually comprehended what i learned.

Long:
Subject: Re: Prompt 1 - during Week 5
This week while doing my powerpoint, i found that i approached it at first with a closed mind, just thinking about it as another assignment, but as I began to work on it I realized just how interesting it was, after taken this class I learned how to do things that I have seen others do to there presentations and I had only dreamed
of doing. Now it interest me and actually makes me happy to make my presentation and it looks 100 percent better.

The reflexive group received prompts written to encourage deep thinking about themselves, specifically to engage with an imagined future self via three vantage points and to answer questions about that future self in terms of the Education Technology course in which they were enrolled. Again, the first two short responses show a contrast in the level of engagement: the first offers a very general assessment of the role information can play and ways to seek out information while the second participant offered a brief yet concentrated response to the prompt that asked participants to compare and contrast their imagined future self with people in their lives right now.

**Short – less potent:**
Subject: Re: Prompt 3 - during Week 9
School helped show me how to be responsible, sucessful, and happy. If I want to seek out information I go to a source that can provide me with detailed info.

**Short – more potent:**
Subject: Re: Prompt 2 - during Week 8
My mother and father becasue they are both people who work very hard for what they have achieved and thats the same mentallity i have. I least resemble my cousin Paul becasue he isnt doing anything with his life and hes not in school.

The last two excerpts from the reflexive prompt group both show engagement with the questions asked. The medium response to prompt four answers the question “describe a night out in ten years” and “how did this class make that night possible” and the long response to prompt one answers the question “how did this class help create your life ten years from now”; prompt four sets up a specific context – going out, while prompt four simply asks for a description of the participant’s future life. Both responses indicate an understanding of the connection between their current course and their futures, albeit that connection identifies the class as a small but necessary stepping stone.
Medium:
Subject: Re: Prompt 4 - during Week 12
A night out 10 years from now would include me, my husband, some friends and their husbands or significant others. We would go out to a restaurant or bar in a hip downtown area and have a great time. This class would not have helped in any way except maybe to get a job that would give me the money to go out.

Long:
Subject: Re: Prompt 1 - during Week 5
Overall, COURSE is a small but necessary part of accomplishing my goals. This one class determines whether or not I will be able to spend my junior and senior years in the College of Education, and whether or not I will be accepted into the elementary education program. This class will also help my future as a teacher because it will help me attain more skills to be the best possible teacher that I can be, especially since technology is changing the world constantly. By taking this class, among others, I will be able to graduate from college, and begin the future that I have planned.

The both group received an integrated set of prompts, ones that eliminated redundant elements such as directions but retained the core writing prompts. As with the reflective and reflexive groups, the both prompt group demonstrated engagement with the prompts and wrote responses that indicate the types of thinking the prompts were designed to elicit was indeed made manifest. The short responses offer a contrast between the depth of responses; the more potent example attempts to tease out specifics while the less potent one stops at “I have no idea.” What is interesting is that both evaluate the impact of the class as negligible in terms of its value – one because s/he sees the class as having little value to her/his future and the other because s/he undervalues the importance of the skills s/he outlines. That is, the first respondent doesn’t know where s/he’ll be but is sure that this course won’t have an impact while the second is sure about his/her future, but minimizes the impact of organizational skills on creating the imagined future.
Short – less potent:
Subject: Re: Prompt 4 - during Week 12
in ten years i have no idea what i'm going to be doing with my life. who knows what my interests will be, who i'm hanging out with, or where we're going. i have absolutely no clue.
i dont see this class having a huge impact on my life in 10 years

Short – more potent:
Subject: Re: Prompt 1 - during Week 5
This class will help me with my academic plans by teaching me how to use certain programs that will be necessary for my success in the teaching field. . . . This class hasn't really helped directly with my future but will impact my organization skills within the class room by helping keep my lesson plans and stuff like that in order and easily accessible.

The following excerpted responses from the both prompt group illustrate a response to a reflective portion of prompt three, a part that asked students what they learned this week, and a response to a reflexive portion of prompt two, one that asked students to imagine then query a future self. Both excerpts are typical of the responses from the both group.

Medium:
Subject: Re: Prompt 3 - during Week 9
Untill this week, I didn't know that Microsoft Excel could be used to do a variety of different things like spreadsheets, money charts, charts in general, and lists. In class to understand, I need to pay attention in class. It takes good time management to understand everything we learn in class and going home and practicing it.

Long:
Subject: Re: Prompt 2 - during Week 8
My imagined future resembles the life of some of my grade school teachers. A few of them went to Florida State University so they went through this same stepping stone as I did. Additionally, many of them not only pursued a Bachelor's degree, but continued in graduate school to receive a Master's degree in either Counseling or School Administration. I plan to do the same also.

My future least resembles the life of my parents. My father is an exporter and my mother is a secretary at City Hall. Neither of them chose a profession in the education arena, or even a job that deals with children. My choosing to become an educator was based on my own desire and it had no influence from my parents.

The no prompt group was asked to write a journal entry about the class, and that is what the responses confirm the participants wrote about. Some students wrote with more specificity than others, as evidenced by the two short excerpts.

**Short – less potent:**
Subject: Re: Prompt 4 - during Week 12
This is our second to last class and so far this class has been pretty informative.

**Short – more potent:**
Subject: Re: Prompt 3 - during Week 9
This week we learned about Inspiration. It's a good tool to use when you are brainstorming for your lesson, and to put your lesson together. It's a program that could be used for students as well.

The responses showed a range of styles – from narrative to evaluation, paragraphs to bullet points. Some responses would qualify as reflective, such as the medium length one below. A comprehensive qualitative analysis of the no prompt group’s responses will help identify the similarities and distinctions between the freely written responses and the ones guided by prompts – both in terms of content and in terms of rhetorical style.
Medium:
Subject: Re: Prompt 1 - during Week 5
I really find this class interesting and difficult. I find it interesting because it gives me new ideas about being a teacher. It really opens your mind to new possibilities through technology and not just textbooks.

Long:
Subject: Re: Prompt 4 - during Week 12
Class this week was frustrating. We learned this new program called hyperstudio and I had the worst time with it. I understood it when the teacher was explaining it but when we were asked to create our own, I did not know what I was doing. . . . I am glad that this is the last assignment that we have to do. Last week I was stressed about Excel, now this.

While all of the students did not make the same level of contributions in terms of engagement with the Journal Project, as evidenced by the samples above, the four sets of journal prompts did indeed elicit what they were designed to in all of the groups. But to what end? The next sections present the data analysis of the measures of the effect of the Journal Project.

Preliminary Data Analysis

Description of Data
The first stage in the analysis of the data gathered for this study was examining the data and deriving descriptive statistics. A sight inspection of the data illuminated a posteriori problem with the Excel test scores: nine out of seventy nine, 11%, of the scores are zeros. A zero score indicates that a student did not take the test. Analysis continued, as a the purposeful act of taking or not taking a test is in itself part of a participants’ overall academic performance.
Tests for the Assumptions

The next step in the process was a test of four assumptions to which the analysis must be robust: scale of dependent variable, independence of sample, normality of distribution, and equality of variance. The ANOVA should be robust to all four of the assumptions.

**Scale and Independence:** All data were measured on an equal interval scale meaning the assumption about scale is satisfied. However, since this was a quasi-experimental design – the groups were predetermined course sections, or a cluster sample - the sample was not wholly robust to the assumption of independence. The students self-selected into one of thirteen sections, and the researcher was able to work with four of these sections. The selection of the four sections was based on both the experience of the instructors, their willingness to participate, and the fact that they each taught two of the sections. Two highly experienced instructors volunteered two class sections each for the experiment. Each section’s assignment to a treatment group was determined by the roll of a four sided die.

**Normality of Distribution and Equality of Variance:** The results of the test of normality indicated that all of the measures demonstrated a normal distribution. The next test was for the equality of variance which evidenced a lack of equality of variance in the scores for academic performance. Even though the PowerPoint and Excel scores are unequal and the variance in the final grade score is barely unequal, the analysis for all variables continued because ANOVA is robust to violations of variance (Lindman, 1974).

Primary Data Analysis

In this section, the results of each of the hypotheses is presented. The hypotheses are listed in the order in which they will be discussed. A one-way ANOVA tested all four of the hypotheses. Tables 4.2, 4.3 and 4.4 present a summary of the descriptive statistics, the ANOVA for all of the preplanned analyses and subsequent Post Hoc analysis for the final grade score.

**Hypothesis 1: Effect of Reflexive Prompts on Academic Performance**

Hypothesis 1 predicted that participants who received reflexive prompts would perform better on three academic measures than students who did not receive reflexive prompts. This
hypothesis was tested using two test scores – PowerPoint and Excel - and the final grade for the course.

**PowerPoint**: The two groups receiving reflexive prompts were the reflexive only group and the both group; the reflexive only group had a mean score of 94.00 with a standard deviation of 8.84 on the PowerPoint test and the both group had a mean score of 86.20 with a standard deviation of 22.26, as shown in Table 4.2. The two groups not receiving reflexive prompts were the reflective only and the no prompt groups; the mean scores for these two groups was 90.10 (SD= 9.86) and 80.95 (SD=28.05) respectively, as shown in Table 4.2. An analysis of the variance of the means of the participants’ scores on the PowerPoint test showed no significance (F = 1.639, df = 3, p = .187).

**Excel**: The two groups receiving reflexive prompts were the reflexive only group and the both group; the reflexive only group had a mean score of 61.10 with a standard deviation of 28.52 on the Excel test and the both group had a mean score of 71.56 with a standard deviation of 31.04, as shown in Table 4.2. The two groups not receiving reflexive prompts were the reflective only and the no prompt groups; the mean scores for these two groups was 72.20 (SD= 33.88) and 75.24 (SD=31.09) respectively, as shown in Table 4.2. An analysis of the variance of the means of the participants’ scores on the PowerPoint test showed no significance (F = .788, df = 3, p = .504).

**Final Grade**: The two groups receiving reflexive prompts were the reflexive only group and the both group; the reflexive only group had a mean score of 84.22 with a standard deviation of 21.92 as a Final Grade and the both group had a mean score of 92.60 with a standard deviation of 6.74, as shown in Table 4.2. The two groups not receiving reflexive prompts were the reflective only and the no prompt groups; the mean scores for these two groups was 94.40 (SD= 3.95) and 91.14 (SD= 6.18) respectively, as shown in Table 4.2. Unlike with the individual test scores, a significant difference was noted at the univariate level for the final grade scores (F = 2.736, df = 3, p = .049); however, the significance did not support the hypothesis. In fact, the group receiving the reflective-only prompt had a higher mean (M = 94.40, SD = 3.95) for the final grade than the group receiving the reflexive-only prompts who had the lowest overall (M = 84.22, SD = 21.92). Further analysis based on Post Hoc comparison using Tukey HSD demonstrated the significance of the differences in the means between reflexive-only and reflective-only group as shown in Table 4.3.1. No other significant relationships were found.
Table 4.2
Descriptive Statistics for All Preplanned Analyses

<table>
<thead>
<tr>
<th></th>
<th>Reflective n=20</th>
<th>Both n=20</th>
<th>Reflexive n=18</th>
<th>No-Prompt n=21</th>
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<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
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<tr>
<td><strong>Academic Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PowerPoint Test</td>
<td>90.10 (9.86)</td>
<td>86.20 (22.26)</td>
<td>94.00 (8.84)</td>
<td>80.95 (28.05)</td>
</tr>
<tr>
<td>Excel Test</td>
<td>72.20 (33.88)</td>
<td>71.56 (31.04)</td>
<td>61.10 (28.52)</td>
<td>75.24 (31.09)</td>
</tr>
<tr>
<td>Final Grade</td>
<td>94.40 (3.95)</td>
<td>92.60 (6.74)</td>
<td>84.22 (21.92)</td>
<td>91.14 (6.18)</td>
</tr>
<tr>
<td><strong>Self-Regulated Learning Strategies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metacognitive Self-Regulation</td>
<td>3.94 (.85)</td>
<td>3.72 (.92)</td>
<td>3.39 (.83)</td>
<td>3.63 (1.08)</td>
</tr>
<tr>
<td>Effort Regulation</td>
<td>4.88 (.98)</td>
<td>4.78 (1.08)</td>
<td>4.26 (.84)</td>
<td>4.92 (1.03)</td>
</tr>
</tbody>
</table>

Table 4.3
Univariate Analysis of Variance for Hypothesis 1 – 6

<table>
<thead>
<tr>
<th></th>
<th>Academic Performance</th>
<th>Self-Regulated Learning Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PowerPoint Test</td>
<td>1.639 3 0.187</td>
<td></td>
</tr>
<tr>
<td>Excel Test</td>
<td>0.788 3 0.504</td>
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</tr>
<tr>
<td>Final Grade</td>
<td>2.736 3 0.049</td>
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</tr>
<tr>
<td><strong>Hypothesis 2</strong></td>
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<tr>
<td>Metacognitive Self-Regulation</td>
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</tr>
<tr>
<td><strong>Hypothesis 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort Regulation</td>
<td>1.743 3 0.165</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2 , cont
Univariate Analysis of Variance for Hypothesis 1 – 6

<table>
<thead>
<tr>
<th></th>
<th>Academic Performance</th>
<th>Self-Regulated Learning Strategies</th>
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</thead>
<tbody>
<tr>
<td><strong>Hypothesis 4</strong></td>
<td></td>
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<tr>
<td>PowerPoint Test</td>
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<td>Final Grade</td>
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<td><strong>Hypothesis 5</strong></td>
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<td>Metacognitive Self-Regulation</td>
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<tr>
<td><strong>Hypothesis 6</strong></td>
<td></td>
<td></td>
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<tr>
<td>Effort Regulation</td>
<td>0.381 3 0.541</td>
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52
Table 4.3.1
Significance Levels from the Post Hoc Tukey HSD Analysis for Final Grade

<table>
<thead>
<tr>
<th>(I) group</th>
<th>(J) group</th>
<th>Final Grade*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflection Prompts</td>
<td>Both Prompts</td>
<td>0.806</td>
</tr>
<tr>
<td>Reflexive Prompts</td>
<td>Reflection Prompts</td>
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</tr>
<tr>
<td>Reflexive Prompts</td>
<td>Reflexive Prompts</td>
<td>0.042</td>
</tr>
<tr>
<td>Reflexive Prompts</td>
<td>No Prompts</td>
<td>0.961</td>
</tr>
<tr>
<td>No Prompts</td>
<td>Reflection Prompts</td>
<td>0.961</td>
</tr>
<tr>
<td>Reflection Prompts</td>
<td>Reflexive Prompts</td>
<td>0.978</td>
</tr>
<tr>
<td>Both Prompts</td>
<td>Reflexive Prompts</td>
<td>0.255</td>
</tr>
<tr>
<td>Reflexive Prompts</td>
<td>No Prompts</td>
<td>0.127</td>
</tr>
<tr>
<td>No Prompts</td>
<td>Both Prompts</td>
<td>0.978</td>
</tr>
<tr>
<td>Reflexive Prompts</td>
<td>No Prompts</td>
<td>0.127</td>
</tr>
</tbody>
</table>

*Significance (at the .05 level)

Hypothesis 2: Effect of Reflexive Prompts on Metacognitive Self-Regulation

Hypothesis 2 predicted that participants who received reflexive prompts would have higher metacognitive self-regulation scores than groups who received the reflective-only or no-prompt. This hypothesis was tested using the results from the metacognitive self-regulation subscale of the MSLQ; Chronbach’s alpha calculated for this study is .88. The two groups receiving reflexive prompts were the reflexive only group and the both group; the reflexive only group had a mean score of 3.39 with a standard deviation of .83 on the metacognitive self-regulation subscale of the MSLQ and the both group had a mean score of 3.72 with a standard deviation of .92 as shown in Table 4.2. The two groups not receiving reflexive prompts were the reflective only and the no prompt groups; the mean scores for these two groups was 3.94 (SD=.85) and 3.63 (SD= 1.08) respectively, as shown in Table 4.2. Unfortunately, the results depicted in Table 4.3 showed no significance (F = 1.111, df = 3, p = .350).

Hypothesis 3: Effect of Reflexive Prompts on Effort Regulation

Hypothesis 3 predicted that participants who received reflexive prompts would have higher effort regulation scores than groups who received the reflective-only or no-prompt. This hypothesis was tested using the results from the Effort Regulation subscale of the MSLQ; Chronbach’s alpha calculated for this study is .89. The two groups receiving reflexive prompts were the reflexive only group and the both group; the reflexive only group had a mean score of
4.26 with a standard deviation of .84 on the effort regulation subscale of the MSLQ and the both group had a mean score of 4.78 with a standard deviation of 1.08 as shown in Table 4.2. The two groups not receiving reflexive prompts were the reflective only and the no prompt groups; the mean scores for these two groups was 4.88 (SD= .98) and 4.92 (SD= 1.03) respectively, as shown in Table 4.2. Again, the results in Table 4.3 showed no significance (F = 1.743, df = 3, p = .165).

**Hypothesis 4: Effect of Reflective Prompts on Academic Performance**

Hypothesis 4 predicted that participants who received reflective-only prompts would perform better on three academic measures than participants who received no prompts. Using a one way ANOVA, this hypothesis was tested using two test scores and the final grade for the course, as summarized in Table 4.3.

**PowerPoint**: The two groups receiving reflective prompts were the reflective only group and the both group; the reflective only group had a mean score of 90.10 (SD= 9.86) on the PowerPoint test and the both group had a mean score of 86.20 (SD= 22.26), as shown in Table 4.2. The no prompt group had a mean score of 80.95 (SD=28.05), as shown in Table 4.2. An analysis of the variance of the means of the participants’ scores on the PowerPoint test showed no significance (F = 3.434, df = 3, p = .071) as seen in Table 4.3.

**Excel**: The two groups receiving reflective prompts were the reflective only group and the both group; the reflective only group had a mean score of 72.20 (SD= 33.88) on the Excel test and the both group had a mean score of 71.56 (SD= 31.04), as shown in Table 4.2. The no prompt group had a mean score of 75.24 (SD=31.09), as shown in Table 4.2. An analysis of the variance of the means of the participants’ scores on the Excel test showed no significance (F = .082, df = 3, p = .777).

**Final Grade**: The two groups receiving reflective prompts were the reflective only group and the both group; the reflective only group had a mean score of 94.40 (SD= 3.95) as a Final Grade and the both group had a mean score of 92.60 (SD= 6.74), as shown in Table 4.2. The no prompt group had a mean score of 91.14 (SD= 6.18), as shown in Table 4.2. The one way ANOVA of the means of the participants’ scores on the final grade showed no significance (F = 3.820, df = 3, p = .058).
Hypothesis 5: Effect of Reflective Prompts on Metacognitive Self-Regulation

Hypothesis 5 predicted that participants who received reflective prompts would have higher metacognitive self-regulation scores than groups who received no prompt. This hypothesis was tested using the results from the Metacognitive Self-regulation subscale of the MSLQ. Chronbach’s alpha calculated for this study is .88. The two groups receiving reflective prompts were the reflective only group and the both group; the reflective only group had a mean score of 3.94 (SD=.85) on the metacognitive self-regulation subscale of the MSLQ and the both group had a mean score of 3.72 (SD=.92) as shown in Table 4.2. The no prompt group had a mean score of 3.63 (SD= 1.08), as shown in Table 4.2. A one way ANOVA showed no significance (F = 1.674, df = 3, p = .203), as summarized in Table 4.2.

Hypothesis 6: Effect of Reflective Prompts on Effort Regulation

Hypothesis 6 predicted that participants who received reflective prompts would have higher effort regulation scores than groups who received no prompt. This hypothesis was tested using the results from the effort regulation subscale of the MSLQ. Chronbach’s alpha calculated for this study is .89. The two groups receiving reflective prompts were the reflective only group and the both group; the reflective only group had a mean score of 4.88 (SD=.98) on the effort regulation subscale of the MSLQ and the both group had a mean score of 4.78 (SD= 1.08) as shown in Table 4.2. The no prompt group had a mean score of 4.92 (SD= 1.03), as shown in Table 4.2. A one way ANOVA showed no significance (F = .381, df = 3, p = .541) as seen in Table 4.3.

A Posteriori Analysis

Driven by the absence of an overwhelming finding of significance and because the entire MSLQ was administered, a series of a posteriori tests were conducted in attempt to discover any extant significant difference in the unexamined portions of the data. An alpha level of .10 was set for all a posteriori statistical tests. The MSLQ has fifteen subscales, each of which has been independently validated. Three findings of significance were found in three of the subscales as a result of the a posteriori analysis: one motivation subscale and two learning strategies subscales. The motivation subscale is the extrinsic goal orientation and the two learning strategies subscales are rehearsal and organization.
In addition to exploring the MSLQ data, the Excel test scores were re-analyzed. This second analysis consisted of replacing the nine zero scores with no scores and then completing the ANOVA as though these were missing values. These nine scores, which resulted from students not taking the test, represent 11% of the total number of scores with the following group distribution: the reflective prompt group had three zeros (15%), the reflexive prompt group had two zeros (11%), the both prompt group had two zeros (10%), and the no prompt group also had two (10%) as shown in Table 4.4.

The re-analysis of the Excel data is presented first. Next, the significance of the extrinsic motivation subscale is discussed, followed by a discussion of the findings of significance in the two learning strategies subscales, rehearsal and organization. All of the descriptive data, ANOVA analyses, and Post Hoc analyses are presented in Tables 4.5, 4.6, and 4.7 respectively.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percent of Group</th>
<th># zero</th>
<th>n=</th>
</tr>
</thead>
<tbody>
<tr>
<td>overall</td>
<td>11%</td>
<td>9</td>
<td>79</td>
</tr>
<tr>
<td>reflective</td>
<td>15%</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>reflexive</td>
<td>11%</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>both</td>
<td>10%</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>none</td>
<td>10%</td>
<td>2</td>
<td>21</td>
</tr>
</tbody>
</table>

Excel

Because of the high number of zero scores, this analysis was fueled by a desire to determine if significant difference existed between the scores of the students who actually took the test. Thus, the zero scores were replaced by no score and the analysis was recomputed with consideration of missing values. The finding was of significance (F = 3.150, df = 3, p = .031) and a Post Hoc analysis confirmed this significance, as seen in Table 4.7, showing the difference to be between the reflective-only group (M = 84.94, SD = 14.61) and both prompt group (M = 83.15, SD = 19.47) with the mean of the reflective-only group significantly higher than the mean of the both group as shown in Tables 4.6 and 4.5 respectively.
Motivation Subscale: Extrinsic Goal Orientation

Extrinsic goal orientation is the degree to which a student is motivated by extrinsic rewards such as grades, and the Chronbach’s Alpha for the extrinsic goal orientation subscale, calculated for this study, is .89. A significant difference was found in the extrinsic goal orientation subscale (F = 2.559, df = 3, p = .061), and a Post Hoc analysis confirmed this significance, as seen in Table 4.7, showing the difference to be between the between the no prompt and reflexive-only groups. As seen in Table 4.6, the mean of the group that received no prompt 4.93 (SD= .29) was higher than the mean of the reflexive-only group 4.81 (SD=.25), indicating some support for the general hypothesis that reflexive prompts might have a positive effect; that is, the no-prompt group is more significantly motivated extrinsically than the group that received the reflexive-only prompts. The intrinsic motivation subscale, incidentally, showed no significant findings. Thus, the data indicates that students receiving no-prompts were statistically significantly more extrinsically motivated than the group receiving the reflexive-only prompt; however, the data does not support the implication that the group receiving the reflexive-only prompt is more intrinsically motivated. Post Hoc analysis confirmed significance between the means of groups. Table 4.7 displays the descriptive statistics for extrinsic motivation.

Rehearsal

Rehearsal is act of reciting or naming items to be learned, and the Chronbach’s Alpha for the rehearsal subscale, calculated for this study, is .94. A finding of significance in difference between means was found in the Learning Strategies subscale rehearsal (F = 2.835, df = 3, p = .044) as seen in Table 4.6. A Post Hoc analysis showed the difference to be between the reflective-only group and the no-prompt group, as seen in Table 4.7. The means, reported in Table 4.4, show that the reflective-only group had significantly higher scores \( M = 4.21, SD = 3.42 \) on rehearsal than the no-prompt group \( M = 3.75, SD = 3.08 \).

Organization

Organization refers to the strategies that help learners select information and construct connections between concepts to be learned, and the Chronbach’s Alpha for the organization subscale, calculated for this study, is .95. A finding of significance in difference between means was found in the Learning Strategies subscale, organization, \( F = 3.111, df = 3, p = .031 \) as seen
Table 4.5
Descriptive Statistics for *A Posteriori* Analyses

<table>
<thead>
<tr>
<th></th>
<th>Reflective n=20</th>
<th>Both n=20</th>
<th>Reflexive n=18</th>
<th>No-Prompt n=21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td><strong>Academic Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excel Test</td>
<td>84.94 (14.61)</td>
<td>83.15 (19.47)</td>
<td>80.50 (18.00)</td>
<td>67.89 (20.52)</td>
</tr>
<tr>
<td><strong>MSLQ Subscales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extrinsic Goal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>5.36 (.21)</td>
<td>5.61 (.17)</td>
<td>4.81 (.25)</td>
<td>4.93 (.29)</td>
</tr>
<tr>
<td>Rehearsal</td>
<td>4.21 (3.42)</td>
<td>3.01 (2.38)</td>
<td>3.15 (2.48)</td>
<td>3.75 (3.08)</td>
</tr>
<tr>
<td>Organization</td>
<td>3.69 (3.10)</td>
<td>2.54 (1.98)</td>
<td>3.07 (2.29)</td>
<td>3.58 (2.93)</td>
</tr>
</tbody>
</table>

Table 4.6
Univariate Analysis of Variance for *A Posteriori* Analyses

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>df</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excel Test</td>
<td>3.15</td>
<td>3</td>
<td>0.031</td>
</tr>
<tr>
<td><strong>MSLQ Subscales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extrinsic Goal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>2.559</td>
<td>3</td>
<td>0.061</td>
</tr>
<tr>
<td>Rehearsal</td>
<td>2.835</td>
<td>3</td>
<td>0.044</td>
</tr>
<tr>
<td>Organization</td>
<td>3.111</td>
<td>3</td>
<td>0.031</td>
</tr>
</tbody>
</table>

*significant at p< .10
Table 4.7
Significance Levels from the Post Hoc Tukey HSD Analysis for All *A Posteriori* Analyses

<table>
<thead>
<tr>
<th></th>
<th>(I) group</th>
<th>(J) group</th>
<th>Academic Performance</th>
<th>MSLQ Subscales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Excel</td>
<td>Extrinsic Goal Orientation</td>
</tr>
<tr>
<td>Reflection Prompts</td>
<td>Both Prompts</td>
<td>0.991</td>
<td>0.875</td>
<td>0.053</td>
</tr>
<tr>
<td></td>
<td>Reflexive Prompts</td>
<td>0.899</td>
<td>0.359</td>
<td>0.129</td>
</tr>
<tr>
<td></td>
<td>No Prompts</td>
<td>0.038</td>
<td>0.547</td>
<td>0.754</td>
</tr>
<tr>
<td>Both Prompts</td>
<td>Reflection Prompts</td>
<td>0.991</td>
<td>0.875</td>
<td>0.053</td>
</tr>
<tr>
<td></td>
<td>Reflexive Prompts</td>
<td>0.974</td>
<td>0.086</td>
<td>0.991</td>
</tr>
<tr>
<td></td>
<td>No Prompts</td>
<td>0.065</td>
<td>0.163</td>
<td>0.383</td>
</tr>
<tr>
<td>Reflexive Prompts</td>
<td>Reflection Prompts</td>
<td>0.899</td>
<td>0.359</td>
<td>0.129</td>
</tr>
<tr>
<td></td>
<td>Both Prompts</td>
<td>0.974</td>
<td>0.086</td>
<td>0.991</td>
</tr>
<tr>
<td></td>
<td>No Prompts</td>
<td>0.199</td>
<td>0.985</td>
<td>0.599</td>
</tr>
<tr>
<td>No Prompts</td>
<td>Reflection Prompts</td>
<td>0.038</td>
<td>0.547</td>
<td>0.754</td>
</tr>
<tr>
<td></td>
<td>Both Prompts</td>
<td>0.065</td>
<td>0.163</td>
<td>0.383</td>
</tr>
<tr>
<td></td>
<td>Reflexive Prompts</td>
<td>0.199</td>
<td>0.985</td>
<td>0.599</td>
</tr>
</tbody>
</table>

Significant (at p< .10 level)

in Table 4.5. Post Hoc analysis showed that the significance was between the means of the reflective-only and no-prompt group and between the means of the reflective-only and the reflexive-only group, as seen in Table 4.7. The means, reported in Table 4.4, show that the reflective-only group ($M = 3.69$, $SD = 3.10$) had significantly higher scores on organization than both the no-prompt group($M = 3.58$, $SD = 2.98$) and the reflexive-only group ($M = 3.07$, $SD = 2.29$). This finding supports the general conclusion that reflection on process supports some types of learning strategies, specifically organization.

**Summary of Results**

**Primary Data Analysis**

Of all six hypothesis, only the analysis for the first resulted in a finding of significance; however, this finding did not support the hypothesis. Table 4.8 presents a summary overview of all of the findings, both from the planned data analysis and the *a posteriori* analysis.
The first hypothesis proposed that the groups receiving reflexive prompts or both reflexive and reflective prompts would perform better academically than groups who received the reflective-only or no-prompt. The finding, in fact, was that the reflective-only group scored significantly higher than the reflexive-only group on the final grade score – the opposite of what was anticipated.

The only other significant relationship that was found for any of the other preplanned analyses was the Post Hoc analysis of Hypotheses 3 which examined effort regulation among all four groups. In contrast to the predicted outcome, the no-prompt group was significantly higher in effort regulation than the reflexive-only group.

In both of these findings of significance, the corresponding hypotheses were not met indicating that the reflexive prompt had the opposite of the intended effect based on the outcomes of the analyses.

**A Posteriori Findings**

Because of this lack of significance in the findings, a posteriori analyses were conducted with an alpha set at .10. Following is a summary of the results from these analyses.

**Excel**: Because of the high number of students who didn’t take the test, resulting in a score of zero, the a posteriori analysis of the Excel data systematically replaced the zero scores with no scores, resulting in a considerable amount of missing data. A second ANOVA, that took missing data into account, subsequently revealed a significant difference between the reflective-only group and the both group, with the former having a higher mean.

**Extrinsic Goal Orientation**: The results of the ANOVA for the extrinsic goal orientation subscales revealed a significance, specifically between the case of the no-prompt and reflexive-only prompt groups with the reflexive-only group reporting lower levels of extrinsic goal orientation.
Table 4.8
Summary of Findings for All Pre-Planned and A Posteriori Analyses

<table>
<thead>
<tr>
<th>Hypothesis 1</th>
<th>Reflective</th>
<th>Both</th>
<th>Reflexive</th>
<th>No-Prompt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Performance*</td>
<td>n=20</td>
<td>n=20</td>
<td>N=18</td>
<td>n=21</td>
</tr>
<tr>
<td>PowerPoint Test</td>
<td>Groups receiving reflexive prompts or reflexive and reflective prompts did not perform significantly better academically. Incidental Finding: The reflective only group scored significantly higher on the final grade measure than the reflexive only group.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excel Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 2
Self-Regulated Learning Strategies*

| Metacognitive Self-Regulation | Groups receiving reflexive prompts or reflexive and reflective prompts did not self-report higher metacognitive self-regulation |

Hypothesis 3
Effort Regulation

| Groups receiving reflexive prompts or reflexive and reflective prompts did not self-report higher effort regulation. Incidental finding: the no-prompt group reported significantly higher levels of effort regulation than the reflexive only group. |

Hypothesis 4
Academic Performance*

| PowerPoint Test | Groups receiving reflective prompts did not perform significantly better academically than the no prompt group. |
| Excel Test | | | |
| Final Grade | | | |

Hypothesis 5
Self-Regulated Learning Strategies*

| Metacognitive Self-Regulation | Groups receiving reflective prompts did not self-report higher metacognitive self-regulation than the no prompt group. |

Hypothesis 6
Effort Regulation

| Groups receiving reflective prompts did not self-report higher effort regulation than the no prompt group. |

A Posteriori Analyses**
Academic Performance

| Excel Test | The reflection only group had a significantly higher mean than the both prompt group. |

MSLQ Subscales

| Extrinsic Goal Orientation | The no-prompt group reported significantly higher levels of extrinsic motivation than the reflexive only group. |
| Rehearsal | The reflection only group reported significantly higher levels of rehearsal than the no-prompt group. |
| Organization | The reflection only group reported significantly higher levels of organization than the no-prompt group and the reflexive only group. |

*significant at p< .05 **significant at p<.10
Rehearsal: A clear significance existed between the reflective-only group and the no-prompt groups as indicated by the ANOVA conducted on the MSLQ data. The reflective-only group self-reported higher levels of rehearsal than the no-prompt group.

Organization: As with rehearsal, the reflective-only group’s self-reported level of organization was significantly higher than the no-prompt group. Additionally, the ANOVA revealed that the responses indicated a significant difference between the reflective-only and reflexive-only groups with the reflective-only, again, showing higher levels of the learning strategy, organization.
CHAPTER V
DISCUSSION

This chapter first presents a discussion and interpretation of the results of the hypothesis testing, the *a posteriori* analysis, and the Journal Project in light of the model of future oriented motivation and self regulation Miller & Brickman (2004). Next limitations of the study are presented followed by a presentation of future research considerations.

**Discussion and Interpretation of the Results and the Journal Project**

**The Results**

This study attempted to elicit reflective thinking about learning behaviors in part as an exploration of the model of future-oriented motivation and self regulation Miller & Brickman (2004) developed. The authors proposed that self-regulated learning behaviors are positively impacted by the existence of long-term goals that must be attained via formal schooling. Since future goals influence the organization of proximal goals according to Miller & Brickman (2004), self-regulated learning behaviors have both a short-term and long-term pay-off. This study tried to explore that connection by way of the Journal Project, a series of four journal prompts designed to elicit thinking about short and long term goals by way of reflective and reflexive thinking, respectively, in the context of the selected course. The data from the test of the first hypothesis was, in fact, the only data sub-set that revealed any significant differences.

The six hypothesis tested for effect of the reflexive prompts using all four groups and for the effect of the reflective prompts using three groups. Through the analysis, it was anticipated that the four groups would manifest the following relationships: reflexive only > both > reflexive only > no prompt for the first three and reflective only > both > no prompt for the last three hypotheses. In fact, the only finding of significance for the preplanned analysis revealed that the both and no-prompt groups dropped out and the relationship of the reflection only and reflexive only groups was inverse to the predicted one. While a significant effect for the reflection prompt group was hoped for, the first hypothesis predicted that the groups receiving
reflexive prompts or both reflexive and reflective prompts would perform better academically on three measures than groups who received only the reflective prompt or no prompt at all. The finding, that the reflective-only group scored significantly higher on their final grade scores than the reflexive-only group, did not support the hypothesis and demonstrated an inverse relationship to the one expected. However, the finding of significance for the reflective-only group are in line with the general understanding the role reflection can play in academic performance and self-regulated learning behaviors. (Pintrich, 1990; Pintrich 2004; Zimmerman & Kitsansas, 1997; Zimmerman & Kitsansas, 1999; Zimmerman & Bandura’s, 1994; Zimmerman, 2002; Kitsansas, Reiser, & Doster, 2004; Kupier, 2002; Ley & Young, 1998; Zimmerman, Bandura, & Pons, 1992). Self-evaluative reflection plays a positive role in self-regulated learning, and the Journal Project, as an intervention, worked well to stimulate self-evaluative reflection by way of the reflective prompts.

In addition to reflective prompts, the Journal Project employed reflexive prompts. The reflexive prompts asked students to imagine a future self then answer some questions about that future self or about their current self, mindful of that future self. It was anticipated that reflexive journal prompts would help make visible the four sociocultural contexts Miller & Brickman (2004) have defined: home, school, peers, and media, contexts from which past experiences emerge. These socioculturally based past experiences together with both personal values and knowledge of one’s own possibilities comprise the three locations where disruptions in the development of personally valued, future-oriented, school-related goals (Miller & Brickman, 2004). While the authors suggest interventions that address perceived value, knowledge of possibilities, and self-concept of ability – other sections of the model, they do not directly address the section that both begins and ends the models: the past experiences and their social context. The Journal Project was such an intervention: using reflexive journal prompts in an attempt to stimulate contemplation of the self and the constituting influences in light of an imagined future self in order to positively affect learning behaviors and performance.

Future oriented goals govern the prioritization of proximal goals such that if a connection between the proximal goal and the distal goal can be clearly made, a learner will self-regulate and prioritize the proximal goals most directly connected to the future goal(Miller & Brickman, 2004). It was hoped that the participants receiving the reflexive prompts would report more metacognitive self-regulation, effort regulation, and perform better academically. The
results of the three hypotheses anticipating the significant effect of the reflexive prompts indicate that the role of reflexivity in the participants’ academic and self-regulatory success was negligible: no significant differences were revealed. This lack of significant effect of the reflexive prompts combined with the finding of significance for the group receiving only the reflective prompts, which scored significantly higher on their final grades than the group receiving only the reflexive prompts, kindles a line of questioning about the reflexive prompts. Having no prompt or both prompts did not result in a significant difference from the reflective only group while having only a reflexive prompt did, implying that the reflexive prompts may have created a greater disparity between groups than either having a combination or no prompt at all. The extensive a posteriori ($\alpha = .10$) findings add to curiosity about seemingly negative effect of the reflexive prompts.

**Excel**: Across all of the groups, eleven percent (11%) of the participants opted not to take the Excel skills test. While the journal entries themselves did not give any direct indication as to why some students opted not to sit for the skills test, the researcher’s past experience teaching this course and ones like it at other institutions leads toward a hypothesis that general intimidation was the cause. Excel, frankly, scares away many students because it is function and math oriented. Because the missing scores were fairly regularly distributed at two to three scores per class, a range of 10%-15%, a second ANOVA using only completed scores was undertaken. This analysis revealed a significant difference between the reflective-only group and the both group, with the former having a higher mean. Because the only difference between these two treatment groups is the presence of the reflexive thinking prompts, it appears that the reflexive prompts may have had a negative impact on the Excel test score, the opposite of the intended results.

**Extrinsic Goal Orientation**: The results of the ANOVA for all of the MSLQ motivation subscales showed a significance in the extrinsic goal orientation subscale: the no-prompt group is more significantly motivated by extrinsic benefits than the group that received the reflexive-only prompts. Reflexive thinking might have an impact on motivation states, specifically, deep thinking about the self might diminish extrinsic goal orientation. Does it follow, then, that reflexive thinking promotes an intrinsic goal orientation? Unfortunately, the implication that reflexive thinking promotes intrinsic goal orientation is not supported by the findings on the intrinsic goal subscale.
Rehearsal: The analysis of the self regulated learning behaviors subscales of the MSLQ data revealed significant differences in two scales: rehearsal and organization. A clear significance on the rehearsal subscale existed between the reflective-only group and the no-prompt group; specifically, the reflective-only group self-reported higher levels of rehearsal than the no-prompt group. This finding makes sense in that the reflection prompts specifically asked participants to forecast their academic behavior. What is curious, however, is that the group that received both prompts did not also report higher levels of rehearsal. They, too, received the prompts that asked them to forecast their academic behavior. Again, the results imply that the reflexive prompts may have diminished the effect of the reflective prompts for the both group. This might have occurred because of the broader range of ideas included in the prompt that asked both reflective and reflexive questions. The reflexive only prompts entirely focused on thinking about learning behaviors.

Organization: As with rehearsal, the reflective-only group’s self-reported level of organization was significantly higher than the no-prompt group and, in this case, the reflexive-only group as well. Again, the effect of the reflection prompts on organization is in line with research that connects reflection and self-evaluative activities like organization (Pintrich, 1990; Pintrich 2004; Zimmerman & Kitsanss, 1997; Zimmerman & Kitsanss, 1999; Zimmerman & Bandura’s, 1994; Zimmerman, 2002; Kitsanss, Reiser, & Doster, 2004; Kupier, 2002; Ley & Young, 1998; Zimmerman, Bandura, & Pons, 1992). Again, however, the reflexive prompts appear to have diminished the positive effects of the reflective prompts. Could it be that the series of reflective only prompts acted like training, the intensity of which was diluted by the reflexive prompts? Only further investigation – both in terms of a deep qualitative analysis of the journal prompts and replications studies - can tease out why the reflexive prompts seem to have lessened the effect of the reflection prompts. But a closer look at the Journal Project offers starting points for that future analysis.

The Journal Project: More Than Just Prompts

Completing the Journal Project in a course heavily focused on skills acquisition in a teacher-lead vs. student centered environment revealed that course selection should be considered as a factor when planning a study that asks participant to think in certain ways – in this case, about connections between the course and a possible future of their imagining. The
course for this study was very procedural – both in content and delivery. It primarily focused on skill acquisition and demonstration of procedural knowledge. This emphasis on what is classified as verbal information in Gagne’s (1995) taxonomy of learning outcomes seemed to be in conflict with the requirement of an activity and learning outcome that is easily categorized as an intellectual skill – reflexive journaling. In a course that emphasized, encouraged, and even evaluated conceptual learning and critical thinking skills, the Journal Project may produce entirely different results. The injection of such a different approach to class made the Journal Project an anomalous activity whereas in a course that emphasized conceptual learning and critical thinking skills, the Journal Project would be more of an extension or augmentation to the course.

Another reason for the absence of effect in terms of reflexive thinking might center around the focus on long-term goals in the reflexive prompts. The types of questions in the reflexive prompts, specifically about long term goals, were greatly de-contextualized for students in comparison to the reflective prompts which focused solely on the actual course activities. The prompts need to be more closely aligned with the course and the way the participants are learning in that course. Based on responses to a summative evaluation question included in the demographic survey, the focus on long-term goals may have actually distracted the participants from thinking about their short term goal resulting in no findings of significance. The following responses, in particular, characterizes the responses that communicated a negative or neutral affect toward the question:

Q: Describe what you like and didn’t like about the journaling.

A: Participant 55-C (Reflexive only group) The prompts we were given were all over the place. The ideas didn’t seem to relate to each other.

A: Participant 61-D (Both prompt group) I like journaling my own thoughts, but some of the questions seemed silly so I didn’t enjoy them as much.

Other responses from the reflexive-only and both prompt groups indicate that the focus on long term goals was of interest to participants, but as the results of both the planned and A Posteriori statistical analyses show, this interest did not significantly impact these learners’ academic performance or self-regulated learning behaviors.
In addition to revising the prompts to make them more available to participants and switching the Journal Project to a more complimentary content area, adding training and extending the timeline would greatly enhance the project. All groups would receive the same training in thinking about themselves reflexively and reflectively as current learners and future educators. Embedding the training on these types of thinking into the content of an appropriate course would help ensure that the no-prompt groups is not led to a particular type or style of response because of the training. This training should be complimented by an extension of the Journal Project across at least two semesters, more if possible. A longitudinal study would better evidence long-term effects of both the training and the journal prompts. Additionally, long-term journals would offer a rich source of data about how people think about learning and themselves over time.

Limitations of the Study

Since one of the essential difficulties of this study comes from the myriad unknowns involved in trying to quantitatively assess the effects of asking people to think deeply with themselves as the object of thought – specifically the effects on a behavior or set of behaviors – questions about instrumentation arise. Even though a finding of significance for the reflexive group was found on the extrinsic motivation subscale, the question remains: Is the MSLQ the appropriate instrument to detect the impact of reflexive thinking on self regulated learning behaviors? The instrument was designed to measure behaviors known to be enhanced by, and in some cases ones that involve, reflection. In addition to understanding the validity of the prompts insofar as their ability to stimulate a particular kind of thinking in participants, the creation and validation of an instrument designed specifically to measure reflexivity and its effects is needed. Reception theory (Hall, 1997), which explores the issues around the interpretation of texts from a reader-response perspective, along with think-out-loud protocols could help guide the development and validation of both the training, the journal prompts, and instrumentation.

Another issue is a possible ceiling effect due to the mastery learning approach in the course. Students final grade score, one of the three measures of academic performance, are a result of as many iterations of assignments as the instructor would allow. A final grade score in a class that uses mastery learning is indicative of the totality of a student’s effort, meaning that
this data point most likely represents layers of data as each version of any given assignment would have been evaluated but only the sum of the scores of the final submissions would be recorded. Furthermore, two of the three academic performance measures - the PowerPoint test and the Excel test - may not be entirely representative of the students overall academic performance because they are such a small percentage of the overall course grade thus potentially too fine an indicator. Using a larger percentage of the coursework and collecting data on each iteration of that coursework might better indicate any significant effect.

The architecture of the study may have impacted the results. A sight inspection of the dates journal entries were posted coupled with comments on the demographic survey revealed that not all journal entries were posted in the correct weeks. Participants were not being evaluated on what they wrote, simply if they wrote. Some students wrote a cluster of responses in a short period of time, making negligible any long-term effect of continuous reflective or reflexive thinking. Many students, on the same demographic survey, indicated that they were not regular with their efforts because they had to navigate – and remember to navigate – to a Blackboard site separate from their regular class site. In order to eliminate this problem, more email reminders could be sent out, or more optimally, the journaling area could be imbedded into the regular class website.

Lastly, the participants may simply have been over tested: each section of the course participated in a two other studies separate from this one. The participant may not have fully engaged or may have had limited capacity to engage in a research project because of this quantity of study participation.

**Future Research**

Reflexive thinking is not a kind of thinking that people have a lot of skill in whereas it is probable that participants, especially pre-service teachers, would have some initial familiarity with reflection. Further research into the impact of reflexive thinking on self-regulated learning behaviors and academic performance might be more successful if it incorporated some sort of training in or introduction to the intellectual skills needed, namely 1) the reflexive journaling expected of participants and 2) methods for tapping into the creative and imaginative thinking such journaling requires. Furthermore, future research might also take a different tact in terms of
generating the thinking behind the writing, asking students to discuss the prompts in small groups thereby offering them a social context in which to interpret and contemplate the prompts before actually writing them. A critical change to any future research is that the Journal Project should be aligned with a course – or better, a series of courses - with a content focus and pedagogical approach more appropriate to conceptual and critical thinking. A series of courses would offer future researchers the ability to examine with more confidence any longitudinal effects – on goals, on self-regulation, on academic performance – journaling reflexively might have.

Future researchers might investigate the seemingly inverse relationship between reflection and reflexivity hinted at by the lack of statistical results for the both prompt group in any of the preplanned and only one of the a posteriori analyses. Is reflexive thinking a distraction to reflective thinking? Do the two types of thinking, happening in tandem, lessen the effect of the other? Since the only effect of the reflexive prompts was in the subscale of extrinsic goal orientation – the reflexive-only group was significantly less extrinsically goal oriented than the no-prompt group – further investigation into the role reflexive thinking plays in psychometrics like motivation and volition might be a viable focus for research on the impact of reflexive thinking. To investigate these and other questions, future researchers will want to develop and validate specific instruments that both prompt and measure reflexive thinking and its impact on academic performance and self regulation.

Conclusion

Reflexive thinking is generally considered deep thinking – an intellectual skill - and it may require a set of skills that were not present in all participants. Reflexive thinking may simply not have an impact on self-regulation or academic performance; alternately, the measures might not have been appropriate for the study. Figuring out the features of reflexive thinking then ensuring environmental affordances and accurate instrumentation may result in a better understanding of how to measure reflexivity and its impacts. Redesigning the Journal Project to include embedding it into a more appropriate content area, adding training, and re-crafting the prompts to align more with the participant goals to become educators would make replications of the study stronger. A longitudinal study design would be the optimal situation.
Investigating the impact of writing and reflexive thinking on both performance and the processes involved in self-regulation, especially in technology-based learning environments, proved challenging. Research into metacognition strives to understand how to enable people to engage with their ways of knowing in order to maximize their learning experiences – and hopefully their lives. I believe reflexive thinking is an important part of this objective. While this study confirmed but did not add anything new to the literature regarding reflective thinking, it is hopefully one of the first steps in investigating the role reflexive thinking might have in learning and instruction.
APPENDIX A: SUMMARY OF PILOT SURVEY
Questionnaire

Directions: Thanks for answering the following questions as completely as you can. Please put your answers right after the question. Make sure to save your answers then attach the completed survey to your email reply message.

You're helping to make online learning better for everyone!

1. As best as you can off of the top of your head, define “self-regulation.”

2. Describe what you see as the differences between being a successful online student and a successful student of a class that meets in a classroom.

3. What three pieces of advice would you give to someone who is about to take his/her first online class?

4. Imagine yourself in five years:
   a. How much do your classes relate to your plans for yourself in five years.
   b. Do all of your classes directly relate to your goals for your future?
   c. When a class doesn’t directly relate to a future goal, how do you “get into it and get it done”?

5. Who in your life influences your desire to go to school?

6. Who in your life influences your future goals?

7. How hard would it be to imagine your life as a novel then to analyze the characters?

8. Statistical information:
   a. Age:
   b. Year in School:
   c. Sex:
   d. Number of online classes taken:
APPENDIX B. HUMAN SUBJECTS APPROVAL

(copy, original on file with researcher)
Human Subjects Committee

Letter of Consent for Adults

Dear EME 2040 Student:

I am a graduate student under the direction of Dean Marcy Driscoll in the Department of Educational Psychology and Learning Systems at the College of Education at Florida State University. I am conducting a research study to determine the impact of journal writing on the success of online students.

Your participation will involve responding to journal prompts. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. However, the journal assignment is part of your regular course requirements, so not participating in the study simply means your journals won't be collected as data. You still must complete all the required work for the course. The results of the research study may be published, but your name will not be used. Information obtained during the course of the study will remain confidential, to the extent allowed by law.

There are no foreseeable risks or discomforts if you agree to participate in this study. Although there may be no direct benefit to you, the possible benefit of your participation is contributing to the research in teacher education.

If you have any questions concerning the research study, please call me or Dean Driscoll 850.942.0138 or email me at kjb3693@fsu.edu.

Sincerely,

Kerry J. Burner
Ph.D. Candidate, Instructional Systems
COE, FSU

I give my consent to participate in the above study.

______________________________ (signature) ________________________ (date)

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Vice President for the Office of Research at (850) 644-8633.
APPENDIX C. COURSE SYLLABUS

FALL 2005 SYLLABUS

CLASS SECTIONS

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Room</th>
<th>Section</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>10:00AM</td>
<td>STB 124D</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>12:00PM</td>
<td>STB 124D</td>
<td>2</td>
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<tr>
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<td>STB 124D</td>
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<tr>
<td>T</td>
<td>12:00PM</td>
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</tr>
<tr>
<td>T</td>
<td>3:00PM</td>
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<td></td>
</tr>
<tr>
<td>T</td>
<td>4:00PM</td>
<td>STB 124D</td>
<td>8</td>
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<td>W</td>
<td>3:00PM</td>
<td>STB 124D</td>
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<td></td>
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<tr>
<td>TH</td>
<td>4:00PM</td>
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<td>11</td>
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<tr>
<td>M</td>
<td>5:15PM</td>
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<tr>
<td>M</td>
<td>8:00PM</td>
<td>CAW 023</td>
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<td></td>
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<tr>
<td>W</td>
<td>5:05PM</td>
<td>CAW 023</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COURSE DESCRIPTION

This course will provide you with the opportunity to achieve competency in the use of educational technology for planning and delivering instruction. **Educational technology is the study and practice of approaches, strategies, and techniques that can increase the effectiveness, efficiency, and appeal of instruction.** An introduction to educational technology includes the study of (1) how instruction is designed, developed, and improved; (2) the types and uses of different media; and (3) how the design of the instruction and appropriate media are integrated to promote student learning (Newby, et al., 1996).

REQUIRED MATERIALS


2. SAM 2003 CDs (part of textbook bundle).

3. One PC-formatted 100 megabyte Zip disk -- Please bring disk to ALL class sessions and DO NOT USE YOUR ZIP DISK UNTIL INSTRUCTED TO DO SO.

4. All students must have an [FSU email account](http://acns.fsu.edu/) for the duration of this course. If you do not have an email account please access the ACNS homepage at [http://acns.fsu.edu/](http://acns.fsu.edu/) to register for your free email account.

COURSE GOALS
As technology becomes more pervasive and integrated into education, College of Education graduates will have to be proficient with its use before entering the workplace. Moreover, the faculty of the College of Education at Florida State University is using more technology in their courses. They expect students entering the degree program will have basic computer and technology skills for the production of scholarly papers, for resource retrieval, email, presentations, communication, or as a learning tool. This course will prepare you to be *productive* when you enter other education courses. Therefore, this course is a sophomore level course and is required of all students entering an education program of study. It is expected that you will gain proficiency with the following computer applications or systems:

- Computer operating system
- Netscape or Explorer (Internet Browser)
- Microsoft Word (word processing & basic web development)
- Microsoft Excel (spreadsheets)
- Microsoft PowerPoint (presentation and multimedia application)
- Photoshop (graphics)
- Inspiration (visual thinking tool)
- HyperStudio (multimedia software development)

You will learn to use these programs in the context of assignments related to planning, delivering or evaluating instruction, incorporating the following goals:

- Use the computer as a tool for development of instructional materials, as well as an asset for the delivery and management of those materials.
- Apply a systematic approach to the design and development of instructional plans and materials.
- Draw from a repertoire of instructional approaches and media to select and use those that most effectively and efficiently impact student learning.
- Implement instructional technologies to facilitate learning outcomes in the classroom.
- Use technology for your professional use and development as an instructor.

**The media we will focus on is the use of the personal computer. However, you should not approach this course with the idea that it is solely an introduction to computers. There is more to educational technology than being able to use computers!**

**COURSE GRADES**

Your grade for the course will be based on attendance, skill checks, essay tests, assignments and a final project. Please note that no “Incomplete” grades will be granted. Further, course drops will only be considered by the course professor if there is an exceptional medical or personal emergency.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
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</tr>
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</table>
**Attendance**

<table>
<thead>
<tr>
<th>Attendance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Skill Checks (on SAM): 5 pts. each</td>
<td>20</td>
</tr>
<tr>
<td>4 Essay Tests (on Textbook): 5 pts. each</td>
<td>20</td>
</tr>
<tr>
<td>Assignments</td>
<td>35</td>
</tr>
<tr>
<td>Final Project</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Note.** You will get extra points (6pts.) when you complete the trainings for SAM Skill checks (Word, PowerPoint, and Excel; 2 pts. Each)

Your assignments and performance are significant for your growth as a teaching professional, and will help you to fulfill the State of Florida Accomplished Practice in Technology.

**Attendance (5 points)**

Class attendance is part of the course grades. Attendance is required for each entire 90-minute class session. Points will be deducted from the second absence:

- 1\textsuperscript{st} absence: 5 pts
- 2\textsuperscript{nd} absence: 3 pts
- 3\textsuperscript{rd} absence: 1 pt
- 4\textsuperscript{th} absence and more: 0 pt

**Skill Checks (4 at 5 points each):**

There will be four Skill Checks during the semester covering the content from the SAM Testbanks:

a) Windows XP,
b) MS Word;
c) MS Powerpoint; and
d) MS Excel.

These Skill Checks will be taken on computers at the Test Center in University Center C, Suite 1200. You MUST take the skill checks ONLY the time period assigned to your section.
You will be given a **1.5 day** Test Window for each skill check. Please see the Test Schedule on the last page of this syllabus, to check the dates for each section day’s Test Windows. **There will be NO makeup tests given.** Please refer to the Test Rules and Procedures to review the policies of the Test Center. You will have 20 minutes to complete each of the skill checks.

**In-class Essay Tests (4 at 5 points each):**

There will be four essay tests during the semester covering the content from the textbook. The Essay tests will be taken in class. Detailed guidelines will be provided by your instructor.

**Assignments (35 points total):**

Assignments will comprise a large amount of your grade (35%). To receive credit, you must meet the criteria that are described by your instructor. Assignments will be assessed as pass/fail. If your assignment is not acceptable AND it was turned in on time, you may redo it and turn it in again once within one week.

**Final Project (20 points total):**

The Final Project, as a group project, will be worth 20 points. The Final Project will be graded based on the following criteria:

- 15 points for the product submission. Each person in the group will receive the same grade for the product.
- 5 points for group participation as evidenced by postings in the Discussion. Each person in the group will receive a separate grade based on their level of participation. At the end of the project period, each student will submit an evaluation statement of each group members’ contributions.

You will receive only one grade for the project. There will be **NO resubmissions.** It is important that you submit your very best project.

**Grading scale:**

Grades will be assigned on a percentage basis, using the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
</tr>
<tr>
<td>A-</td>
<td>90-92.99%</td>
</tr>
<tr>
<td>B+</td>
<td>87-89.99%</td>
</tr>
<tr>
<td>B</td>
<td>83-86.99%</td>
</tr>
<tr>
<td>B-</td>
<td>80-82.99%</td>
</tr>
<tr>
<td>C+</td>
<td>77-79.99%</td>
</tr>
<tr>
<td>C</td>
<td>73-76.99%</td>
</tr>
<tr>
<td>C-</td>
<td>70-72.99%</td>
</tr>
<tr>
<td>D+</td>
<td>67-69.99%</td>
</tr>
<tr>
<td>D</td>
<td>63-66.99%</td>
</tr>
<tr>
<td>D-</td>
<td>60-62.99%</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>

**COURSE EXPECTATIONS**

This is a hybrid course. A hybrid class means that it is half face to face and half online. To be successful in this class you must do a significant amount of work outside of the regular class time. You will have to complete many of the course requirements on your own. For example: you will have to learn the software applications, read the textbook, take the tests, work on the assignments, participate in discussions, meet with you groups and study on you own. Your instructor will be available to assist you but you are expected to regulate your own study program.
A formal class session will be held for the first 90 minutes of the FSU-scheduled class period which all students are required to attend. The instructor will be holding office hours/help session for the remaining 75 minutes.

**ATTENDANCE**

- Attendance is required for each entire 90-minute class session. Those missing the first class will be dropped.
- To receive an excused absence from class (personal injury or sickness, or family crisis) you must present appropriate documentation (a doctor’s note; hospital admission form, police report, etc.) to your instructor. Please notify your instructor of your absence via e-mail if possible.
- Important class information (policies/procedures) may be announced in class to supplement the syllabus. Students will be expected to comply with such policies and procedures even if they are absent from class when the announcements are made.
- Should a student miss class, that student is responsible for meeting with the instructor of the class during office hours to find out what was missed.
- Please turn your cell phone OFF before coming to class. Please do not use your cell phone in the classroom at any time before or after class.
- Students participating in disruptive and/or distracting behavior (surfing the Web, conversing with friends, loud snoring ☺) during class time will be asked to leave.
- Students who experience problems that may result in multiple weeks of absences should meet with the Instructor as soon as possible to ensure the successful completion of the course.

**COMMUNICATION**

- Students are responsible for checking their email on their FSU garnet account ([http://webmail.fsu.edu](http://webmail.fsu.edu)) at least three times a week. Many, if not all, class announcements will be distributed through email or posted on our course Website. You are responsible for all schedule/assignment changes and other information disseminated electronically.
- You may have your email forwarded from your FSU garnet account to another account using the form at [http://cars.acns.fsu.edu/CARS/account_maintenance.html](http://cars.acns.fsu.edu/CARS/account_maintenance.html). Make sure to test your mail forwarding to confirm that it works!
- If you forget your FSU garnet email password or have difficulty with webmail, call the Help Desk at 644-8502.
- Students must familiarize themselves with the course Web site, accessed from your Campus Website at [http://campus.fsu.edu/](http://campus.fsu.edu/).

**ASSIGNMENTS**

You will most likely spend 6 to 8 hours per week outside of class learning software, reading the textbook, and completing assignments.

- All of the graded assignments will require you to use a computer – either your own, or one of the computers in university laboratories (Stone 124C-D, Stone 002, Cawthorn, Strozier, and the Student Union building). The computer labs become very busy and more unavailable the longer you wait to start your assignments. It is important you plan to complete assignments as early as possible.
- Your instructor will tell you when to start each assignment.
- All assignments must be completed by the due.
Assignments

<table>
<thead>
<tr>
<th>No.</th>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knowledge-Base Building</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Word &amp; Graphics Project</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Simple Web Page Project</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>PowerPoint Project</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Innovative Technologies</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Inspiration Project</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Excel Project</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>HyperStudio Project</td>
<td>6</td>
</tr>
</tbody>
</table>

Assessments

- Your SAM 2003 Key Code is located on the inside back cover of the SAM 2003 pamphlet included in your course pack.

- All Skill Checks must be completed by the date scheduled in the Test Schedule below. Each section day will be given a 1.5 day Test Window. Please make every effort to take your Skill Checks early in the Test Window.

- There will be no makeup tests given. Missing a test do to unforeseen circumstances on the last day of the Test Window will not result in a makeup opportunity. If you wait until the last day of the Test Window, you do so at your own risk.

CHEATING

- Scholastic Dishonesty: students who violate the Florida State University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University. Since dishonesty harms the individual, fellow students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. Please review the policies in the Florida State University undergraduate catalog.

- We maintain a databank of all past assignments, both this semester and in prior semesters.

- We use special software that compares every electronically submitted assignment file to all other submitted files to determine if the file was copied from another student.

- We consider it cheating when two or more students submit assignments with the same or portions of the same content.

- Students caught communicating during tests will be asked to leave and forfeit their test.

- First Offense Penalty: Both the person who shared his/her work, and the person who borrowed and submitted the work are given zeros on the assignment.

- Second Offense: An "F" for the course and formal charges against the students involved.
Sometimes cheating is not detected until after students have submitted several copied assignments. In such cases the first copied assignment is considered the first offense, the second copied assignment, the second offense, and so on.

OTHER

Any student in this course who has a documented disability that may prevent him or her from fully demonstrating his or her abilities should contact their instructor as soon as possible so they can discuss accommodations necessary to ensure full participation and facilitate your educational opportunity.

Please do not consume food or drink in the labs!

### Skill Check Schedule

<table>
<thead>
<tr>
<th>Skill Check</th>
<th>Test Window for each Section Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows XP</td>
<td></td>
</tr>
<tr>
<td><strong>TUE Sections:</strong></td>
<td>9/9 (all day), 9/12 (morning)</td>
</tr>
<tr>
<td><strong>WED &amp; THU Sections:</strong></td>
<td>9/12 (afternoon) – 9/13 (all day)</td>
</tr>
<tr>
<td><strong>MON Sections:</strong></td>
<td>9/14 (all day) - 9/15 (morning)</td>
</tr>
<tr>
<td>Word</td>
<td></td>
</tr>
<tr>
<td><strong>MON Sections:</strong></td>
<td>9/22 (all day) - 9/23 (morning)</td>
</tr>
<tr>
<td><strong>TUE Sections:</strong></td>
<td>9/23 (afternoon), 9/26 (all day)</td>
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<tr>
<td><strong>WED &amp; THU Sections:</strong></td>
<td>9/27 (all day) – 9/28 (Wed: PM, Thu: AM)</td>
</tr>
<tr>
<td>PowerPoint</td>
<td></td>
</tr>
<tr>
<td><strong>MON Sections:</strong></td>
<td>10/6 (all day) - 10/7 (morning)</td>
</tr>
<tr>
<td><strong>TUE Sections:</strong></td>
<td>10/7 (afternoon), 10/10 (all day)</td>
</tr>
<tr>
<td><strong>WED &amp; THU Sections:</strong></td>
<td>10/11 (all day) – 10/12 (Wed: PM, Thu: AM)</td>
</tr>
<tr>
<td>Excel</td>
<td></td>
</tr>
<tr>
<td><strong>MON Sections:</strong></td>
<td>11/9 (all day) - 11/10 (morning)</td>
</tr>
<tr>
<td><strong>TUE Sections:</strong></td>
<td>11/10 (afternoon), 11/14 (all day)</td>
</tr>
<tr>
<td><strong>WED &amp; THU Sections:</strong></td>
<td>11/15 (all day) – 11/16 (Wed: PM, Thu: AM)</td>
</tr>
</tbody>
</table>

Note: 9/5 Labor Day; 11/11 Veteran’s day - No classes
Morning period: 8:30 AM – 12:30 PM
Afternoon period: 12:30 PM - 4:30 PM

### COURSE CALENDAR

* Subject to Revision *

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Assignment #</th>
<th>Topic</th>
<th>Assignment Due</th>
<th>Skill Check Test Windows</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aug 29-Sep1</td>
<td>Introduction</td>
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</tr>
<tr>
<td>Week</td>
<td>Dates</td>
<td>Subject</td>
<td>Instructor Notes</td>
<td></td>
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<tr>
<td>------</td>
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<td>--------------------------------</td>
<td>------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Sep 5-8</td>
<td>1 SAM Registration Knowledge-base Building</td>
<td>Sep 30 (F)* No Class on Sep 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sep 12-15</td>
<td>2 Word &amp; Graphics</td>
<td>Sep 16 (F) #1: Windows XP Sep 9-15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sep 19-22</td>
<td>3 Simple Webpage</td>
<td>Sep 23 (F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-6</td>
<td>Sep 26-29</td>
<td>4 PowerPoint</td>
<td>Oct 7 (F) #2: Word Sep 22-28</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oct 3-6</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Oct 10-13</td>
<td>5 Innovative Technologies</td>
<td>In class #3: PowerPoint Oct 6-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-9</td>
<td>Oct 17-20</td>
<td>6 Inspiration</td>
<td>Oct 28 (F)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Oct 24-27</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10-11</td>
<td>Oct 31-Nov 3</td>
<td>7 Excel</td>
<td>Nov 11 (F) #4: Excel Nov 9-16</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Nov 7-10</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12-13</td>
<td>Nov 14-17</td>
<td>8 Hyper Studio</td>
<td>Nov 25 (F)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Nov 21-24</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>14-15</td>
<td>Nov 28-Dec 1</td>
<td>Final Project</td>
<td>Dec 12 (M)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Dec 5-8</td>
<td></td>
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</tbody>
</table>

**Note.** * The due for assignment #1 can be determined by your instructor.
+ The Essay test schedule will be informed by your instructor.

Also visit these links for additional information.

**Test Calendar**
**Test Center Info, Rules and Procedures**
APPENDIX D: COMMON BLACKBOARD SHELL

Welcome to the EME 2040 Journal Site. On the left, you’ll see a menu button “Journals” that you should click on.

Once you do, you’ll see a list of names. Find yours and click on it. That takes you to a page that says “Group Discussion Board.” Never mind about the word “Group” – Blackboard won’t let that be altered.

Once you click on this link, you’ll be taken to your private journaling space.

Open the forum, and post your journal entries as replies to the posted threads. You should write as much as you feel is appropriate.
Sun, Sep 25, 2005 — Journal Directions
Welcome to the EME 3010 Journal Site. On the left, you'll see a menu button "Journals" that you should click on.

Once you do, you'll see a list of names. Find yours and click on it. That takes you to a page that says "Group Discussion Board." Nevermind about the word "Group" - Blackboard won't let that be altered.

Once you click on this link, you'll be taken to your private journaling space.

Open the forum, and post your journal entries as replies to the posted threads. You should write as much as you feel is appropriate.
Group Page: rfc

- **Group Discussion Board**
  Use the Group Discussion Board for debates and conversations.
- **Group Members**
  This group has no members.
<table>
<thead>
<tr>
<th>Prompt 1: during Week 5</th>
<th>09-25-2005 10:49</th>
<th>New</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prompt 2: during Week 9</td>
<td>09-25-2005 10:54</td>
<td>New</td>
</tr>
<tr>
<td>Prompt 3: during Week 12</td>
<td>09-25-2005 10:59</td>
<td>New</td>
</tr>
</tbody>
</table>
APPENDIX E. PROMPTS

Reflective Prompts:

Prompt #1
What part will this class play in your academic plans?
Describe (1) the assignment you worked on most this week and (2) your approach to getting it completed.
What is the most important thing you got out of class this week?

Prompt #2
How well did your work for this class last week pay off? What will you do the same this week? What will you change? Why?
What is the most important thing you got out of class this week? Relate it to what you got of class last week.
What is the relationship between understanding this class and how you do your work for it?

Prompt #3
How are you deciding what to spend the most time on each week? Are you doing what you intend to do? Why or why not?
Write a few sentences to finish following thoughts:
Until this week, I didn’t know. . .
So far in this class, I have figured out that to understand what’s going on, I have to. . .

Prompt #4
Have you learned any new ways to approach studying this semester? From who? Do they work for you?
What are the differences between reading for fun and reading for learning?
How do you make sense of what you’re reading when you get confused?
Write a few sentences to finish following thoughts:
The next time I take a class that requires me to do a great deal of work outside of class time. . .
**Reflexive Prompts:**

Prompt #1
What part will this class play in your academic plans?

Describe your life ten years from now. Use the 5W’s (who, what, where, when, why) to help get started if you need to.

How did this class help create that future?

Prompt #2
Re-read your future life description from Prompt 1 and write a revision, if needed, below.

Think about the people in your life right now, then answer the following:
Whose life does your imagined future most resemble? Why?

Whose life does your imagined future least resemble? Why?

Prompt #3
Write a short article that gives an update of your life for any alumni newsletter (you pick the organization); make sure to highlight your successes and accomplishments. Use the 5W’s (who, what, where, when, why) to help get started if you need to.

What role did school play in creating the life you just described?

Write a few sentences to finish following thought:
If I want to seek out information, I . . .

Prompt #4
Describe a night out – ten years from now. Use the 5W’s (who, what, where, when, why) to help get started if you need to.

How did this class make that night possible?

Write a few sentences to finish following thoughts:
Compared with the people I hang out with right now, the people in my future are . . .

Most of the people I meet at college. . .

The next time I take a class that requires me to do a great deal of work outside of class time. . .
Both – Reflective then Reflexive

Prompt #1
What part will this class play in your academic plans?

Describe (1) the assignment you worked on most this week and (2) your approach to getting it completed.

What is the most important thing you got out of class this week?

Describe your life ten years from now. Use the 5W’s (who, what, where, when, why) to help get started if you need to.

How did this class help create that future?

Prompt #2
How well did your work for this class last week pay off? What will you do the same this week? What will you change? Why?

What is the most important thing you got out of class this week? Relate it to what you got of class last week.

What is the relationship between understanding this class and how you do your work for it?

Re-read your future life description from Prompt 1 and write a revision, if needed, below.

Think about the people in your life right now, then answer the following:
Whose life does your imagined future most resemble? Why?

Whose life does your imagined future least resemble? Why?

Prompt #3
How are you deciding what to spend the most time on each week? Are you doing what you intend to do? Why or why not?

Write a few sentences to finish following thoughts:
Until this week, I didn’t know . . .

So far in this class, I have figured out that to understand what’s going on, I have to . . .

Write a short article that gives an update of your life for any alumni newsletter (you pick the organization); make sure to highlight your successes and accomplishments. Use the 5W’s (who, what, where, when, why) to help get started if you need to.
What role did school play in creating the life you just described?

Write a few sentences to finish following thought:
If I want to seek out information, I . . .

Prompt #4
Have you learned any new ways to approach studying this semester? From who? Do they work for you?

What are the differences between reading for fun and reading for learning?

How do you make sense of what you’re reading when you get confused?

Describe a night out – ten years from now. Use the 5W’s (who, what, where, when, why) to help get started if you need to.

How did this class make that night possible?

Write a few sentences to finish following thoughts:
Compared with the people I hang out with right now, the people in my future are . .

Most of the people I meet at college. . .

The next time I take a class that requires me to do a great deal of work outside of class time. .
APPENDIX F. SURVEY INSTRUMENT

EME 2040 Journal Project: Dissertation Study by Kerry Burner

Demographic Information

Name (for reference only; all names are confidential) ________________________________

Age: _____  Gender: M  F  Year in School: 1st  2nd  3rd  4th  5th or beyond

Major: ___________________________  Grade you expect in this class: _____

Questions About the Journal Project

1. Describe what you liked and didn’t like about the journaling.

2. If you could help redesign the journal project for next semester, what would you change?

3. Describe what you do to make yourself do something that you need to do but don’t really want to.
**Motivation and Attitudes**

The following questions ask about your motivation for and attitudes about this class. Remember there are no right or wrong answers, just answer as accurately as possible. Use the scale below to answer the questions. If you think the statement is very true of you, circle the circle on 7; if a statement is not at all true of you, circle on 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

<table>
<thead>
<tr>
<th></th>
<th>not very true of me</th>
<th>very true of me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I can learn new things.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>2.</td>
<td>I will be able to learn the material in this course.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>3.</td>
<td>I think about how poorly I am doing compared with other students.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>4.</td>
<td>I will be able to use what I learn in this course in other courses.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>5.</td>
<td>I believe I will receive an excellent grade in this class.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>6.</td>
<td>I think understanding the most difficult material presented in the readings for this course.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>7.</td>
<td>I think being able to get a good grade in this class is the most satisfying thing for me right now.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>8.</td>
<td>I think about items on other parts of the test I can't answer.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>9.</td>
<td>I am my own fault if I don't learn the material in this course.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>10.</td>
<td>It is important for me to learn the course material in this class.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>11.</td>
<td>The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>12.</td>
<td>I think I can learn the basic concepts taught in this course.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>13.</td>
<td>If I can, I want to get better grades in this class than most of the other students.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>14.</td>
<td>I think about the consequences of failing.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>15.</td>
<td>I think I can understand the most complex material presented by the instructor in this course.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>16.</td>
<td>I prefer course material that arouses my curiosity, even if it is difficult to learn.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>17.</td>
<td>I am very interested in the content area of this course.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>18.</td>
<td>If I try hard enough, then I will understand the course material.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>19.</td>
<td>I have an uneasy, upset feeling when I take an exam.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>20.</td>
<td>I think I can do an excellent job on the assignments and tests in this class.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>21.</td>
<td>I expect to do well in this class.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>22.</td>
<td>The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>23.</td>
<td>I think the course material in this class is useful for me to learn.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>24.</td>
<td>When I have the opportunity in th is class, I choose course assignments that I can learn from, even if they don't guarantee a good grade.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>25.</td>
<td>If I don't understand the course material, it is because I didn't try hard enough.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>26.</td>
<td>I like the subject matter of this course.</td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
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<td>very true of me</td>
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<tr>
<td>27. Understanding the subject matter of this course is very important to me.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>28. I feel my heart beating fast when I take an exam.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>29. I'm certain I can master the skills being taught in this class.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>30. I want to do well in this class because it is important to show my ability to my family, friends employer or others.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>31. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

### Learning Strategies

The following questions ask about your learning strategies and study skills for this class. Again, there are no right or wrong answers; just answer as accurately as possible. Answer the questions about how you study in this class as accurately as possible. Use the same scale to answer the remaining questions. If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>very true of me</th>
<th>not very true of me</th>
</tr>
</thead>
<tbody>
<tr>
<td>32. When I study the readings for this course, I outline the material to help me organize my thoughts.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>33. During class time, I often miss important points because I'm thinking of other things.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>34. When studying for this course, I often try to explain the material to a classmate or friend.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>35. I usually study in a place where I can concentrate on my coursework.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>36. When reading for this course, I make up question to help focus my reading.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>37. I often feel so lazy or bored when I study for this class that I quit before I finish what I planned to do.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>38. I often find myself questioning things I hear or read in this course to decide if I find them convincing.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>39. When I study for this class, I practice saying the material to myself over and over.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>40. Even if I have trouble learning the material in this class, I try to do the work on my own, without help from anyone.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>41. When I become confused about something I'm reading for this class, I go back and try to figure it out.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>42. When I study for this course, I go through the readings and my class notes and try to find the most important ideas.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>43. I make good use of my study time for this course.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>44. If course readings are difficult to understand, I change the way I read the material.</td>
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<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>45. I try to work with other students from this class to complete the course assignments.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>46. When studying for this course, I read my class notes and course reading over and over again.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>47. When a theory, interpretation or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>48. I work hard to do well in this class even if I don't like what we are doing.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>49. I make simple charts, diagrams, or tables to help me organize course material.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>50. When studying for this course, I often set aside time to discuss course material with a group of students from the class.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>51. I treat the course material as a starting point and try to develop my own ideas about it.</td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td></td>
<td></td>
<td>not very true of me</td>
<td>very true of me</td>
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<tr>
<td>52.</td>
<td>I find it hard to stick to a study schedule.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>53.</td>
<td>When I study for this class, I pull together information from different sources, such as lectures, readings and discussions.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>54.</td>
<td>Before I study new course material thoroughly, I often skim it to see how it is organized.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>55.</td>
<td>I ask myself questions to make sure I understand the materials I have been studying in this class.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>56.</td>
<td>I try to change the way I study in order to fit the course requirements and the instructor's teaching style.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>57.</td>
<td>I often find that I have been reading for this class but don't know what it was all about.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>58.</td>
<td>I ask the instructor to clarify concepts I don't understand well.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>59.</td>
<td>I memorize key words to remind me of important concepts in this class.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>60.</td>
<td>When course work is difficult, I either give up or only study the easy parts.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>61.</td>
<td>I try to think through a topic to decide what I am supposed to learn from it rather than just reading it over when studying for this course.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>62.</td>
<td>I try to relate ideas in this subject to those in other courses whenever possible.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>63.</td>
<td>When I study for this course, I go over my class notes and make an outline of important concepts.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>64.</td>
<td>When reading for this class, I try to relate the material to what I already know.</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>65.</td>
<td>I have a regular place set aside for studying.</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>66.</td>
<td>I try to play around with ideas of my own related to what I am learning in this course.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>67.</td>
<td>When I study for this course, I write brief summaries of the main ideas from the readings and my class notes.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>68.</td>
<td>When I can't understand the material in this course, I ask another student in this class for help.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>69.</td>
<td>I try to understand the material in this class by making connections between the readings and the concepts from the lectures.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>70.</td>
<td>I make sure that I keep up with the weekly readings and assignments for this course.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>71.</td>
<td>Whenever I read or hear an assertion or conclusion in this class, I think about possible alternatives.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>72.</td>
<td>I make lists of important items for this course and memorize the lists.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>73.</td>
<td>I attend this class regularly.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>74.</td>
<td>Even when course materials are dull and uninteresting, I manage to keep working until I finish.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>75.</td>
<td>I try to identify students in this class whom I can ask for help if necessary.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>76.</td>
<td>When studying for this course I try to determine which concepts I don't understand well.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>77.</td>
<td>I often find that I don't spend very much time on this course because of other activities.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>78.</td>
<td>When I study for this class, I set goals for myself in order to direct my activities in each study period.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>79.</td>
<td>If I get confused taking notes in class, I make sure I sort it out afterwards.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>80.</td>
<td>I rarely find time to review my notes or readings before an exam.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
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<tr>
<td>81.</td>
<td>I try to apply ideas from course readings in other class activities such as lecture and discussion.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX G: SELECTED JOURNAL ENTRIES

Entries from the group receiving reflective prompts:

Short – less potent:
Forum: Journal Prompts
Date: Sun Nov 27 2005 11:31
Author: A3
Subject: Re: Prompt 4 - during Week 12
i learned numerous educational tools that can aid me in a class such as this. when taking hybrid
courses one has to be disaplened and capable of performing tasks outside of the class room.
The next time I take a class that requires me to do a great deal of work outside of class time i will
be prepared and understand what i will need to do to complete the course with excellent marks.

Short – more potent:
Forum: Journal Prompts
Date: Mon Oct 31 2005 10:04
Author: A10
Subject: Re: Prompt 3 - during Week 9
Basically I prioritize my class work responsiblilities, the more important and or difficult a task
the sooner it will be started. And I have been doing well in this manner.
...several things in Excel, like how to correctly freeze panes.
...ask lots of questions

Medium:
Forum: Journal Prompts
Date: Tue Oct 18 2005 11:03
Author: A8
Subject: Re: Prompt 2 - during Week 8
my work from last week paid off, i did well on the powerpoint quiz and was able to design my
webpage and turn it in early. probablly wont change much maybe add a little more practice on
the sam cd
the most important thing i got out of class this week was working on my own power point
presentation, it allowed me to use the things i learne using sam last week and made it easy for me
to use them in a tpical senario showing that i actually comprehended what i learned.
the relationship between understanding this class and doing the work for it is very simple, you
have to be able to understand the corse material to do the work, meaning you have to actually try
to do it in order to complete the assignments ontime and correctly

Long:
Forum: Journal Prompts
Date: Tue Oct 18 2005 20:32
Author: A11
Subject: Re: Prompt 1 - during Week 5
This week we created a web page and a powerpoint. This plays into my future plans as an
educator, because much information can be relayed through a powerpoint and it makes it that
much more interesting. This week while doing my PowerPoint, I found that I approached it at first with a closed mind, just thinking about it as another assignment, but as I began to work on it I realized just how interesting it was, after taking this class I learned how to do things that I have seen others do to their presentations and I had only dreamed of doing. Now it interests me and actually makes me happy to make my presentation and it looks 100 percent better. The most important thing I think I got out of class this week was that it opened my eyes to how fun the computer could be, before now I hated computers and thought of them only as trouble, now I'm starting to open my eyes and be intrigued by them.
Entries from the group receiving reflexive prompts:

**Short – less potent:**
Forum: Journal Prompts  
Date: Mon Nov 14 2005 16:06  
Author: C51  
Subject: Re: Prompt 3 - during Week 9  
School helped show me how to be responsible, sucessful, and happy. If I want to seek out information I go to a source that can provide me with detailed info.

**Short – more potent:**
Forum: Journal Prompts  
Date: Mon Nov 14 2005 16:02  
Author: C53  
Subject: Re: Prompt 2 - during Week 8  
My mother and father because they are both people who work very hard for what they have achieved and that's the same mentality i have. I least resemble my cousin Paul because he isn't doing anything with his life and he's not in school.

**Medium:**
Forum: Journal Prompts  
Date: Fri Nov 18 2005 20:41  
Author: C50  
Subject: Re: Prompt 4 - during Week 12  
A night out 10 years from now would include me, my husband, some friends and their husbands or significant others. We would go out to a restaurant or bar in a hip downtown area and have a great time. This class would not have helped in any way except maybe to get a job that would give me the money to go out.  
Compared with the people I hang out with now, I hope that a few of them stay the same in the future, and I meet new people to hang out with along the way.  
Most of the people I will meet at college I will never see after college, but a select few will be my friends for life.  
The next time I take a class that requires me to do a lot of work outside of class I will work hard at it.

**Long:**
Forum: Journal Prompts  
Date: Mon Sep 26 2005 18:43  
Author: C48  
Subject: Re: Prompt 1 - during Week 5  
The COURSE will help me in several ways. First of all, it fulfills a requirement that I must have in order to be accepted into the College of Education at Florida State University. I believe I am and will to continue to obtain the proper skills needed to teach in a world where technology has become so essential. I am learning how to use tools that will help me in the classroom such as Powerpoint for lectures, Excel for gradebooks, and Word for web pages and other documents. I
also think that the skills I am obtaining will help my students and their understanding of technology.

In ten years, I envision several things for myself. I hope to be married and have a family with two or three kids. Children are one of my favorite things about life, which is why I want to become a teacher. I hope to be teaching by then as well. I am majoring in Elementary Education so I should be teaching in an elementary school by that time. I would like to work with first, second, or third grade in my first few years, so by the time a decade has passed I will feel more prepared to work with fifth or sixth grade. I have lived in Florida my entire life so I hope to teach somewhere out of state, preferably somewhere on the west coast since that is where my boyfriend is currently attending school.

Overall, COURSE is a small but necessary part of accomplishing my goals. This one class determines whether or not I will be able to spend my junior and senior years in the College of Education, and whether or not I will be accepted into the elementary education program. This class will also help my future as a teacher because it will help me attain more skills to be the best possible teacher that I can be, especially since technology is changing the world constantly. By taking this class, among others, I will be able to graduate from college, and begin the future that I have planned.
Entries from the group receiving both prompts:

**Short – less potent:**
Forum: Journal Prompts  
Date: Wed Nov 16 2005 16:36  
Author: D63  
Subject: Re: Prompt 4 - during Week 12

- not particularly
- reading for fun is fun, reading for learning is rigorous and sometimes difficult
- re-read it, or keep reading to see if it is explained later
- in ten years i have no idea what i'm going to be doing with my life. who knows what my interests will be, who i'm hanging out with, or where we're going. i have absolutely no clue.
- i dont see this class having a huge impact on my life in 10 years

Compared with the people I hang out with right now, the people in my future are . .
probably the same people, i hang out with a few close friends, and thos friends are very close, i would expect them to be in my future as well.

Most of the people I meet at college. . .
are cool, some suck though. i am not choosy about who i hang out with at parties, but only a select few all the time.

The next time I take a class that requires me to do a great deal of work outside of class time. .
all my classes require a great deal of work outside of class time since i'm a math education major. i'm pretty sure that i'll do it the same way ... just keep up with all the work.

**Short – more potent:**
Forum: Journal Prompts  
Date: Wed Oct 19 2005 10:22  
Author: D70  
Subject: Re: Prompt 1 - during Week 5

This class will help me with my academic plans by teaching me how to use certain programs that will be necessary for my sucess in the teaching field. The assignment that I worked on most this week was the advertisment assignment. I accomplished this task by working diligently and following the instructions. This week i learned how to use hyperlinks. In ten years I plan on living with my husband in Maryland working as a kindergarden teacher because that is what i want to do and get enjoyment out of. This class hasnt really helped directly with my future but will impact my organization skills within the class room by helping keep my lesson plans and stuff like that in order and easily acessiable.

**Medium:**
I decide what to do each week by following the syllabus. I do try to stay ahead with the assignments. This past week, however, we have to do a project at home that I wish I would have spent more time doing or we as a class spent more time in class doing it. I have been doing what I intended to do, except for this past week's assignment. Until this week, I didn't know that Microsoft Excel could be used to do a variety of different things like spreadsheets, money charts, charts in general, and lists. In class to understand, I need to pay attention in class. It takes good time management to understand everything we learn in class and going home and practicing it.

Article: My name is D69 and I graduated from Florida State University with my Masters in Elementary Education. I am working towards becoming a principal soon and helping improve my school as best I can. FSU helped me create this life by all its wonderful classes and help they offered me throughout the years. FSU has such a good teaching program I am able to get good work and pay wherever I go.

If I want to seek out information, I try to look up what I can on my own or ask friends or family to help me.

Long:

How well did your work for this class last week pay off? What will you do the same this week? What will you change? Why?

Last week, my work paid off okay for this class. We had to take a Skill Check for Powerpoint and I scored an 85%. Throughout the week, I would continually take practice tests to familiarize myself with the material. For this week, I am going to continue taking practice tests for the next Skill Check so I can be comfortable once testing time comes around. However, as oppose to last week, I am going to prepare myself earlier so I can get help on some unanswered topics. What is the most important thing you got out of class this week? Relate it to what you got of class last week.

The most important thing I got out of class this week was learning about computer software and the components of a system unit. We had to take an in-class essay test about that material so I studied those topics in particular throughout the week. Basically, I did the same preparations for this week as I did last week by continually reviewing the material until it became familiar to me. What is the relationship between understanding this class and how you do your work for it? The relationship with understanding this class and how I do my work for it is that I know what and what not to concentrate on during my studies. Although the textbook offers a wide array of knowledge, I focus on the material that is more pertinent to the class, which is technology being integrated into the classroom.

Re-read your future life description from Prompt 1 and write a revision, if needed, below. My future life vision from Prompt 1 has not changed. I still hold on to the same goals now. The only minor change is that I plan to teach middle school math rather than high school.
Think about the people in your life right now, then answer the following:
Whose life does your imagined future most resemble? Why?
My imagined future resembles the life of some of my grade school teachers. A few of them went to Florida State University so they went through this same stepping stone as I did. Additionally, many of them not only pursued a Bachelor's degree, but continued in graduate school to receive a Master's degree in either Counseling or School Administration. I plan to do the same also.
Whose life does your imagined future least resemble? Why?
My future least resembles the life of my parents. My father is an exporter and my mother is a secretary at City Hall. Neither of them chose a profession in the education arena, or even a job that deals with children. My choosing to become an educator was based on my own desire and it had no influence from my parents.
Entries from the group receiving no prompt:

**Short – less potent:**
Forum: Journal Prompts  
Date: Mon Nov 28 2005 13:04  
Author: B26  
Subject: Re: Prompt 4 - during Week 12  
This is our second to last class and so far this class has been pretty informative.

**Short – more potent:**
Forum: Journal Prompts  
Date: Sun Oct 30 2005 16:22  
Author: B39  
Subject: Re: Prompt 3 - during Week 9  
This week we learned about Inspiration. It's a good tool to use when you are brainstorming for your lesson, and to put your lesson together. It's a program that could be used for students as well.

**Medium:**
Forum: Journal Prompts  
Date: Tue Sep 27 2005 23:25  
Author: B35  
Subject: Re: Prompt 1 - during Week 5  
I really find this class interesting and difficult. I find it interesting because it gives me new ideas about being a teacher. It really opens your mind to new possibilities through technology and not just textbooks. However, I find this class challenging because I'm not good with computers at all. I have a really hard time with assignments when other people can do them in ten minutes. I'm glad I'm taking the class so I can learn how to do it, it's just frustrating that I have such a hard time with computers and technical stuff.

**Long:**
Forum: Journal Prompts  
Date: Tue Nov 15 2005 11:11  
Author: B36  
Subject: Re: Prompt 4 - during Week 12  
Class this week was frustrating. We learned this new program called hyperstudio and I had the worst time with it. I understood it when the teacher was explaining it but when we were asked to create our own, I did not know what I was doing. It was supposed to be turned in yesterday in class but I had such a hard time with it that I am going to have to turn it in later. I am glad that this is the last assignment that we have to do. Last week I was stressed about Excel, now this.
REFERENCES


Dewey. (1933). *How We Think*. Henrey Regney, Chicago


BIOGRAPHICAL SKETCH

Education

Dissertation: The Effects of Reflective and Reflexive Writing Prompts on Students’ Self-Regulation and Academic Performance in a Hybrid Learning Environment. Pre-service teachers participated in an online journaling project across two months.

2001: M.A. in English - Rhetoric and Composition, University of South Florida, Tampa, Florida.
Thesis: Revising Revision: A Post-Process Pedagogy. I argue that revision is an individual act of interpretation not simply a codified process of correcting text.

1993: B.A. Major: World and Comparative Literature; Minor: Mathematics. San Francisco State University, San Francisco, California.

1990: A.A. University of Maryland, Munich Campus, Germany.

Certifications


Expected April 2007: Certificate in Online Instructional Development, Florida State University, Tallahassee, Florida.


2005: Certificate in Human Performance Technology, Florida State University, Tallahassee, Florida.

Professional Experience

1/2007 – present: Project Director, Launch Project, FSUTeach, Florida State University.
Collaborate with FSUTeach Program Directors and COE Dean to coordinate and oversee the instantiation of the FSUTeach Program.

Assist COE Dean as assigned on a project basis.

Teach sections of EME 2040/EPI0003, Introduction to Educational Technology, online & face-to-face; ENC 1101, Composition I; ENC 1102, Composition II – face-to-face and online sections; ENC 1141, Writing about Literature; and ENC 1210 online, Technical Writing.

Taught two sections of EME 2040, Introduction to Educational Technology.

Assist lead researchers in collection, analysis, and presentation of qualitative data on the Ocoee Middle School 1-1 Project. The purpose of the project was to investigate the use of Tablet (laptop) PCs in Ocoee Middle School, a "model technology school" located in Orlando, Florida. Project sponsors: Microsoft, Hewlett-Packard, and Holt Rinehart & Winston.

Administratively assist department chair as assigned.

2000 – 2001: Adjunct Instructor, St. Petersburg College, Main Campus.
Taught sections of ENC 001, Prep Writing I; ENC 002, Prep Writing II; and EAP I, English for Academic Purposes for Non-Native Speakers I (Basic ESOL).

Tutored students in written English skills, composition, and research strategies.

1997 – 2001: Graduate Assistant: Writing Center Tutor and Instructor, University of South Florida.
Tutored students in written English skills, composition, and research strategies; organized and gave in-class orientations; taught sections of ENC 1101, Composition I, and ENC 1102, strategies.

1997 – 2001: Substitute Teacher, Pinellas County Schools
Subbed in K-12 classes as needed.
Memberships in Professional Organizations

American Educational Research Association since 2003
Association for Educational Communications and Technology since 2002
National Council of Teachers of English since 1998

Publications and Technical Reports

Dennen, V. and Burner, K.J. (in submission) Trilateral Talk: The Role of the Rhetorical Triangle to Promote and Analyze Learner Interactions in Threaded Discourse. *Journal of Research on Technology in Education*.


Presentations


Burner, K.J. (2001). Constructivist theory and composition pedagogy. Paper presented as part of the Roundtable Discovering the Empathetic Self in A Composition Community at the Annual Meeting of the Conference on College Composition and Communication, Atlanta, Georgia.

Committees

Member, Dean’s Adjunct Ad-Hoc Committee (2002), Tallahassee Community College.
Chair, Freshman English Award Committee (2000), University of South Florida.

Courses Taught and Instructional Strategies Used

EME 2040/EPI 0003 (FSU, TCC) Introduction to Educational Technology – online, face-to-face, and hybrid settings.
ENC 1210, Technical Writing (TCC) – web-based course.
ENC 1101, Composition I (TCC, USF) – face-to-face and hybrid.
ENC 1101, Composition I (USF) – course linked with general education art requirement.
ENC 1102, Composition II (TCC, USF) – face-to-face, hybrid, and online.
ENC 1141, Composition II with Literature Analysis (TCC, USF) – face-to-face
ENC 001, College Prep Writing I (SPC) – face-to-face.
ENC 002, College Prep Writing II (SPC) – face-to-face.
EAP 001, English for Academic Purposes for Non-Native Speakers I (SPC) – face-to-face.