

ANOTHER LOOK AT REFLECTION: PROMOTING STUDENT VOICE, SELF-  
EFFICACY AND STUDENT/TEACHER DIALOGUE THROUGH STRUCTURED,  
GUIDED REFLECTION PROMPTS IN A COLLEGE READING AND STUDY  
SKILLS COURSE

by

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DEDICATION

For John: My anchor and mainsail

For Mr. Bates: For Caring

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## CHAPTER ONE: INTRODUCTION TO THE STUDY

*“Learning improves to the degree that it arises out of the process of reflection.”*

Shermis, 1999

In the past 10-15 years, numerous commissions, boards, and foundations as well as states and local school districts have identified reflection/inquiry as a standard toward which all teachers and students must strive not only in meeting new educational reforms but in helping maintain a dynamic, democratic society. The focus of this study was to examine the impact of using guided, structured reflective prompts and written discourse occurring between students and teachers within a college-level reading and study strategies course. Although there is a large body of research on the topic of reflection, none speak to its practice within this specific context.

Guided reflection prompts were used to determine the impact of providing structured steps in modeling the reflective process and in receiving individual feedback from teachers on students' ability to reflect on issues affecting their learning. It was hoped that by providing a structured framework from which to practice reflection, and in providing teacher feedback and guidance, students would find that their learning improved through their problem-solving efforts. The reflection prompts used in this study evolved out of a number of assignments already inherent within the curriculum which involve reflective components such as goal setting, motivation, and personal writing concerning issues affecting student learning.

In recent years, the topic of reflection has become a widespread interest for professionals both in the field of education and those within the area of professional growth. Within the education profession, Dewey is described as the “premier philosophic source on reflective methods” (Willower, 1992, p. 3) and both defined and developed the concept of reflective thinking in 1910 in *How We Think*. When searching the ERIC database on the topic of reflection, I found 6,453 articles which included those for professional development and reflective teaching and coaching. Articles addressing the reflective practitioner included 221 references with subtopics for human resources and professional development. Reflection and transformative learning listed 84 articles which included those concerning human resources and conflict resolution, and reflection and writing sources included 807 articles.

Dewey’s definition of and initial concepts for reflection (as distilled by Rodgers, 2002) served as the basis for the present study. According to Dewey, the successful practice of reflection is defined as “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” (1991, p. 6). Dewey’s basic premise concerning reflective practice is that it should be concerned with problem-solving with the end result being improved learning.

Major concerns about the practice of reflection are having no clear direction from which to proceed, specific steps to take in that direction, no precise theoretical framework from which to work, not having adequate time in which to accomplish the task well, and even more abstract necessities such as specific mental attitudes, habits of mind, and a

sense of individual ownership of some problem or issue from which to proceed (Rodgers, 2002). The present study involved students enrolled in a 100 level college course who may have been identified by various campus services (or considered by themselves) as qualified but possibly under-prepared for college work by virtue of reading and/or writing scores, those on academic probation, students with special needs and non-traditional students who have been removed from the academic environment for an extended period of time.

One way to begin to address these concerns is in giving clearly defined and structured reflection prompts which guide students in focusing their thinking on a particular issue with step-by-step questions which lead them from generalized thinking to generating steps needed in order to change or improve their situation (problem solving and ownership) and the time in which to do so. These responses along with written dialogue provided in community with teachers in response to students' writing in resolving issues and/or achieving goals was explored in this study.

### **Research Questions**

1. How did student participation in structured, guided reflection activities in a college reading and study strategies course impact students' ability to reflect?
2. What did student written responses to structured, guided reflection prompts in a college reading and study strategies course reveal about the students'

perceptions of their ability to reflect? How did these perceptions change over time during the course of one semester? (Five sections each per two semesters).

3. How did students perceive the opportunity to write in response to structured, guided reflection prompts and receive teacher feedback in a college reading and study strategies course?

### Statement of the Problem

The problem of implementing reflection/inquiry within curriculum as a standard in meeting new educational standards lies in not only a lack of a clear definition but in how it can be taught and assessed. Adult educators, like other professional groups, are practicing professionals specifically concerned with the education and learning of adults and have a long history of concern with reflection and critical analysis (Boreham, 1988; Brookfield, 1987; Mezirow, 1977; Usher, 1985; Usher & Bryant, 1989). Unfortunately, many articles written for use by adult educators are concerned with increasing the understanding of the concept of the reflective practitioner in professional groups (including teachers), but not its implementation (Ecclestone, 1996, 1992; Knight, 1996; Shermis, 1999). Without some standardized form of implementation, educators will continue to find the ability to discuss, assess and research the process of reflection a confusing if not impossible task.

Dewey states that the process of reflection is inherent to the improvement of learning (making meaning of human experience) with the ultimate result being the

maintenance of a healthy democratic society. If the greatest obstacle is in defining how reflection can be as Rodgers states “taught, learned, assessed, discussed and researched” in the field of education (2002, p. 842), it stands to reason that a logical place from which to begin is in utilizing a guided and structured assignment which models the reflective process within curriculum.

### Theoretical Framework

Contemporary educators and researchers return to Dewey and his concepts on modes of thought as the historical basis of reflection, which relies heavily upon the broad outlines of earlier Platonic/Socratic accounts of reflection (Argyris & Schon, 1974; Kerka, 1996, 2002; Kolb, 1984; Mezirow, 1978, 1991, 2000; Rodgers, 2002; Schon, 1983, 1987, 1991; Shermis, 1999; Spalding & Wilson, 2002; Zeichner & Liston, 1990). Dewey’s original definition of reflection is: “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” (1910/1933). Dewey makes clear that “a reflective thinker moves deliberately from the data of the experience to formulating a theory, to testing his theory about the experience” (as cited in Rodgers, 2002, p. 851).

Rodgers has distilled Dewey’s six phases of reflection into a more easily managed four:

1. Presence to experience

2. Description of an experience (implies holding at bay spontaneous interpretations—Dewey’s phase two—until analysis, where they can be more closely examined in light of the data gathered)
3. Analysis of experience (which subsumes Dewey’s phases four and five)
4. Intelligent action/experimentation (Dewey’s phase six) (2002, p. 856)

For purposes of this study, Dewey’s phase 3 (naming the problem) was subsumed under phase 2 described by Rodgers.

These four steps move one from an initial experience through the process of coming to a hypothesis concerning that experience. After experimenting or testing the hypothesis, one has new information and possibly a new frame of reference from which to proceed in further hypothesizing and testing. Thus one is moved through the cyclical process again in interpreting the results of that experiment and so on, as required in empirical research.

In addition to Rodgers’ distillation, Mezirow’s Theory of Transformational Learning (1978, 1991, 2000) in the reframing of perspectives or habits of mind, was considered for this study. The concepts of discourse in community with teachers through writing and individual voice of learners as a means of potential transformation of the learning experience also helped to shape the framework of this study. Since no research was discovered concerning writing in response to guided reflection prompts by college students, I used research concerning journal writing as a source of information about reflective writing by college students.

One criticism of the concept of reflection stems from the fact that there is no clear direction from which to proceed, or specific steps to be taken in that direction. Providing students with both structured reflection prompts with clearly defined steps to be followed along with using the concepts of discourse in community with teachers through writing and individual voice of learners as researched by Kerka (1996), Spaulding and Wilson (2002) and Rodgers (2006) provided insight in relation to potential transformation of the learning experience for this study.

As such, Dewey's original definition and concepts concerning the process of reflection (as distilled by Rodgers) served as the foundation for the theoretical framework for the study.

### Reflection

Inherent within the framework of Dewey's ideas on reflective thought and practice are two phases which must be present:

- (1) a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and
- (2) an act of searching, hunting, inquiring, to find material that will resolve the doubt, settle and dispose of the perplexity. (1910/1933, 1991, p. 12)

Dewey also saw reflective thought as a kind of chain of thoughts linked together in a sustained movement to a common end, which must come to some conclusion. Like a train, it must eventually arrive at a destination.

In keeping with Dewey's theory, Rodgers (2002) has developed a framework by which the writings of Dewey have been broken down into easily understood steps which make use of aspects of what Dewey believed makes us human and what makes us learners. Rodgers also adheres to Dewey's insistence that how we go about reflecting on reflective practice mirror the scientific method--grounded in evidence. As such, the theoretical framework or model developed by Rodgers based on her distillation of Dewey's writings was used for purposes of this study.

Dewey makes clear that "a reflective thinker moves deliberately from the data of the experience to formulating a theory, to testing his theory about the experience" (as cited in Rodgers, 2002, p. 851). Rodgers goes on to identify six phases in Dewey's reflection process which she labels as

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 hypotheses. (Rodgers, 2002, p. 851)

Therefore, for purposes of this study, the basic framework on reflective thought and practice as originally developed by Dewey and distilled by Rodgers was used when referring to the practice of reflection.



### Transformational Learning

The nature of reflection within Transformational Learning theory again comes from Dewey's insistence that one must first be aware of some problem which needs to be solved. Dewey referred to this awareness as the pre-reflective stage of critical inquiry. However, Mezirow states that what is missing from this stage, as described by Dewey, is a fault-finding review of presuppositions from prior learning and their consequences, a seeing through of habitual ways of learning in reassessing validity of previously unquestioned perspectives.

According to Mezirow (2000),

Transformative Learning Theory refers to the process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action. Transformative learning involves participation in constructive discourse to use the experience of others to assess reasons justifying these assumptions, and making an action decision based on the resulting insight. (pp. 7-8)

In other words, one must necessarily rely on one's own experience to guide action, but also include the experience of others in order to justify one's interpretation of an experience and to then proceed to take action based on both. Transformative learning refers to transforming a problematic frame of reference to make it more dependable in our adult life by generating opinions and interpretations that are more justified.

As students follow the steps in the guided reflection prompts, they must not only state what the issue(s) are which are affecting their learning and what steps they need to take in order to resolve them, but also plumb their perspectives on their prior learning and problem-solving skills. By writing down their thoughts and receiving feedback from teachers, they may receive new insights and perspectives on how they might approach issues affecting their learning and gain a new-found confidence in their ability to resolve them.

#### Discourse and Authentic Voice

Mezirow states that “Fostering discourse, with a determined effort to free participants from distortions by power and influence, is a long-established priority of adult educators” (2000, p. 14). Reframing of new perspectives happens through dialectic in finding one’s own voice rather than relying on the voices of tradition and authority, and by sharing that voice with and among others through written discourse. This is referred to as authentic voice.

Dewey, (1910/1933, 1991), Mezirow (1978, 1991, 2000), and Kerka (1996, 2002) among others, speak to the power of finding one’s own voice. Likewise, an inability to participate in discourse denies one his/her own voice, and thus participation in what is considered a true democratic society. As students respond in writing to guided prompts, they are “speaking” in their authentic voices not only to teachers but to themselves. As teachers respond, a dialogue is constructed in which the student may discover new insights and/or reinforcement in his/her opinions and ability to problem-solve and

improve learning. The power of this individual voice within the classroom is a precursor for confidence and participation in a society that places great importance on each individual within a democracy.

### Discourse

Dewey believed that reflection needs to be done in community with others; that to reflect and not share with others was an incomplete (or irresponsible) act. It is through discourse or sharing in community with others that one can begin to see the strengths and weaknesses of one's own thoughts, ideas and/or beliefs.

Discourse (or descriptive feedback as Rodgers calls it) is defined as:

a reflective conversation between teacher and students wherein students describe their experiences as learners, with the goals of improving learning, deepening trust between teacher and student, and establishing a vibrant, creative community on a daily basis. (Rodgers, 2006, p. 209)

A reflective conversation can be accomplished through spoken or written dialogue between students and teachers. According to Kerka (1996, 2002) the use of journals and diaries:

...have a long history as a means of self-expression. Several themes prevalent in adult learning—coming to voice, developing the capacity for critical reflection, and making meaning—are reflected in the way journals can be used in adult education. (pp. 1-2)

Like Kerka, Spaulding and Wilson (2002) begin with the definition of reflection given us by Dewey and contribute further important—although possibly intangible benefits to reflective journal writing such as serving as a permanent record of thoughts and experiences, provide a means of establishing a relationship with instructors, serving as a safe outlet for personal concerns and frustrations, and as an aide to internal dialogue.

In addition, Spaulding and Wilson believe that reflective writing within the context of community, such as in journal writing, also helps students grow within the discourse provided by teachers in the form of feedback to written entries. Journals also aid teachers in that they serve as windows into students' thinking and learning, provide a means of establishing and maintaining relationship with students, and serve as dialogical teaching tools.

Even though reflection prompts used in the present study are not considered journal entries per se, they are part of reflective writing, and the work of Kerka (1996, 2002) and Spaulding and Wilson (2002) attempts to clarify the role of writing in the process of learning.

### Authentic Voice

In *Attending to Student Voice: The Impact of Descriptive Feedback on Learning and Teaching* (Rodgers, 2006), Rodgers states that having to express oneself to others reveals both the strengths and the holes in one's thinking. Voice, whether spoken or written, requires that one not only think for oneself, but formulate and transmit that thinking to others. In doing so, one's thinking and learning can be transformed.

Authentic voice then becomes the means by which individuals reflect, communicate and reevaluate ideas, thoughts and beliefs and come to more justified conclusions based on their own and others' experiences.

In summary, the theoretical framework developed for the present study was based upon the concepts of reflection as defined by Dewey (1910/1933, 1991) and distilled by Rodgers (2002). Transformational Learning Theory, as defined and developed by Mezirow (1978), and Kerka (1996, 2002). Spaulding and Wilson's (2002) and Rodgers' (2006) theories on writing and receiving feedback as a means of coming to voice was utilized. These concepts and theories had relevance in the examination of the reflective writings of university students' responses to guided prompts.

### Importance of the Study

The present study's aim was to examine the reflective processes of under-prepared university students and to determine if these processes had the potential for Transformative Learning through the practice of reflection using guided and structured prompts. Through this study, it was hoped that the process of reflection became clearer and/or evolved in both theory and practice rather than simply disappear as Rodgers (2002) fears.

### Assumptions

The first assumption of this study was that written reflections are an accurate indicator of student thinking.

The second assumption was that students were writing what they believe or wanted to believe about themselves when discussing issues described in the reflection prompts, and not simply what they believed to be what the teacher wanted to see.

### Limitations

The primary limitation of this study was that while there are many stakeholders in the discussion concerning reflective thought and practice both within the field of education and society in general, this research was limited to the role of reflection practiced within the context of one university course.

Second, the results of this study may not have been representative of the entire population or generalizable to other education courses, such as those developed for primary and/or secondary education classes.

A third limitation lies in the fact that two teachers were involved as known participant observers in that the prompts were given by each of the two teachers in different sections of the course. Results were taken from two sections taught by one teacher, and three sections from another. Differing styles of teaching, presenting of the prompt assignments, and feedback given in response to student writing also differed accordingly.

A fourth limitation was that question six of reflection six combined the questions of how valuable it was to have the opportunity in which to write reflections and receive feedback on them. Therefore there were fewer data points to evaluate than if they had been asked as separate questions.

A fifth limitation was that in having students respond to prompts for only one semester, there was no way to go back and check with individual students on comments as to how they were interpreted by the researcher.

### Definition of Terms

**Discourse:** According to Mezirow, “Discourse is the process in which we have an active dialogue with others to better understand the meaning of an experience” (2000, p. 14).

**Reflection:** Dewey’s definition of reflection is, “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” (1910/1933, 1991, p. 6).

**Reflective Student:**

According to Dewey, a reflective practitioner is one who engages in active critical inquiry, or one who develops a “lively, sincere, and open-minded preference for conclusions that are properly grounded” (1910/1933, 1991, p. 28). For both Dewey and Rodgers, this (the reflective practitioner) can and should include teachers. However, for purposes of the present study, the term reflective student referred to students enrolled in a college reading and study skills course writing responses to a series of reflection prompts given in class.

### Improved Learning:

For purposes of this study, improved learning was defined as positive change in students' abilities (and/or perceptions of their abilities) to reflect through the use of guided reflection prompts and/or discourse occurring between students and teachers.

### Transformational Learning:

According to Mezirow, transformational learning happens when adults learn to change their frames of reference by “formulating more dependable beliefs about our experience, assessing their contexts, and seeking informed agreement on their meaning and justification” (2000, p. 4). For the purposes of this study, transformational learning referred to any changes in students' self-perceptions. When students' self-perceptions are changed in a positive way in relation to themselves as learners, a transformation occurs. Their frame of reference is updated to reflect a more dependable belief about themselves as learners.

### Authentic Voice:

According to Dewey, authentic voice is one gained from the practice of reflection or in making meaning from his/her experience in order to come to conclusions based on insight rather than on received dogma or tradition (1910/1933, 1991, p. 26). This, when shared in community with others is what constitutes transformational learning. In the present study, authentic voice included the individual and unique responses to reflection prompts



by both teacher and student in their own “talking language” concerning issues presented.

In summary, by using Dewey’s definition and distillation of his ideas on reflection into a viable framework, Rodgers has given us a place to begin the process of studying reflection. As Rodgers insists, Dewey would approve of our reflecting and refining his ideas based on our own experience and changing our theory as our own experience and accumulated knowledge dictate. In addition, with professional organizations and educators calling for more reflective practitioners in order to provide solutions to new problems and issues arising in both professional growth and education, learning to think in order to transform both oneself and others through mutual discourse is becoming more of a requisite than an option.

The present study was an attempt to answer the call for student as reflective practitioner. It is a beginning, a voice entering into the conversation concerning how the practice of reflection can be taught, implemented and researched within the context of a university reading and study strategies course. By providing guided, structured prompts in modeling the process of reflective thinking and in having written dialogue with teachers, did students learn how to resolve issues and reach goals and/or change their perceptions of themselves as learners?

## CHAPTER TWO: REVIEW OF THE LITERATURE

Much has been written on the definition and theory of reflection. (Boud, Keough & Walker, 1985; Fendler, 2003; Knight, 1996; Kolb, 1984; Mezirow, 1991, 2000; Rodgers, 2002, 2006; Schon, 1983, 1987, 1991; Shermis, 1999; Zeichner & Liston, 1996). However, actual research has been problematic in that a common definition of reflection and what constitutes reflective thought and practice differ as widely as those who write about these topics. Also, as Dewey states, for the process of reflection to begin there must first be an idea, problem or issue that must be resolved which leads to a theory which guides investigation or research for real learning to take place, and for the results of that learning to remain dynamic, they must continue to be researched (1910/1933, 1991).

The idea or issue guiding the present study on reflection sprang from a question I had after teaching several semesters concerning whether or not reflection could be taught. This question arose in response to what I perceived as a need among students first of all, to express and seek answers to issues affecting their learning (both academic and personal) in a safe environment and second, to establish some kind of connection with me within the classroom.

This was evidenced both in verbal and written communication throughout the course of the semester, including responses to several assignments within the curriculum which require that students reflect on goals, motivation, the use of study strategies, and the way they go about making meaning from text. These exercises require that the

student put his/her answers into writing which are responded to (also in writing) by the teacher. Over time, these written documents became not only written discourse occurring between student and teacher as a means of evaluating student competence and understanding, but also one of recognition and encouragement of progress already made.

Since the topic of reflection is inherent to both transformative adult learning and writing, the literature review will begin with a discussion of the topic of reflection in general and its definitions within the body of professional literature, and proceed to more specific guidelines as given by Dewey (1910/1933, 1991), Schon (1983, 1987, 1991) Kolb (1984) and Dewey's definition and ideas as distilled by Rodgers (2002). Section two will focus primarily on Mezirow (1978, 2000) and his Theory of Transformational Learning, and section three will focus on discourse through writing (including the use of journals) and authentic voice using primarily Kerka (1996, 2002), Spaulding and Wilson (2002) and Rodgers (2006).

As such, the literature review is broken down into three main sections:

1. Reflection: Dewey, Shon, Kolb and Rodgers
2. Reflection and Transformative Adult Learning: Mezirow
3. Reflection, Discourse Through Writing, and Voice: Kerka, Spaulding and Wilson, and Rodgers.

## **Reflection**

A plethora of definitions concerning the concept of reflection exists. However, the most-often quoted definition is the one given to us by Dewey in 1910, and according

to Dewey could be substituted for the word inquiry: “An 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” (1910/1933, 1991, p. 2).

In fact, much if not all of the literature written between Dewey’s time and the present begins with and credits Dewey for the origins of, and work on the concept of reflection and its role in learning. The most widely-known and respected writers and researchers in the field such as Boud, Keough and Walker (1985), Fendler (2003), Knight (1996), Kolb (1984), Mezirow (1991, 2000), Rodgers (2002), Schon (1983, 1987, 1991), Shermis (1999), as well as Zeichner and Liston (1996) begin with and expand on the writings of Dewey.

However as Dewey states, it is fitting that the ideas, theories, and results obtained from the many definitions of and theories concerning reflection continue to be discussed, reformulated and repeated if real learning is to take place. Rodgers points out that due to the difficulty in defining reflection, it is difficult to even begin to talk about. Some examples of definitions of reflection in the literature are:

Serious and sober thought at some distance from action and has connotations similar to ‘meditation’ and introspection’. It is a mental process which takes place out of the stream of action, looking forward or (usually) back to actions that have taken place. (Louden, 1991, p. 3)

Boud, Keogh, and Walker (1985) define reflection as: “A generic term for those intellectual and effective activities in which individuals engage to explore their experiences in order to lead to a new understanding and appreciation” (p. 4). In this,

Boud et al. view reflection from the learner's point of view. They emphasize the relationship of the reflective process and the learning experience against what the learner can do. In this, Boud et al. include emotions in the process, but reduce Dewey's five steps of reflective process into three, while excluding both the behavioral environment and the use of dialogue (unlike Dewey).

Reid (1993) defines reflection as "an active process rather than passive thinking." She states that "reflection is a process of reviewing an experience or practice in order to describe, analyze, evaluate and so inform learning about practice" (p. 306). Like Reid, Kemmis (1985) states that reflection is more than a process which focuses on the head.

It is a positive active process that reviews, analyses and evaluates experiences, draws on theoretical concepts or previous learning and so provides an action plan for future experiences. (p. 4)

Johns (1995) notes that reflection

...enables the practitioner to assess, understand and learn through their experiences. It is a personal process that usually results in some change for the individual in their perspective of a situation or creates new learning for the individual (p. 24).

Often the phrase critical thought is used instead of, or in conjunction with, reflective thought. Mezirow unravels a distinction between the two by stating that critical thought may be accomplished without any resultant action being taken, whereas reflective thought leads to newer or better ways of thinking or habits of mind, which is another phrase of Dewey's. Still others such as Zimmerman and Paulsen (1995) refer to

the process as self-regulation which requires students to take responsibility for their learning and also requires dynamic character traits such as enthusiasm, curiosity, willingness to take risks, persistence, and an enjoyment of the process.

What is clear however is that all agree on what reflection is not--a passive, free-floating, mindless activity. Rather it is an active, conscious process, one that is often initiated when an individual practitioner encounters some problematic aspect of practice and attempts to resolve or make sense of it. To reflect means to actively think upon that which is already supposed as *known*, which leads to further conclusion, and to further reflect upon these conclusions which brings new experience and with it new knowledge. Thought is not (nor should it be) static, but an on-going dynamic process of conclusion-drawing, further reflection and action. By this process we not only learn but make meaning of our experience, which is as Dewey states, the purpose of reflection.

The fact that humans are capable of making meaning from our experiences gives us the ability to know that we *are*, that we exist and are capable of thinking about our existence and what that existence means. To simply be aware of one's own existence is thought in its purest form. Or put another way, its simplest form. Everything that comes to mind or that goes through our heads is considered thought. However, as Dewey stated,

Daydreaming, building of castles in the air, that loose flux of casual and disconnected material that floats through our minds in relaxed moments are, in this random sense, *thinking*...In this sense, silly folk and dullards think.

(1910/1933, 1991, p. 2)

Clearly reflective thinking involves much more than daydreaming, stream of consciousness free-floating thought, or simply knowing that one *is*. As Dewey states, it must be disciplined, focused and aimed at a conclusion. Since Dewey has been considered the premier resource on the topic of reflection since 1910, his initial work, and the distillation of such provided by Carol Rodgers, will be used for the purposes of this study.

### Dewey

Within the specific context of education, reflective thought became the domain of John Dewey. In fact, Dewey's work is considered to be the very "roots of reflection" within the profession of education, and as such is an appropriate resource for the purposes of this study (Rodgers, 2002, p. 842). In *How We Think* (called the "'bible' of progressive educators in the USA") (Rorty, 1989, pg. ix), Dewey attempts to find a "single consistent meaning" to the word thinking (1910/1933, 1991, p. 1). In doing so, he excludes things we do not directly see, hear, smell, or taste. In other words, even reflective thought is incomplete if it does not lead to some empirical testing, conclusion drawing and further testing.

Reflective thought, according to Dewey, is directly related to action. "For Dewey, the basis of, and reason for reflection was the necessity of solving problems faced in habitual ways of action" (Miettinen, 2000, p. 61). His philosophy was that any hypotheses must be tested in experiential activity against solving a problem which

elicited the initial process of reflection. This is how learning and resultant knowledge is created. For Dewey, reflection without further action is an act of irresponsibility.

Furthermore, Dewey (like Zimmerman) believed the individual is also responsible for bringing certain personal traits into the practice of reflection if it is to be successful. Dewey brought the characteristics of discipline, courage, patience, curiosity, open mindedness, whole heartedness and responsibility into play and felt that with successful practice, reflective methods could become natural, virtually automatic and something that could engender commitment, emotion, and even passion (Willower, 1992). Inherent within Dewey's criteria for reflective thinking are the following elements:

1. (a) a state of perplexity, hesitation, doubt; and (b) an act of search or investigation directed toward bringing to light further facts which serve to corroborate or to nullify the suggested belief.
2. Given a difficulty, the next step is suggestion of some way out—the formation of some tentative plan or project, the entertaining of some theory which will account for the peculiarities in question, the consideration of some solution for the problem.
3. To hunt for additional evidence, for new data, that will develop the suggestion, and will either, as we say, bear it out or else make obvious its absurdity and irrelevance. (Dewey, 1910/1933, 1991, p. 9-13)

For Dewey, “reflective thinking, in short, means judgment suspended during further inquiry; and suspense is likely to be somewhat painful” (1910/1933, 1991, p. 13). This is



perhaps another reason why reflective thinking has been difficult to incorporate not only into educational practice, but in the business world as well.

Within the professional field, two names are well-known for their use of Dewey's initial definition and principles in the process of reflection and the empirical method: Donald Schon and David Kolb whose ideas will be discussed in the following sections.

### Schon

The literature on reflective practice and its role in professional circumstances is dominated by Schon. Schon's work in reflective practice has an historical foundation in a tradition of learning supported by Piaget (1967) and Dewey each of whom advocated that learning is dependent upon the integration of experience with reflection and theory with practice. Like Dewey, each argued that experience is the basis of learning, but that without reflection upon that experience, there is no extraction of meaning. The learning cycle of making a mistake or stumbling upon some problem, reflecting upon it and approaching it from a different perspective where chosen goals, values, plans and rules are operationalized is referred to by Schon as single-loop learning.

Schon's work builds upon this initial definition and framework of both what reflection is and how it should be practiced in the area of institutions. Schon, a theorist in business and education, took this single-loop learning (or reflection) a step further in stating that when the governing variables (goals, values, plans and rules) are scrutinized or questioned, and a resultant alteration is made to them, a paradigm shift occurs in what he called double-loop learning.

Schon contended that the main problem in the professions was that professionals were trained in problem solving which was grounded in a systematic, fundamental knowledge based on a science in which they were educated (theory) rather than being educated in how to handle actual practice which might include complexity, uncertainty, instability, uniqueness and value conflict—or problem setting. Once again, the idea of withholding judgment and further testing along with the discomfort of uncertainty during this process necessarily plays a role.

Schon's work built on Dewey's ideas and contributed three main achievements to our current understanding and concept of reflective thought and practice: the learning society, double-loop learning, and reflection-on-action. Schon's greatest contribution is seen as his innovations in the development of reflective thought and practice as learning systems within organizations, social movements and governments, and became more political in nature in speaking to how learning societies become systems within our socio-economic structure.

Like Dewey, Schon was interested in what he called "learning societies" (Smith, 2001, p. 1), with a concern for their social systems in being able to learn and adapt within a changing world. Schon has been called "the greatest theorist of the learning society" (Smith, 2001, p. 4) in that he hypothesized that the increasing proportion of free time and the rapidity of change necessitated a society better able to adjust itself to a state of inconstancy.

Schon's theory was that society could no longer hold the belief that our world is unchangeable and thus provides a bulwark of certainty (Smith, 2001, p. 4). As Schon put

it “institutions are characterized by ‘dynamic conservatism’ - ‘a tendency to fight to remain the same” (1983, p. 30). This loss of the stable state meant that institutions must prepare themselves to be in a continuous process of transformation in order to survive. As such, Schon’s and Dewey’s theories of the inevitable interaction between individual and society are reinforced. In order for social or learning systems to survive, this interaction must happen through mutual communication through networks, flexibility, feedback and organizational transformation—much as with individuals.

Schon (1987) identified two types of reflection: 1) reflection-in-action (thinking on your feet), and 2) reflection-on-action (retrospective thinking). Like Dewey, Schon believed that all learning involved the detection and correction of an error. This was referred to as single-loop learning when current goals, values, frameworks and strategies are taken for granted.

However, Schon took this to another level in not only detecting and correcting an error, but also in looking at the governing variables of a particular structure and in subjecting them to critical scrutiny and perhaps altering the structures themselves in resolving the problem. This was referred to as double-loop learning. In this way, the theories underlying problem solving may be looked at instead which could possibly lead to a shift in the way strategies and consequences are framed—an entire paradigm shift—or transformation.

Although the reflective manner that Dewey and Schon describe and recommend can be intensely personal and challenging as an individual endeavor, we must also be open to questioning our own long-held beliefs and willing to examine the consequences

of our actions within the broader context of society. This requires that communication and trust become prominent features between and among practitioners in order to create an ongoing dialogue within this context.

One criticism of Schon's theories is that while his critical analysis of systems theory substitutes responsive networks for traditional hierarchies, "his theory of governance remains locked in top-down paternalism" (Smith, 2001, p. 8). However, Ransom states that Dewey would agree with "the way that societies learn about themselves and the processes by which they transform themselves, is through politics, and the essence of politics is learning through public deliberation, which is the characteristic of effective learning systems" (1998, p. 9). Or in what Dewey would call inquiry.

Another criticism of Schon, is that (unlike Dewey) he does not "interrogate his own method," but relies on models which could be used by trainers in an unreflective manner (Usher, Bryant, & Johnston, 1997, p. 149). Trainers might become dependent on a specific model and base conclusions on how well participants adhered to the model, rather than look further for explanations. Like Dewey however, Schon believed that reflection is an active process that includes not only the identification of some problem or issue, but also requires that some action be taken upon it as part of the process.

Even though Schon has made great contributions to our understanding of the theory and practice of learning, the majority of Schon's work was as an organizational consultant in the area of professional development of organizations and many other professional groupings other than education specifically.

Schon's single and double-loop learning concepts of reflection are different from Dewey's only in name in that Dewey espoused the theory that all learning must necessarily fall back on what was learned previously and new knowledge created based on what was learned in addition to always questioning tradition, dogma, and how things were done or thought of in the past in the creation of new knowledge.

### Kolb

Kolb's book, *Experiential Learning, Experiences as the Source of Learning and Development* (1984) is regarded as "classical and as a foundation for experiential learning" (Miettinen, 2000, p. 55). Kolb's four-stage model focuses on experience and reflection—an overlap to both Dewey's and Schon's writing—which has more recently been looked upon as writing "consultancy literature" and further argument for the utility of his 1960's work in developing the Learning Styles Inventory (LSI). However, Kolb's model of experiential learning is based, as he says, on the theories of Dewey, Lewin and Piaget, and has been influential in the literature concerning management training and consultation, adult education, and research on cognitive processing styles.

*Experiential Learning* (1984) was originally formulated as a set of arguments for the utility of the author's earlier work—the *Learning Styles Inventory* (LSI). The main application of the model was to "manage and gain control of individual learning by inventing one's learning style" (Kolb, 1984) by which one may transform his/her learning experience. Like Dewey and Schon, Kolb posits that "learning is a process whereby knowledge is created through the transformation of experience" (1984, p. 38). In other

words, experience is translated into concepts, which in turn are used as guides in the choice of new experiences. Kolb's four-stage model is regarded as a foundation for experiential learning, used routinely as a source in the literature of the field and in the thesis of adult education students: "It has been an important starting point for several attempts to develop adult education theory" (Miettinen, 2000, p. 54).

Kolb refers to his model as " 'the Lewinian Experiential Learning Model' and 'The Lewinian model of Action Research and Laboratory Training'" which is based on the tradition of Lewinian action research and small group research (1984, p. 21). Kolb's four-step model states that in order for learners to be effective they need four different kinds of abilities—concrete experience abilities, (CE), reflective observation abilities (RO), abstract conceptualizing abilities (AC) and active experimentation abilities (AE) (1984, p. 28).

Kolb's experiential model claims to reinforce the empirical aspects of Dewey's in that the original problem must be reflected upon, some form of action taken and further reflection made upon the results. Kolb states that his model is not intended to develop an alternative theory of learning, but to suggest a "holistic integrative perspective on learning that combines experience, perception, cognition, and behavior" which Miettinen states are all part of the theoretical framework inherent within the theory of experiential learning (1984, p. 21). Therefore, Miettinen is also stating that there is a flaw within the model of experiential learning itself due to the idealistic nature or humanistic connection in that it is also necessary to have "faith in an individual's innate capacity to grow and learn" (2000, p. 54).

According to Miettinen, Kolb is attempting to fuse the four ways of conceptualizing reality set forth by Pepper (1972): Formism, mechanism, contextualism and organism with findings in brain physiology in defining functional differences between the right and left hemispheres of the brain (2000, p. 56). Although Miettinen admits this is tempting in taking the best of each theory, he quotes Pepper in stating that “when taken out of their theoretical context, the context where they came from—[they] change into ‘thin, little more than names with a cosmic glow about them” (quoted in Miettinen, p. 57).

Miettinen also states that the “belief in an individual’s capabilities and his individual experience leads us away from the analysis of cultural and social conditions of learning that are essential to any serious enterprise of fostering change and learning in real life” (2000, p. 71). On the other hand, Dewey’s model places the individual experience within the cultural and social conditions that lead to fostering change and “learning in real life” and not within T-group specificities (Miettinen, 2000, p. 71).

Ultimately, Miettinen concludes that in fact, none of the phases of Dewey’s model of reflective activity are included in Kolb’s model of Lewinian experimental learning, nor does it present Dewey’s model of learning. In fact, Miettinen states that even the essence of Dewey’s thought disappears in Kolb’s treatment, and that instead it is a model constructed only to substantiate his Learning Styles Inventory. However Kolb did characterize working toward solutions within community as those of the “here and now” and those of “there and then” types of knowledge (Miettinen, 2000, p. 59). These could

refer perhaps to what Schon described as single and double-loop learning, or reflection-in-action and reflection-on-action.

In conclusion, Dewey, Schon and Kolb share much in common in that each theorized that reflective thought must stem from the realization or understanding that one must necessarily first have a problem or issue that needs resolving, that some form of action needs to be taken to rectify the problem or issue, and that the consequences of that action must be reflected on further in order to move within a chain events to some conclusion. By this process, meaning is constructed, which all agreed was the basis of learning through meaning making.

Schon and Kolb also both state that the basis of their thoughts, concepts and theories of reflection stem from the 1910/1933 work of John Dewey entitled *How We Think*.

Though they would naturally come to their own conclusions concerning the concept of reflection based on their own work in much different fields (and for much different purposes) it is important to keep in mind that an on-going dialogue and reframing of ideas concerning its practice and purpose was precisely what Dewey had in mind.

Perhaps the person who has done more in recent years in keeping the discussion and practice of reflection alive is Carol Rodgers, whose work will be discussed in the next section, and upon whose distillation of Dewey's ideas provides the framework for the present study.



### Rodgers

Rodgers, Associate Professor of Education at the State University of New York in Albany (SUNY) has not only written on the topic of reflection, as defined and described by Dewey, but has distilled Dewey's main ideas into a viable framework from which to proceed in discussing the topic of reflection.

Rodgers has also written about the impact of descriptive feedback on learning and teaching in adult education. Her ideas have been incorporated into the Teacher Knowledge Project out of the School for International Training (SIT) in Brattleboro, Vermont which offers a three year partnership in training and supporting co-facilitators of inquiry groups for teachers and/or administrators. This teacher knowledge project has as its aim the making of reflective teacher inquiry groups as an integral part of professional development. In these groups, the reflective cycle (based on the work of Dewey and interpreted and developed by Rodgers) is used as the primary training tool.

Rodgers's rigorous theoretical framework is not only based on a clearly defined concept of Dewey's philosophical belief of what reflection is, but also breaks down the steps involved in a more scientifically grounded practice. It is a beginning to facilitate talking about reflection (or reflection on reflection) in a precise way by teachers, researchers and students in a way that cannot be so easily dismissed as soft or in vaguely defined movements.

Rodgers attempts to more clearly define Dewey's writings on the role of reflection and to distill the essential meaning and steps involved in what she perceives as the essence of reflection and the empirical emphasis Dewey placed upon the practice of

reflection. In this way, Rodgers hopes to clarify the concept of reflection and what it means to think by going back to the roots of reflection as defined by Dewey, and break down into manageable parts the concepts put forth by Dewey in 1910.

Rodgers (2002) claims that although institutions, boards and foundations are calling for thinking to learn as a standard toward which both students and teachers must strive, an extensive examination of what Dewey meant is missing in contemporary literature. Rodgers gives four reasons for this problem in addition to the sheer effort involved in making Dewey's more philosophical writings more accessible in a hands-on manner.

1. It is unclear how systematic reflection is different from other types of achievement of thought.
2. It is difficult to assess a skill that is vaguely defined.
3. Without a clear picture of what reflection looks like, it has lost its ability to be seen and therefore has begun to lose its value.
4. Without a clear definition, it is difficult to research the effects of reflective teacher education and professional development on teachers' practice and students' learning. (Rodgers, 2002, p. 842)

Rodgers also reinforces Dewey's insistence on a scientifically grounded and empirical methodology along with placing it (as Dewey did) within the greater concept of society.

In fact, one of Dewey's four criteria for reflective practice (and as distilled by Rodgers) is that it must happen in community—through interaction with others and with his/her environment. Rodgers states that for Dewey, “merely to think without ever

having to express what one [sic] thought is an incomplete act” (2002, p. 856). Without taking others’ ideas into consideration, a willingness to entertain different perspectives, coupled with an acceptance of the “possibility of error even in the beliefs that are dearest to us,” we are not acknowledging the limitations of our own perspectives (Dewey, 1933, p. 30). According to Rodgers’ distillation of Dewey’s concepts, without interaction and willingness to both accept our own limitations in perspective and to change them as individual habits of mind, “learning is sterile and passive, never fundamentally changing the learner” (2002, p. 847).

Rodgers gives four clearly defined criteria for reflection according to Dewey as:

1. Reflection is a meaning-making process that moves a learner from one experience into the next with deeper understanding of its relationships with and connections to other experiences and ideas. It is the thread that makes continuity of learning possible, and ensures the progress of the individual and, ultimately, society. It is a means to essentially moral ends.
2. A systematic, rigorous, disciplined way of thinking, with its roots in scientific inquiry.
3. Reflection needs to happen in community, in interaction with others.
4. Reflection requires attitudes that value the personal and intellectual growth of one self and of others. (2002, p. 2-13)

Each of these four criterion is then elaborated upon by Rodgers as to how it relates to Dewey’s concepts through direct quotes from his work cross referencing many articles and books written by Dewey, including *How We Think* (1910/1933, 1991),

*Democracy in Education* (1916/1944), *Experience and Education* (1938), and also by others including Schon, and attempts to interpret these works as they relate to each criterion.

In doing so, Rodgers is able to keep Dewey's initial ideas ever-present in the mind of the reader, the philosophical underpinnings of each, and in addition give a more contemporary or practitioner-friendly version of how each relates, and can be used as a guideline in actual practice. Rodgers gives us a clearly defined idea of reflection and reflective practice along with easily understood and manageable steps within the process. In this way, a clearer language of reflection (or reflection on reflection) can begin to have an impact on students, teachers and other practitioners who acknowledge the value of its role in our collective knowledge.

According to Dewey (as distilled by Rodgers) experience is the beginning of reflection. But just to experience something is not enough, one must also be aware of the significance of an event. As she goes on to state:

How many apples had fallen on heads before Newton perceived the inherent significance of the event? Thus an additional quality is necessary in the person—a quality of being present to the nature of the experience and an openness to its potential meanings. (Rodgers, 2002, p. 850)

According to Rodgers' first criterion in distilling Dewey's ideas, the function of reflection is making meaning in order to formulate the 'relationships and continuities' among elements of an experience, between that experience and other experiences, between

that experience and the knowledge that one carries, and between that knowledge and the knowledge produced by thinkers other than oneself (Rodgers, 2002, p. 858).

Criterion two requires that the process of reflection mirror the scientific method, which according to Rodgers includes:

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 (2002, p. 851)

Rodgers goes on to collapse these six phases into a more manageable four:

1. presence to experience (Dewey's phase 1)
2. description of experience (implies holding at bay spontaneous interpretations—(Dewey's phase two)—until analysis, where they can be more closely examined in light of the data gathered
3. analysis of experience (which subsumes Dewey's phases four and five)
4. intelligent action/experimentation (Dewey's phase six) (2002, p. 856)

For purposes of this study, Dewey's phase 3 (naming the problem) will be subsumed under phase 2 described by Rodgers.

The third criterion, reflection in community, states that one must necessarily express oneself to others so that others can truly understand one's ideas and also "reveals the strengths and the holes in one's thinking" (Rodgers, 2002, p. 856). According to

Dewey, “One has to assimilate, imaginatively, something of another’s experience in order to tell him intelligently of one’s own experience” (1916/1944, p. 6).

Criterion four brings emotion into the equation wherein Dewey states that human beings are not divided into two parts—one emotional and the other intellectual—unless it is a by-product of false methods of education.

There is no integration of character and mind unless there is fusion of the intellectual and the emotional, of meaning and value, of fact and imaginative running beyond fact into the realm of desired possibilities. (1933, p. 278)

Rodgers states that because Dewey wrote *How We Think*, and not *How We Feel*, this dimension of learning is often over looked. In this, Dewey brings attitudes within the individual to bear on the act of reflection and resultant learning. These individual traits within each person bring a sense of responsibility to learning and the discipline of harnessing them and using them to our advantage is “part of the work of a good thinker” and aids us in accepting what evidence tells us is so, rather than the all-too-human trait of seeing what we wish to see (Rodgers, 2002, p. 858).

The attitudes described by Dewey are:

1. Whole-heartedness (a genuine, no holds barred enthusiasm about one’s subject matter)
2. Directness (trust in the validity of one’s own experience without spending a lot of time worrying about the judgment of others)

3. Open-mindedness (hospitality; a willingness to entertain different perspectives, coupled with an acceptance of the ‘possibility of error even in the beliefs that are dearest to us,”) )
4. Responsibility (implies that a carefully considered line of thought should lead to action) (Rodgers, 2002, p. 858-862)

Rodgers’ use of Dewey’s definition and ideas on reflection emphasizes the process of reflection as rigorous, and systematic, having scientific method including precise steps: observation and detailed description of an experience, an analysis of the experience that includes generation of explanations and development of theories, and experimentation—or a test of theory.

For purposes of the present study, the foundational theory on reflection given us by Dewey in 1910 and distilled and elaborated upon by Rodgers in 2002 is appropriate. In addition, the theory of Transformational Adult Learning which follows will be considered when researching the data on student learning.

### Reflection and Transformative Adult Learning

#### Mezirow

Transformative Learning is a term coined by Jack Mezirow in 1978 in a ground-breaking study of women who returned to community college to continue their education. According to Mezirow, learning occurs in one of four ways: by elaborating existing frames of reference, by learning new frames of reference, by transforming points of view, or by transforming habits of mind. Transformation refers to “a movement

through time of reformulating reified structures of meaning by reconstructing dominant narratives” (2000, p. 19).

Just as with Dewey and Schon, Mezirow states that learning pertains to making meaning as a learning process or epistemic cognition--the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience as a guide to future action. However Mezirow takes this definition further in stating that:

Transformative learning refers to the process by which we transform our taken-for-granted frames of reference (meaning perspectives, habits of mind, mind-sets) to make them more inclusive, discriminating, open, emotionally capable of change, and reflective so that they may generate beliefs and opinions that will prove more true or justified to guide action. (2000, p. 8)

In this way, transforming a problematic frame of reference makes it more dependable in our adult lives by generating opinions and interpretations that are more justified. In other words, as Dewey and Schon state--the end result of reflective problem solving—a more successful practice.

Mezirow takes both the new understanding and the action taken from the new understanding (praxis) to constitute an altered state of being which he calls Transformative Learning. Dewey would call this successful reflective practice in that it comes full circle in having taken prior knowledge concerning a situation, taking action on that knowledge, and coming to a new understanding based on experimentation.



Also inherent within reflecting collaboratively in problem solving and transformation of habits of mind is the role of dialogical discourse which leads to a clearer understanding by tapping collective experience to arrive at a tentative best judgment.

Discourse, according to Mezirow, “is not based on winning arguments; it centrally involves finding agreement, welcoming difference, ‘trying on’ other points of view, identifying the common in the contradictory, tolerating the anxiety implicit in paradox, searching for synthesis, and reframing” (2000, p. 13). All echoes of the theories of Dewey and subsequently Schon and Kolb.

Transformational learning seeks to explain the way adult learning is structured and to determine by what processes the frames of reference through which we view and interpret our experience (meaning perspectives) are changed or transformed.

Transformation occurs, according to Mezirow, through some variation of the following:

1. A disorienting dilemma
2. Self-examination with feelings of fear, anger, guilt or shame
3. A critical assessment of assumptions
4. Recognition that one’s discontent and the process of transformation are shared
5. Exploration of options for new roles, relationships and actions
6. Planning a course of action
7. Acquiring knowledge and skills for implementing one’s plans
8. Provisional trying of new roles
9. Building competence and self-confidence in new roles and relationships

10. A reintegration into one's life on the basis of conditions dictated by one's new perspective (2000, p. 22)

Reflective thought and practice which takes into account its role within the context of society where collaboration and communication must take place in order for the process to continue to be a dynamic one in which real growing (or learning) can take place becomes what Mezirow (as Dewey) believes is the end result of reflection--learning and meaning-making. "The justification for much of what we know and believe, our values and our feelings, depends on the context—biographical, historical, cultural—in which they are embedded," or our taken-for-granted frames of reference (Mezirow, 2000, p. 3). These too, and perhaps more importantly, must be taken into consideration when reflecting upon a situation or dilemma and reinforces the idea of the importance of dialogue or sharing in community in order to come to more justified conclusions.

Mezirow believes that formulating more dependable beliefs about our experiences, assessing their contexts, seeking informed agreement on their meaning and justification, and making decisions on the resulting insights are central to the adult learning process. Put another way, it seems as Dewey stated—a means by which to draw further, more relevant conclusions about what one knows or believes based on new information. Mezirow's idea that the product of reflective thought is transformative learning seems the next logical step in Dewey's original (and much-often-quoted) definition. Mezirow's three categories of reflection depend on the practitioner's purpose:

1. Task-oriented problem solving

2. Understanding what someone else means

3. Understanding the self

By examining an issue or problem to be solved within the context of collaboration and communication, we may transform our own points of view by becoming “critically reflective of assumptions supporting the *content*, and/or *process* of problem solving” creating a transformation in what both Dewey and Mezirow refer to as habits of mind. When major shifts in habits of mind occur, transformative learning also occurs (Mezirow, 2000, p. 20). This could be seen also as what Schon referred to as double-loop learning.

Mezirow states that reflective discourse, within Transformation Theory, is “that specialized use of dialogue devoted to searching for a common understanding and assessment of the justification of an interpretation or belief” (2000, p. 10-11). Mezirow goes on to state that “Discourse is the process in which we have an active dialogue with others to better understand the meaning of an experience” (2000, p. 14). Without input from others we are left once again with only our own individual experience and interpretation of it.

For Mezirow finding one’s voice is a precondition to assessing, understanding and making meaning from one’s experience and in sharing those experiences with others through community discourse in order to come to a new understanding or frame of reference, and ultimately in changing our habits of mind. Our ideas and perspectives, when shared in community with others, open the possibilities of seeing a thing from a new perspective based on the experiences of others. Likewise, an inability to participate

in discourse denies one his/her own voice. One way of participating in discourse is through writing.

### Reflection and Discourse Through Writing and Voice

In adult learning, individual voices “want to be heard and they want to hear from each other. It is vital to their learning process” (Duncan, 1997, p. 3). In providing students an opportunity in which to voice their concerns, ideas, and goals through written, private, and one-on-one dialogue with the teacher, a first step is taken in giving students and teacher a means by which one-on-one dialogue can take place. Providing students a safe and private means of dialogical discourse with the teacher, students must engage with both one another and the teacher in order to move toward speaking their own mind, toward questioning others’ assumptions, and toward networking, or as Rodgers states in her distillation of Dewey’s writings: happening in community, in interaction with others. One way of finding one’s own voice in community is through writing. According to Liedtke and Sales (2001) “writing is a useful catalyst for reflection and presents students with an opportunity to state their ideas clearly and convincingly to an audience (p. 350).

### Kerka

To Kerka (1996), writing is not only a means of reflection and growth through critical reflection, but also provides a text written in the learner’s authentic voice. Several themes in adult learning include “coming to voice, developing the capacity for critical reflection and making meaning” (p. 2). It also enables

...learners to articulate connections between new information and what they already know... Writing can provide tangible evidence of mental processes...make thoughts visible and concrete, giving a way to interact with, elaborate on, and expand ideas. (p. 3)

Having to express oneself to others (either verbally or through writing) both helps others to understand one's ideas, but also reveals the strengths and weaknesses in one's own thinking. In this way, self-discipline is required in being accountable to and responsible for others as well as ourselves—and our environment.

Kerka (1996, 2002); Black, Sileo, and Prater (2000); Chapman (2003); Liedtke and Sales (2001); Shuy (1987), and Spaulding and Wilson (2002) speak to the power of writing in the form of journals as a means of knowing one's self, learning to connect the abstract and concrete, develop metacognitive strategies for higher learning and as a means of receiving support, insight and feedback.

According to Schneider (1994), journal writing is closest to natural speech, and writing can flow without self-consciousness or inhibition. It also aids memory, provides a context for healing and growth, and a safe place to practice writing without the restrictions of form, audience and evaluation (Kerka, 1996).

In addition, journals are “a less formal, less threatening way for older reentry learners to approach writing in a course to ‘talk’ in a way they might not in class” (Grennan, 1989). They also provide “tangible evidence of mental processes, make thoughts visible and concrete, giving a way to interact with, elaborate on, and expand ideas” (Kerka, 1996, p. 3). A journal is a text written in “the learners’ authentic voice”

and this engagement with one's journal adds a "necessary affective element to the learning process" (Kerka, 1996, p. 4).

In addition, when reflective discourse occurs through writing, such as in a reflective journal where others such as teachers are reading and responding to entries, such as the reflection prompts used in the present study, a dialogue develops from one of individual reflection to one done in community with others. Through dialogue, "...they [students] receive support, insight, and feedback; learn to connect the abstract and the concrete; and develop metacognitive strategies..." (Kerka, 1996, p. 2). This reflective discourse between student and teacher can also "bridge the gap between the abstract intellectual idiom of the classroom and the reality of the outside world" (Randic, 1991, p. 1).

According to Vygotsky (1962), knowledge, thought, and learning are social and collaborative acts. Language that includes thought and action is used in writing, and that writing communicates the multitude of voices inside each person. Vygotsky, along with other language scholars such as Elbow (1973), as well as Moffell and Wagner (1968) believe that human beings find meaning through exploration in their own talking language—or what Kerka (1996, 2002) calls authentic voice. Kerka, along with Black, Sileo and Prater (2000), Coia and Taylor (2001), Kim (2005), Reimers (1997), Shuy (1987) and Spaulding and Wilson (2002) attempts to demystify reflection through her research of writing in the form of journal-keeping.

Although the reflection prompts used in the present study are not considered dialogue journals, there is an element of journal writing in that students are asked to refer

back to previous reflection prompts in discussing such subjects as motivation, organization of time and issues affecting their learning which they have discussed previously. Students are also assumed to be writing in their authentic voice or “talking language,” and are participating in discourse with their teacher. For purposes of this study, Kerka’s, Spaulding’s and Wilson’s, and Rodgers’ theories and guidelines will serve as a framework for learning through reflective journal writing, discourse in community and authentic voice.

Kerka offers theories and research that support learning from reflective journal writing and guidelines (or maps) for teachers in the use of journals in adult learning.

Kerka offers the following benefits from journal writing according to research by Andrusyzen and Davie (1997), Mitchell and Coltrinari (2001), and Moon (1999):

To integrate new knowledge and create new meaning

1. Break habitual ways of thinking
2. Enhance development of reflective judgment and metacognition
3. Increase awareness of tacit knowledge
4. Facilitate self-exploration and personal growth
5. Work out solutions to problems
6. Enhance development of reflective judgment and metacognition
7. Increase awareness of tacit knowledge
8. Facilitate self-exploration and personal growth

In this way, journal keeping can be a means of reflection in community through dialogue, and transformational learning both for students and teachers.

The benefits for adult learning, according to Schneider (1994) are that journal writing is “closest to natural speech and writing can flow without self-consciousness or inhibition. It reveals thought processes and mental habits, it aids memory, and it provides a context for healing and growth” (Kerka, 1996, p. 3). In cases of English language learners and older re-entry students, journals also provide a less formal, less threatening way for learners to approach writing as a means of “talking” in a way they might not in class (Grennan, 1989).

Journal entries also provide a means of tangible evidence of mental processes. “They [journal entries] make thoughts visible and concrete, giving a way to interact with, elaborate on, and expand ideas” (Kerka, 1996, p. 3). In this way, they also demonstrate movement through Kolb’s modes of experiential learning: recording a concrete experience or feeling, reflecting on and observing the experience, integrating the observation into abstract concepts or theories, and using the theories to make decisions and solve problems.

### Spaulding and Wilson

Like Kerka, Spaulding and Wilson begin with Dewey’s definition of reflection and state that Dewey also claimed that reflection benefits individuals by giving them more control over experience thereby increasing the value of an experience-or in meaning-making. Also like Kerka, Spaulding and Wilson (2002) state that reflective writing done in community with teachers also provides a means of establishing and maintaining relationships, a safe outlet for personal concerns and frustrations, and acts as



an aid to internal dialogue. In a research study conducted using reflective journaling, it was found that “Overall, personalized feedback on their journals and their relationships with their instructors were most important in helping them grow” (2002, p. 1393).

### Rodgers

The role of dialogue between teacher and student is one that Rodgers calls “Descriptive Feedback” in attending to student voice (2006, p. 209). Rodgers attempts to explain the role of description of experiences on the part of teacher and student in reflective practice through dialogue which she refers to as “descriptive feedback” (2006, p. 209). Rodgers states that feedback can be “written, oral or both” (2006, p. 220) and describes descriptive feedback as

...a reflective conversation between teacher and students wherein students describe their experiences as learners, with the goals of improving learning, deepening trust between teacher and student, and establishing a vibrant, creative community on a daily basis. (2006, p. 209)

Rodgers postulates that currently the authorization of student voices is acknowledged at two ends of the continuum—knowing how students make meaning from their learning in the moment, and formal research on student perspectives after the fact (2006). Rodgers calls the space in-between these two descriptive feedback—coming to know students and their learning through description.

Once again Rodgers relies on Dewey’s process consisting of the four phases of reflective thinking: experience, description, analysis, and intelligent action. In revealing

this process through dialogue, Rodgers says she has come to know the power of it in meeting learners' needs and in building trust and community—two things also believed to be necessary by Dewey and Mezirow in order to be a true reflective thinker.

Rodgers states that students must feel that their views are “desired, respected, accepted, and acted upon” in order for initial doubts and reserve to fade (2006, p. 211).

Rodgers insists that “as far back as Dewey, educators have been calling upon teachers to listen to students and to be “‘alive’ to their thinking affect and learning” (2006, p. 11). In addition to constructivists who have made listening to their students and sharing power in reforming education a priority, inclusion of student voice through the lens of critical pedagogy has also become a focus (Banks, 1996; hooks, 1994; Ladson-Billings, 1994; McLaren, 1989; Nieto, 2000; Shor, 1993).

By having a conversation with students about their learning, teachers are what Rodgers calls “attending to student voice” or actively listening, thereby showing respect for students' views. “Once they perceive that their views are desired, respected, accepted, and acted upon, once they see what the teacher is asking for and why, and that the teacher is ready to learn, their doubts and reserve [for reflective dialogue] tend to fade” (Rodgers, 2006, p. 211).

As Rodgers states, “when teachers begin to see students, students begin to feel seen” (2006, p. 232). The role of student voice and descriptive feedback between student and teacher is a means of building community within the classroom and trust between students and teacher, whether done through dialogue within the classroom or through writing.

In summary, reflection as defined and described by Dewey is a long and well-established framework from which to begin the discussion on the topic of reflection. With both Schon and Kolb relying heavily on the initial work of Dewey in refining their own methods in professional settings and most importantly (and appropriately within the confines of the present study) with Rodgers in the area of education, their research is appropriate as a model.

With the possibility of transformative learning being an end result (and possibly further step in Dewey's model) the work of Jack Mezirow will be considered in conjunction with his work on the importance of voice. Kerka's, Spaulding's and Wilson's and Rodgers' research on the importance of writing and the role of dialogue--or feedback-- and resultant finding of one's own voice is important in the context of reflection writing to prompts given for purposes of this study.

In addition, the methods chosen for this study are based upon the theoretical frameworks derived from the research done by the above as being those who are most respected in their fields of study. Furthermore, the work of Rodgers is the first of its kind in providing a viable framework from which to begin discussion, implementation and research based on the concepts and beliefs of Dewey--long considered the expert on reflection.

## CHAPTER THREE: METHODOLOGY

### **Research Design**

#### Qualitative Methodology

A qualitative methodology incorporating the use of a case study design from the perspective of a practitioner researcher was chosen for the present study. Qualitative methods involve an interpretive, naturalistic approach to subject matter. The researcher attempts to study things and people in their natural settings and “make sense of or interpret phenomena in terms of the meanings people bring to them” (Gall, Gall & Borg, 2003, p. 24). Using a qualitative methodology, the data, consisting of participants’ written responses to structured questions, was analyzed in an attempt to interpret meanings inherent within the data. The interpretation of written responses in conjunction with the day-to-day interaction with participants adds unique meaning to interpretations from the perspective of practitioner/observer researcher.

#### Case Study Design

A case study design was used which “plays an important role in advancing a field’s knowledge base” and is an “appealing design for applied fields of study such as education” (Merriam, 1998, p. 41). A case study is also expected to catch the complexity of a single case.” It is the study of “the particularity and complexity of a single case, coming to understand its activity within important circumstances” (Stake, 1995, p. xi). By using students’ written responses and teacher feedback from two semesters

(consisting of five sections each) of a college reading and study skills course, a case study consisting of those particular semesters was constructed.

### Practitioner Researcher Perspective

As practitioner researcher within the context of my own classroom, I administered the prompts and provided feedback to a portion of the responses in the hope of improving my own practice within the classroom. According to Patton (2002) in order “to understand fully the complexities of many situations, direct participation in and observation of the phenomenon of interest may be the best research method” (p. 21). In addition, Becker (1970) argues that participant observation is the most comprehensive of all types of research strategies in that it must also have depth and detail. Patton cites six strengths of participant observation as:

1. Through direct observations the inquirer is better able to understand and capture the context within which people interact—understanding context.
2. Firsthand experience with a setting and the people in the setting allows the enquirer to be open, discovery oriented, and inductive.
3. The enquirer has the opportunity to see things that may routinely escape awareness among the people in the setting.
4. Provides the opportunity to learn things that people would be unwilling to talk about in an interview.
5. Provides the opportunity to move beyond the selective perceptions of others.

6. Getting close to the people in a setting through firsthand experience permits the inquirer to draw on personal knowledge during the formal interpretation stage of analysis. (2002, p. 263-264)

Through the choice of this methodology I hoped to not only discover a more in-depth knowledge of my participants' experience in using guided reflection prompts in learning the process of reflection, but inform my own practice in becoming a reflective practitioner myself.

### **Research Questions**

Three research questions guided the present study. They were as follows:

1. How did student participation in structured, guided reflection activities in a college reading and study strategies course impact students' ability to reflect?
2. What did student written responses to structured, guided reflection prompts in a college reading and study strategies course reveal about the students' perception of their ability to reflect? How did these perceptions change over time? (Five sections each per two semesters consisting of different students).
3. How did students perceive the opportunity to write in response to structured, guided reflection prompts and receive teacher feedback in a college reading and study strategies course?

## Research Context

### Our Classroom

The context of the present study was a 100 level, two-credit, pass/fail university reading and study strategies course taught in the Pacific Northwest. The course was designed and developed in order to target students of all learning abilities (freshmen – seniors) including those considered under-prepared for college work. There were five sections of the course offered in both fall, 2005 and spring 2006 semesters and each was capped at 17 students each. As a participant observer/researcher within my classroom, my own perspective or reflexivity aided in examining the data in that I was also the instructor for 3 sections of the course.

To be reflexive, according to Patton (2002) is to “undertake an ongoing examination of *what I know and how I know it* (p. 64), or “to have an ongoing conversation about experience while simultaneously living in the moment” (Hertz, 1997, p. viii). One of the requisites of being reflexive is in finding one’s own authentic voice which in turn “engages the reader through rich description, thoughtful sequencing, appropriate use of quotes, and contextual clarity so the reader joins the inquirer in the search for meaning” (Patton, 2002, p. 65).

As reflexive researcher, I also attempted to use my own authentic voice as students did through their writing. By this I hoped to give the reader as rich a description as possible of student experience in writing reflections and in receiving teacher feedback in order to aid in the search for meaning in this study.

### Course Content

The content of the course used for purposes of the study encourages a culture of reflection through the completion of a series of required assignments. One particular assignment consists of filling out a study strategy questionnaire concerning frequency use of particular study strategies. This questionnaire was based on one developed by Taraban, Rynearson and Kerr (2000) at Texas Technical University where the strategies were found to be positively correlated with higher GPA and metacognitive awareness. This questionnaire was also found to be associated with particular study strategies taught within the course.

In addition, a one page writing assignment is given in week 2 of the semester in which students are given the opportunity of either reflecting on their prior use of tools or in communicating with their teacher about anything students wanted the teacher to know about themselves and their prior learning and/or personal experiences. My initial question(s) sprang from these two assignments in particular in that the majority of students seemed to be choosing the opportunity to write about themselves as individuals or students rather than about tools used, and were very candid and direct in what they chose to tell me as their teacher. I felt it was an attempt to communicate with me on a more intimate level and over time perceived a need for students to have both a means of and opportunity in which to do this.

Also with the results of the questionnaire showing a statistical correlation between use of particular strategies and their effect on GPA, and the link with the strategies being taught within the context of the course, I wondered if this awareness of (or reflection on)



student practices and/or habits could be taught as a means of improving learning. The idea of using Reflection Prompts sprang primarily from these two assignments in relation to whether reflection through writing could be taught as a means of problem-solving and reaching individual goals. If students could be taught to reflect in writing as a means of problem-solving and improving their learning as well as a means of communicating with their teacher in building a community of trust through written feedback on responses, it seemed a question worth pursuing.

### The Prompts

The five prompts themselves (four of which were used for the purposes of this study) were developed by myself and one other teacher involved in the study concerning learning strategies being taught and practiced within the context of the class such as Motivation, Organization of Time, and Goals. These prompts were developed, used and responded to by myself and the other instructor for several semesters before the idea of the present study was formulated. Providing students with prompts and giving class time in which to think about possible issues along with clearly defined steps from which to resolve, seemed to me a fertile ground in which to research the practice of reflection itself. A more in-depth description of the course and a weekly breakdown of assignments are attached as Appendix B.

### **Research Participants**

Participants consisted of a convenience sample taken from five sections each of the university course during fall 2005, and spring 2006 semesters. For the fall 2005 semester, a total of 69 students completed the course with 59 giving written consent to use their reflections. For the spring 2006 semester, a total of 57 students completed the course with 43 giving written consent.

All students were required as part of the curriculum, to respond to six Reflection Prompts given over the course of the semester. However, only those students who gave written permission to use their responses were used for purposes of this study. As such participation was voluntary. The permission slip approved by the IRB (# 0000097) also guaranteed participant anonymity and confidentiality.

The participants ranged in age from 18 to 57, were from diverse socio-economic, cultural and racial backgrounds, and were in various stages of their undergraduate academic careers (freshmen-seniors). Of the 59 students giving written permission to use their reflections for this study for the fall, 2005 semester, 22 were male, and 37 female. Forty-six were identified as Caucasian, 2 as Asian, 3 as American Indian, 3 as Hispanic, 1 as African American, and 4 Not Identified. Twenty-five participants were 25 years of age or younger, and eighteen were 26 years of age or older. Demographics of gender and age were provided by the Registrar's Office.

For the spring, 2006 semester, of the 43 students giving written consent to use their reflections, 19 were male and 24 female. Ethnicity was not available. Twenty

participants were 25 years of age or younger, and twenty-three were 26 years of age or older.

Some students were identified as having learning disabilities, physical limitations or challenges, and/or participants in campus-sponsored minority or athletic affiliations. Others were recommended to the course by athletic or academic advisors or former students and still others from direct enrollment through the published class schedule available to all registering students.

## **Data Sources and Procedures**

### Data Sources

The data sources used for purposes of this study were student responses to five Reflection Prompts provided in class which included a self-assessment and a narrative component, as well as teacher feedback on each prompt. Teacher feedback was also used in conjunction with student responses as dialogue.

### Reflection Prompts

Inherent within the Reflection Prompts was the notion that in order to address and self-rate the issues involved, students needed to probe their own values, beliefs, and frames of reference from previous experience and position within the greater framework of their culture and society. Students needed to look critically at where they rated themselves and why, in addition to relying on past experience and knowledge about how

to address the issue and what steps needed to be taken in order to achieve a goal or resolve an issue.

The Prompts were of an interview nature, but were asked and responded to in writing rather than verbally. For instance, prompts 1, 3, 4 and 5 ask students to “talk about” the ratings they gave themselves, what needed to be done in order to improve the situation, and the next step needed to take in improving. Question 6 gave students an opportunity to “talk about” the value of writing reflections and receiving feedback from teachers.

All data sources used for purposes of this study were contained within the Reflection Prompts themselves consisting of student responses to the structured, guided steps given within each prompt, including both a written interview and narrative portion to be completed by students. All written student examples included were chosen randomly from all participants.

Table 1 illustrates a condensed version of the five prompts which were used for purposes of this study. Each row describes the steps required in answer to each prompt, what was requested of students in responding, and what was used as data to be coded and analyzed. To view actual prompts, please see Appendices C, D, and E.

### Teacher Feedback

The second data source was teacher feedback (written directly on the prompts in response to student writing) and any comments made by students in response to the

feedback. All teacher feedback examples were chosen randomly from all participants (two examples from each teacher involved).

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Table 1

*Condensed Version of the Five Prompts Used*

Reflections	Topics	Ratings of Topics	Evaluation of Topics	Adjusted Approach	Evaluation of Self
Reflection Prompts 1, 3 and 5	M/O/I	Rating 1-5	How improve	Next Step	
Reflection Prompt 4	Goal	Rating 1-5	Adjustments	Next Step	Confidence level 1-5
Reflection Prompt 6 Questions 1-5 Rate SD-SA (Strongly disagree to Strongly agree)	Thoughts clearer	Understanding grew	Liked getting feedback	Made more motivated	Recom. prompts continue
Reflection Prompt 6 Question 6 Rate 1-5 (low/high)	Value of writing	Value of feedback	Narrative		

Note. M= Motivation; O=Organization of time; I=Issue  
 Ratings= 1=low, 5=high (ability to be motivated, manage time, resolve issue(s), meet goal)

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Procedures

Each of the six Reflection Prompts were given during class time by myself and one other instructor involved in the study over the course of the first ten weeks of two consecutive semesters, beginning in week three of each semester. The prompts continued to be given every other Friday, with reflections 5 and 6 given on the same day of week

ten. Reflection Prompts 1, 3, 4 and 5 were provided on an overhead projector with responses written on notebook paper. Reflection Prompts 2 and 6 were given as handouts to be written upon. Ten minutes of class time were allowed for each of the reflections 1-5, with responses turned in at the end of that time. Reflection Prompt 6 (Appendix E) was un-timed and followed immediately after Reflection Prompt 5 (Appendix C).

If students were absent the day of a particular reflection assignment, a written copy of the prompt was provided with the instruction to complete it in ten minutes of their own time and turn in at the beginning of the following small group class. Written responses were made to students by individual teachers on the reflections themselves, photocopied (for the present study), recorded, and returned to student folders which were used for student/teacher exchange of assignments.

## **Data Preparation and Analysis**

### Reflection Prompt Responses

Data analysis began during the spring of 2008 at which time I began to separate and organize Reflections by individual student into stacks of reflection one through six, with reflection number two (pertaining to use of a particular strategy taught within class) being discarded for purposes of the study. Reflections were separated for those students who had attached permission slips and those without were discarded.

Various data displays were also used as the need arose. Miles and Huberman (1994) state that “extended, unreduced text alone is a weak and cumbersome form of display. It is hard on analysts because it is *dispersed* over many pages and is not easy to

see as a whole” (p. 91). This makes looking at the data difficult in seeing all the variables at once, especially in seeing any possible changes over time. However, in also including narrative or quotations from the data (as in qualitative studies) provides some “grounded meaning for the material; they put some flesh on the rating or label and can be extracted easily for use in the analytic text” (p. 129). Therefore, when recording the data, I used a table which broke down each participants’ responses which also evidenced any changes in self-ratings over time. As a means of interpreting the self-ratings, I also used any narrative included which could be seen as further evidence of my analysis of the responses.

As I began the process of analysis, I also began keeping a journal noting what I felt I knew or understood about the prompts and how I felt my research questions could and would be best answered. Since I have been using the Reflection Prompts for several semesters (including both before and after) gathering the specific data for the two semesters included in this study) I had a general idea of what the student responses might be, but no specifics. I tracked my own attempts, progress and/or failures and methods of using both creative and critical faculties in making what Patton (2002) calls carefully considered judgments about what is really significant and meaningful in the data.

After names and demographics had been recorded on a spreadsheet, a random number was assigned to each student and transferred to individual stacks of reflections. After each stack had been assigned a number, all names associated with individual stacks were cut off and shredded in order to ensure anonymity for participants. Table 2 represents how the data was recorded on a spreadsheet for the 5 reflections according to

topic selected M=Motivation, O=Organization, I=issue, G=goal, rating given (1=low, 5=high), and ratings given for questions 1-6 on reflection #6 (Strongly Agree=SA, Disagree=D, Agree=A, Strongly Agree=SA).



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Table 2

*Example Spreadsheet by Student for 5 Reflection Prompt Responses*

ID	Sex	Age	R#1		R#3		R#4		R#5		R#6					
			Topic	Rating	Topic	Rating	Goal	Rating	Topic	Rating	Q1	Q2	Q3	Q4	Q5	Q6
1	F	24	M	5	I	4	G	5	M	4	SA	A	SD	D	SA	5
2	M	33	O	3	M	3	G	3	O	3	SD	D	SA	A	SD	3
3	M	19	M	2	0	0	G	2	I	2	A	SA	D	SD	A	4

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For Reflection Prompts 3 and 5 if an issue was chosen instead of M or O, and I was recorded. For Reflection Prompt 4, the goals were coded G. If a particular reflection was missing for any student, a zero was entered for that reflection number. This spreadsheet aided in discovering any patterns present in both student self-assessment and in written narrative concerning what types of issues were affecting student learning, what goals students wished to achieve and what steps needed to be taken in order to succeed at identified topics. This also gave me a specific look at both individuals' choices and changes in perceived abilities on topics over time (based on self-ratings on prompts 1, 3, 4, 5 and 6, and confidence levels on prompt 4) over the course of one semester, as well as overall patterns as a group.

The guided, structured steps used in the Reflection Prompts closely resemble the four phases of reflection as distilled from Dewey's writings by Rodgers and which begin with Phase 1 which she calls Presence to Experience. According to Dewey (as distilled by Rodgers) an experience is an interaction with one's environment which must involve "interaction between the self and another person, the material world, the natural world, an idea, or whatever constitutes the environment at hand" (Rodgers, 2002, p. 846).

1. Presence to Experience (PE).
2. Description of an Experience (DE).
3. Analysis of Experience (AE).

Intelligent Action/Experimentation (IA/E).

For the purposes of this study, Rodgers' system was applied to the data in exploring the answers to Research Questions 1 and 2 and abbreviated as follows: Presence to Experience (PE), Description of an Experience (DE), Analysis of Experience (AE) and Intelligent Action/Experimentation (IA/E). These phases are displayed in Table 3 according to prompt.

Table 3

*Reflection Prompts in Relation to Each Research Question and Possible Evidence of 4 Phases of Reflection*

Reflections (R)	1	3	4	5	6
Research Question 1	M/O (PE) Rating Talk about rating (DE) How to Improve (A) Steps (IA/E)	M/O/I (PE) Rating Talk about rating (DE) Steps to Improve (A) Steps (IA/E)	G (PE) Rating Adjustments? (A) Revised? (A) Steps (IA/E) Confidence level?	M/O/I (PE) Rating Talk about rating (DE) How to Improve (A) Steps (IA/E)	Q1 (A) Q2 (A) Q4 (A) (IA/E)
Research Question 2	M/O (PE) Rating Talk about rating (DE) Steps (IA/E)	M/O/I (PE) Rating Talk about rating (DE) Steps (IA/E)	G Rating Adjustments? (A) Revised? (A) Steps (IA/E) Confidence level?	M/O/I (PE) Rating Talk about rating (DE) Steps (IA/E)	Q1 (A) Q2 (A) Q4 (A) (IA/E)
Research Question 3					Q3 (A) Q5 (A) Q6 (A)

Note. M= Motivation; O=Organization of time; I=Issue; G=Goal; TC=Teacher Comments; SC=Student Comments; PE=Presence to Experience, DE=Description of Experience, A=Analysis of Experience, IA/E= Intelligent action/ Experimentation

In order to determine if students were exhibiting presence to a situation (PE), I looked for evidence which Dewey (and Rodgers) describe as “to note or perceive a fact” (1933, p. 10). This included such language as:

1. I am writing about
2. I will write about
3. An important issue that is affecting my learning right now is
4. My goal is

In order to determine if students were exhibiting movement from Phase I of a general “feeling” or presence to an experience, to one of forming an intellectual, articulated idea or describing the event (DE), I looked for evidence of what Dewey called a conversion. “This conversion is effected by noting more definitely the conditions that constitute the trouble” (Dewey, 1933, p. 108). This involved the student putting the experience within the context of what was already known, and in beginning to make meaning. I looked for data within the written responses for language such as:

1. I think I am decent about managing my time
2. I find it hard to stay focused
3. I have a lot on my plate
4. Sometimes I get tired or feel overwhelmed
5. My goal is to graduate, to see myself in a cap and gown

For Phase III in Analyzing (AE), I looked for evidence of students’ beginning to generate possible explanations and hypothesizing solutions (AE) to the named and described experiences stated. Rodgers’ distills Dewey’s ideas in this phase to individuals

relying on prior experience and “bringing in other resources, both people and books” (2002, p. 854). This phase also includes what Rodgers describes as “a platform of reason and understanding from which one can take the next step, intelligent action” (2002, p. 854). As such, I looked for language within the responses such as:

1. I can improve by
2. I need to
3. To improve my motivation, I need to
4. To improve my situation, I need to
5. This will clear my mind
6. In order to reach my goal I will

For Phase IV, Intelligent Action and/or Experimentation (IA/E), or what Dewey insisted on as *intelligent* action versus habit or reflex, I looked for language such as:

1. I did really good on a test
2. I am doing way better than before
3. I do my homework right after class when I am more awake and alert
4. I’ve begun to use my tools more effectively

In addition, any improvement/change in student ratings relating to ability to be motivated, organize their time, reach goals and/or feel confident based on language related to writing in response to prompts was noted.

Rodgers (2002) states that collaborative reflection (or done in community with others) allows both teachers and students to acknowledge their interdependence on one another, and aids both in the need for the support of the community in learning to act

independently within a larger world. The community “also serves as a testing ground for an individual’s understanding as it moves from the realm of the personal to the public” (Rodgers, 2002, pg. 857). It also provides a forum where individuals can put form to what he or she is thinking or feeling.

### Coding

Patton (2002) states that “The qualitative analyst’s efforts in uncovering patterns, themes, and categories includes using both creative and critical faculties in making carefully considered judgments about what is really significant and meaningful in the data (p. 467). For purposes of this study, the four-phase model developed by Rodgers was used in attempting to sort and categorize the data (student ratings and narrative) as evidence of Presence to an Experience (PE), Description of an Experience (DE), Analysis of Experience (AE) and/or Intelligent Action/Experimentation (IA/E). Patton (2002) states that the researcher must then work back and forth between the data to verify the meaningfulness and accuracy of the categories and placement of data within each.

Once the data has been tested for correct placement, the researcher must then begin looking for any divergence in the information to include making connections between new and old information, making connections among different items and posing new information that ought to fit existing categories (Patton, 2002). The following is a breakdown of each Research Question and how the data was analyzed in an attempt to answer each question.

### Research Question 1

*How did student participation in structured, guided reflection activities in a college reading and study strategies course impact students' ability to reflect?*

For Research Questions 1 and 2, the researcher looked for evidence of the four reflective phases described by Rodgers (2002) in her distillation of Dewey's work: Presence to an Experience (PE), Description of an Experience (DE), Analysis of Experience (AE) and Intelligent Action/Experimentation (IA/E).

The prompts given over the first ten weeks of the semester guide students step-by-step through the process of selecting a topic or goal, providing a self-rating, talking about the rating, what will be needed in order for a student to improve an issue or reach a goal, to restate if necessary and to identify a first step in the process. The self-ratings and narrative provided by students within the confines of this step-by-step process provided me with a rich context in which to explore if there was any impact on students' ability to reflect over the ten week period. For example, by initially giving students a choice of two topics (Motivation or Organization of Time) and to rate and talk (write) about their chosen topic through a series of guided steps, students may have begun to be aware of and identify their own topic/issue/goal in further reflection responses which might evidence Phase 1 of Rodgers' framework--Presence to an Experience.

In addition, if students chose to write on the same topic more than once, it might have meant there was a change in awareness of the topic and in pursuing new ways of addressing, or in Rodgers' Phases 2 and 3 in Describing the Experience (DE) in light of new data gathered based on previous experience, and Analysis of Experience (AD) in



refining the process by having gathered information from other sources, including teacher feedback.

I attempted to identify the four phases described by Rodgers through the coding of each student's responses to individual steps described within the structured, guided prompts and to note any changes in how students were approaching issues and/or goals as evidenced through their self-ratings and narrative. In addition, I included any pertinent ratings and/or narrative included on how students responded to the process of writing reflections and noted if there was any impact evidenced on students' ability to reflect.

### Research Question 2

*What did student written responses to structured, guided reflection prompts in a college reading and study strategies course reveal about the students' perception of their ability to reflect? How did these perceptions change over time? (Five sections each per two semesters).*

In an attempt to answer Research Question 2, I looked for evidence of students' perspectives on their own abilities to reflect through use of the students' self-ratings and narrative by coding each student's responses to the step-by step process of the guided prompts using Rogers' framework. I also looked for any indication of change in students' perspectives about their ability to reflect. For instance, students might have included narrative on responses to Reflection Prompts written later on within the ten week period in which prompts were assigned, which might evidence a change in perspective as students became accustomed to using the prompts as a means of reflecting.

This might be evidence of Rodgers' Phases 2 and 3 in Describing an Experience (or in having had time in which to ground their experience) and Analysis of Experience, in having brought in other resources (including teacher feedback) which might influence their perspective on how they reflect.

In addition, student responses to the process of writing reflections themselves at the end of the ten week period, gave evidence as to how students perceived their own ability to reflect and any change in students' perceptions over time after having responded to five previous prompts. This is evidence of Rodgers' Phase 4 (Intelligent Action/Experimentation) in having had time to act on topics and goals and what effect, if any, those actions had on their perspectives of their own ability to reflect.

### Research Question 3

*How did students perceive the opportunity to write in response to structured, guided reflection prompts and receive teacher feedback in a college reading and study strategies course?*

In an attempt to answer part one of Research Question 3, I noted any student narrative on any or all Reflection Prompts which concerned student perceptions regarding writing responses to prompts. It was also necessary to note any narrative showing any changes in those perceptions as they were experiencing it over the ten week period in which the assignments were given and again through the ratings and any narrative included on the final student assessment of reflecting on reflection.

For the second part of Research Question 3, it was necessary for the researcher to note any narrative on the 5 Reflection Prompts regarding the role of teacher feedback on their reflection writing, what if any changes were evidenced there and again their ratings and narrative on the reflection of reflecting prompt at the end of the ten week assignment period.

Once all responses to all Reflection Prompts were recorded, I began to identify patterns within individual students as to changes in students' perceptions of their ability to reflect and reach goals, as evidenced by student narrative and/or on the role of teacher feedback/dialogue from all Reflection Prompts. These patterns hopefully evidenced any impact on students' perceived abilities to reflect, how those patterns changed over the course of 10 weeks, and the role of teacher feedback. In addition, a further analysis was performed in identifying problems/issues affecting learning identified by the students, and a breakdown by age/gender added.

Inter-rater reliability of coding was provided by giving two colleagues a random sample of Reflections who identified patterns and provided written documentation for comparison with the researcher's.

### Triangulation

Inter-rater reliability was used as one form of triangulation. Another source consisted of the journal I kept while attempting to sort, code and categorize the data and any initial observations, patterns, issues and/or problems with my processes. The third

source of triangulation was the six prompts themselves, the individual data points and any narrative associated with each contained within the prompts.

### Limitations

Limitations to the methodology used for the present study were that including myself as a reflexive instrument within the study as a participant researcher/observer, I was directly involved in and with only a portion of the total participants on a daily basis. This may have given me more information (and thus bias) concerning my own group of student participants than on students within sections taught by the other instructor. Also, in looking at teacher feedback within the study for both myself and the other instructor, I was attempting to understand and describe the voice and meanings of another instructor for each semester.

Another limitation was in attempting to interpret and analyze student responses to the prompts, I may have interpreted those responses in a way which may not accurately reflect student intentions. In order to try and correct this limitation and for triangulation purposes, I had intended to contact and interview a number of former students involved in the study to verify their responses in order to more correctly reflect the meaning of their responses. However, this was not possible.

A final limitation may have been in having two instructors providing the Reflection Prompts within their own classrooms, the methods in doing so may have differed according to instructor, teaching style and amount and content of teacher feedback. However, despite these limitations, the structured, guided prompts and the

student/teacher dialogue contained within them are a valuable source of information on students' real and/or perceived ability to reflect. Students' ability to replicate the first three steps in Rodgers' model on reflection and follow-through in taking some form of action (step 4) in successive prompts is evident. Also changing perceptions of participants' ability to resolve issues and achieve goals over time and the role and use of teacher feedback is clear.

## CHAPTER FOUR: RESULTS

### **Introduction**

In order to report my findings, my results chapter is broken down into seven sections as follows:

1. Overall Results
2. Reflection Results--Motivation/Organization of Time/Issues Affecting Learning (Reflections 1, 3 and 5)
3. Goals (Reflection 4)
4. Student Evaluations (Reflection 6)
5. Teacher Feedback (Reflections 1, 3, 4, 5 and 6)
6. Summary Analysis of Results
7. Triangulation Results

Results for each section include an explanation of what is included for each along with evidence of Rodgers' model (2002) on the four phases of reflective practice. Also included is discussion and examples of what may be considered evidence of Rodgers' theories on the benefits of teacher feedback (2006).

#### Section 1—Overall Results

The most obvious result of using guided, structured prompts on students' ability to reflect, was that students were able to follow the specific numbered steps given in the prompts when selecting and discussing that topic and thus provide evidence of Rodgers'

four phase model on reflective practice. In addition, students evidenced beginning to respond to the format of the prompts in successive responses. This is an indication that as they became more familiar with the format, they also began to address steps on the prompts asking them to respond to naming, describing, finding resolution to and next step in problem solving without evidence of following bulleted items. As one student put it, “Every time I write about something and do it in your format, I find that I have a better perspective on the topic than before.”

Perhaps the best evidence of this, however, was in the responses to Reflection Prompt 1 wherein the majority of students were able not only to address the two numbered steps, but also the 4 bulleted items under step 2. Of the 78 participants responding to Reflection Prompt 1, 46 (59%) either mentioned or labeled their narrative Next Step evidencing the fact that they had followed all the bulleted items since this is the last item listed on Reflection Prompt 1.

Those who failed to address any of the bulleted items may have done so either because they became absorbed in what they were writing and forgot to do so, or simply ran out of time. In addressing the numbered steps, students were also addressing Rodgers’ first two phases--Presence to an Experience (PE) and Description of an Experience (DE). In addition, when students began to “write for 10 minutes,” as directed on the prompts, they also evidenced beginning to resolve the issue they were describing and therefore to address Rodgers’ third phase of reflection, Analysis of Experience (AE) without seemingly referring again to the bulleted items.

When students were given Reflection Prompts 3 and 5 however, it appears they may have become confused by the different format of each from Prompt 1 and from each other. In giving students three numbered options and including the bulleted items only under option 1, some students appeared not to address the bulleted items at all for option 2 on Reflection 3. Perhaps in not taking time to read through all the instructions, they felt that option 2 did not require addressing the bulleted items. However most provided evidence of Analysis of Experience (AE) and Next Step (NS) in accordance with the specific request under option three.

These same participants may have been able to address the third bullet on ways to improve simply from having had experience in doing so with Prompt 1 and in being asked to “write” on their topic. In many responses, it was difficult to determine if this portion of the narrative came from step 2 (to write) or from bullet 3 in writing a response as to how to improve. Some participants launched immediately into how to improve and so may have skipped the bulleted item altogether due to either lack of time or because they were aware of what they were asked to write based on the format of previous Reflection Prompts.

Again, Prompt 5 differed from both Prompts 1 and 3 in that it states there are 3 options but appears to list only 2, and in this case, they are lettered option A and option B. This may have been confusing to students in structure. This observation is reinforced on Reflection Prompt 4 when students are asked to: “Please write on the following” and are then provided with 7 specific steps to follow. Of the 82 participants, 44 either numbered, labeled, used an \*, a separate short paragraph or in some other way



distinguished the 7 questions. This is a clear indication that students may perceive that numbered items were imperatives and bulleted items optional.

However, even with confusion and/or lack of time, the vast majority of students were able to complete the first three phases of Rodgers' model on Reflective Practice by using the guided, structured prompts and to begin to choose their own topic and write about it even if they didn't follow all of the bulleted items. The bulleted items of self-rating and next step are not inherent within Rodgers' model, but give insight into students' perceptions of their abilities to resolve the topics named including if there was any change over time. Perhaps in naming a next step, they gained the impetus to begin phase four of Intelligent Action/Experimentation (IA/E).

Since the guided, structured prompts lead students to complete the first three phases of the model, the fourth phase (IA/E), taking some form of action based on the previous three phases became of greatest interest in determining if students were able to complete this phase on their own. This would be based on previous evidence of AE (Analysis of Experience), NS (Next Step) and CL (Confidence Ratings) in their ability to resolve through intelligent action and/or experimentation.

As stated previously, the best evidence of whether students were able to go on and complete phase 4 on their own, was contained in the comparisons of Reflection Prompts 1, 3 and 5 and to some degree in Prompt 4. What became immediately obvious is that of those participants who evidenced use of IA/E (Intelligent Action/Experimentation) in Reflections 3 and 5, and who also evidenced use of both AE (Analysis of Experience) and NS (Next Step) in the previous Reflection response, had correspondingly higher self-

ratings in the succeeding response. This may be an indication that those who had taken the time to both think of ways to improve and to provide a next step felt an impetus to follow through with some kind of action and felt a greater confidence in their ability to do so.

However, the greatest surprise came when participants addressed the AE (Analysis of Experience) or ways to improve (either through having begun writing in response to Step 2, and/or in addressing the third bulleted item) and not the NS (Next Step) bullet, but followed through with some form of action regardless, the self ratings still went up except in one or two instances. When participants listed a Next Step (NS) but no Analysis of Experience (AE) and took action, their ratings either went down or remained the same except in one or two instances. Therefore, it appears that even though both steps in combination produce the greatest results as in Reflections 1 and 3 where of the total of 19 participants, 17 evidenced AE, 16 NS and 16 both, if one step is negotiable it would be the NS item. If participants showed no evidence of IA/E (Intelligent Action/Experimentation) their ratings went down or stayed the same with only one or two instances of them going up. In addition, if students evidenced both AE or NS in the previous Reflection response, but took no follow up action, their self-ratings either went down or stayed the same.

Of the 34 participants who chose to write on Issues affecting their learning for Prompt 3, and 25 for Prompt 5, of the 8 who evidenced Intelligent Action/ Experimentation (IA/E), 4 of them evidenced both Analysis of Experience (AE) and Next Step (NS) and 1 evidenced AE only. It is hard to determine how these are related to self-

ratings due to the fact that participants were not instructed to provide self-ratings on the prompts when choosing an Issue affecting their learning.

For evaluation Prompt 4 (Goals), of the 81% who participated, it was noted that 58% gave evidence of having used Rodgers' fourth phase by having revised their goal statement in light of ways of improving that they'd written about in a previous step. What was more surprising was that many participants had already begun taking some form of action and/or experimentation in reaching their goal. This may have been due to the emphasis placed on setting goals in weekly discussion in class. Again, of those evidencing follow through with IA/E (Intelligent Action/Experimentation), 50% provided evidence of AE (Analysis of Experience), 45% NS (Next Step) and 41% both. These participants' self-ratings were not only higher in rating, but also in numbers of those giving higher ratings: (11 confident, 8 pretty, 6 very, 3 extremely, with only 1 saying "not very") as compared to those who showed no evidence of IA/E (4 confident, 3 pretty, 2 very, 2 fairly and 1 not good).

Confidence ratings of those evidencing use of IA/E (Intelligent Action/Experimentation) may be due to the fact that by taking the time to think of ways of improving and/or Next Step provided these participants with more confidence and perceived control over achieving their goal. In addition, the greater numbers of those providing evidence of Ratings, AE, IA/E and NS may be due to having prior experience in writing in response to 3 Reflection Prompts and/or in the fact that the prompt itself contains 7 specifically numbered items to be addressed, or possibly both.

In any case, what is evident is that when students are given guided, structured Reflection Prompts and in-class time in which to complete them, students are capable of following the steps and in doing so to begin to complete phase 4 of Rodgers' model. They recognized the need to take some form of action in order to improve and/or take a next step, whether they actually took it or not. In this way, the impact on students' ability to reflect appears to increase over time with becoming familiar with the format of the prompts. This was also evidenced in a more obvious way by one participant on the evaluation prompt. Even though he gave the value of writing to prompts a 4, he stated that "These reflection [sic] let me see what I was really doing and what I need to be doing. The only thing is though you actually see what's going on, for me, the part taking of action was off and on. This is why I gave these reflections a 4."

Another student wrote "I gave the value to have the opportunity to write reflections in class a 3 because I thought it was helpful to remind myself about everything but then I didn't really take action on them after reflecting about them. It just felt that I was writing about something that I needed to work on, but then I never did what I wrote about." However in having attempted some form of action students' self ratings evidence more self-confidence in their ability to resolve the issue.

In addition, students realized that when writing about Organization of Time, if their schedule did not work out, they simply needed to keep revising and working on it as things in their lives changed and to include room for unexpected emergencies. This is evidence of Rodgers' model in that they had begun to see that it was a process and needed to be readdressed, rethought, and refined as part of that process in order to

succeed at resolving their issue and/or achieving their goal. This may have been accomplished by giving students the option of writing about the same topic more than once and in so doing, also reinforced the idea that if something didn't work the first time, they should continue to look for ways to improve until they felt they were satisfied with their progress.

During the ten week period that Reflection Prompts were included in the curriculum, the use of Teacher Feedback to resolve issues evidenced in Reflection 5, as opposed to Reflection 3, nearly doubled. This is further evidence of phase three of Rodgers' model that indicates one must also include any input provided by books, further reflection or in community with others in resolving issues. Perhaps over time as students grappled with the same issue(s) they began to take the teacher feedback more seriously. They may have realized that they had not resolved their issue as yet and became more amenable to trying something provided for them through dialogue with the teacher.

Phase three of Rodgers' model was evidenced in Reflections 3 and 5 and also more especially in the evaluation at the end of the 10 week period ("Reflection on Reflecting"--Prompt 6) where of the 94 including Reflection 6 for this study, the great majority of participants selected either Strongly Agree or Agree to all 5 questions on the evaluation. They noted that writing to prompts:

- Made their thoughts clearer
- Increased their understanding of the topics they wrote about
- They liked getting feedback

- Motivated them to take action
- Recommended the prompts be continued

Perhaps what was most important in these student self-ratings was in the students' perceptions of their own abilities to reflect, and their self-confidence in being able to resolve issues as evidenced by their responses to these items after 10 weeks of writing to prompts. Many students also wrote that it was important it was to be able to go back over past reflections and to see how much they had improved. The "perception" of improvement and of increased ability and confidence in being able to address and resolve issues is invaluable. As one student stated "I liked looking back on my reflections and to know I'm not in the position anymore. That I have improved and I feel good about that."

In addition, 99% of participants said they Strongly Agreed or Agreed with liking feedback on their responses. Being provided with feedback from teachers concerning specific student issues provides a means of on-going dialogue on a one-to-one basis that acknowledges students as unique and whole individuals with unique backgrounds, concerns and issues—whether personal or academic—and provides them both a voice in their own education and a form of support system which could not be accomplished in a more conventional classroom. As one student put it, "I liked getting feedback, because it was nice to have someone tell me if what I was doing was right. It was nice to get suggestions to improve on what I write about, and it was nice to be reassured I was doing good & to keep it up."

Of a total of 85% of participants responding to question 6 on Reflection 6 for this study, 90% of these gave ratings of between 4 and 5 for how valuable it was to write to

prompts and receive teacher feedback. This clearly indicates that regardless of how students perceived the opportunity at the beginning of the 10 weeks, the great majority of them had found some value in writing in response to reflection prompts by the end. Only one participant selected D (Disagree), indicating that feedback was a key ingredient in impacting how students felt about having the opportunity to write about issues.

Clearly, students exhibited the ability to follow numbered steps on Reflection Prompts in order to replicate at least three phases of Rodgers' model (Presence to an Experience, Description of an Experience, and Analysis of Experience) and phase four (Intelligent Action/Experimentation). However, there were far greater benefits evidenced over the 10 week course of the assignments as students were taught to reflect and use the reflection prompts. These will be discussed in further detail in my conclusions chapter.

### Section 2--Reflection Results--Motivation/Organization of Time/Issues Affecting Learning (Reflections 1, 3 and 5)

This section gives overall results for Reflections 1, 3 and 5 and examples of participant narrative providing evidence of each of the four phases of Rodgers' model on reflective practice: Presence to an Experience (PE), Description of an Experience (DE), Analysis of Experience (AE) and Intelligent Action/Experimentation (IA/E). In addition examples of participants who provided a Next Step (NS) and showed evidence of using Teacher Feedback (FB) are also included.

Table 4 provides a summary of Reflections 1, 3 and 5 and gives the total percentage of students who provided:

Rate = ratings

AE = evidence use of Analysis of Experience (phase 3 of Rodgers' model)

STEP = evidence addressing bulleted item 4

IA/E = evidence using Intelligent Action/Evidence

FB = evidence of direct use of Teacher Feedback



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Table 4

*Number of Students Participating in each Reflection Prompt*

R1				R3						R5					
Total	Rate	AE	Step	Total	Rate	AE	IA/E	Step	FB	Total	Rate	AE	IA/E	Step	FB
87%	82%	76%	63%	86%	46%	63%	33%	38%	5%	92%	61%	72%	54%	23%	11%

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Table 5 shows individual results for Reflections 1, 3 and 5, listing student ID # assigned, topic chosen, ratings given, and evidence of Analysis of Experience (AE), Intelligent Action/Experimentation (IA/E), NEXT STEP (NS) and use of Teacher Feedback by Reflection. These three reflection responses were recorded together as a means of comparison to questions dealing with Motivation, Organization of Time and/or Issues affecting learning over time.

The bulk of my study revolved around the ability of students to evidence use of Rodgers' four phase model of reflective practice when given structured, guided prompts and the impact of teacher feedback. In an attempt to evidence these phases of Rodgers' model, I have given percentages and/or numbers to those providing evidence of each phase but have devoted most of my results section to the rich narrative provided by students and teachers. All examples of student narrative were chosen at random (based on ratings), and all teacher feedback was chosen based on random examples (two from each teacher involved in the study). This is where I feel the full benefits of the reflection writing process can best be seen. In addition, however, various themes arose in student narrative concerning issues and goals which will be discussed in further detail in Chapter Five.

Table 5

Results for Reflections 1, 3 and 5

ID #	R#1				R#3						R#5					
	TOPIC	RATE	AE	STEP	TOPIC	RATE	AE	IA/E	STEP	FB	TOPIC	RATE	AE	IA/E	STEP	FB
1	M	3	X*	-	NA						M	5	-	X*	-	X
2	O	3	X	-	I/P	-	-	-	-	-	M/O	4	-	-	-	-
3	M	1.5	X	S	M	-	X	X	-	-	M	-	-	-	-	-
4	M	2	X*	S*	I/P/M	-/4*	-	-	-	-	M/O	1.5/4.25	-/-	-/X*	-	-
5	M/O	3/3	X	NS	I/P	-	X	NA	-	-	M	-	X	X	-	X
6	NA				NA					-	NA					
7	O	3.5	X	-	O	5	-	X*	-	X	O	-	-	-	-	X
8	O	2	X	-	M	3	X	X*	-	-	O	3	X	X*	-	X
9	M	-	-	-	M	3	-	X*	S*	-	M	4	X*	X*	S*	-
10	NA				NA						NA					
11	M	2	X	NS	M	2	X	-	-	-	O	3	X*	X*	S*	-
12	M	3	X	S	M	4	X*	X	S*	-	M	4	-	X*	-	X
13	M/O	5/3	-/X	-/S	I/P	-	X	NA	-	-	I/P	-	X	X*	-	X
14	O	2	X	S	M	3.5	-	NA	-	-	M	5	X	X*	-	X
15	O	4	X*	S	I/A	-	-	NA	-	-	M	5	-	X*	-	X
16	M	2.5	X	S*	I/P	2	X	X*	S*	-	I/P-	-	X	X*	S	-
17	M	4	X	-	I/P	-	X	NA	S	-	I/P	-	X	X*	-	-
18	O	2-3	X	S*	O	5	X*	-	S*	-	O	2	X	X*	-	X
19	O	3	X*	S*	M	2	X*	NA	-	-	M	3-4	X	X	-	-
20	M	3.5	X	S	NA	NA	NA	NA	NA	-	M	3	X*	X*	S*	-
21	M	5	X	NS	O	4	X*	NA	S*	-	I/A	-	X*	X*	-	-
22	M	2	X	-	I/A	-	X	X	S	-	I/A	-	X*	X	-	-
23	O	1.5	X	S*	M	2.5-3	X*	NA	-	-	I/P	-	X	X	-	-
24	O	5	X*	S*	M	3	X*	NA	S*	-	I/P	-	X*	X*	-	-

(table continues)

Table 5 (continued)

ID#	R#1				R#3						R#5					
	TOPIC	RATE	AE	STEP	TOPIC	RATE	AE	IA/E	STEP	FB	TOPIC	RATE	AE	IA/E	STEP	FB
25	O	2	X*	S*	O	3	X*	X*	S	-	O	4	X*	X*	-	-
26	O	3	X*	S*	N	4	-	X*	-	-	M	4	X	-	NS	-
27	M	5	X	NS	I/A	2	-	-	S	-	I/A	5	X	X*	-	-
28	O	4	X*	S*	M	3	-	X	-	-	I/A	-	X*	NA	-	-
29	O	4	X*	S	M	2	X	NA	-	-	M	4	X	X*	-	-
30	M	4.5	-	-	I/P	-	-	NA	-	-	M	-	-	-	-	-
31	NA				O	4	X	X*	S*	-	M	4	X	X*	-	-
32	M	3	X	S*	I/A	-	X	NA	S*	-	M	-	X	X*	-	-
33	NA				NA	NA					O	4	-	X*	-	-
34	O	2	X	S	I/P	-	X	X	-	-	I/P	-	-	X	-	-
35	O	3	X*	-	I/P	-	X	NA	-	-	I/A	-	-	-	-	-
36	O	5	X	S	O	3	X	-	S	-	O	3	X	-	S	-
37	M	3	X	S*	O	-	X	NA	-	-	I/P	-	X*	NA	-	-
38	M	3	X	S*	I/P	-	X*	NA	S*	-	O	2	X*	NA	-	-
39	O	3.5	X*	NS	O	3	X	-	S*	-	O	-	X*	X*	-	-
40	NA				NA						NA					
41	O	4.5	X	S	O	3	-	X	-	-	O	4	X	X	-	-
42	O	3.25	X*	S*	O	3.95	X	-	S	-	O	4	X	X*	-	-
43	M	3.5	X	NS	M	3.5*	-	X	-	-	M/O	4/1	-/-	-/X	-	
44	M	3.8	-	-	M	-	X	-	S*	-	M	-	X	X	-	-
45	M	4	X	S	O	4	X*	NA	S*	-	O	4.5	X*	X*	S*	-
46	O	4	X	S*	O	4	-	X*	-	-	M/O	5/2	-/X	-/X*	-	-
47	M	3.5	X*	S*	M	4	-	X	S*	-	M	4.3	X	X*	S	-
48	O	1	X*	S	I/P	-	-	X	-	-	M	3	X*	X	-	-
49	O	3	X*	-	I/A	2	X	NA	S	-	O	5	-	X*	-	-
50	M	3	X*	S*	I/A	-	X	NA	NS	-	M	5	X	-	S	-
51	M	2-3	X	-	I/P	-	X	NA	-	-	I/P	-	X	NA	-	-
52	O	3	X*	S*	M	-	X	X	-	-	I/P	-	-	NA	-	-
53	M	3	X	S*	I/A	-	X	NA	S*	-	M	4	X	-	-	-

(table continues)

Table 5 (continued)

ID#	R#1				R#3						R#5					
	TOPIC	RATE	AE	STEP	TOPIC	RATE	AE	IA/E	STEP	FB	TOPIC	RATE	AE	IA/E	STEP	FB
54	M	2	X*	-	O	3-4	X*	X*	-	-	I/A	-	X*	-	-	-
55	O	3	-	-	NA				S		M	2	X	NA	S	-
56	NA				O	3	X	X*	-	-	M	-	X	X*	-	-
57	M	2-3	X	-	I/P	-	-	NA	-	-	I/A	-	X	X*	-	-
58	M/O	-/-	X/-	-	I/P	-	X	NA	NS	-	I/P	-	X	X	S	-
59	O	1	X*	NS	I/P	-	X	NA	-	-	M/O	5/-	-/-	-/X	-	-
60	O	3.5-4	X*	-	O	3.5-4	X*	X*	-	-	O	4	X	X*	-	-
61	M	-	X*	S*	NA						NA					
62	O	3.5-4	X*	NS	NA						O	4	X*	X	-	X
63	O	3	X*	S*	O	3	X	X*	S	-	O	3	X	-	S*	-
64	O	2	X*	S*	M	4	X	X*	-	-	M	3-4	X	-	S*	-
65	O	3	X	NS	M	4.5	X	NA	S	-	O	4	X*	X*	-	-
66	M	4	X	S	M	4	X	X*	NS	-	M	3	X	-	-	-
67	NA				NA					-	NA					
68	M	-	-	-	M	5	-	X*	-	-	O	3	-	X	-	-
69	O	3	X*	S*	M	5	X*	NA	S*	-	O	3	X	-	S	-
70	M	4	X*	S*	M	-	X	X*	-	X	M	5	X	X	-	X
71	O	2	X*	S*	O	-	-	X*	-	-	I/A	-	X	-	-	-
72	O	2	X*	S*	M	-	X	X*	-	-	M	3	X	-	S	-
73	M	2.5	X	S	M	4.5	X	X	S	-	M	4.5	X	X	S	-
74	O	3	X*	S*	M	-	-	NA	S*	-	O	3	X*	X*	S*	-
75	O	3	X*	S*	M/O	4/2	X/X	-/-	S/S*	X	O	3	X	-	S	-
76	M	3	X*	S*	O	-	-	-	-	-	O	4	X	-	S	-
77	M	4	X*	-	NA					-	O	5	X*	NA	-	-
78	NA				O	-	X	NA	-	-	M	3	X	NA	-	-
79	NA				I/A	-	X	NA	S	-	NA					
80	M	2	X*	NS	I/P	-	X	X*	-	-	M	3	X*	X*	-	-
81	O	3	X*	S*	O	3	X	X*	-	-	I/A	-	X*	-	S	-

(table continues)

Table 5 (continued)

ID#	R#1				R#3						R#5					
	TOPIC	RATE	AE	STEP	TOPIC	RATE	AE	IA/E	STEP	FB	TOPIC	RATE	AE	IA/E	STEP	FB
82	M	5	X	-	O	5	-	X*	-	-	M	5	-	X*	-	-
83	NA				O	4	X*	X*	S*	-	M	2	-	-	-	-
84	M	2	-	-	I/P	-	-	X	-	-	I/P	-	X	-	-	-
85	M/O	5/3.5	-/-	-	NA						M/O	5:/4	X/X	-/-	-	-
86	O	-	X	S	O	-	X	X*	-	-	I/A	-	X	X	-	-
87	M	2	X	NS	I/A	-	X*	NA	S	-	M	4	X*	X*	-	-
88	O	3	X*	S*	M	2	X*	NA	-	-	I/P	-	X	NA	-	-
89	O	2	X	-	I/P	-	X*	NA	-	-	O	2.5	X	-	S	-
90	O	3.5	X	-	M	5	X	NA	-	-	M	4.5	X	X	-	-
91	M/O	4.5/2	-/-	S	I/P	1	X	NA	S	-	I/P	-	X*	X*	S*	-
92	M/O	1/3	X*	S*	M/O	2/3.5	X	X*	-	X	I/P	-	-	X	-	-
93	M	3	-	S	O	4	X	NA	NS	-	NA					
94	NA				I/A	-	X	NA	S*	X	M	5	X*	X*	S*	-
95	M	4	-	NS	M	3	X	X	S*	-	O	2	X	-	-	-
96	M	4	X	S	I/P	-	-	-	NS	-	NA					
97	NA				I/P	-	X*	X*	-	-	M	4-5	X	-	-	-
98	M	7-8	X	S	I/P	-	-	NA	-	-	O	1-2	X*	NA	-	-
99	NA				I/P	-	X	NA	-	-	I/P	-	-	-	-	-
100	M	4	X	S	NA						M	5	-	-	-	-
101	M	2	X*	NS	I/A	-	X	X*	-	-	O	8	X*	X*	-	-
102	O	3	-	-	NA						M	4	X	-	-	-

X=Evidence of Step

S=Specific Step

NS=Non specific Step

NA=Not applicable

\*=Evidence of using specific strategies taught in class

In the initial evaluation of the four phases of Rodgers' model on reflective practice (2002) for Reflections 1, 3 and 5, the phases overlap somewhat, as well as the student narrative in response to the steps or bullets within each prompt. Due to this, I continually redefined what needed to be included in each phase as I coded and categorized and therefore felt a definition of what I eventually included in each was necessary.

The first two phases of Rodgers' model of reflective practice (2002) were automatically evidenced by students as they addressed each step of the prompt in being present to an experience (PE) in naming a topic to write about and in describing it (DE) when asked in the prompt to "talk about" their topic and the rating they were giving. In addition, 56% of the participants chose to write on Motivation or Organization of Time more than once for Reflections 1 and 3, 3 and 5, 1 and 5, or 1, 3 and 5. Another 13% chose to write on an Issue affecting their learning more than once for Reflections 3 and 5.

After coding for Rodgers' first two phases, Presence to an Experience (PE) and Description of an Experience (DE), it became evident that Reflection Prompts 1, 3 and 5 provide two very specific and numbered steps in asking students to 1. Select a topic, and 2. Write on it. In doing so, the first two phases were automatically evidenced by students as they addressed each step in being present to an experience and in beginning to describe it. Therefore, I have given random examples of student narrative evidencing Rodgers' first two phases.

### Reflections 1, 3, and 5: Evidence of PE and DE

The first two phases of Rodgers' model on reflective practice are described below and random examples are given from participants' narrative for Reflections 1, 3 and 5 which evidence these two phases.

1. Presence to an Experience (PE): This phase corresponds with Dewey's (1933) phase 1—an experience. This means not only having an experience but being able to also perceive the significance of it and to be open to its potential meanings. When having an experience one need not think about or reflect upon it, but also be aware of and/or observe that there may be more than one possible interpretation which may give new directions to be pursued.
2. Description of an Experience (DE). This phase encompasses Dewey's phases 2—spontaneous interpretation of the experience and 3-naming the problem or question that arises out of the experience and implies more than an involuntary interpretation of an experience, until one can analyze “Where they can be more closely examined in light of the data gathered.” (Rodgers, 2002, p. 856).

The following are examples of participant narrative evidencing Rodgers' phases 1 and 2 from Reflections 1, 3 and 5. These examples were pulled from the two specific numbered steps provided for students in these Reflection Prompts.



Examples of Rodgers' Phase 1: Presence to Experience (PE):

Participant # 1: "I would like to have a little more motivation in studying.

Participant: # 3: "I'm feeling very negative about motivation right now because out of this whole semester, I would have to say that this point is the lowest."

Participant # 11: "On a scale from 1-5 I would give myself a 2 so far for this semester for being motivated. I would only give myself a 2 because I have a really tough time getting myself to be motivated."

Examples of Rodgers' Phase 2: Description of Experience (DE):

Participant # 1: "I can get sidetracked very easily."

Participant # 3: "...I'm just really tired and burnt [sic] out, can't sleep at night."

Participant # 11: "I haven't wanted to study or do homework I would rather be hanging out with friends instead, also I've been really tired so its [sic] hard to keep yourself motivated to study when you want to sleep."

In addition, I coded and incorporated student narrative relating to the four bulleted items under Step 2 on Reflections (1, 3 and 5) into the last two phases of Rodgers' model, Analysis of Experience (AE) and Intelligent Action/Experimentation (IA/E). For each step I have included one example each from Reflections 1, 3 and 5 and have defined each as follows:

1. *Rate on a 1-5 scale your ability this semester to be motivated for school or to manage your time. 1=Low 5=High.*

Even though a student rating is not included as part of Rodgers' 4 phase model, it does further develop phase 2 (DE) gives an indication of student awareness of their situation and enables monitoring of any changes in student perception over time. Ratings are shown on Table 3 (for Reflections 1, 3 and 5) and on Table 4 (for Reflection 4) under the heading column RATE.

2. *Talk about the rating you gave yourself.*

Any student narrative addressing this bullet under Step 2 was recorded as an X on the spreadsheet, and incorporated under AE since some students skipped talking about their actual rating and continued to follow Step 2 "Write for 10 minutes." Perhaps this seemed a repeat or an overlap to the directions under Step 2. However I included the narrative for those few students who addressed this bullet by directly stating "I gave myself this rating because..." The columns labeled AE on Table 3 for Reflections 1, 3 and 5 and on Table 4 for Reflection 4 include this and any evidence of bullet 3 below in the student narrative. Furthermore, if a participant's narrative included incorporating any specific strategies or techniques being taught within the class, I also recorded an \*. If no evidence of AE was shown, I recorded an -.

3. *What will you do to improve your motivation or time management?*

Any student narrative concerning ways to improve their situation were included under the columns labeled AE.

Examples of Rodgers' Phase 3: Analysis of Experience (AE):

- Participant # 13: “What I think I am going to do is work no more than 20 hours a week, but no less than 15 hours a week and I have been thinking about riding the bus to school instead of driving here everyday.”
- Participant # 5: “So I think instead of writing about my motivations, because I have some of the best motivative [sic] sources, I need to focus on what am I to do with that motivation.”
- \*Participant # 42 stated: “The way I can improve is by not waiting until [sic] the due date to start my homework. I go to school on Mon, Wed, and Friday [sic] so I should use this time to my advantage and study on Tues and Thurs. I also could study more on weekends. This [sic] last 2 weekends of school I have played more than I should have. If I could have spent that time studying, I wouldn't have had to cram the night before.”
- *What's the next step you must take to get started in improving your motivation or time management?*

Again, Rodgers' model of reflective practice does not include a Next Step (NS) phase as evidence of reflection. However, including a Next

Step seemed a good precursor for preparing to evidence Rodgers' fourth phase in taking Intelligent Action/Experimentation (IA/E). Therefore I created a specific column on the spreadsheets for recording any evidence of this in order to determine if participants would state a specific or non specific step to be taken and to determine if this step was followed up on successive Reflections. In order to be recorded as a Next Step, I included only student narratives which were obvious, such as using the heading Next Step, numbering in relation to the prompt, bulleting, or in stating, "My next step will be" in order to differentiate it from narrative concerned with Ways to Improve. On the Tables I labeled this STEP and recorded an S for specific step and a NS for non specific. For a Next Step to be recorded as an S, it had to be specific in nature such as "My next step to improve is to get to TRIO for my interview." In order for it to be recorded as NS, it had to be a very general statement as in "I need to get more interested in my classes." Also, if participants' narrative included comments concerning incorporating any specific strategies or techniques being taught within the class I also recorded an \*. If no step was given I recorded an -.

Examples of NEXT STEP: (NS):

- Participant # 3 states: “Next step: looking into majors, following Avery around his job to see if I’d like the Industrial Hygenist field.”
- Participant # 22: “I feel that if I can get my sleep schedule worked out at the beginning of the week then my week will go better.”
- Participant # 16: “Future strategies we decided was to involve him more in my college experience and (I think) to ask his help on some of my classes.”

For Reflections 3 and 5, I added two more columns in addition to those listed above for participants’ narrative which included evidence of Rodgers’ fourth phase, Intelligent Action/Experimentation (IA/E), and for Feedback for participants’ narrative that included evidence of direct use of Teacher Feedback and labeled IA/E and FB respectively on Tables 3 and 4.

For evidence of phase 4, Intelligent Action/Experimentation (IA/E), I included evidence of intelligent action or experimentation taken whether in response to specific ways to improve or steps listed on previous Reflections or not. This diverges somewhat from Dewey’s and Rodgers’ insistence that any intelligent action or experimentation be as a direct result of previous theory. However, if as they both espouse that reflection is an on-going, circular activity taking into account any and all other resources, such as advice from others, books and/or further reflection, any intelligent action or experimentation evidenced should be recorded as evidence of phase 4. Again an X is recorded for evidence of this phase in the column labeled IA/E for Reflections 3 and 5 an

\* for those who included comments concerning incorporating specific strategies or techniques being taught within the class. Included below are one example each from Reflection Prompts 3 and 5 for evidence of Intelligent Action (IA/E) and use of Teacher Feedback (FB):

Examples of Intelligent Action/Experimentation (IA/E):

- \*Participant # 31: “I have been making flash cards for my tests two weeks in advance so that I can study a little bit each night.” “I have a test in one week so I am almost done with my flash cards and have been reading through my notes every night.”
- \*Participant # 94: “I am learning to take notes a lot better now which allows me to focus more on what my teachers are saying, which in turn helps me pick out key information.”

Examples of use of Teacher Feedback (FB):

- Participant # 70: (Teacher feedback from Reflection 1): “Take some time and make a list first. Number them in order of priority and try scheduling time for each. Re-order if not working and reschedule times if need to. It’s a process remember? It takes sometime to come up with something that can really work for you. The important thing is to get started and keep at it.”
- Participant # 12: “The last reflection I did (#4) you gave a simple but helpful idea. It was to set specific time during the week to read. I

started to use set times rather than [sic] just when I felt like reading. The set times seem to force me to read and accomplish my readings. When I didn't have set time I would usually go play on the computer or watch t.v. I think I am satisfied with my motivation at this point."

### Section 3--Goals (Reflection 4)

Reflection 4 focused on a particular goal that students wished to achieve. Since this particular prompt was not followed up with a succeeding prompt asking if they had made progress in achieving their goal, it was impossible to know if any adjustments or next steps might have played a part in whether students actually achieved their goals or not. Furthermore, they were not given an opportunity to revisit their goal in this way or to realize that they also had the option of continuing to revise any of their steps in order to eventually achieve them. This seemed a big oversight on my and the other teacher's part when developing the prompts. Especially when seen in the light of a subject that was very positive in nature in achieving something versus overcoming a problem/issue that could be perceived as a negative.

This prompt asked students to write on their goal by following 7 specific steps:

1. What is your goal?
2. Why is it important to you?
3. On a 1-5 scale, rate your progress toward achieving your goal (1=I'm stuck, 5=I'm well on my way).
4. Explain the rating you gave in #3.

5. Do you need to make adjustments to your goal statement to make your goal realistic? If so, please write a revised goal statement.
6. What is (are) the next step(s) you need to make toward achieving your goal?
7. How confident are you that you will achieve your goal? Please explain.

Table 6 below is a summary of Reflection 4 recorded by Topic, Rating, evidence of Analysis of Experience (AE), Intelligent Action/Experimentation (IA/E), Analysis of Experience (AE), Step and Confidence Level (CL).

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Table 6

*Summary of Reflection 4*

Total	Rate	AE	Step	IA/E	FB	CL*
80%	77%	71%	61%	58%	1%	57%

\* = Confidence Level

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Table 7

*Summary of Confidence Levels-Goals*

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RATINGS	# OF PARTICIPANTS
100%	1
70%	1
Extremely	3
Very	11
Pretty	12
Good	1
Confident	20
Sure	1
Fairly	2
Sort of	1
Not bad	1
Not sure	2
Not good	1
Not very	1

---

Individual results for Reflection Prompt 4 concerning goals is shown in Table 8 on the next page.

Table 8

*Individual Results for Reflection—Goals*

ID#	TOPIC	RATING	AE	IA/E	STEP	CL
1	A	4	X	.*	.*	Good
2	P	5	X	.*	S	Extremely
3	A	4	X	X	S	Pretty
4	P	4	X	X	S	Very
5	A	2.5	X	X	S	Pretty
6	NA					
7	A	4	X	X	-	Very
8	A	3	X	-	-	Not Bad
9	A/P	2	X	-	NS	Pretty
10	NA					
11	A	3	X	-	S	Pretty
12	A	2	X	-	S	Not Good
13	A	4	X	-	S	Very
14	A/P	2	X	-	S	Confident
15	A/P	3	X	X	S	Confident
16	NA					
17	A	5	X	-	-	-
18	A/P	3	X	X	-	Confident
19	A*	3-4	X	.*	S	-
20	A*	4	*	X*	S	-
21	A/P	5	*	*	S	Very
22	A	2	X	-	S	-
23	NA					
24	A	1	X	-	S	Confident
25	A	4	-	X*	-	Confident
26	P	4	X	-	-	-
27	-	-	X	-	-	-
28	A	1	X	X	S	Pretty
29	A*	3	X	*	NS	Confident
30	P	3	X	*	S	Pretty
31	A	5	X	X	S	Very
32	NA					
33	A	7	X	X	S	-
34	A	3	X	-	S	Fairly

(table continues)

Table 8 (continued)

ID#	TOPIC	RATING	AE	IA/E	STEP	CL
35	NA					
36	A	3	X	-	S*	Very
37	A	3	X	X	S	Pretty
38	A	3	X*	X	S	-
39	A	2	X	X	S	Pretty
40	NA					
41	A/P	3	-	X*	-	Very
42	A	3	X	X	S*	Pretty
43	A	2.5	X	*	-	-
44	A*	2.8	X	X	-	Confident
45	A	3.5	X	*	S	Confident
46	A	1-2	X	X	S	?
47	A	3	X	*	S	Confident
48	A	4	-	*	S	Extremely
49	A	2	X	-	-	-
50	A	4	-	X	S	Very
51	A	2	X	*	S	Pretty
52	A/P	3	X*	X	S	-
53	A	3	X	*	S	70%
54	A	3	X	-	S	-
55	A	4	X	X	S	Very
56	A/P	4	X	X	-	-
57	A	5	X	X	-	-
58	P	3	X	X	S	Sort Of
59	A	5	X	X	-	-
60	A	4.5	X	X	S	Confident
61	A	-	X	X	-	-
62	NA					
63	NA					
64	NA					
65	NA					
66	NA					
67	NA					
68	NA					
69	NA					
70	A	4	X	X	NS	Sure
71	A	-	X	X	S	-
72	A/P	2.5	X	X	S	Not Sure

(table continues)

Table 8 (continued)

ID#	TOPIC	RATING	AE	IA/E	STEP	CL
73	NA					
74	A	3	X	X	S	Pretty
75	NA					
76	P	5	X	X	S	Extremely
77	A	5	X	*	S	-
78	A	1	X	X	S	Very
79	A	4	X	-	S	Pretty
80	P	1	-	X	-	Not Sure
81	P	4	X	X	-	-
82	A	5	X	X	-	Very
83	A	4	X	X	S	Confident
84	P	5	X	-	S	Confident
85	A	3.5-4	X	-	-	-
86	P	-	X	-	S	-
87	A/P	1	X	*	S	Not Very
88	A	3	X	-	S	Fairly
89	A	2	X	-	S	Confident
90	A	4	X	X*	S	Confident
91	A	5	X*	X*	S	-
92	A	4	X	X	S	Confident
93	A	5	-	X	S	100%
94	A	4	-	X*	S	Confident
95	NA					
96	A	1.5	-	-	-	-
97	A	4	*	X	-*	-
98	A	3	X	X	S	Confident
99	NA					
100	P	0	-	-	NS	Confident
101	A	3	-	-	-	Confident
102	A	3-4	-	X	NS	Confident

---

Again, answers students gave to steps 1 and 2 could be considered as evidence of Presence to an Experience (PE) and steps 3 and 4 could be considered evidence of

Description of Experience (DE) in Rodgers' model of reflective practice. Examples are shown below for Reflection 4. The numbered steps 1, and 2 on the prompt resemble Reflections 1, 3 and 5 which ask:

1. *What is your goal? (PE)*
2. *Why is it important to you? (DE) (AE)*

Examples of participants' narrative providing evidence of phases 1 and 2, Presence to an Experience (PE) and Description of an Experience (DE), of Rodgers' model are provided below:

**Examples of Rodgers' Phase 1: Presence to an Experience (PE):**

- Participant # 70: "My goal for this semester is to pass my math class with a C or better.
- Participant # 86: "My goal for college is to first find a job I would like to go into."
- \* Participant # 29: "My goal is to do my assignments a couple days before they are due."

**Examples of Rodgers' Phase 2: Description of an Experience (DE):**

- Participant # 70: "This is extremely important for me for a few reasons. First, I don't want to repeat this class again. I would like to pass it on the first try. The second reason I need to pass this class is because my teacher is awesome at teaching math, and she is retiring in July. I like her style of teaching, and the way she tests, and I don't want to have to retake the class from another instructor and have to learn their ways of teaching."

- Participant # 86: I have some things in that that I would like to look into. The job I will go into will be a big part of my life so that's what makes it important.
- \* Participant # 29: "This goal is important to me because if I do this it will help me study more for my classes. I'm trying to do this also so I'm ahead and so I don't slack off and fall behind.

In addition, steps 3 and 4 repeat the bulleted items in Reflections 1, 3 and 5 and are recorded on Table 4 in the same manner, with the same criteria as those defined for Reflections 1, 3 and 5. Step 5 asks:

4. *Do you need to make adjustments to your goal statement to make your goal realistic? If so, please write a revised goal statement.*

For any participants' narrative evidencing the need to make adjustments and in writing a revised goal statement, I recorded it under the column labeled IA/E even though there was no way to follow up on the action taken on Goals in subsequent Reflections.

**Examples of Rodgers' Phase 3: Intelligent Action/Experimentation (IA/E):**

- \*Participant # 25: "I have been using the methods I learned in [class] to help me study and it's been working. I have been using the L-T-L notes, P-R-M on textbooks and I've used the frames as well."
- Participant # 56: "I have gone through each room in my house and gotten rid of things we don't need or use. This is very important to me-I have lived with clutter and I'm trying to stay on track keeping things simple."

Step 6 is again a repeat of that included on Reflections 1, 3 and 5 and is recorded on Table 4 in the same manner, with the same criteria as those defined for Reflections 1, 3 and 5.

**Examples of NEXT STEP (NS):**

- Participant # 71: “Tomorrow I am going to go out and try to retrieve at least 10-15 specimens for my collection. Then I am going to study for Monday’s Botany exam.”
- \*Participant # 36: “1.) taking great notes during class.  
2.) using PRM on the text  
3.) study everyday
- Participant # 76: “The next step to reach my goal is staying healthy and really training hard. Then giving my all in the matches.”

Examples of participant narrative on a non specific (NS) Next Step are as follows:

- Participant # 29: “My next step is to to [sic] make is keep on working. I cannot fall behind in any of my classes.”
- Participant # 70: “I just need to stay focused and caught up in everything so that I have ample time to reach this goal for math class.”

Step 7 asks:

7. *How confident are you that you will achieve your goal? Please explain.*

For question 7, I have added a column to Table 4, labeled CL for confidence level and have included the verbiage used by individual student in that column.

**Examples of Confidence Level:**

- Participant #1: “I feel like my goal is going good.”
- Participant # 76: “Right now I am extremely confident I will achieve my goal.”
- Participant # 30: “Pretty confident. It just depends on my schedule at work.”
- Participant #12: “I don’t think I will achieve [sic] my goal as well as I would like since my test is on Tuesday. I will have to try as best as I can.”
- Participant # 72: “I don’t know how I will achieve my goal. I’m pretty tired. I need to figure out why I’m not getting enough sleep already even though I have time to do so.”

**Section 4—Student Evaluations (Reflection 6)**

Section 4 provides results of student evaluations on the writing of reflection assignments themselves (Reflection Prompt 6), and examples of participants’ narrative according to rating given. The results include an overall rating provided on question 6 pertaining to the value of writing reflections and examples of participants’ narrative included concerning their rating and/or additional comments about the reflective writing assignments themselves.

Students are asked to circle one of four possible responses to 5 questions concerning the prompts themselves.



1. Writing a reflection made my thoughts clearer or more focused than they were before.
2. My understanding of the topics about which I was writing grew as a result of writing the reflections.
3. I liked getting feedback on my reflections.
4. Writing a reflection motivated me to take action related to the topic(s) I wrote about.
5. I recommend that the reflection assignments continue next semester in UNIV 105 & ED-LTCY 105.

The four response choices to these questions were as follows:

6. The four response choices are:
7. Strongly Disagree
8. Disagree
9. Agree
10. Strongly Agree

A sixth question asks students to rate how valuable it was to have the opportunity to write reflections in class on a scale of 1=low, 5=high value. And a third option is available for students to explain their rating or make additional comments about the reflection assignments.

Of the 94 participants who chose to have Reflection 6 included for this study, the great majority selected either Strongly Agree or Agree to all five questions on the evaluation. They noted that writing to prompts:

- Made their thoughts clearer 97%
- Increased their understanding of the topics they wrote about 93%
- They liked getting feedback 99%
- Motivated them to take action 96%

Below is Table 9 showing the overall results of the student responses to questions 1-5.

---

Table 9

*For Reflection 6, Questions 1-5*

RATINGS	Q1	Q2	Q3	Q4	Q5
SA	32%	21%	50%	35%	51%
A	58%	65%	42%	53%	38%
D	3%	7%	1%	4%	3%
SD	0	0	0	0	0

---

For question 6, 97% of the participants recommended that the prompts be continued.

Table 10

*Question 6*

---

RATINGS	
1	0
2	2
3	6
3.5	1
4	30
4.5	3
5	45
5+	1

---

Example of participants' narrative giving the rating of 5+ for Question 6 concerning how valuable it was to have the opportunity to write reflections in class is as follows:

- Participant # 17: "The reflections gave me a chance to stop and think about my goals and where I want to go. They gave me time to get away from worrying about my classes and grades and work. I actually use this 'reflection' tool on a regular basis when I start to feel overwhelmed by my class work. I feel refreshed and ready to start again. They have helped me on a number of occasions to get over a writer's block while writing some of my essays for English. I think reflections should be added to a list of 'College Success Tools. Keep up the good work. I would not be doing as well as I am if it was not for this class."

Examples of participants' narrative giving the rating of 5 for Question 6 concerning how valuable it was to have the opportunity to write reflections in class are as follows

- Participant # 1: "I liked to get feedback, because it was nice to have someone tell me if what I was doing was right. It was nice to get suggestion [sic] to improve on hat I wrote about. And it was nice to be reassured I was doing good and to keep it up. I liked looking back at my reflections and to know I'm not in the position anymore. That I have improved and I feel good about that."
- Participant # 2: "I feel that the reflection assignments were & are of high value, because it's true one needs to write it down for it to stick & to be organized. I'm very happy to know that I have improved a lot on my strategies through writing about them. Also it just makes life easier."
- Participant # 44: "The reflections were actually some of my favorite assignments because they are more personable and informal. There aren't many rules and guidelines so one can write anything in a reflection paper. The reflections also made me more aware of how I was managing my time and what classes I needed to concentrate on. I think reflections need to be done in every class so that students can get a better picture of what they need to work on specific to that class."

Examples of participants' narrative giving the rating of 4 for Question 6 concerning how valuable it was to have the opportunity to write reflections in class are as follows:

- Participant # 19: “For some people writing things down makes it “in stone” so to say. For me I can say that I’m going to P-R-M an assigned reading but when I write it down on my weekly planner I see that it is my goal. It reinforces because I wrote it down. It holds me liable to get it done. I’m not sure if next semester if I would write reflections to myself but I will ‘think’ about how I am applying what I am being taught.”
- Participant # 30: “I loved the reflections cause they really let you know what we think. I remember in high school we used to write blurbs in English every Friday and loved the blurbs because if you were stressed or anything you could get it out on paper. At the end of the year we looked back on all of them and it was great to see how things had changed.”

Examples of participants’ narrative giving the rating of 3 for Question 6 concerning how valuable it was to have the opportunity to write reflections in class are as follows:

- Participant # 97: “I would rate the use of reflections as a 3 b/c [sic] sometimes I didn’t have much to say or my habits didn’t need changing. Other times however, I was stressed out and used the reflections as a venting tool.”
- Participant # 11: “I thought that it was pretty valuable to write reflections in class. I think that they helped remind me of what my goals were and helped remind me of stuff that I wanted to work on, such as motivation and time management. I gave the value to have the opportunity to write reflections in class a 3 because I thought it was helpful to remind myself

about everything but then I didn't really take action on them after reflecting about them. It just felt that I was writing about something that I needed to work on, but then I never did what I wrote about."

- Participant # 27 gave a value rating of 3.5 and stated: "I think that writing reflections is good but not essential. It's like mustard on a sandwich, it makes the sandwich taste better but you could eat it with or without. It give the student an opportunity to see their opinion on paper, an outside the box type of view. I would suggest keeping the reflection writings, it keeps students on top of stuff. And it makes the sandwich taste better."

Examples of participants' narrative giving the rating of 2 for Question 6 concerning how valuable it was to have the opportunity to write reflections in class are as follows:

- Participant # 8: "As I am writing a reflection, I know what I need to do before writing. I feel a reflection is a way of checking in once in awhile to prove I am going to school. For some people this may be a great tool. In my opinion I seem to be writing the same things over and over on my learning styles and goals. The rating is the same and I hate repeating myself. I appreciate the help but I would like another tool useful for me."
- Participant # 50: "Maby [sic] if we took time as a class to give more of a [sic] idea to solve the problems that we have. If I knew how to solve my problems I would."

In addition, 17 participants directly commented on how they felt about receiving feedback in relation to Question 6.

Examples of participants' narrative on this feedback are as follows:

- Participant # 90: "I like receiving comments because they are words of encouragement and can also serve as a second point of view."
- Participant # 72: "It is proof to me that this class works and there is genuine interest in the success of the students by the faculty. Thank you!"
- Participant # 26: "I also enjoyed the feedback ----gave. It made me feel like I wasn't alone in my feelings which further pursued me toward my goal."
- Participant # 40: "Positive feedback is a confidence BOOSTER [sic] (much like a booster shot in the arm)."

#### Section 5—Teacher Feedback (Reflections 1, 3, 4, 5 and 6)

For Section 5, examples of teacher feedback are given (two each per teacher) which were chosen at random for each Reflection (1, 3, 4, 5 and 6) and given in support of each rating (1-5) for overall value of writing in response to Reflection Prompts.

Rodgers' model on the three benefits of collaborative feedback includes Affirmation (A), Seeing Things Newly (SN), and Support (SU). Teachers, having the end result of encouraging students in the reflective cycle, provided positive feedback, new ideas and perspectives and affirmation and support in students' attempts to improve stated situations and/or in reaching goals. In providing feedback however, the more specific the feedback given, the greater the likelihood that students would accept and/or

attempt to address the feedback as evidenced in responses to later prompts given during the semester.

Comments written in the teachers' hand in response to student writing is an acknowledgement of the individual student, his/her concerns, and encouragement in continuing the process of reflection. However, specific feedback can not only help a student become more efficient in that process, but also model how to become more specific themselves when stating what needs to be done, and the next step to be taken in the process.

In looking at the extensive teacher feedback, I was continually diverted by the topics/issues chosen by the participants when given time to write about and attempt to resolve them. After six years of teaching this course, I knew that younger students typically have different issues and motivations than do non traditional students. Goals however, seem to be academically related regardless of sex and/or age, and of a more immediate or short term nature. Seventeen participants referred specifically to wanting to do better on a test, pass a class or get a higher GPA, ten mentioned wanting to be more organized or to turn in assignments early, eight mentioned wanting to keep up with their reading, and seven mentioned their goal as wanting to graduate.

Issues, however, included fourteen participants who listed their home life and related stress, seven lack of focus, four being tired or exhausted, and four work schedules as issues. Of those who noted home life, significant other/relationship problems, all were female but one. Of the non traditional-aged females, issues such as undermining by a spouse or significant other, stress in handling multiple responsibilities, a general feeling



of being overwhelmed between home and school responsibilities, or of being a “fish out of water” were common.

Of the traditional-aged females, the relationship issues were primarily concerned with a long-distance romance, a lack of family support of a romance, an upcoming marriage or a significant other moving away. Males in both traditional and non traditional-aged groups cited more academically related issues such as lack of a major, concern over future job possibilities with families to support, work taking up too much time from studies, or lack of focus.

However I have had numerous occasions in either being part of, or overhearing many conversations involving non traditional female students concerning issues of low self-esteem, self-confidence, and even verbal, emotional and sometimes physical abuse by significant others (sometimes family members in some cultures) along with guilt and confusion about their changing roles within the family and society. I was somewhat surprised not to find more of these kinds of issues within the responses. Perhaps as stated earlier by more than one student, putting pen to paper makes it very real and therefore something once stated as an “issue” begs for resolution, which they are not yet able to address.

Examples of teacher feedback which may evidence the three benefits of collaborative feedback according to Rodgers’ model of Affirmation (A), Seeing Things Newly (SN) and Support (SU) are as follows:

Affirmation (A):

- Participant # 52: “Good ideas! Makes you feel you have some control over your life!”
- Participant # 58: “Sorry to hear you are struggling Crystal. Sometimes being over-stressed & over-tired is enough to make you depressed & then being depressed makes you more tired, etc. It’s a vicious cycle.”
- Participant # 59: “I think you’re amazing Rachel! Lots of students w/no problems are way behind. Keep that motivation going! I admire you!”
- Participant # 63: “This is very well written & you’ve focused on what you want to do and how to do it. Very clearly written—and your writing shows a fine understanding of your needs now and before. Best to you!”

Seeing Things Newly (SN):

- Participant # 7: “So as not to get overwhelmed, I divide tasks into manageable parts and ‘check them off’ one at a time till they’re all done.”
- Participant # 57: “Try to find something fun, enjoyable or interesting in everything. You’ll begin to make connections and look for connections & that’s when it gets fascinating!”
- Participant # 58: “Try to take one day at a time & one thing at a time. School is overwhelming even if you have nothing else going on so having your mother ill makes it difficult to focus on school.”
- Participant # 63: “Good idea—but being flexible is important too. Things come up.....”

- Participant # 70: “Take some time & make a list first. # them in order of priority & try scheduling time for each. It’s a process remember. It takes time to come up with something that can really work for you. The important thing is to get started & keep at it!”

Support (SU):

- Participant # 7: “This is a thoughtful and insightful reflection. You are very clear about how to improve your organization of time.”
- Participant # 42: “This is a clear and well-developed statement.”
- Participant # 58: “Be careful of your own health. Without it you can’t accomplish anything for school or your mom. Let me know if I can help or if you need to talk.”
- Participant # 69: “Let me know how your adjustments work out for doing math homework.”
- Participant # 70: “Sounds like you are doing all the right things! Think how great you will feel in 5 more weeks! To be able to look back and say you did your very best!”

Section 6—Summary Analysis of Results

Student perception of writing in response to prompts over the 10 week period and in receiving teacher feedback was overwhelmingly positive to all six questions on Reflection Prompt 6 indicating that the experience overall was a positive one. This is reinforced by student narrative provided on both the Prompts themselves and on Prompt

6 (Evaluation). Perhaps as mentioned earlier, this was due to an increase in student confidence and perception of having more control over their learning due to the use of a structured format from which to respond, and in getting individualized feedback from teachers.

Increased participation and familiarity with the use of the structured prompts was evidenced in Reflection Prompt 4 where individual items to be addressed were numbered. With this prompt, there was eighty-one percent participation, 71% evidencing use of Analysis of Experience (AE—step 3 of Rodgers’ model) or what Dewey referred to as “a series of dry runs” in mentally attempting to resolve their issue. Fifty-eight percent showed having already taken some form of Intelligent Action/Experimentation (IA/E), and 66% evidencing a Next Step (NS). Those participants who evidenced use of IA/E also gave themselves higher self-ratings and provided ratings in greater numbers. Those giving no evidence of IA/E also had lower self-ratings and provided ratings in lower numbers.

Ninety-seven percent of participants stated that writing to reflection prompts made their thoughts clearer, ninety-three percent that it increased their understanding of topics chosen, and ninety-six percent stated that writing to prompts motivated them to take action. A total of ninety-nine percent of participants liked receiving feedback on their writing and the use of teacher feedback in successive prompts increased almost 50% between prompts 3 and 5, and ninety-seven percent recommended the prompts be continued.

In addition, participants who evidenced both Analysis of Experience (AE) and Next Step (NS) in a previous prompt and Intelligent Action/Experimentation in a successive prompt, also exhibited higher self-ratings for the same prompt. If participants evidenced use of Analysis of Experience (AE) in a previous prompt and no Next Step but took some form of action in the successive prompt, self-ratings were also correspondingly higher except for one or two instances. If there was no evidence of Intelligent Action/Experimentation (IA/E), self-ratings in the same prompt remained the same or fell lower.

Writing in response to prompts helped students to make meaning of what they were experiencing--or as more than one student stated--in seeing the topic as more tangible and thus perhaps more manageable, once on paper. In this way, Dewey's ultimate aim in reflection being inherent to the improvement of learning and as a meaning-making process of human experience seems to have been met.

### Section 7—Triangulation Results

Random samples of Reflections were read and responded to by two colleagues who identified patterns and provided written documentation for comparison with the researcher's. Inter-rater reliability was 89.3% and 90.2%. In addition, five reflections each from 102 participants were used for coding and analyzing purposes, including a student evaluation form (Prompt 6). This form consisted of six individual data points

asking for student ratings along with narrative which provided evidence to results found.

The journal record of attempts made/failure noted as to initial observations, patterns, issues and/or problems concerning coding and analysis of data is also valid evidence of results recorded.

## CHAPTER FIVE: CONCLUSIONS

My initial question spurring this study was whether reflection could be taught. I soon realized however, that what I really wanted to know was if students could be taught to think for themselves, to resolve issues (both personal and academic) that inevitably come up during the course of a semester and perhaps avoid the ultimate pitfall of giving up and dropping out. In addition, could the feelings of helplessness or lack of control in their lives possibly dissipate in the process and be replaced by a feeling of self-confidence and control in having not only overcome what might be seen as overwhelming obstacles, but also in taking pride in their successes? Might this also aid in building self-esteem and confidence in seeing their own growth and ultimate reward of a degree—in other words a sense of self-efficacy?

In order to better understand my interest in this study, this particular student population and my passion for seeing them succeed, some light needs to be shed on my own life connections and my journey on the path to teaching. In having returned to school at the age of forty after twelve years in a Fortune 500 company, and in having received both my B.A. and M.A. in English, I stumbled upon teaching, which I had been interested in since the first grade. When the teacher asked my first day of school if anyone could read and write, I was the only one who raised my hand. That day I became a teacher of my peers—my first taste of acknowledgement by an adult. I was hooked.

However, I did not find my way back for thirty-five years. When I did, I found I had become extremely shy in front of a sea of unfamiliar faces looking to me for

academic nurturing. I had no children of my own, no background, theory or foundation in the discipline of education, had never taught a class and yet assumed I could teach three sections of a college course while completing a doctoral level program in education—and live to tell about it.

I immediately began searching for ways to make teaching more comfortable for myself, and in doing so, for my students. I felt if I was able to approach it from more of a one-to-one basis, teaching might seem more manageable to me in seeing one individual face at a time and relating to them as such. I began asking my students to write a one page paper at the beginning of the semester in which they could introduce themselves and tell me anything they'd like me to know about them in a more personal and confidential manner. In return I opened up the classroom to any questions they might have about me in hopes of creating a more personable and reciprocal teacher-student relationship. In doing so, I soon realized that students were as anxious as I, and eager for me to know something about them personally, as separate individuals with their own goals, dreams and prior accomplishments. It also gave them a confidential and safe opportunity to confide in me any form of physical, emotional or mental challenges they might have, or perhaps simply that they were shy and/or uneasy about speaking up in class.

Responding to these personal student writings created an ongoing dialogue which continued through written comments on succeeding assignments. This gave me continuing insight into what difficulties my students were facing both in their academic and personal lives and a means of both written and verbal dialogue with them over the course of the semester.



The Reflection Prompts sprang from this recurring scenario from semester to semester in realizing that students needed a means of taking time out for a few minutes to collect themselves and organize their thoughts. By putting their thoughts on paper, along with a few ways of resolving issues to be referred to later, they could be rid of them at least temporarily. In the meantime they were mentally released to return their focus and attention back to their studies. It seemed a natural progression since organization is one of the five learning tools taught within the course. The student writing was not only surprising in its level of trust and intimacy, but the rapport that developed between teacher and student on a one-to-one basis made it possible to deal with the students as individuals within a group.

Many of the younger students were plagued by having to deal with what they deemed overwhelming events in their everyday lives in becoming responsible adults and learning how to manage jobs and academic schedules along with their personal lives for the first time. However for the most part they appeared to have a great deal of self-confidence in their abilities to confront and resolve issues head on.

In contrast, even though the older or non traditional students evidenced being overwhelmed by a lot of the same issues, it was from a much different perspective in a general lack of self-confidence in being able to be effective students, to learn and retain information and test take, but also in a general unease and embarrassment in being “too old to go back to school.” I could relate to this unease in having been a non traditional student myself.

Many of the non traditional students were also returning to school after extended periods of time having had many years of experience in varied fields and in feeling those experiences were not valued in an academic setting. In having come from the private sector and entering education at a non traditional age myself, I also perhaps provided them with a sense of having been in what they considered “the real world” and in having also experienced some of the same things outside academia.

In addition, through many of the non traditional females’ experiences outside of academia, they brought with them a negative self-concept, low self-esteem and self-worth in having been told repeatedly that they were too stupid to go to college and would never “make it” by friends, family and sometimes spouses. Many of these same women came from backgrounds of abuse, neglect, alcoholism and/or drug abuse and were determined to make a better life for themselves. Many were returning to school in order to earn degrees in social work, psychology, nursing and criminal justice in order to not only better their own lives, but the lives of others. One student in particular told me she had lost her home during the course of the semester, but continued to come to classes while living on the street. These are the students who continue to amaze me semester after semester in how far they are willing to go, what extremes they are willing to tolerate, in order to achieve their goals.

Since I also come from what is considered an at-risk background, I could relate to these women in many ways other than academically. Their experiences were some of my own, and in sharing with them, they also came to see that they were not alone in their

experiences. More importantly perhaps, they began to see their own backgrounds as something that could be overcome and used for a positive purpose.

In my own experience, I was fortunate enough to have had the example of a sixth grade teacher who showed a special and individual interest in each of his students (including myself) which I was not receiving at home. He was somehow able to sense my lack of a role model in my life and to unselfishly provide one. As I grew older I realized how this teacher in valuing me as a student, and as a unique individual had perhaps been the only adult in my life who had given me a sense of my own capability in overcoming my particular circumstances and in being worthy of achieving whatever I set my mind to.

In taking a personal interest in me and in caring what was going on in my life throughout high school and beyond, he gave me something of far greater value than an education in English. He gave me my only understanding of what it meant to be of value to someone and more importantly, to myself. When I returned to school and was given the opportunity of becoming a teacher, I did so with the hope of passing this invaluable gift I had received onto others as a means of honoring this person who had so influenced my life in such a positive and yet intangible way.

As the idea of my study developed, I found not only the initial question of whether or not reflective practice could be taught a narrow one, but also the reasons behind my wanting to know. It was not only about wanting to know about teaching reflection as an educative process, but in connecting one-on-one with my students somehow and in providing them an advocate and support system as I had been provided.

However, I soon found the voluminous amount of both student narrative and dialogue occurring between students and teachers within the Reflection responses themselves, was overwhelming and generally impossible to capture in a study reduced to three research questions. This was especially true considering that the data was categorized and coded within the confines of the four stage model of reflection along with theory developed about collaborative feedback as defined by Rodgers. However, the model and theory did provide a much-needed framework by which to begin the process of determining if students could be taught to reflect through guided, structured prompts and from the nature of collaborative feedback provided by teachers.

Initially I had hoped by having a specific model by which to code and categorize my findings, the results would be straightforward and easily discernable. This would indicate whether or not participants showed evidence of having accomplished each of the four phases of Rodgers' reflection model, thereby answering the initial question of whether reflection could be taught. Upon closer analysis, this proved to be far messier and confusing than I had anticipated. The four phases of reflection (as defined by Rodgers) overlap in definition and scope as they move from one phase to the next as does student narrative in how (and in what order) participants chose to address the steps and/or bulleted items included on the prompts.

For example, phase 1 (presence to an experience) of Rodgers' model is described as having an experience and in being aware of and/or observing more than one possible interpretation. Phase 2 (description of an experience) begins to name the problem or question that arises out of the experience. In some instances, in being present to an

experience one might also begin to simultaneously name and describe it, which is what participants evidenced in their narrative when responding to reflection prompts. Clear cut phases within participant narrative were the exception rather than the rule and generally occurred when students chose to address the steps or bulleted items in prompts by numbering each or in some other way signifying beginning to address a new step or item within the prompt such as in Prompt 4 on Goals.

Therefore, in order to respond to this overlap, I was forced to continually recode, re-categorize and redefine my boundaries of which category I felt best suited each piece of data. This in itself proved to be a reinforcement of Dewey's insistence on the cyclic nature of reflection which, although an interesting part of the process, was also very demanding and frustrating.

In addition, I found myself rereading and recoding on a daily basis until I realized that with each day, my perspective had changed slightly as to where I had previously identified distinct boundaries or categories within the narrative. Consistency in this was particularly important to me on Reflections 1, 3 and 5 since they are the prompts in which a comparison of students' writing on the same topic over time can be seen. In order to resolve this, I chose to code and categorize all reflections 1, 3 and 5 on the same day since I felt I could maintain the same perspective throughout the process. Hopefully this provided better consistency throughout these three prompts, adding greater insight into what these participants experienced over time.

Even though the prompts themselves (which were developed and used as part of the curriculum far in advance of any notion of providing data for a research study)

followed Rodgers' model surprisingly closely, I felt somewhat confined in feeling I had to try and fit all the emerging data into a coding system consisting of four steps. In doing so, it was apparent that students were able to follow numbered steps or in some instances, bulleted items in replicating the reflection process (as defined in Rodgers' four phase model) and sometimes in moving to the next step automatically, after being exposed over time to the format of the prompts. Or perhaps, students realized in responding to the Next Step (NS) bullet that not only did they need to state a next step on paper, but to follow through in taking one in reality. As more than one student stated, having written down something on paper made their issue and/or goal more "real" to them, and in doing so, also made the notion of taking some form of action also necessary or more real.

In this respect, the impact of providing students with structured, guided prompts and in giving them ten minutes of in-class time in which to respond to each, led them through the four phase model as set out by Rodgers and in becoming familiar with the format of naming, describing, analyzing and in some cases, taking intelligent action. Students learned how to reflect based on these four phases when asked to respond to the steps provided them. That they were able in some or most cases to move onto the fourth phase in taking intelligent action in successive prompt assignments, points to the fact that they had "learned" what the four phases were and were able to address them independently of the prompts themselves. In this way, students could be said to have learned how to reflect.

However, as mentioned previously, far greater benefits than those anticipated by Rodgers' model were evidenced over the course of the Reflection assignments as students

were taught to use guided, structured prompts. As many students noted in their narrative, “It’s true one needs to write it down for it to stick & to be organized. I’m very happy to know that I have improved a lot on my strategies through writing about them. Also it just makes life easier.” Or, “I think the main reason why writing the reflections help out is because it gets the students to let out all their inner thoughts & roll them onto paper, they can visually see what the problem areas are and can conquer them much easier than if they haven’t written anything down.” Using the word “conquer” gives a good indication that this particular student felt he had gained control over what needed to be accomplished. Whether or not students followed through with some form of action, it was obvious they had found a way to at least feel more in control.

Perhaps one of the most important results of writing to prompts is seen not only in providing students with tangible, concrete ideas about ways to improve and perpetuate the reflective cycle, but reassurance, encouragement and a means of feeling acknowledged as individuals through one-on-one dialogue and feedback provided in response to student reflections. Although students acknowledged that they liked getting feedback, the personal and confidential dialogue which occurred between students and teachers is one which could not have been accomplished in a conventional classroom situation. In addition, as Kerka states, it provided a safe outlet for students’ personal concerns and frustrations which aided their own internal dialogue.

As more than one student stated, “It made me feel like I wasn’t alone in my feelings,” and “I didn’t feel alone or like nobody cared,” or “It helped me to explain what was going on in my life to someone else. I liked the fact that someone wanted to hear

about how I was feeling and what kind of stresses I was dealing with.” The value of this kind of rapport and trust between student and teacher and in building a sense of community within the classroom is inestimable.

In addition, teacher feedback and resultant dialogue between students and teachers gave students a feeling of personal connection with the teacher and a feeling, as more than one student put it, that “someone cares.” Providing students a one-on-one audience with the teacher and in giving personal feedback to their specific issues in a supportive, affirmative way helped students feel encouraged and reinforced in what they were already attempting and what they hoped to do in the future. This, perhaps is at least in part, where the greater student confidence in ability to resolve issues and/or achieve goals resides. It should also not be understated as to how this one-on-one dialogue informed my own (and no doubt the other teacher’s) roles as reflective practitioners ourselves. As Rodgers states, “Once they [the students] perceive that their views are desired, respected, accepted, and acted upon” and in sharing power through the inclusion of student voices, a “deepening trust between teacher and student and among students, and establishing a vibrant, creative community on a daily basis” is achieved (2002, p. 211-212).

Perhaps more importantly in giving students an opportunity to actively participate in their own learning by giving them a voice within it, and teachers reinforcing that voice through feedback, students come to have confidence in their own voice, a deepening trust in their own validity as meaning-makers and problem-solvers. One overwhelming piece of evidence on the benefits of reflection can be seen in both the formation of new ways in



which to change old paradigms of thought and perception concerning issues affecting learning as well as in students' perceptions of themselves as learners and problem-solvers, as described by both Dewey and Mezirow.

This profound and obvious impact of using guided, structured prompts was evidenced through student self-ratings being higher in conjunction with attempting any kind of action or experimentation in resolving issues/achieving goals in successive prompts. The perception that a student had of his/her own ability and/or confidence level in being able to resolve issues and in perhaps the action taken, also gave students a feeling of control over their learning that they might not have had previously. Whether or not students were aware that in having taken some action, their self-ratings were also correspondingly improving is something I was not able to address within the confines of the study. However, what is important is that students' perceptions of their own abilities were increasing over time with attempting to resolve issues and/or achieve goals. In addition ratings on Reflection Prompt 6 show evidence of student perception of having improved understanding on topics and of having made their thoughts clearer and more focused at the end of 10 weeks was overwhelmingly high.

Students' perceptions of themselves as capable problem-solvers changed in a positive way when they took some form of action in order to resolve issues and/or reach goals. In other words, students' existing paradigms had also changed and *transformed* their learning as a result.

It would be interesting to have students write a short response at the beginning of the semester asking how they felt about themselves as learners and why, and follow up at

the end of the 10 weeks with the same prompt. This might be further evidence of Mezirow's Transformational Learning in analyzing student perception over an extended period of time.

Even though the majority of participants did not use the specific word "confidence" in their comments or overall evaluation of the value in writing to the prompts, their statements of enjoying being able to look back and see how far they'd come, in being happy to know they had improved and their overall positive ratings are testament to a growing confidence in having been given a means of taking stock. One student stated: "Positive feedback is a confidence booster (much like a booster shot in the arm)." In addition, as stated previously, those who chose to write on the same topic more than once and evidenced taking some form of action also had higher self-ratings in succeeding responses, whereas those who took no action had lower self-ratings.

The idea or feeling of having some control over their situation, in naming ways of improving and attempting to resolve their situation, along with supportive teacher feedback, provided a feeling of greater self-confidence as reflected in self-ratings between prompts and in the overall rating given to the value of having an opportunity to write to prompts. This greater self-confidence in one's ability to resolve issues and/or achieve goals were benefits students could take with them not just through their academic career but their lives in general. By providing the means to achieve a self-efficacy they may not have had or been aware of previously, students garnered a means of gaining a sense of control over resolving issues and achieving goals, or as Dewey states, in

improving their learning. Students not only achieved the mindset of how to take stock of where they are, but where they wanted to go and how to get there.

As Albert Bandura states:

We find that people's beliefs about their efficacy affect the sorts of choices they make in very significant ways. In particular, it affects their levels of motivation and perseverance in the face of obstacles. Most success requires persistent effort, so low self-efficacy becomes a self-limiting process. In order to succeed, people need a sense of self-efficacy, strung together with resilience to meet the inevitable obstacles and inequities of life. (1997)

Providing a ten week period of exposure to writing to reflection prompts was one more tool taught within the class that many of the participants stated they would take with them into the following semester. As one student stated "I would like to continue to use the reflections after (the class) –I just have to get someone to ask for one and give me feedback on it." Or, "Reflections are good to have and I know that I'll be using reflections for my next term and so on," or "It nice [sic] to have writing throughout the semester because you can track your ups and downs, and prepare properly for the next semester by knowing what issues you struggled with that semester."

It would be interesting to follow up with these students in order to find out if any of them continued to write reflections, and if so, if they used them as a means of talking with themselves to resolve issues and achieve goals. It would also be interesting to know how reflections may have affected their self-confidence in their ability to do so versus

those who did not. The use of reflection prompts continues to be part of the curriculum today and continues to receive positive feedback from students. The call for the reflective practitioner also continues as we struggle to define, refine, practice, assess and research how the process of reflection can aid in improving learning for our students and ourselves.

As Rodgers states, “It is not a fad whose time has come and gone but perhaps the most essential piece of what makes us human, of what makes us learners” (2002, p. 864). “When teachers begin to see students, students begin to feel seen. Sometimes for the first time, teachers and students feel present to each other, not only as roles—teacher, student—but as human beings who are from moment to moment in the process of change, and who therefore have the need to talk about how that change affects their joint efforts at learning” (2006, p. 231).

With improved learning being the goal of educators, the use of guided, structured Reflection Prompts introducing the benefits of problem-solving can also mean introducing students to feelings of self-efficacy and control over their learning possibly for the first time. Students evidenced the ability to begin to cycle through the phases of Rodgers’ model on their own when given structured prompts over time thereby accomplishing the goal of improving their learning. However, creating an environment which nurtures a one-on-one rapport and trust between teachers and students, along with encouragement in continuing to pursue the benefits of reflective practice, might just be the best means of accomplishing both.

Reflection prompts, in some small way, provide students with a means of coming to know their own power, control and ability to resolve their own issues, thereby giving them a sense of self-efficacy. However, and perhaps more importantly, they provide a means of letting students know that someone acknowledges them as individuals, gives them a voice in their struggles and in their own education, is willing to listen and provides an on-going dialogue between themselves and teachers that would not otherwise occur in a conventional classroom setting.

The best student evaluation I receive in a semester is “Linda really cares about us and our success.” If one student feels this during the course of the semester, I feel I have succeeded in achieving my own goal of perhaps giving one student the confidence of knowing that they too can accomplish anything they set their mind to, regardless of their past experiences, backgrounds and beliefs about themselves as learners and/or individuals.

Reading and study skills, along with learning to become critical thinkers and problem-solvers through reflective practice is imperative to one’s education (as English was in my own case). But what may be even more conducive to learning is a sense of self-confidence or self-efficacy in one’s own life--in discovering that you’re not alone, that someone believes in you for perhaps the first time, and maybe most importantly, that someone sees you as a unique and valuable human being with a unique and valuable voice, and who cares enough to listen.

Perhaps one student put it best by saying, “Writing reflections is good but not essential. It’s like mustard on a sandwich, it makes the sandwich taste better but you

could eat it with or without. I would suggest keeping the reflection writings, it keeps students on top of stuff. And it makes the sandwich taste better.”

### **Recommendations**

Based on the overwhelmingly positive results contained with the data along with 97% of participants giving a rating of Strongly Agree/Agree recommending that the reflections be continued, I would agree that this practice continue with a few modifications and/or suggestions to the prompts themselves as follows.

I would recommend that:

1. Add a short prompt and beginning and end of 10 weeks asking students to talk about how they feel about themselves as learners and why they feel this way
2. The Prompts themselves be consistent, simple and easy to follow in structure
3. The items (or steps) be numbered and not bulleted
4. Make sure prior reflection responses are available to students when requesting they write to successive ones
5. Add a numbered step to Prompts 3 and 5 that ask students:  
If you are writing on the same topic as before, have you taken any action based on ideas you came up with previously? Have you taken action based on ideas you came up with after further reflection? Why or why not? Did it resolve the issue? If not, what do you need to do now?

6. Reinforce to students that they be as specific as possible about the Next Step they intend to take
7. Continue the reflection assignment for the duration of the semester
8. Add another prompt as a follow up to 4 (Goals)
9. Teachers provide very specific feedback to students when responding
10. The prompts themselves be introduced to a broader base of students within education as a means of developing student voice, rapport and trust with teachers, and as a means of developing self-efficacy

It could be interesting and informational to perform further research on using guided, structured prompts (adapted as above) and in following participants through following semesters to determine if any continued to use this method of problem solving, and if so, did their perceptions changed over time. Also an in-depth case study of three or four students over the course of their academic career and even beyond might prove invaluable as to insights in how to approach and adapt the reflection assignments themselves.

In addition, considering the topics/issues that came up in the responses themselves, it would be interesting to perhaps adapt one section of the course to better suit the needs of non traditional students, and females in particular. Further research on the needs of non traditional females reentering school and what is currently available at other universities in addressing those needs could be incorporated as a component of the current curriculum. This could also provide a type of in-house support system of other women their own age to talk to thereby also reducing their feelings of isolation.

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APPENDIX A

**Syllabus**



ED-LTCY 105/UNIV 105 Reading and Study Strategies (2 credit hours)  
Spring 2006

Course Description

*Description from the Boise State University Undergraduate Catalog, p. 35 (p. 145):*

**UNIV 105 (ED-LTCY 105) READING AND STUDY STRATEGIES (1-2-2) (F/S).** Strategies include: reading textbooks, selecting key information from various types of text, note taking, preparing for tests, and test taking. (Pass/Fail)

*Expanded Course Description:*

This course is designed to assist students in meeting the demands of their current university courses. This course works best for students who are enrolled in two or more 100-level Core courses at the same time they take UNIV 105 (ED-LTCY 105).

Meeting new demands often means developing new strategies and techniques as well as refining our old ways of doing things. This course provides students with ways to read and study efficiently.

This major content of this course can be remembered as 5-4-3: 5 Learning Tools, 4 exam-study tools, and 3 stages of reading.

- 5 Learning Tools: (1) Motivation (2) Organization of Time (3) Use of Prior Knowledge (4) Organization of Information (5) Concentration
- 4 Exam-Study Tools: (1) Frame (2) Map (3) Practice Test (4) Text Hierarchy
- 3 Stages of Reading: (1) Preview (2) Read (3) Mark

The emphasis of the course is for students to learn to use these tools and strategies in all of their current courses. Successful use of these processes depends on the motivation of the students to give them a good chance to work. A good chance means that students will attend class, do the assigned work, and try hard to learn.

Each student in UNIV 105 (ED-LTCY 105) is required to attend one Large Group meeting and two Small Group class hours per week. In Large Groups, tools, strategies, and techniques are presented. Students practice using them in Small Group workshops, applying them to their work in other courses.

## Course Objectives

The major objectives in this course are as follows:

1. To increase each student's efficiency in reading and studying;
2. To encourage positive attitudes among students toward reading and other academic work;
3. To broaden the student's reading horizon and increase the student's amount of reading.

STUDENTS: THE TEACHERS OF UNIV 105 (ED-LTCY 105) ARE COMMITTED TO ASSISTING YOU TO GET THE MOST OUT OF YOUR UNIVERSITY EDUCATION!

## Required Texts

Armstrong, J. (2001). Readings Tools for College Study. 2<sup>nd</sup> edition. New York: McGraw-Hill. Abbreviated **RT** in Preliminary Calendar (separate handout)

Barsch, J. R. (1996). Barsch learning styles inventory. Novato, CA: Academic Therapy Publications.

ED-LTCY 105 / UNIV 105 Supplement. Abbreviated **S** in Preliminary Calendar (separate handout)

## Evaluation

Course credit (pass/fail) is determined by (I) the quality and punctuality of completed assignments, and (II) attendance.

### I. Completed assignments

Evaluation of work is frequent. To meet the truly exceptional needs of individual students, teachers may modify the minimum requirements, but all students are required to complete an equivalent amount and level of work.

#### A. Minimum Required Assignments (See page 5 of Syllabus)

On page 5 are listed the **minimum** number of assignments. More assignments may be required. All students must complete the assignments in the areas, listed as A-H, J, K.

#### 1. Evaluation Scale (for "Minimum Required Assignments," p. 5)

The scale used to evaluate the quality of work application of strategies to reading, writing, and exam-study tools is as follows:

- |      |                             |
|------|-----------------------------|
| 8-10 | strong to excellent quality |
| 7.5  | adequate quality            |

7	nearly adequate quality
1-6	inadequate level of work
R	Revise and Re-submit work for a numerical score

To receive a grade of "Pass" in UNIV 105 (ED-LTCY 105), students must achieve an average mark of 7.5 in each of the areas, letters A-H & K, on "Minimum Required Assignments: UNIV 105 (ED-LTCY 105)" (p. 5).

Punctuality of assignments: Completing work on time is often difficult, but it is an important aspect of being a good student. Instructors will require "make-up work" for any assignment turned in after the due date.

## **2. Evaluation Criteria for Selected Required Assignments (See p. 6 of Syllabus)**

### **B. Quizzes and Class Participation**

Students are expected to take notes during Large Group meetings. Quizzes focus on key concepts presented in Large Group and course texts. Class participation involves being prepared for class and contributing to class activities. To pass UNIV 105 (ED-LTCY 105), students must have a passing average on quizzes and have participated actively in class.

## **II. Attendance Policy & Making Up Work**

**Attendance Policy.** Attendance is very important in university courses. To achieve a grade of "Pass" in UNIV 105 (ED-LTCY 105), a student may miss no more than one Large Group meeting and one Small Group meeting per semester. Students who miss more than this amount must check with their Small Group teachers about make-up work, which must be completed for these students to pass UNIV 105 (ED-LTCY 105).

We have this policy because class time is time for learning, practicing, and applying techniques for reading, note taking, and studying. If this time is missed and not made up, then the quality of learning starts to go down. This policy is also consistent with university policy on attendance, which is stated in the undergraduate catalog: Even though Boise State might approve of your absence from class, the university catalog states that you are responsible for whatever you miss in class.

### Make-Up Work

Two ways to make up absences in UNIV 105 (ED-LTCY 105) are presented:

- #1 is available to all students;

- #2 is an option if you have extra-curricular responsibilities to Boise State (student athletes, members of ASBSU student government, students on work-study programs, etc.).

1. If you are required to do make up work, we want you to spend the same amount of time doing make-up work as you missed from class. Keeping this guideline in mind, please do the following:

- Think of work that will help you in another class and that uses a UNIV 105 (ED-LTCY 105) strategy. For example, to make up for missing a 50-minute Small-Group class, you could write mirror and summary questions for your math class notes. If you spend about 15 minutes writing mirror and summary questions for one day's notes, then you would need to do three days' worth of notes. Another idea would be to make a question Frame to use in studying for a test in psychology, history, or geology.

Of course, we teachers want you to use the LTL note taking method in every class. And we want you to make question Frames to help you study for your tests in other classes. Thus, this make-up work is what we want you to do even if you do not have to do make up work. We want you to use the LTL strategies because they will help you be a successful student.

- Get approval of your Small-Group Teacher before doing the work!
- Reminder: Make-up work is done in addition to the assignments that all students are required to do for UNIV 105 (ED-LTCY 105).

2. This alternative is intended for people who have regularly scheduled Boise-State events that conflict with UNIV 105 (ED-LTCY 105) class time. It applies only to absences you have to make up because of Boise-State sponsored events that you are required to attend.

- By September 10 (fall) or February 10 (spring), give your Small-Group teacher a list of all of the UNIV 105 (ED-LTCY 105) classes (large and small groups) that you expect to miss because you have to Boise-state sponsored events. Be sure to update this list if your schedule of events changes.
- Give your Small-Group Teacher a copy of your schedule of classes
- Keep a "Class Management Journal" for all of the classes you miss. Turn this in as required by your Small-Group Teacher.

#### Format

Do one journal entry for each UNIV 105 (ED-LTCY 105) class you miss. You may write your entry in one of two ways:

- \* As several paragraphs
- \* As several lists, with a few sentences of comments about each list.

Length: Each journal entry should be at least 2/3 of a page.

Content

Discuss what you did before and after your absence in order to stay caught up in all the classes you missed because of a Boise-State sponsored event. For example, if you missed math, biology, and Small Group because of an athletic competition, then write about all three classes, not just UNIV 105 (ED-LTCY 105). Evaluate how well you are doing with your plan to stay caught up.

## Minimum Required Assignments: UNIV 105 (ED-LTCY-105)

NAME \_\_\_\_\_ TERM Spring 06

## Information about Requirements:

- ❖ A-F & J: see Syllabus, page 6.
- ❖ G: see Supplement, pp. 17-18
- ❖ H & K: information given in class

DUE DATE	REQUIREMENT—ASSIGNMENT—COMMENT	MARK & DATE RECEIVED
Jan. 20	Paper copy of ED-LTCY 105/UNIV 105 Syllabus	
Jan. 27	B—1-Page Writing OR 1-Page RT Applications, Ch. 1	
Feb. 1	A—Lecture/class notes (from 2 Large Groups)	
Feb. 3	H—Calendar of Major Test Dates and Due Dates	
	(1) Feb. 3 _____ (2) Feb. 17 _____ (3) Feb. 24 _____ (4) Mar. 10 _____ (5) Mar. 24 _____ (6) Mar. 24 _____	(1)____ (2)____ (3)____ (4)____ (5)____ (6)____
Feb. 8	A—Lecture/class notes (2 days from another course)	
Feb. 10	C—P-R-M (on 1 week's reading from another course; minimum 6 textbook pages)	
Feb. 10	Do in class: Degrees of Reading Power (DRP) Assessment	
Feb. 22	A—Lecture/class notes (2 days from another course)	
Feb. 24	D—Do in class: Frame on text TBA:	
Mar. 1	E—Do in class: Map on "Japan," (RT pp. 228-229)	
	F—Practice Test (on material from another course)	
Mar. 8	J—Vocabulary Self-Collection (1-50)	
Mar. 10	C—P-R-M (on 1 week's reading from another course; minimum 6 textbook pages)	
Mar.15	D—Frame (from another course)	
Mar. 17	F—Practice Test on Sociology chapter from RT (see S pp. 27-28)	
Mar. 22	F—Critique sociology Practice Test YOU TOOK (S pp. 29-30)	
Apr. 5	D—Frame (from another course)	
	G—Post-Exam Analysis (after any major test; see S pp. 17-18)	

Apr. 12	E—Map (from another course)	
Apr. 14	K—SKI 3 Reflection_____	Frame_____ Recall_____
Apr. 19	E—Do in class: Map: “Making of a Father...” (RT pp. 285-286)	
Apr. 21	J—Vocabulary Self-Collection (1-100)	
Apr. 28	K—SKI 4 Reflection_____	Map_____ Recall_____
Apr. 28	E—Do in class: Map: “... Nepantla ...” (RT pp. 253-255)	
May 3	E—Map (from another course)	

Evaluation criteria for an “8” on Required Assignments: A-F, & J.

**Requirement A, Syllabus p. 5. *Lecture/class Notes***

- a. Provide at least two days' worth of notes from a course.
- b. Start each set of notes on a new sheet of paper.
- \*c. Write 1-5 Mirror Questions for each page of notes.
- \*d. Write a Summary Question at top of page one of each set.  
\*Apply only to LTL Note taking. Substitute other format requirements if you're using the Cornell System or the Verbatim Split Page Procedure (VSPP).

**Requirement B, Syllabus p. 5. *1-Page Writing/RT Applications, Chapter 1***

Choose a OR b:

- a. Write at least 1 page (total) on one or more Applications from RT pp. 20-21
- b. (or) Write at least 1 page about yourself as a student at Boise State

**Requirement C, Syllabus p. 5. *P-R-M Reading Strategy***

- a. Apply the P-R-M Reading Strategy to a full textbook chapter (a week's assignment).
- b. Write questions in margins.
- c. Mark key words and phrases that answer question.

**Requirement D, Syllabus p. 5. Frames**

- a. Frame has appropriate form:
  - \* Frame headed by overall question or general topic
  - \* Specific topics listed across the top of Frame (at the head of each column)
  - \* Ideas listed down the left side (at the start of each row).
- b. Slots filled in with information (some blank cells ok).
- c. No slots filled with Yes/No Responses.

**Requirement E, Syllabus p. 5. Maps**

- a. Must be made in response to a topic (usually an essay type of question).
- b. Include only key words on topic (or answer to the question).

**Requirement F, Syllabus p. 5. Practice Test\***

- a. Must be turned in to Small-Group teacher before the date of the actual exam.
- b. Must have same format as actual exam in one of your courses; that is, practice test must have the same number and kind of questions as the actual exam.
- c. Must include answers for objective tests.
- d. Must include detailed outline (or Map) of all answers to essay items.

*\*Note: If you have no exams, then talk to your Small-Group teacher about doing a combination objective and essay exam based upon course materials for UNIV 105 (ED-LTCY 105).*

**Requirement J, Syllabus p. 5. Vocabulary Self-Collection**

- a. Collect all 100 words. Words may come from any source, such as other courses or recreational reading, just as long as you don't already have complete prior knowledge of the meaning of the words. Small-Group teachers may require additional conditions to the collection.
- b. Provide meanings of the words.
- c. Number the words consecutively from 1-100.



APPENDIX B

**Weekly Breakdown of Course Assignments**

Week	6	7	8	9	10
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What follows is a weekly breakdown of assignments due within the first 10 weeks of the semester which also contain reflective components inherent within the course. Students are required to be aware of and use the concepts of determining the most important information to be used in making other study tools such as maps, frames and practice tests, in practicing new vocabulary acquisition, setting weekly goals, and

Week	1	2	3	4	5
Key Terms	<ul style="list-style-type: none"> <li>• MOU</li> <li>• OC</li> <li>• Goals</li> </ul>	<ul style="list-style-type: none"> <li>• PRM</li> <li>• Time Management</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary Technical General</li> <li>• Time Management</li> </ul>	<ul style="list-style-type: none"> <li>• Test Anxiety Management</li> </ul>	
Strategies	<ul style="list-style-type: none"> <li>• LTL</li> <li>• Goal Cards</li> </ul>	<ul style="list-style-type: none"> <li>• Studying for 2 mid-term exams</li> <li>• Calendar of Major Tests and Due Dates</li> </ul>	<ul style="list-style-type: none"> <li>• Vocabulary Cards</li> <li>• Vocabulary Maps</li> </ul>		<ul style="list-style-type: none"> <li>• PRM</li> <li>• LTL</li> </ul>
Assignments		<ul style="list-style-type: none"> <li>• PRM</li> <li>• 1 pg Writing</li> </ul>	<ul style="list-style-type: none"> <li>• 2 days LTL (LG)</li> <li>• Listening Habits</li> </ul>	<ul style="list-style-type: none"> <li>• 2 days LTL notes from another course</li> <li>• Test Anxiety Management Workshop</li> </ul>	<ul style="list-style-type: none"> <li>• PRM</li> <li>• DRP</li> </ul>
Reflections			1	2	

becoming aware of and correcting poor study habits.

*Table 1.* Select Strategies and Assignments with Reflective Components

Key Terms	• FRAMES	• MAPS		• Practice Test	
Strategies	• FRAMES	• MAPS	• Integration of FRAMES, MAPS, Practice Tests	• Practice Test	• Text Hierarchy • Strategy Use Questionnaire
Assignments	• 2 days LTL notes from another course • FRAME	• PRM • MAP	• 50 Vocabulary Terms • FRAME • Learning Styles Inventory • PRM	• Develop Practice Test • Take Practice Test	• Post-Exam Analysis • Critique Practice Test • Strategy Use Q.
Reflections	3		4		5 & 6

### *Week 1*

In Week 1, students are introduced to the basis of the course (Table 1)—the five Learning Tools of Motivation, Organization of Time, Use of Prior Knowledge, Organization of Information and Concentration (M-O-U-O-C). According to the *Reading Tools for College Study* textbook:

1. (M) *Motivation* is your incentive, drive, or interest in doing something—what keeps you moving.
2. (O) *Organization of time* involves deciding how much time you need to do something and scheduling time to do it.

3. (U) *Use of prior knowledge* means understanding new information in terms of what you already know; *prior knowledge* includes everything you knew before this very moment—before right now.
4. (O) *Organization of information* means understanding how objects, events, and ideas are arranged, ordered, and connected.
5. (C) *Concentration* is the employment of all of your thought or attention on something—in other words, what you’re doing with your conscious mind at any moment. (Armstrong, 2002, p. 12)

Once students are consciously aware of the Learning Tools and how they can, and are, applied in their everyday lives, they can also give careful thought to which tool works best in any given learning situation. In working through their hesitation, perplexity or doubt and coming to some conclusion, they are participating in what Dewey stated as the two phases of reflective thought and practice--problem-solving.

The five Learning Tools require students to become aware of their Motivation level, how they Organize their Time and Use Prior Knowledge and Motivation in their decision-making. The practice of using these tools subsequently leads to making study tools such as Maps, Frames and Practice Tests (discussed later in this section) wherein students are required to anticipate test questions in their content area courses and organize the information in such a way as to aid in studying and test-taking.

The strategy of the Learning To Learn (LTL) note taking strategy (Heiman, 1998) (Table 1) is introduced the first day of class. The LTL note taking strategy is a technique whereby students are asked to record notes in a two-column style. A three inch margin is

drawn to the left of each page of notebook paper, leaving a column to the right for note taking during class lecture. Later that same day students review their notes and produce “mirror questions” which reflect the information given in the lecture notes, and record them in the three-inch margin to the left, along with a summary question of the day’s lecture at the top which represents the main topic of that day’s lecture.

The benefit of this strategy is in having students reflect on lecture material in the way a teacher would in developing questions which might appear on a test. In other words, they must seek out material that a teacher might determine the most important information to know from that day’s lecture, and to self-test based on that information. In consciously seeking out what they feel to be the most important information, students are once again actively involved in what Dewey called problem-solving. The Note Taking assignment asks students to use the LTL style in both the large group class of the course on Mondays, and within their other courses throughout the semester. LTL lecture note assignments from two large group classes are due in Week 3 and from another class in Week 4 and Week 6.

Also included in Week 1 is the concept of making and achieving goals over the course of the semester. Goal (index) Cards are given on Mondays in large group and followed-up on subsequent Mondays in monitoring students’ success in achieving their goals. In this way, students must consciously consider a goal they would like to achieve in overcoming issues such as lack of motivation, procrastination or lack of scheduled study time and write it down as a means of resolving the issue. Students are encouraged to share and celebrate the goal achieved in class (reflection done in community with

others) to rip up the goal card and take another in preparation of making and meeting a new goal. In this way students are continually engaged in reflecting on issues affecting their learning and in the act of problem-solving in finding the best means of resolving them.

No reflection prompts are given during the first two weeks of the course. Instead time is devoted to introducing and learning new concepts and in beginning to put them into practice.

### *Week 2*

In Week 2 a reading strategy called Preview, Read and Mark (PRM), is introduced along with an emphasis on the Learning Tool of Organization of Time (O) (Table 1). Students are taught how to preview text (P), read (R) and select what they feel to be the most important idea(s) and/or information from the text for marking (M). The PRM strategy requires students to actively seek out how text is organized, determining the author's development of the main topic, looking for clues as to subject matter and importance such as headings, subheadings, bolded and/or italicized words and captions. The Preview step (P) requires students to spend approximately five minutes reviewing the text and forming initial questions based on the preview.

The Preview strategy helps students gain an overview of the text and form initial questions concerning the text which aids in student interest and motivation. The Reading step (R) involves reading one to two paragraphs at a time and going back to mark or highlight key words and/or phrases deemed to be the most important. While marking

(M) students are also more focused on what the main points of a text are. While using the PRM strategy, students are involved in solving the problems related to the Learning Tools of Motivation, Organization of their Time, and Concentration. Once students have decided what the most important words and/or phrases are by marking them, they can then use the information to make various study tools which save time in studying for tests.

Students are encouraged to continue to practice the PRM strategy in their other courses throughout the semester, with required assignments due in the fifth, seventh, and eighth weeks (see Table 1). Both the strategies of PRM and LTL note taking are revisited and reinforced in Week 5.

Also included in Week 2 is the concept of Organization of Time (O). The development of a time management strategy concerns Studying for Two Major Exams that are given two days apart in different courses (Table 1). This aids students in learning how to organize and schedule their study time more effectively when faced with studying for two major exams. An example for studying successfully for both a history and a biology exam in the same week taken from the *Reading Tools for College Study* textbook (Armstrong, p. 27) is given on an overhead in the large group Monday class. Students are asked to practice on their own in filling out a blank form (also included in the textbook) in demonstrating how they would study for two overlapping exams of their own.

Another assignment asks students to complete a personal Calendar of Major Test and Due Dates and personal appointments/responsibilities for the complete 16 week

semester that they are currently aware of and to update as needed. This assignment is a means by which students are given practical experience in using the concept of organizing their time. Both these activities require that students be actively involved in solving the problem of scheduling adequate time for both school and personal activities.

In addition, the one page writing assignment is given this week giving students the opportunity of either reflecting on their prior use of tools or in communicating with their teacher about anything they feel they would like the teacher to know about themselves and their prior learning and/or personal experiences.

### *Week 3*

The six Reflection assignments included in the curriculum beginning in Week 3 (Table 1) ask students to explore issues of Motivation, Organization of time, issues affecting their learning, and goals they wish to achieve (Table 1). In the case of the Reflections, an automatic grade of 10 points for each reflection completed is given to students. In this way students were introduced to the experience of writing Reflections and in not being penalized in any way for what they wrote.

For the first Reflection due in Week 3 (Table 1) (Appendix C) students are asked to select either the topic of Motivation or Organization of Time to reflect upon and write about. In having been introduced to the strategies of M-O-U-O-C, the use of Goal Cards, and in having been given the assignment of recording Major Test and Due Dates on a personal calendar within the first two weeks of the course, students have a better understanding of the roles of Motivation and Organization of Time in their success.



*Week 4*

In Week 4, the topic of test anxiety management is addressed (Table 1) through a workshop given by the Academic Support Center on campus in how to manage test anxiety by becoming aware of such things as negative thought processes, one's health, diet, exercise, and the use of music and breathing exercises. Students are encouraged to become more reflective about how these issues might affect their test-taking abilities and how to resolve them. Reflection 2 is also due during Week 4 (Table 1) and asks students to reflect upon their use of the PRM strategy and is not included for purposes of this study.

*Week 5*

In Week 5, the LTL note taking and PRM strategies are revisited (Table 1). Students practice taking notes in class while the teacher presents a mock lecture, then given time in which to develop mirror and summary questions and compare with other students. Students are given the choice of using either their *RT* course book or a text from another class to practice using the PRM strategy as teachers work with individual students. One week of assigned reading using the PRM strategy is turned in as a required assignment. No reflection assignment is given in Week 5.

*Week 6*

Frames are introduced in Week 6 (Table 1). A Frame is a matrix of information which includes four parts (Figure 1), the title, topics (columns), ideas about topics (rows), and information slots (where columns and rows intersect). Topics appear as heads of columns, and sub-topics (ideas) as heads of rows. Information slots for each topic appear in a matrix-like structure and answer questions particular to each column. For instance, in Figure 1, the topics (columns) are Monet, VanGogh, and Picasso, the ideas about topics (rows) are: Important paintings, Style, Key features of work of vision, and Nationality/dates. The information slots (where columns and rows intersect) contain the information pertinent to each specific artist. In this way, Frames provide a major amount of closely related information in a visual, organized way.

Frames take a portion of important information from a text and organize it in such a way that what might have been dense or confusing is now displayed in a more easily understood manner. Developing a Frame requires a student to solve a complex problem that includes identifying topics within the same category (such as the three painters in Figure 1). Students must locate similar information about each topic (such as the painters' works) and generate an idea for the row of the frame (such as "important paintings").

During Week 6 students are also given Reflection 3 (Table 1) (Appendix B) which gives students three options from which to choose to reflect upon. Option 1 is to write on the same topic they chose for Reflection 1, the topic they chose not to write on for Reflection 1, or to write about an important issue affecting their learning. By this time in the semester students have had five weeks in which not only to think about and

practice the concepts of Motivation and Time Management but to write about their thoughts concerning one or both. In giving students the option of writing about an issue affecting their learning, the practice of reflection writing is moved from one of being given a choice of two topics the whole class responds to, to one of individual choice. In this way, students are made aware that reflection writing isn't just another class requirement but a method by which they can move toward improving or resolving issues specific to them as learners.

### Three Modern Painters

	Monet	VanGogh	Picasso
Important paintings	<ul style="list-style-type: none"> <li>•<i>Impression: Sunrise</i></li> <li>•<i>The River</i></li> <li>•<i>Water Lilies, Giverny</i></li> </ul>	<ul style="list-style-type: none"> <li>•<i>The Potato Eaters</i></li> <li>•<i>Wheat Field and Cypress</i></li> <li>•<i>Self-Portrait</i></li> </ul>	<ul style="list-style-type: none"> <li>•<i>Les Femmes d'Alger (O. J. M.)</i></li> <li>•<i>Mother and Child</i></li> <li>•<i>Guernica</i></li> </ul>
Style	Impressionism	Post-impressionism	Cubism
Key features of work or vision	landscapes, network of color patches	exaggerated the essential; committed to visible world	abstract treatment of space, but contact with classical tradition
Nationality, dates	French, 1840-1926	Dutch, 1853-1890	Spanish, 1881-1973

Figure 1: Frame of Three Modern Painters

Note. From *Reading Tools for College Study* (p. 84) by Armstrong, 2002, New York: McGraw-Hill Primis.

#### Week 7

In Week 7, students are introduced to Map making (Table 1). A Map is a “visual representation of concepts that are arranged to show how the concepts are related to each other” (Armstrong, 2002, p. 99) (see Figure 2). Maps, like Frames, give students a visual representation of information in an organized manner that helps retain the information in preparation for a test. In making Maps, students are instructed to identify the most important information contained within an essay in the *Reading Tools for College Study* textbook or within another course text and to display that information in a Map.

Students must reflect on and determine what information should be included in their Map and why, and encouraged to be creative with colors and shapes in giving information a clear visual difference on paper.

In Figure 2, a Map of the 5 Learning Tools shows the title and three levels of information: the main topic of Learning Tools is at the top and the subtopics of Motivation, Organization of Time, Use of Prior Knowledge, Organization of Information and Concentration are shown on the same line signifying the same level of importance within the Map. Underneath the subtopics are listed details pertaining to the specific subtopic as in daily, weekly and monthly being details of Organization of Time, and factors interfere and factors develop under Concentration. In creating Maps and determining what information to include, students find that key words was trigger their memory for further key ideas and details they was need for a test. No reflection assignment is given in Week 7.

### *Week 8*

Week 8 of the semester introduces the concept of integrating Frames, Maps and Practice Tests in order to prepare for exams (Table 1). A Practice Test is a tool by which an actual test to be taken by a student is imitated. In developing high-quality questions which may be used on an exam, Frames and Maps provide a means by which objective questions, essay questions or both may be anticipated. Students are shown how to integrate study tools as a means of studying a text as representation rather than re-reading

an entire text in preparation for a test. In developing high-quality Maps, Frames and Practice Tests, students must decide what tools work best for each situation, reducing the amount of time spent in test preparation and improving ability to remember information.

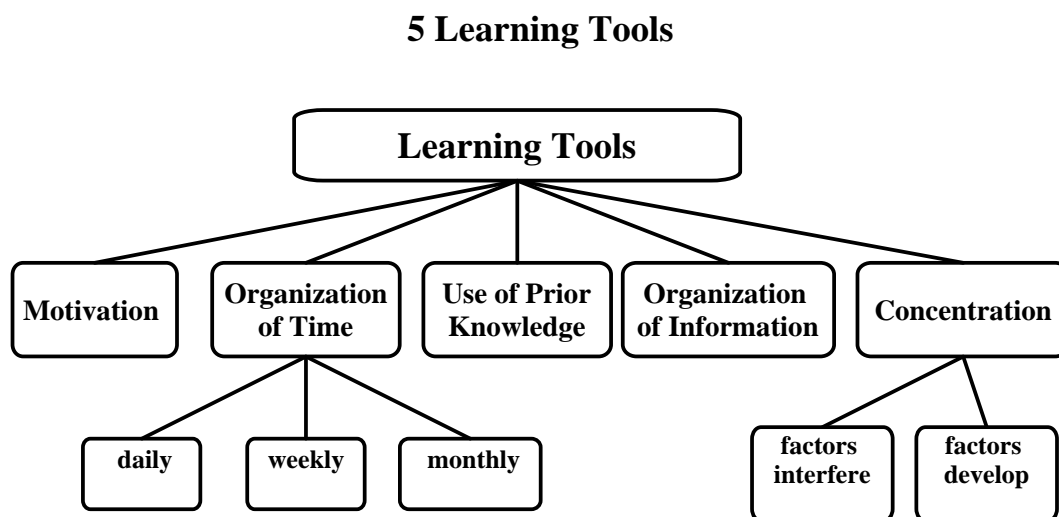


Figure 2. Map of 5 Learning Tools

Note. From *Reading Tools for College Study* (p. 105), by Armstrong, 2002, New York: McGraw-Hill *Primis*.

In making a Practice test, students begin to develop a sense of what kinds of questions a teacher might ask on an actual test. Students must anticipate what information contained within a text is important enough to be included on a test—“high-quality test questions” (Armstrong, 2002, p. 116). One Practice Test assignment occurs in Week 9 (Table 1) based on an excerpt from the *Reading Tools for College Study*

textbook (Armstrong, 2002) used in class. The reading concerns the beginnings and development of sociology. The work is done in groups of four students during class time over the course of a week in regularly scheduled classes. Students must incorporate what Dewey calls their sense of doubt, hesitation or perplexity in resolving issues of how a teacher might think in developing test questions. They must also do this within community with small groups of their peers in coming to a mutual decision about material to be included.

After completing the Practice Test assignment to make a test on the sociology chapter, each student is required to take a sociology test developed by another group, to score him/herself based on the answer key, and to critique the test they took. This critique is based on clearly defined guidelines. This assignment requires students to reflect critically on whether another group followed the test development guidelines and/or asked high-quality questions that asked about the most important information contained within the text.

The second Practice Test assignment requires each student to develop an individual Practice Test based on an actual test they was be taking in another course sometime during the semester. In order to complete the individual Practice Test assignment, each student must determine what test they would like to develop a Practice Test for, inquire as to what kind of test it was be, how many and what kind of questions was be on the test, and develop their test based on the information. They also must provide an answer key.

For the Post-Exam Analysis assignment (Table 1), students must complete a half-page or more in writing reflecting upon how they studied for the exam, how well they did (or perceive they did) on a test, what strategies they used in preparation, how well these strategies worked in this particular instance, and what they might do differently for the next exam. In this way, students think about particular issues faced in taking an exam and determine how they re-solve these issues in the future. Dewey's insistence on the practice of reflection mirror the scientific method, requires that the participant base his interpretation of his experience on prior knowledge, the forming of a new hypothesis based on his latest experience and to continue to modify and adjust his beliefs based on new knowledge gained in an ongoing cycle.

Reflection 4 is assigned during Week 8 (Table 1) (Appendix D) which asks students to reflect on a goal that is important to them and what steps they feel they was need to make in order to achieve it. Again the notion of using reflective practice in order to improve or resolve issues affecting student learning is moved to one which can also be used to identify and achieve goals.

### *Week 9*

Week 9 is devoted to making Practice Tests on the sociology text contained in the *RT* book (Table 1). Two sections of the class are combined for the entire week and groups of four students work together in using a template given to them on computers. Students must decide among themselves what the most important material is (or what a teacher might ask on a test) and develop high-quality questions. They must also



complete a practice test developed by another group. One of Dewey's criteria for reflective practice was that it be done in community with others. "In so far as we are partners in common undertakings, the things which others communicate to us as the consequences of their particular share in the enterprise blend at once into the experience resulting from our own special doing" (Dewey, 1944, p. 186). No Reflection assignment is given during Week 9.

#### *Week 10*

During Week 10, the study strategy of Text Hierarchy is introduced (Table 1). A Text Hierarchy organizes information into a format that connects information from most general to most specific in a manner that retains the author's development of the main topic. A Text Hierarchy may be presented as a Map or in an outline format (Figure 3).

Dewey believed that reflection was a meaning-making process, one that "moves the learner from one experience to the next with deeper understanding of its relationships with and connections to other experiences and ideas. It is the thread that makes continuity of learning possible" (Rodgers, 2002, p. 843). Creating a Text Hierarchy requires that students be able to identify and move from the most basic level of understanding of information to the most specific in a manner that retains the continuity of an author's purpose.

It is also during Week 10 that students complete the Strategy-Use Questionnaire developed by Texas Technical University which asks students to rate themselves as to how often they use 35 strategies they found to be the best-of-the-best in learning strategies. Students rate themselves on a scale of 0=never use, 1= rarely use,

2=sometimes use, 3=often use, and 4=always use. Certain of these strategies were found to be highly correlated with higher GPA and with certain strategies inherent within the course.

Also incorporated within assignments due in the first ten weeks of class are several assessment exercises such as The Listening Habits Questionnaire (Week 2, Table 1) and the Strategy Use Questionnaire (Week 10). These assessment tools ask students to reflect on specific listening habits and study strategies they may be using which may or may not be beneficial to their learning.

The exam study tools of LTL note taking, Frames, Maps, Practice Tests, Text Hierarchy, Reflections and the reading strategy of Preview, Read and Mark (PRM) incorporate the 5 Learning Tools of Motivation, Organization of Time, Use of Prior Knowledge, Organization of Information and Concentration. Inherent within these strategies and tools is the concept of reflective practice. Students must continually strive to learn better ways of reading and studying, determine what information is most important and how best to display that information in a visual format as both a means of studying for a test and retaining the information. Students are introduced to the strategies and tools, given practice material within the course book with which to work in community with small groups, and given several assignments to be completed in other courses on their own.

Each of these activities begins as Dewey says, with a “state of perplexity, hesitation, doubt” and requires “an act of searching, hunting, inquiring to find material that was resolve doubt, settle and dispose of perplexity” (1933, p. 12). Whether done

alone or in community with others in small group workshops, students begin to develop a sense of how to go about problem-solving in how to attain their goals, study for a test, retain information, and approach and resolve their individual learning issues as a means of improving their learning.

Reflections 5 and 6 are given during Week 10. Reflection 5 (Table 1) (Appendix C) gives students two options from which to choose: to write on the same topic they wrote on for Reflection 3, or to write on an important issue affecting their learning. Reflection 6 (Table 1) (Appendix C) asks students to answer several questions about their experience in responding to the reflection prompts in the first ten weeks of the course.

APPENDIX C

**Reflection Prompts 1, 3 & 5**

## Reflection # 1

1. Select either Motivation or Organization of Time as your topic for reflection
2. Write for 10 minutes on the following:
  - Rate on a 1-5 scale your ability this semester to be motivated for school or to manage your time. 1=Low 5=High
  - Talk about the rating you gave yourself.
  - What will you need to do to improve your motivation or time management?
  - What's the next step you must take to get started in improving your motivation or time management?

## Reflection # 3

Write on one of these three options:

Option 1: Write on the same topic you wrote on last time.

1. Select either Motivation or Organization of Time as your topic for reflection.
2. Write for 10 minutes on the following:
  - \* Rate on a scale from 1-5 your ability this semester to be motivated for school or to manage your time. 1=Low 5=High
  - \* Talk about the rating you gave yourself.
  - \* What will you need to do to improve your motivation or time management?
  - \* What's the next step you must take to get started in improving your motivation or time management?

Option 2: Following the assignment above, write today on the topic you DIDN'T write on last time.

Option 3: Write on an important issue that's affecting your learning right now. Describe the situation, state what needs to make it significantly better, and what your next step is to improve it.

## Reflection # 5

Write on one of these three options:

Option A: Write on the same topic you wrote on last time.

1. Select either Motivation or Organization of Time as your topic for reflection.
2. Write for 10 minutes on the following:
  - \* Rate on a 1-5 scale your ability this semester to be motivated for school or to manage your time. 1=Low 5=High
  - \* Talk about the rating you gave yourself.
  - \* What will you need to do to improve your motivation or time management?
  - \* What's the next step you must take to get started in improving your motivation or time management?

Option B: Write on an important issue that's affecting your learning right now. Describe the situation, state what needs to make it significantly better, and what your next step is to improve it.

APPENDIX D

**Reflection Prompt 4**

## Reflection # 4

Please write on the following:

1. What is your goal?
2. Why is it important to you?
3. On a 1-5 scale, rate your progress toward achieving your goal (1=I'm stuck, 5= I'm well on my way).
4. Explain the rating you gave in #3.
5. Do you need to make adjustments to your goal statement to make your goal realistic? If so, please write a revised goal statement.
6. What is (are) the next step(s) you need to make toward achieving your goal?
7. How confident are you that you will achieve your goal? Please explain.

APPENDIX E

**Reflection Prompt 6**



## REFLECTION ON REFLECTING

Over the last nine weeks you've written 5 reflections in UNIV105, one every two weeks. Now please take a few minutes to write about your reflections.

As a reminder the topics for the reflections are listed below:

1. Motivation or Organization of Time (Time Management)
2. Your use of the P-R-M Reading Strategy
3. Choose one:
  - a. Option 1. Motivation or Time Management (same topic as in reflection 1)
  - b. Option 2. The topic you DIDN'T WRITE ABOUT in reflection 1 (Motivation or Time Management)
  - c. Option 3. Write about an issue that's affecting your learning right now.
4. A goal you've set for yourself.
5. Choose one:
  - a. Option 1: Motivation or Time Management.
  - b. Option 2: Write about an issue that's affecting your learning right now.

For Statements 1-5, please circle the item that best describes your response:

1. Writing a reflection made my thoughts clearer or more focused than they were before.
 

Strongly Disagree	Disagree	Agree	Strongly Agree
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2. My understanding of the topics about which I was writing grew as a result of writing the reflections.
 

Strongly Disagree	Disagree	Agree	Strongly Agree
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3. I liked getting feedback on my reflections.
 

Strongly Disagree	Disagree	Agree	Strongly Agree
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4. Writing a reflection motivated me to take action related to the topic(s) I wrote about.
 

Strongly Disagree	Disagree	Agree	Strongly Agree
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5. I recommend that the reflection assignments continue next semester in UNIV 105.
 

Strongly Disagree	Disagree	Agree	Strongly Agree
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