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A Qualitative Study of Metacognitive Reflection: The Beliefs, Attitudes and Reflective Practices of Developing Professional Educators

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A QUALITATIVE STUDY OF METACOGNITIVE REFLECTION: THE BELIEFS,
ATTITUDES AND REFLECTIVE PRACTICES OF DEVELOPING PROFESSIONAL
EDUCATORS

A Dissertation

Submitted to the School of Graduate Studies and Research

In Partial Fulfillment of the

Requirements for the Degree

Doctor of Philosophy

Liliya S. Bormotova

Indiana University of Pennsylvania

December 2010

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Title: A Qualitative Study of Metacognitive Reflection: The Beliefs, Attitudes and Reflective Practices of Developing Professional Educators

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This study looks at cases of ‘reflection’ where the subject or topic in question involves an individual’s focusing on her own learning, metalinguistic development, and cognitive processes such as regulation and control of cognitive functions including selection, application and awareness of learning strategies. The study shows what advanced graduate students do metacognitively in reflective documents, and how they have come to understand metacognitive reflection, including in reflective assignments, as part of their learning process.

The qualitative design chosen for the present study uses data gathered in individual and focus group interviews and through document analysis (using a select group of written documents produced by the participant graduate students in response to assignments they perceive as ‘reflective’). The design of the study was also informed by the results of two restricted pilot studies (survey and interview based), conducted in 2005 and 2006.

The results obtained from the data analysis showed that 1) narrative plays an important role in supporting metacognitive reflection; 2) certain types of reflective assignments and the ways they are structured or set up can produce highly rewarding metacognitive reflections; 3) the benefits of metacognition for successful learning were

clearly recognized by all study participants; 4) reflection goes through several stages, which were identified in classic research done in the 1980s; 5) emotions trigger and facilitate learning; and 6) scaffolding is desirable in teaching students reflective and metacognitive skills.

This study is intended as a contribution to the research about graduate students' beliefs, attitudes, perceptions and experiences, with reflective assignments in academia. It indicates that metacognitive reflection is a “developing expertise” which takes considerable time and experience to evolve. It is hoped that the results will help educators to create a literate and informative account of reflection and to model their own practice in ways that encourage reflective practice among their students. This study also provides important insights and suggestions for future research which might be of substantial benefit for helping students and educators pursue related topics in the coming years.

ACKNOWLEDGMENTS

My special thanks go to my husband Patrick J. McDevitt for supporting me every day and at each step of this research through the years; to my mother Dr. Tatiana A. Bormotova, a medical doctor, for sharing and discussing her views on cognitive and metacognitive processes involved in the field of medicine and diagnosing patients and for her daily emotional support in this undertaking; to my sister Olga Bormotova, for providing me with her musical support and cheerful laughter; and to Dr. Bernard Koloski from Mansfield University of Pennsylvania for his transcontinental support, personal human investment and interest in Russian and Eastern European matters and his understanding of all political, financial and personal difficulties involved in making my graduate studies in this country possible. It all started ten years ago in Russia, Volgograd, when I was working as a translator at the Volgograd Shipyard. Ten years later, I thank you Patrick, Tatiana, Olga and Bernie for supporting me throughout this very long journey, and for encouraging me to proceed with and finish this work from which I learned so much.

My thanks also go to this study's participants who so willingly shared their invaluable personal stories and experience and dedicated their time to the long thoughtful rounds of interviews about reflection and metacognition. Thank you Boris, Dmitrii, Sergey, Mikhail, Ekaterina, Olga, Ibrahim, Anna, Suzette, Liz, Maria and Ella for providing me with your educated insights which helped me to investigate the complex cognitive processes involved in human thinking and metacognitive reflection.

Thank you Dr. Fontaine, for guiding me through this long journey and for being wise and patient advisor; thank you Dr. Alvine and Dr. Savova for reading this manuscript and offering your insights at the defense.

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CHAPTER I

INTRODUCTION AND BACKGROUND FOR THE STUDY

My Personal Interest in the Study

I first encountered the term ‘reflection’ in assignments associated with the courses in my graduate study at an American university. Before studying in the United States, I had never reflected on projects, papers, or other academic projects either in writing or verbally. Reflective assignments were new to me and I assumed that they were an accepted part of American educational methodology.

However, from conversations with several of my American doctoral student peers, who received their formative education in the United States, I learned that many of them were also encountering reflective assignments for the first time in either their master’s or doctoral programs. Thus, my assumption about reflection being a familiar and well-understood part of the American educational system proved to be at least partially mistaken. Eventually, I came to the conclusion that, even though reflective practice in U.S. academia is not a new phenomenon and is often spoken about by educators, it remains a vague concept for many students. This realization in turn led me to wonder whether ambiguous understandings of reflection might exist among teachers as well. If so, this might in fact lead to a situation where a potentially powerful tool might not always be being used in the most effective manner possible to support our efforts at educating students.

As my comments above suggest, my motivation for undertaking the present study is rooted in personal experience. I remember how I first reacted to being asked to reflect on an assignment in a graduate course. The assignment called for a “Portfolio of Journal

Entries”; students were asked to reflect on a professional concern which arose from class readings and/or discussions. This assignment ultimately led me to question my deeply rooted belief that teachers, and not learners, were in charge of education. Looking back, I realize that I did not have enough experience with reflective assignments, and therefore was not prepared to meet my teachers’ expectations. I wrote my reflective pieces hoping they were what the teachers expected, and in fact focusing on teacher expectations rather than my own. Similar feelings, and a similar developmental path, have been reported informally to me by some of my classmates.

Only now that I have taken all the advanced composition courses offered by the university, have read a great deal of literature on reflection and metacognition, and have developed my own reflective assignments as a researcher and teaching associate, have I acquired a better, more informed and more literate understanding of the role of reflection in learning. Thus, this study is in part a desire to help future generations of learners through this process of discovery, by listening to the journeys of experienced travelers for the insights they may offer.

I value the idea of becoming aware as a natural phenomenon which occurs during the learning process, and I see reflective assignments as a “learn by doing” process aimed at developing students’ awareness and metacognitive skills.

However, I still feel that much needs to be done to help teachers empower learners on this journey to self-awareness. Two informal studies, covered in Chapter III, were performed as pilot studies and have served as a background for the current research. These studies showed that much confusion exists among students and teachers regarding

the purposes and meaning of reflective writing, and that people in both groups hold very divergent ideas on these issues.

Certain aspects of reflective assignments, particularly those aimed at metacognition, require students to reach higher levels of reflection. But it is a difficult task to achieve such in-depth analysis; it requires students to “dig deep” into the layers of cognition, unfold them and reveal what is hidden in the mind. Teaching freshmen composition courses, I have noticed that student reflections often lack depth of analysis. Instead of probing more deeply, students are often quick to offer brief evaluations of their work (“I think I did a good job”), to describe their likes and dislikes (“I liked the whole class peer-review sessions better than group ones”), or to flatter the teacher, saying that their writing process improved greatly because of writing multiple drafts and talking to the professor, without accompanying comment on the ways in which these drafts developed. While many students in my classes have been able to look back upon their writing and see improvement and growth, they do not seem to have known how to articulate the how and why of that improvement, or to talk about how their thinking about writing has changed. The number of students who seemed to be able to reach that desired level of deep metacognitive reflection was very small.

Rationale for the Study

An overview of existing research on reflection and metacognition confirms that these areas are important for learning, but there are many questions that need to be addressed as well. Educators have voiced many reasons and pointed out specific problems which serve to underscore this study. A sample of recent claims is given here; the relevant sources are covered in more detail in Chapter II:

1. Educators recognize that the absence of metacognition leads students to become passive learners, disengaged from their education (Joseph, 2003; Irvin, 2005).
2. Many students do not think on a reflective level without guidance on specific task, because this type of processing is not in their cognitive repertoire, even if it is vital to their achievement in college (Joseph, 2003; Irvin, 2005; King 2005).
3. When students do not use metacognitive knowledge, their work shows shallow, shortsighted thinking and an inability to move beyond literal comprehension to the more challenging elements of interpretation and application (Joseph, 2003; Irvin, 2005).
4. Even though students inevitably benefit when a professor adds self-reflective components to a course, this approach may be unexpectedly challenging. Unaware of or indifferent to the value of metacognitive processing, the students may resist instruction that asks them to examine what they are thinking. Some students see such instruction as irrelevant, because they have become comfortable with a relatively passive approach to learning. For most students, this adjustment means changing the way they view themselves as learners and adopting an active approach to their education (Joseph, 2003; King 2002; Irvin, 2005).
5. Metacognitive reflection on learning and one's learning strategies is not only a complex process, it poses certain problems for students. One of the most specific problems has been described by Powell (1985) when he talked about his course based on reflective thought and reflective writing, involving writing autobiographies, personal narratives and other personal accounts:

It is extraordinarily difficult to identify what one is learning when engaged in a learning task or at a time quite close to that period of activity...It is much easier to report when learning is not taking place...At least part of the difficulty lies in the intellectual demand imposed by the sudden switching of attention which is required for immediate reflection on learning. One has to be able to move rapidly and with ease from, say, intense involvement in a discussion of a substantive point to a meta-discussion of ideas and feelings quite unrelated to what was being talked about a short time before. The distancing which is required and the cognitive dislocation which is involved created major problems for many students and limited what they were able to gain from the course (pp.45-46).

6. Much of the reflective element in education has been formalized through procedures like tests and assignments which, although they keep the students on task “can tend to relieve them of the responsibility for fully relating to their own framework the inputs which they receive” (Boud, Keogh and Walker, 1985, p.11). While this may maximize the amount of cognitive learning as defined by end-of-course examinations, it may inhibit the development of self-organized learning.
7. Currently, metacognitive skills in writing instruction are often not an explicit part of the curriculum: they are either not taught at all or taught fragmentarily (Yancey, 1998).
8. Some instructors feel that there is no time for anything "extra" like reflection and metacognition in a writing course; it is something that the students should do on their own or in a study skills course (Yancey, 1998).

9. “Lack of reflection can lead to superficially written responses” (Herrick, 1992, p.144).

Many of the above issues point to the value of reflection and metacognitive reflection; but they also point to the problems involved in making reflection a central part of pedagogical practice. For instance, as the eighth statement suggests, teaching reflection can be time consuming; and with a teaching load of four or five courses per semester, it can be a considerable challenge for teachers to teach the needed skills, as well as to assign and read all the reflective responses students produce. While intensive scholarly attention to these problems often dates back over a decade, and while the ensuing years have found educators struggling to resolve these issues (Azevedo, 2009; Kistner, Rakoczy, Otto, Dignath-van Ewijk, Büttner, Klieme, 2010; Magno, 2010; Richter & Schmid, 2010; Ritchhart, Turner & Hadar, 2009; Zohar & David, 2008;2009), the questions themselves remain and still call for further consideration.

Encapsulating several of the core issues listed above, the literature seems to agree that much as reflection is itself worthwhile and desirable, a core of understandings is needed to make the reflective process meaningful. As Belanoff (2001) writes:

Even if we do experience the value of reflection...we still need strategies to help our students develop their own habits of reflection. We cannot just decide to be reflective, and then it will happen. Nor can we just tell our students to reflect and expect them to produce reflective writing any more than we can expect them to engage in worthwhile group work just because we create smaller circles in the classroom (p. 419).

Before teachers can effectively aim for the goal of empowering students through reflective activities, many questions must be addressed. Is it necessary to require metacognitive reflection as part of the learning process? When does metacognitive reflection work? What is the best way to teach reflection aimed at metacognition? What kinds of explanations do teachers need to provide to the students? What levels and types of students (graduate or undergraduate) should be engaged in reflective thinking? When reflection works, what specific components of the writing, in terms of content, are most instrumental to learners?

While this study cannot hope to answer all of these questions, the overarching purpose of my research is to create a good and informative account of metacognitive reflection on learning, based on the experiences of a small group of advanced graduate students.

Statement of the Problem

While learning theories in education, psychology, and philosophy have proposed steps to encourage reflection as an important way for students to grow in learning, no significant body of analytical research has attempted to determine what students do metacognitively in their reflective documents, or how they understand these exercises as part of their learning process. There are very few accounts reporting students' personal experiences with and understanding of reflective writing assignments. There are no clear detailed accounts of how reflective assignments are developed and how they are being explained to the students. In this study, I will be looking at cases of 'reflection' where the subject or topic in question involves an individual's focusing on her own learning, metalinguistic development, or cognitive activities. In other words, the focus of this study

will be 'reflection on learning' as opposed to 'general reflection' on any given topic or assignment. To define the idea of 'reflection' in a manageable form so as not to include all thinking, I will confine myself to the metacognitive arena.

The qualitative design chosen for the present study is meant to shed light on these areas. My aim is to focus attention on reflection in learning by bringing together diverse trends in educational ideas and practices in order to encourage teachers and learners to adopt clear views on the role of reflection in their own teaching and learning and consider the range of approaches which are available to them.

The main focus and goal of this study is to understand advanced students' perceptions of their metacognitive activities, and to ask to what extent and in what ways they cite these activities as the impetus for change in their learning process, for instance in the strategies they employ in their ongoing learning and development. To achieve these goals, the study will use data gathered through individual and focus group interviews and document analysis (using a select group of written documents produced by the participant graduate students in response to assignments they perceive as 'reflective'). Information gathered in two restricted pilot studies (survey and interview based) will not be directly used in this study, though they have helped me to refine the design and goals of the present study.

Both my personal interest in reflective assignments aimed at metacognition and achieving higher levels of reflection and the insights from my experience teaching composition have led me to conduct this study. It is hoped that the study can become a meaningful contribution to the research about graduate students' perceptions and experiences with reflective assignments in academia.

Overview of the Study

As a step toward understanding the unanswered questions raised above, I have designed this study to explore the reflective practices and experience of a group of advanced graduate students. I have chosen graduate students as participants because these advanced students should be best able to elaborate on topics requiring considerable introspection; also, these advanced students will have had greater opportunities to engage in reflection in different forms; as noted earlier, some have considerable teaching experience and will also have used reflective assignments in their own classes. Of particular interest will be the interviews I conducted with the participants, in which they have been encouraged to tell their own stories and express their own views of reflective assignments. I should note that, since some of the graduate student participants were also experienced teachers, they responded as both learners and educators, as they themselves have assigned reflective essays or journal writings in their classes.

I conducted three kinds of interviews:

- Personal interviews with graduate students
- Focus group interview with graduate students
- Brief interviews with faculty

The interviews were semi-structured and encouraged the participants to speak freely on both the advantages and problems they saw with reflective assignments. To record findings and insights which appeared in the course of the interviews I kept a research journal of my own. To obtain a fuller picture of these students' experiences as responses to prompts in their courses, I conducted brief interviews with two graduate faculty members. Finally, in the course of the interviews, I asked the participants to make

available to me a select group of written documents produced by them in response to assignments they have perceived as ‘reflective.’ I then analyzed the contents of these documents, with the primary purpose of identifying and analyzing metacognitive components which appeared in these written assignments. These were also highly valuable in triangulating the study results, as evidence of the participants’ practice (in their written documents) could be compared with the views they expressed in their interviews.

Importance of the Study

I believe that metacognitive reflection is important for students because it

- 1) aids learning by helping students to unpack their assumptions about themselves as learners and thinkers;
- 2) encourages them to seek awareness of their own learning;
- 3) enhances student agency and control of learning strategies;
- 4) promotes responsible formulations of learning outcomes; and
- 5) provides useful feedback to teachers

Ideally, metacognitive reflection should guide students toward deeper levels of understanding and more effective control of strategies in thinking and learning. However, I have undertaken this study in the belief that reflection will work best if guided by teachers who themselves have an in-depth awareness of their goals and expected results—an awareness that they can then share with their students as needed. The goal of my study is ultimately to provide insights that may guide teachers in their reflective teaching practices.

Research Questions

The research questions for this study are:

1. How do advanced graduate students conceive of reflective assignments?

- a. How do they define the term 'reflection'?
- b. What do they see as goal(s) and advantages of assignments they see as 'reflective'?
- c. What assignments have they completed that they now view as 'reflective'?

2. To what extent, and in what ways, do the answers found for the questions in (1) and the practice of these advanced students reflect notions that would be defined as 'metacognitive' by specialists in the field? In other words,

- a. To what extent the graduate students' own definitions and goal statements seem to embody metacognitive concepts?
- b. What kinds of actual content appears in these participants' own reflective writing; that is how can the content of these pieces be broken down into categories (plans for future practice, narration, etc.)? Do similar patterns in content type appear across writers, or does there seem to be variation in individual reflective styles?

3. What experiences do these students report as triggers for genuine metacognitive changes in their awareness of the metacognitive strategies that characterize their learning and development?

- a. Do they cite reflective writing experiences as having led to important changes in that area?

b. Do they cite other kinds of experience, and if so, what kinds of other experience do they consider important to their growth in metacognitive awareness?

The following chapters will be organized as follows: Chapter II will review the relevant literature on reflection and metacognition in learning; Chapter III will outline in detail the methodology for the present study and will discuss the results from background and pilot studies; Chapters IV and V will present results from the main data collection instruments used in the study; Chapter VI will answer the research questions; and Chapter VII will expand on the conclusions of the study, its implications, and suggestions for further research.

CHAPTER II

REVIEW OF LITERATURE ON REFLECTION AND METACOGNITION

This chapter is intended to provide a selective review of the concepts and research areas that form the background for the present study. The first section will provide definitions of reflection and metacognitive reflection and briefly cover reflection in classical texts and disciplines. Following that, the modern scholars whose work is particularly salient will be covered separately in a section entitled Modern Seminal Views on Metacognitive Reflection (*John Dewey, Polanyi's Concept of Tacit Knowing, Schon's 'Reflective Practicum'*).

The next section will review topics suggested by their titles: The Role of Narrative in Reflection, Boud, Keogh and Walker's 'Stages of Reflection, Yancey's 'Reflection as Growth of Consciousness,' Reflective Models of Learning (*the Kolb model, the FEU, Grundy's model*), Reflection in Education and Composition (including the *Epistemic Approach*), and other accounts of reflection focusing on reflective writing, reflective assignments and reflective practice.

The last sections will cover definitions of metacognition and related concepts such as *metacognitive knowledge, metacognitive experiences/regulation, cognitive vs. metacognitive strategies* and several views of metacognition and metacognitive activities.

Definitions of Reflection and Metacognition

Narrowing Down the Idea of 'Reflection' to 'Metacognitive Reflection'

In popular language, the notion of 'reflection' is much broader than the one covered in the scholarly works discussed in this chapter. One example of the definition of 'reflection' comes from the Random House Unabridged Dictionary (1993):

1. the act of reflecting or the state of being reflected;
2. an image; representation; counterpart;
3. a fixing of the thoughts on something; careful consideration (syn. Meditation, rumination, deliberation, cogitation, study, thinking);
4. a thought occurring in consideration or mediation;
5. an unfavorable remark or observation (syn. Imputation, aspersion, reproach, criticism);
6. the casting of some imputation or reproach;
7. *Physics, Optics*. a. the return of light, heat, sound, etc., after striking a surface;
b. something so reflected as heat or esp. light;
8. *Math*. a. (in a plane) the replacement on each point on one side of a line by the point symmetrically placed on the other side of the line;
9. *Anat*. the bending or folding back of a part upon itself.

As can be seen from the above definitions, the word *reflection* has a range of meanings, including specialized applications in the fields of physics, optics, mathematics and anatomy. The first definition, which amounts to 'thinking' in a general sense, is the one found in everyday usage. Under this meaning, the broad general definition of 'reflection' involves simply giving a subject (a topic or a theme) a thoughtful

consideration, an analysis, or a critique, coming to some positive or negative conclusion, or simply to better understanding, on the basis of one's thought process about some topic.

It is perhaps due to this underlying broad usage that the terms like 'reflection,' 'reflective writing,' and 'reflective practice,' used by educators and researchers, seem to refer to multiple and shifting concepts. Even though many professional writers are concerned with metacognitive issues, their writings often veer off into other areas, such as the 'reflection' that students may engage in regarding , for example, the content of their readings, rather than the process of their learning. Discussions in the literature often stray from metacognitive reflection entirely and veer into areas that constitute what has traditionally been called 'critical thinking'. In addition, some authors (Bolton, 2005), state that they are going to explain what reflective writing is, but in the end give only very general accounts. Others (Herrick, 1992; King 2002) present more or less intuitively satisfying accounts of reflection, stating that writing requires reflection and emphasizing its benefits for students. These writers frequently claim that writing inevitably involves reflection; but again, some seem to equate 'reflection' with its everyday meaning of 'thinking'. In the process, such writers tend to blur the line between writing with a metacognitive focus and other kinds of writing. This is perhaps not surprising, given the history of this term whose origins were deeply rooted in two long-standing and complex disciplines, namely philosophy and psychology. Many characteristics which the general notion of 'reflection' (as critical thinking) and metacognition have in common are, indeed, tightly intertwined and hard to separate.

Nevertheless, I would like to provide the reader with a recent comment on reflection which focuses on the closely related term *reflective writing*. The passage below, by Dr.

Moon (2006) from the University of Exeter in the United Kingdom, is not a definition *per se*, and is not quite precise; however it offers insight into how I wish to view reflection for the purpose of this study:

In the context of ... a higher education program, *reflective writing* will usually have a purpose (e.g. you will be writing reflectively about something that you have to do or have done). It will usually involve the sorting out of bits of knowledge, ideas, feelings, awareness...and so on. It could be seen as a melting pot into which you put a number of thoughts, feelings, other forms of awareness, and perhaps new information. In the process of sorting it out in your head, and representing the sortings out on paper, you may either recognize that you have learnt something new or that you need to reflect more with, perhaps further input. Your reflections need to come to some sort of end point, even if that is a statement of what you need to consider next.

It is also worth recognizing that *reflective writing* may be a means of becoming clearer about something. Into the ‘melting pot’ you might then ‘put’ ideas, information, feelings, other people’s perspectives and advice. From what has been said above, it will be obvious that reflection is not a straight-forward and ‘tidy’ process itself. It is also all right to use the first person – ‘I’ - in reflective writing. (para.2)

Lengthy as it is, I feel that this passage implicitly contains a useful working description of ‘reflective writing,’ with its “melting pot” metaphor and its emphasis on multiplicity in the process.

In any case, in this study, I will be looking at cases of “reflection” where the subject or topic in question involves an individual’s focusing on her own learning, metalinguistic development, or cognitive activities. As I have stressed out earlier in Chapter I, the focus of this study will be “reflection on learning” as opposed to “general reflection” on any given topic or assignment. And, to define the idea of reflection in a manageable form so as not to include all thinking, I will confine myself to the metacognitive arena. An example can be seen in writing in which the author thinks about the processes she has engaged in while writing (“Maybe I wrote my paper's introduction too early... my revising strategy involved reading each paragraph over and imagining what a reader might think... I always tack my essays up on the refrigerator and this helps.....”); or as comments which a student offers on her learning process (“I managed to change my view of linguistics from this course, as I had not realized how many areas it covered or connected with...”); or (“I was often able to complete the readings only by tackling them in several segments, breaking them down so as to give myself sink-in time....”). I see these kinds of reflection, which focus on the process of writing or learning, as quite distinct in principle from statements aimed directly at, say, the content of a given essay (the electoral system in PA needs to be changed); or of a course (the frontal lobes contain areas that are important in establishing our identity).

According to Candy, Harri-Augstein and Thomas (1985), metacognitive reflection is a “specific approach to enable learners to examine their own learning in a systematic manner and uncover their own assumptions and constructs about what they are doing as means for learners to identify and question their own strategies” (pp.16-17). It is this process that I wish to examine in the present study.

Having emphasized the centrality of the notion of metacognitive reflection on learning as used in this study, it is appropriate to devote some discussion to the origins and development of metacognitive reflection throughout time. After developing this historical perspective, I will return later in the chapter to discuss definitions of metacognition.

Metacognitive Reflection in Classical Texts

The idea of thinking about one's own cognition can be traced back to the time of Plato, and to Aristotle's discussions of practical judgment and moral action in his *Ethics* (Grundy, 1982). The seeds of modern formalization for this idea were sown by the French philosopher Rene Descartes in the seventeenth century. Descartes argued that "thinking is reasoning, and that reason is a chain of simple ideas linked together by applying strict rules of logic" (Houde, 2004, p. xiii). In 1690 John Locke took the discussion a step farther when he used the term "reflection" to refer to the "perception of the state of our own minds," or "the notice which the mind takes of its own operations" (Brown, 1987, p. 70). Seventeenth century Prussian philosopher Immanuel Kant also used the term "reflection" in his works: "reflection is the act by which we discover the subjective conditions under which we arrive at concepts" (Kant, cited in Roberts, 1992, p. 5).

Thus, philosophy has supplied some of the conceptual instruments that enable the various branches of cognitive studies to coordinate their research. The role of philosophy has therefore ultimately been to help ground the new domain called cognitive science. When it comes to conceptual instruments, cognitive science is still drawing on

philosophy for conceptual tools and interdisciplinary materials. According to Houde (2004),

It is obviously the philosophy of mind that has furnished the greatest number of topics for reflection to the interdisciplinary community. Contemporary thinking about various levels of consciousness has opened up new areas for joint study, where neuroscientists are establishing privileged ties with philosophers, psychologists, and psychiatrists” (p. xxxii).

Modern Seminal Views on Metacognitive Reflection

John Dewey

The most influential American philosopher, psychologist, and educational reformer of the twentieth century, whose thoughts and ideas have been greatly influential in the United States and around the world, was John Dewey. Dewey proposed the notion of “reflective activity” in learning, a process which, according to him, involved the perception of relationships and connections between the parts of an experience. Dewey believed that it was this kind of activity that enabled effective problem-solving to take place and that improved the effectiveness of learning. He explained reflection on experience as if it were a kind of learning loop, continually feeding back and forth between the experience and the relationships being inferred. Dewey can be said to have paved the way for many subsequent researchers, some of whom will be discussed here. In his book *How we think*, Dewey (1998) refers to rethinking and reconceptualizing one’s knowledge and experience as conscious reflective activity. The activity is purposeful, although the particular goals may not be clear to the learner or to the teacher at the time. The general goal of reconstructing and reconceptualizing an experience is central,

continuing and persuasive. In order to pursue this goal, however, learners need to describe their experience in a narrative form, to work through the attitudes and emotions which might color their understanding, and to order and make sense of new ideas and information which they have retained.

Polanyi's Concept of Tacit Knowing

Although the term 'reflection' does not appear in Michael Polanyi's work, his concept of "tacit knowing" can be seen as an attempt to describe the kinds of cognitive material that one becomes aware of in the course of reflection. Polanyi's argument was that the informed guesses and hunches we engage in are exploratory acts and are performed in the pursuit of knowledge. These guesses and hunches might be aimed at discovering "truth," but they are not necessarily in a form that can be stated in propositional or formal terms. As Polanyi (1967) wrote in *The Tacit Dimension*, "we can know more than we can tell" (p.4), and in his view much of our knowledge cannot be put into words. He termed the pre-logical phase of knowing as "tacit knowledge." Tacit knowing comprises a range of conceptual and sensory information that can be used in an attempt to make sense of something.

By definition, tacit knowledge is knowledge that people carry in their minds and is, therefore, difficult to access. Often, people are not aware of the knowledge they possess or how it can be valuable to others. Tacit knowledge is considered valuable because it provides context for people, places, ideas, and experiences. Tacit knowledge is not easily shared ("We can know more than we can tell"). Tacit knowledge consists often of habits and cultural patterns that we do not recognize in ourselves. The concept of tacit knowing refers to a knowing which is only known by an individual and that is difficult to

communicate. For example, “we recognize the moods of the human face, without being able to tell, except quite vaguely, by what signs we know it” (Polanyi, 1967, p.5).

Polanyi’s main conclusions in regard to the concept of tacit knowing are that it [tacit knowing] is shown to account for 1) a valid knowledge of a problem, 2) the scientist’s capacity to pursue it, guided by his sense of approaching its solution, and 3) a valid anticipation of the yet indeterminate implications of the discovery arrived at in the end (Polanyi, 1967, p.24). In Polanyi’s view, “the discoverer is filled with a compelling sense of responsibility for the pursuit of a hidden truth, which demands his services for revealing it” (p.25). Polanyi’s concept of “tacit knowing” can be related to reflective thinking and writing, for when we reflect, we are also trying to either reveal a hidden truth or to arrive to a new discovery in understanding. Training in metacognition, as it is encouraged in today’s pedagogy, can be seen as working to make explicit much of what Polanyi saw as implicit or tacit.

Schon’s ‘Reflective Practicum’

Donald Schon (1983), a more recent well-known scholar in the area of reflective practice, addressed reflective practice when he discussed professional contexts for reflection-in-action, interaction of strategies, and the limits of individual and institutional constraints which are important in understanding metacognitive reflection on learning. The focus of Schon’s doctoral dissertation was John Dewey’s theory of inquiry – and this provided him with the pragmatist framework that runs through his later work. To support his ideas about reflection in learning, Schon operated by the phrase “reflective practicum,” which he defined as “a practicum aimed at helping students acquire the kind of artistry essential to competence in the indeterminate zones of practice” (1987, p.18).

Schon argued that professional schools must rethink “both the epistemology of practice and the pedagogical assumptions on which their curricula [decisions] are based and must bend their institutions to accommodate the reflective practicum as a key element of professional education” (p.18).

Schon stated that thinking and doing should not be separated because “when we step into the separate domain of thought we will become lost in an infinite regress of thinking about thinking”, but, he continues “in actual reflection-in-action doing and thinking are complementary...Continuity of inquiry entails a continual interweaving of thinking and doing” (1983, p.280).

Schon (1983) recognized that this ideal kind of interaction is often problematic. He identified two problems with an educational process that does not include serious attention to reflective work. These problems are centered on student and teacher involvement respectively:

1. Students may respond to the school by “turning off”, diverting their real energies and creativity to the world outside of the school. Or they learn to beat the system by optimizing to the measures of performance, discovering how to pass tests, get grades, and moving through the levels of the system, without thinking very much about the knowledge they are supposed to be acquiring.
2. Similarly, teachers often learn to optimize to the measure of control on their performance, striving to meet the letter of the standards imposed on them without worrying very much about whether, or how, their students are learning (p. 331).

However, Schon goes on to make a third point that recognizes the practical difficulty of implementing the ideal interaction between reflection and learning:

3. The freedom to reflect, invent, and differentiate [could] disrupt the institutional order of space and time. If the teacher must somehow manage the work of thirty students in a classroom, how can she really listen to any one of them? If she is held rigorously accountable to a sequence of hour-long periods in which specified units of subject matter are to be covered, then she cannot follow the logic of her reflection-in-action. Classes must be small or readily divisible into smaller units, and each teacher must be free to introduce variations in the institutional schedule.

Despite problems with the successful practices of reflective learning, Schon strongly believed in the necessity of such learning and its effectiveness. He wrote that “the student cannot be *taught* what he needs to know, but he can be coached” (1987, p.17). Schon supports this assertion with Dewey’s statement that “He [the student] has to *see* on his own behalf and in his own way the relations between means and methods employed and results achieved. Nobody else can see for him, and he can’t see just by being ‘told’, although the right kind of telling may guide his seeing and thus help him see what he needs to see” (as cited in Schon, 1987). While emphasizing coaching and learning by doing, Schon details the multiple forms that reflection can take:

[I]t is sometimes possible, by observing and reflecting on our actions, to make a description of the tacit knowing implicit in them. Our descriptions are of different kinds, depending on our purposes and the languages of description available to us. We may refer, for example, to the sequences of operations and procedures we execute; the clues we observe and the rules we follow; or the values, strategies and assumptions that make up our “theories” of action (1987, p.25).

In *Educating the Reflective Practitioner* (1987), Schon describes the process of ‘reflection-in-action’ as a sequence of “moments” building a pattern of inquiry:

- There is, to begin with, a situation of action to which we bring spontaneous, routinized responses. These reveal knowing-in-action that may be described in terms of strategies, understandings of phenomena, and ways of framing a task or problem appropriate to the situation. The knowing-in-action is tacit, spontaneously delivered without conscious deliberation...
- Routine responses produce a surprise – an unexpected outcome, pleasant or unpleasant...
- Surprise leads to reflection within an action present. Reflection is at least in some measure conscious, although it need not occur in the medium of words. We consider both the unexpected event and the knowing-in-action that led up to it, asking ourselves as it were, “What is this?” and, at the same time, “How have I been thinking about it?” Our thought turns back on the surprising phenomenon and, at the same time, back on itself.
- Reflection-in-action has a critical function, questioning the assumptional structure of knowing-in-action. We think critically about the thinking that got us into this fix of [sic] this opportunity; and we may, in the process, restructure strategies of action, understandings of phenomena, or ways of framing problems...
- Reflection gives rise to on-the-spot experiment. We think up and try out new actions intended to observe the newly observed phenomena, test our tentative understandings of them, or affirm the moves we have invented to change things for the better... (p.28).

Schon admitted that the description he had given to the process of reflection-in-action is an idealized one, like other approaches; however what distinguishes his view is its immediate significance for action. In Schon's words, "in reflection-in-action, the rethinking of some part of our knowing-in-action leads to on-the-spot experiment and further thinking that affects what we do – in the situation at hand and perhaps also in others we shall see as similar to it" (p.29). The distinction between reflection-in-action and knowing-in-action, according to Schon, may be subtle.

The Role of Narrative in Reflection

Based on the published research (Boud, Keogh and Walker, 1985; Clandinin, 2007; Clandinin & Connelly 2000; Dowst, 1980), as well as based on preliminary results from the pilot interview and personal observations and experience, I expect metacognitive reflection to be closely related to narrative. In other words, one's metacognitive reflection on learning happens after the writer has given a general personal account of her experiences and/or feelings related to a particular situation. And, as was stated earlier in this chapter, in order to produce a meaningful and successful reflection, learners need to describe their experience in a narrative form, to work through the attitudes and emotions which might color their understanding, and to order and make sense of new ideas and information which they have retained.

Narrative inquiry is a developing methodology which has gone through a historical development and has philosophical underpinnings, as well as different forms which it is beyond the focus of this study to cover in detail. Various disciplines and viewpoints draw upon narrative inquiry as conceptualized in anthropology, sociology, psychology and philosophy (Clandinin & Connelly, 1990; 1991; 2000; 2004; 2006; 2007;

Hinchman & Hinchman, 1997; Pagnucci, 2004; Webster & Mertova, 2007). Given the breadth of this literature, it will be possible only to touch on a limited number of relevant sources here.

Educators have come to recognize the central importance of narrative in many learning situations. For instance, Dowst (1980) makes an observation that is crucial to the purposes of this study, saying that whatever the nature of the assignment calling for reflection is, it should first “call for a generalization of some sort, one proceeding from a writer’s “reflective review” of his or her experience in addressing the writing task that the first part of the assignment sets up” (p.77). Powell (1985), in his article ‘Autobiographical Learning,’ which emphasizes the reflective thought in one’s learning, has stated that sometimes the details in the exploration of topics are “hidden in the written narrative” and that “clarificatory questions” are needed to help learners reconstruct and metacognitively reflect on their experience. Even though Powell has described specific problems with metacognitive reflection on learning, he believes in the value of narrative as a technique “for encouraging students to explore the nature of their own learning experiences and thus deepen their understanding of themselves as learners” (p.50).

According to Clandinin and Connelly (1991), reflection and deliberation are the methods of practical inquiry and springboards for thinking of narrative as method, with *reflection* implying “a preparation for the future, and *deliberation* implying past considerations” (authors’ italics, p.263). Clandinin and Connelly consider both terms [reflection and deliberation], since narrative requires a treatment of past, present, and

future. These authors stated that “reflection and deliberation are methods that move back and forth in time, carrying with them uncertainty” (p.263).

Clandinin and Connelly (1991) advocate the use of “narrative method,” which they define as “the description and restorying of the narrative structure of educational experience” (p.259). Among the major constituents of narrative, Clandinin and Connelly list experience, time, personal knowledge, reflection and deliberation.

Boud, Keogh and Walker’s ‘Stages of Reflection’

Similar to Schon’s sequence of “moments building a pattern of inquiry,” and Dewey’s (1998) view on addressing the experience in the narrative form and working through the attitudes and emotions, another group of researchers, Boud, Keogh and Walker (1985), divided the reflective process into three stages (the full discussion of these three stages is presented further in this section), which, according to them are needed: “at the start in anticipation of the experience, during the experience as a way of dealing with the vast array of inputs and coping with the feelings that are generated, and following the experience during the phase of writing and consolidation” (p.10). The authors view these stages as a useful way to conceptualize the process of reflection, although “in any given situation [the phases] may be interlinked” (p.28). Their framework has provided an important organizing principle for the data in the present study. I made this choice because no comparable full model of reflection has been offered since their work over two decades ago, and because their ideas have found reflection in much of the work done since they published their three stages. Given the importance of this framework to the present study and to the field more broadly, I will cover it in some detail here.

According to Boud et al. (1985), in achieving the desirable goal of producing a meaningful reflection, “it is important to draw upon learners’ prior experience and to provide opportunities for them to be engaged actively in what they are learning” (p.7). However, they continue, “experience alone is not the key to learning”. The authors are asking what it is that turns experience into learning. What specifically enables learners to gain the maximum benefit from the situations they find themselves in?

In describing the stages of reflection Boud et al. (1985), have said that the first stage is *returning to the experience*, or a “replay of events” and that this stage “precedes any cogitation” (p. 28). At this point, “what takes place first is a clarification of the personal perceptions of the learner” (p.28). The learner stands back from the immediacy of the experience and whatever personal challenge it may have presented at the time, and simply reviews it. The learner can then start to view the experience from other perspectives, or to stand back metaphorically to look at the wider context of the situation or experience. Boud et al. state that this description of the experience should be, as far as possible, clear of any judgments, as these tend to cloud our recollections and may blind us to some of the features which we may need to reassess. However, what can emerge in the descriptive narrative process is the observation of judgments and interpretations which took place at the time of the experience itself or shortly thereafter. Dowst (1980), in discussing a similar concept (i.e. an initial stage), suggests that facilitators can assist the learner to describe as objectively as possible what has taken place in the experience and to help him or her to avoid interpretations and analysis.

The second stage of reflection, according to Boud et al. (1985), is *attending to feelings*. What this means is that our emotional reactions come into play at this stage.

This can take two quite different paths: on the one hand, emotion can override our rationality to such an extent that we react with blurred perceptions; but in the best case, emotions may foster the development of confidence and a sense of self-worth that can lead to pursuing paths unavailable earlier. Utilizing positive feelings is particularly important as they give us impetus to persist in challenging situations, “they can help us see events more sharply and they can provide the basis for new affective learning” (Boud et al., p.29).

Of course, this second stage of reflection is fraught with potential difficulties: even though our emotions and feelings are a significant source of learning, they can also become barriers. Heron (1982) may be anticipating Boud et al.’s emphasis on the need for clear recall, coupled with their concern about negative feelings, when he says that sometimes in reflection we are not able to recollect events clearly, or we may be so rooted in one perspective or fixed on a given interpretation that we give up reflection, believing that we have reached an understanding of the experience. Heron suggests that this situation may lead to feelings of frustration or other negative emotions; what is happening is that our “human capacities” cease to respond flexibly and creatively to the current situation as it is. When this occurs, the feelings that arise need to be discharged or transformed in a way that enables us to regain our flexibility and creativity in responding to the current situation.

The proposition that emotions trigger and facilitate learning has been strongly supported by researchers belonging to the group of cognitive scientists (Pessoa, 2009; Sweeny, 2009) and neurobiological researchers (Damasion, 2000; Goleman, 2006; Gray, 1990), who affirm that much of cognition involves personal emotion.

The third stage of reflection according to Boud et. al., is *re-evaluating experience*. Here these researchers suggest that, even though it seems quite natural to move straight from the experience to its evaluation, it is usually not profitable to do so, as a great deal of value can be potentially lost. We may find ourselves operating on false assumptions or reflecting on information which we have not comprehended sufficiently. Attention to description and feelings does not guarantee against this, but it can help to minimize the possibility of going astray in reaching conclusions based on the earlier stages of reflection.

As the goal of reflection is to prepare minds for new experience, Boud et al. have noted that,

The outcomes of reflection may include a new way of doing something, the clarification of an issue, the development of a skill or the resolution of a problem. A new cognitive map may emerge, or a new set of ideas may be identified. The changes may be quite small or they may be large. They could involve the development of new perspectives on experience or changes in behavior. The synthesis, validation and appropriation of knowledge are outcomes as well as being part of the reflective process. New links may be formed between previously isolated themes and the relative strengths of relationships may be assessed. Again, a significant skill in learning may be developed through an understanding of one's own learning style and needs (p.34).

Positive outcomes of reflection enable students to continue on to future learning and involve changes in emotional state, attitudes or sets of values. These could include positive attitude towards learning in a particular area, greater confidence or assertiveness,

or a changed set of priorities (Boud et al., 1985). But Boud et.al. wrote, “Change is hard won; we can desire to do something and believe that it is possible, but still it is difficult to do” (p.35).

The elements of reflection identified by Boud et. al. (1985) can not always be as clearly identified in practice as these authors suggested. But this separation clearly helps to draw attention to some of the features which are often overlooked by both teachers and learners. The complexities of the reflective process involve the continual cycling back and forth between elements, the omission of some stages and the compression of some of the elements. Nevertheless, if learners are having difficulties in reflecting, it can be useful to think about the stages Boud et. al., described and examine how they fit into the learners’ behaviors.

Boud et al. (1985) claim that reflection is a vital element in any form of learning, and that teachers and trainers need to consider how they can incorporate some forms of reflection in their courses. These researchers define reflection “not as a single faceted concept...but a generic term which acts as a shorthand description for a number of important ideas and activities” (p.8). They seem to agree, however, that reflection does not come easily to students. One of the problems with reflection that Boud et al. (1985) point out is the difficulty of linking what students learn in college and the ability to reflect metacognitively on this knowledge. For many students, considerable training may be necessary if they are to make these connections and consolidate what they have learned.

A number of researchers (e.g. Boud et al., 1985; Schon, 1987, 1991, 1995; Dewey, 1998) identify three points necessary for successful practices of reflection in

learning. First, only learners themselves can reflect on their own experiences. Teachers can intervene in various ways to assist, but they only have access to individuals' thoughts and feelings through what individuals choose to reveal about themselves. A second, related point, is that reflection is pursued with intent. It consists not of idle meanderings but of purposeful activity directed towards a goal. Third, the reflective process is a complex one in which both feelings and cognition are closely interrelated and interactive. The affective dimension has to be taken into account when we are engaged in our own learning activities, and when we are assisting others with this process. Negative feelings, particularly about oneself, can form major barriers towards learning. They can distort perceptions, lead to false interpretation of events, and can undermine the will to persist. Positive feelings and emotions can greatly enhance the learning process; they can keep the learner on task and can provide a stimulus for new learning. When students reflect on their experience, they inevitably review content, as they "refer to their notes and records, dredge their memories and try to reconstruct an account of the salient features that they believe are required by their teachers" (Boud et al., 1985, p.10). However, though review in itself can be beneficial, reflection leads to more than a simple repetition of content. In the process of reflection, according to Boud et al., students tend to reconceptualize and rethink certain things which were "left undone" or were "incomplete", and "a this is a part of the learning process" (p.10).

Yancey's 'Reflection as Growth of Consciousness'

In the field of composition, another researcher, Kathleen Blake Yancey, in her book *Reflection in the writing classroom* (1998), looks at reflection as "growth of consciousness" and as a "means of going beyond a text..." (p. 5). The author states that

reflection consists of two elements: 1) the processes by which we know what we have accomplished and by which we articulate accomplishment; and 2) the products of those processes. According to Yancey,

When we reflect, we thus project and review, often putting the projections and the reviews in dialogue with each other...we seek to discover what we know, what we have learned, and what we might understand. When we reflect, we call upon the cognitive, the affective, the intuitive, putting these into play with each other: to help us understand how something completed looks later, how it compares with what has come before, how it meets stated or implicit criteria, our own, those of others (p.6).

Yancey has defined reflection as a “critical component of learning and of writing specifically” and, she has said that “articulating what we have learned for ourselves is a key process in that learning” (p.7). By using reflection, according to Yancey, “students theorize and learn from their own practice... and as they learn, they witness their own learning, they show us how they learn” (pp.7-8). Yancey strongly believes that reflective practice should be part of school curricula. In her theoretical framework, she refers to the works of Dewey, Vygotsky, Schon and Polyanyi. Yancey relates reflection to language and cites Vygotsky, emphasizing that “the relation of thought to word is not a thing but a process, a continual movement from back and forth from thought to word and from word to thought” (p.10). Yancey states that “we learn to understand ourselves through explaining ourselves to others” (p.11). Reflection, writes Yancey, “becomes a habit of mind, one that transforms” (p.11).

Based on Schon's works, Yancey has divided reflection into two types: (1) *constructive reflection* "what have you learned, how does this connect with something you already knew, is this what you expected to learn, what else do you need to learn, how will you go about learning it" (p.61); and (2) *reflection in presentation*, which tends to accompany a product and interpret that product for the benefit of a proposed reader. This last type of reflection, according to Yancey, is the reflection that is best known, regardless of the form it takes. In writing classes, according to Yancey, reflection-in-presentation is used when "we ask students to think about who they are as writers, when we ask them to discern patterns among subject positions they have taken, ...to plot their own cumulative development as an increasing accretion of writing selves – and then to explore and explain all this in a formal presentation to an "other" (1998, p.71). Yancey's first category, *constructive reflection*, seems most in line with the spirit of the present study and its results.

Reflective' Models of Learning

Kolb's Model of the Learning Cycle

The Kolb model is termed an "experiential learning model," to emphasize the role of experience in the learning process, an emphasis which differentiates this approach from other cognitive theories of the learning process. The core of the model is a simple description of the learning cycle: how experience is translated into concepts, which in turn are used as guides in the choice of new experiences. Learning is conceived of as a four stage cycle. First, immediate concrete experience is the basis for observation and reflection; next, these observations are assimilated into a theory from which new

implications for action can be deduced. Finally, these implications are used to initiate new experiences.

Concrete experience



Testing implications of concepts in new contexts ↔ Observations and reflections



Formation of abstract concepts and generalizations

(Kolb's learning cycle, Kolb and Fry, 1975)

According to Kolb, in order for learners to be successful, they need four different kinds of abilities corresponding to the four stages of his learning cycle: concrete experience abilities, reflective observation abilities, abstract conceptualization abilities and active experimentation abilities. These abilities represent the elements of the two major dimensions of cognitive growth and learning: the concrete/abstract dimension and the active/reflective dimension.

The FEU Model

Another model emphasizing the role of reflection in learning was proposed by the British Further Education Curriculum and Development Unit (Boud, Keogh and Walker, 1985, p.13). The FEU model has three phases: the experience of the learner, the specific learning which occurs on the basis of that experience, and the reflective activities which are needed to extract specific learning from the overall experience. The FEU authors present their view of the role of reflection in their model:

The individual's experience needs to be followed by some organized reflection.

This reflection enables the individual to learn from the experience, but also helps

identify any need for some specific learning before further experience is acquired. (FEU, 1981, p.21).

The FEU authors emphasize the point that organized reflection has a purposive nature, that it is not aimless. They also emphasize a ‘whole person’ view of the learner and include in their notion of reflection the processing of feelings, values and attitudes as well as the cognitive and psycho-motor aspects of the experience.

Grundy’s Approach

Grundy (1982) provides another view of the place of reflection in learning. As in the Kolb and FEU models, in Grundy’s approach the learners have a clear purpose in reflecting on an experience. The author states that reflection includes re-examining basic assumptions and developing deeper insights. These new insights may then be applied to the original event or to other relevant events in more reflective activity. The phases of reflection, according to Grundy, may be sequential, may overlap or be simultaneous, and some may be omitted.

Grundy also describes the nature of reflection, and focuses on the relationships which must be obtained between teacher and students if critical reflection is to occur. One of the key features of self-reflection is the need for people to have the freedom to make a genuine choice for themselves, rather than conform to the influence of the teacher or other students.

Reflection in Education and Composition

The existing accounts of reflection in the literature are a mix of discussions in which authors either recognize the value of reflection for improving writing and thinking skills, or point out certain problems such as lack of time, lack of strategies, shortage of

specific tools, directions or instructions. The literature also varies widely in scope: some writings focus extensively on portfolios; some at the other extreme explore the value of reflective practice more globally. To illustrate how reflection is portrayed in the literature on composition, I will mention several accounts that I encountered during my research in the next section.

The Epistemic Approach to Writing

The term *epistemic* was introduced into English by the Scottish philosopher James Frederick Ferrier (1808–1864). Epistemology (from Greek *ἐπιστήμη* – *epistēmē*, "knowledge, science" + *λόγος*, "logos"), or the theory of knowledge is the branch of philosophy concerned with the nature and scope of knowledge. It addresses the questions:

- What is knowledge?
- How is knowledge acquired?
- What do people know?
- How do we know what we know?

The *epistemic* approach to writing emphasizes the value of reflection in learning. (Dowst, 1980). As background for the present study, I will cover the epistemic approach separately here, because the principal goal of the epistemic approach is to “help students to manipulate language – especially written English – in ways conducive to discovery and learning” (Dowst, 1980, p. 74). According to Dowst, in an epistemic course, a writing assignment is not just a work-order, it does not order students to produce a composition for the purpose of demonstrating what they have managed to learn about writing. A typical “epistemic” assignment calls for some writing activity that students can

do with a reasonable degree of competence, for example, tell about a time when they changed their mind. It also asks a question, in answering which students must explore the significance, to themselves as writers, of what they have done. This is what the pedagogy of Jerome Bruner advocates: any teaching exercise should lead the student to perform a certain task and then “to climb on your own shoulders to be able to look down at what you have just done – and then to represent it to yourself...Our task as teachers is to lead students to develop concepts in order to make sense of the operations they have performed” (Bruner, 1965, pp.101-102). John Dewey advocated the same process, in that he felt that the ideal process of education is the experience of certain activities followed by “reflective review and summarizing” (1938, p.87).

Education for Dewey, Bruner and epistemically-inclined writing teachers involves composing language to connect one experience with another. This establishes patterns by which one can make sense of known data and in terms of which one can discover new data as well. A typical epistemic writing assignment assumes, according to Dewey, that all “teaching and learning is a continuous process of reconstruction of experience” (p.87). It directs students to follow the experience of composing with some reflective review and summarizing of what they have been doing. Epistemic assignments, Dowst (1980) claims, invite the student-writer to engage in the learning process according to Dewey’s and Bruner’s model. “Exactly what is taught, and what is learned, depends on the writer as well as on the assignments” (Dowst, p.77).

Researchers (Baird, 1952; Bruner, 1965; Dewey, 1998; Dowst, 1980) point out that while the epistemic approach to education is not without its limitations, it is theoretically and pedagogically sound and it works in practice. Dowst, in particular,

claimed that a well-designed epistemic course is likely to make a substantial improvement in students' writing.

General Accounts of Reflection

An example of a broad general account on reflection is Michael Herrick's article (1992) "Writing Requires Reflection," where he writes about the value of reflection as a pre-writing stage. He argues that it is crucial to give students enough reflective time to develop meaningful messages. According to Herrick, "lack of reflection can lead to superficially written responses and a final product may really be a first draft vaguely reflective of teacher's ideas" (p.144). "To prepare the minds of students" to write meaningful messages and to avoid "lack of organization, lack of development, sentence errors and grammatical errors" (p.145), the author offers advice on how to help the students to reflect in the early stages of the writing process. Unfortunately, most of these measures are outlined in very general terms, and most practicing teachers would probably find that there is little to link the recommendations here to real teaching situations. Thus, Herrick makes three relevant claims:

- 1). Students can be helped to reflect by talking in guided class discussions or by general teacher questioning of the whole class. He adds that, "teacher-led discussion should be more than the usual fact-oriented, comprehension drills" (p.145).

Unfortunately, beyond the phrase "should be more than," he does not propose any real specific directions.

- 2). Conferencing, according to Herrick, is another way to help students reflect. "The teacher", says Herrick, "can deal one-to-one or with a few [students] to ask them what

their thoughts are about the content. The teacher can help personalize the content and guarantee that students will spend more time on it if they can explain it to the teacher in their own words and make up their own applications, connections, or examples” (p.145). Once again, here, the specifics of what either the teacher or students can do are left unspecified.

3). Herrick proposes small group discussions about content from different points of view because verbalization leads to fuller understanding. As some educators have noticed, unfortunately, just creating smaller circles in the classroom does not automatically lead to effective learning.

Herrick’s discussion suffers from three problems. First, he does not explain what exactly he means under reflection or reflective writing. Second, Herrick does not seem to be focused explicitly on metacognition. And, third, the author does not provide any explicit instruction about what kind of questions should be asked during conferencing or during small group discussions to promote reflection.

Reflective Practice vs. Reflective Writing

Very few accounts even try to describe reflective writing, and of these, most fail to present a clear picture of this kind of writing. Some researchers do not focus on the concept of reflective writing per se, nor do they provide examples of reflective writing assignments. For instance, Bolton, in her book *Reflective Practice* (2001), in chapter eight “How to Begin Writing,” confidently states in the second paragraph that this chapter “covers what reflective writing is; for whom; and why, how, where and when it might be written” (p.116). However, throughout this chapter Bolton talks about writing in

general, about the first stages of writing and about the stages of the writing process. Further in the same chapter, Bolton vaguely suggests that creative writing is essentially the same as reflective writing because creative writing brings into awareness what we sense but cannot explain. She further shifts her focus to what she terms a 'reflective splurge' which, according to her, means 'focusing on a particular occasion', which she sees as particularly facilitative for reflective writing. Some of Bolton's comments do apply well to the reflection of a creative writer on her writing process. But Bolton's discussion fails overall in giving a clear definition of the concept, and the reader is left with many questions, in particular with respect to forming a practical, detailed picture of reflective writing as part of pedagogical practice. It is quite obvious that such multiple use of the word "reflection" and its derivatives creates reader confusion and imparts only a vague idea of what exactly one writes about.

Besides the unclear distinction between creative and reflective writing, there are other issues as well. In *Reflective Practice*, Bolton talks about learning journals and makes a distinction between different types of journals. She states that the words *logs*, *diaries* and *journals* "seem to be used interchangeably in professional development" and further describes the functions of these different types of journals. In particular, Bolton says that a learning log could consist of "reflective running notes" on different experiences and situations from everyday life (which according to our distinction does not necessarily lead to metacognitive reflection). In answering her own question about *when* one should reflect, she writes that "the most creative times might be when your cognitive powers are at their least able, such as midnight or 4 a.m" (p.162). Here again Bolton raises a question from the reader's side: is this really so?

Generally, Bolton's book reflects its title, "reflective practice," since the author talks about reflective practice in general. In the last chapter of the book, called 'Reflection on Reflection', Bolton writes that the heart of reflective practice is the oxymoron *certain uncertainty*. She claims that:

The only way to get anywhere in reflective practice is to do it – trusting the journey will be interesting and useful, having faith in and respect for yourself and your abilities to reflect as well as practice. But you do not know where you are going. You never will get to a definitive somewhere anyway...the most productive journeys are undertaken without set purpose (pp. 200-201).

According to Bolton, reflective practice can be "hindered by too much self-consciousness and self-awareness", and we should allow ourselves to be "thoughtfully unthinking" because "reflective practice will never offer solutions or final answers" (pp. 201-202). This position seems to run counter to the view of many educators who see reflective practice and writing as raising of consciousness and awareness.

Practical Guides and Cookbooks

In addition to a substantial number of general accounts on reflective writing, there are practical guides or "cookbooks" for teachers providing solutions on how to prepare students to think and write at the college level. One such guide is Weinstein's 'Writing at the Threshold' (2001). The author does not make statements of what should or should not be considered reflective or metacognitive, but offers fifty six methods which he has personally tested during his twenty eight years of teaching writing. The aim of these methods is to professionally guide learners through the transition from slavish or derivative thinking to real, engaged thinking of one's own. Weinstein's work is not

directed at training metacognitive thought per se, but is rather urging attention to higher-order critical thinking, or as the author himself states ‘inquiry-based learning’. Based on my own teaching experience, some of Weinstein’s methods are interesting and work well in a composition classroom, while some require consideration before implementing them in the classroom.

Reflection and Clarity of Instruction

When writing teachers first began asking for reflective texts, usually in portfolios, they did not see these texts either in relation to other kinds of reflection or in relation to other areas such as autobiography. As Yancey (1998) observes, “All we really saw was a portfolio that made much more sense when it included a student’s narrative or interpretive text... and that without such a text – one that came to be called reflection – portfolios were merely folders of work” (p.73). Yancey goes on to state that,

...we [the teachers] weren’t terribly clear about the specifics of reflection: for instance, about how reflection “worked”, or about what was most important to our reading, or about what a reflective text might include, or about the form it might take (p.73).

Yancey claimed that educators themselves need to recognize that their guidelines to reflective writing assignments are often not clear. In *Reflection in the Writing Classroom* (1998), she further pursued this point: “without knowing what it was that we were looking for, most of us – the teachers asking for this reflection – looked for anything and everything, working under two assumptions... [first] that students could easily have something to say that we could not predict, and [second] that we should therefore use directions as open ended as possible” (p.74). Unlike Bolton, Yancey stated

that teachers should give directions to reflective writing assignments, and she raises the question of how open-ended these directions should be. Yancey asks many questions, some of which are uncomfortable for the teacher, for instance, about teachers' own experiences with reflection:

...while students are given wide berth in deciding what to share and how to share it and are explicitly invited to include personal information, exactly the opposite occurs with faculty. The latter are not asked, for example, to explain the place of teaching in their lives, nor are they encouraged to provide readers with a clearer understanding of who you [sic] are as a person. (p.75)

Yancey recommends considering many questions regarding reflection-in-presentation, in particular:

- How explicit should the directions for reflection-in-presentation (i.e. to portfolios and cover letters to portfolios) be?
- Are there specific questions that students should take up?
- What form/s will be allowed (eg, a letter, a poem, an essay, a web site?)
- What expectations come with this "assignment"?
- How will one know if it "works"? (p.78)

Yancey comments incisively about the problems with vague explanations and instructions for reflective writing assignments. She writes that textually, there are signs that reflection is not working, that articulated, elaborated, complex learning is not occurring and that these indications include the following:

- a text that is too short;

- a text that is uninformed about the composer's work or learning: the student doesn't seem to know his or her texts, his or her own knowledge or understanding;
- a text where the author cannot think rhetorically or synthetically, can read neither links nor gaps;
- a text that parrots the context of the class or the teacher without demonstrating the influence of either (p.82).

Like Yancey, Powell (1985) reasons that “without clear guidance on the nature of the focus of recollection [in reflective writing] the written accounts are likely to exhibit so much diversity that discussion of them will prove an unnecessarily difficult and possibly unproductive task” (p.49). Several interview participants, who were advanced graduate students, reported that they experienced uncertainty and sometimes even intimidation of writing assignments which called for reflection. Some were never sure about the specifics of reflective texts, what they should have had or were supposed to include. Thus, the concerns of Yancey and Powell are clearly relevant to the present study's endeavors.

Reflection as a Means of Assessment

Many would say that the development of reflective and metacognitive skills is the most important factor involved in assessing writing in U.S. colleges and universities today. “Reflection is thought to enhance the validity of assessment – that is, the likelihood that assessment will measure what it purports to measure – precisely because

it requires that students narrate, analyze, and evaluate their own learning and their own texts and thus connect the assessment to their own learning” (Yancey, 1998, p.146).

One group of reflective writing assignments used for assessment purposes are the prompts for English Freshmen Placement at one university where I have been an English Placement Rater. During the testing weeks, the students are offered two prompts: one asking them to reflect on their experiences with writing and the other one on their experiences with reading. Given the distinction between metacognitive and general reflection and also the nature of the assignments (prompts), these prompts seemed to refer to the category of general reflection on a given subject, which is not metacognitive. But the borderline between metacognitive and general reflection is quite vague, because in responding to the prompts students not only reflected on their experiences with reading and writing in general but also analyze what they have learned in high school writing classes. So students’ responses to these prompts contained a mix of general and metacognitive reflection. My observations are confirmed by Yancey who recognized that reflective texts take various forms and have different requirements.

Commenting on another feature of reflection, according to Elbow (1997) and (Yancey, 1998) claim that self-assessment in reflective writing helps students to develop a personal voice. By reflecting on their strengths and weaknesses, and on their overall literacy in writing, student writers are able to verbalize their concerns, learn from their experience, raise questions and cognitively grow from their own reflections.

The Genre/Discourse of Reflective Texts

Among other concerns involved in reflective writing, there is yet another one raised by Yancey, namely, what genre should be assigned for reflective texts? Or as she puts it “which discursive site is more hospitable to reflection?” (1988, p.153). According to Yancey,

If the point, ultimately, of reflection is to encourage reflective writers, and if we expect those writers to work in various genres, then it might make sense to ask for more than one kind of reflective text, whether they be independent documents or within portfolios. (p.154).

The types of reflective writing most often practiced in U.S. colleges and universities are portfolios, writing journals, and postscripts (Weinstein, 2001). The existing literature focuses mostly on portfolios, cover letters to portfolios (Belanoff, 2001; Yancey,1998) and writing journals.

All of the above mentioned considerations have served as invaluable guides to my work with the present study. I will return to several of the writings cited here in Chapter VII.

Types of Reflective Writing Assignments

There are many titles which reflective writing assignments can bear and there is no necessity to list all these names because some of them have the same purpose but are called differently by different practitioners. Therefore, I only give the list of reflective assignments provided by Yancey, among which the reader might recognize some that s/he uses in her practice:

- 1) *A companion piece*, “a secondary text that is composed after a primary text is completed” and which, according to Yancey, aims to “comment in some way on the primary text qua text” (p.31).
- 2) *Transmittal Forms*, or “sets of sequenced questions – about writer intent, about the intended audience, about problems the composer had in creating the text – whose answers collectively set a context for the reader (p.31).
- 3) *The Letter of Reflection*, “in which students can talk about whatever they think is important for the reader to know as she or he reads the primary text” (p.31).
- 4) *A Talk-To*, another type of companion piece that is focused in two directions: toward self-assessment and toward multiple perspectives. (p.31).
- 5) *“Talk-backs”*, asking the students to write a response to the comments made by the teacher, to what they think the teacher is saying, how they react to what they think the teacher is saying, to tell the teacher whether his/her comments are clear, where they disagree, what they want the teacher to know. Talk-Backs, according to Yancey, “can accomplish one other purpose: they can generate a dialogue” between students and teachers (pp.37-41).

These five types of reflective writing assignments, according to Yancey, represent reflection-in-action. The author pointed out that “ultimately, what we are trying to foster here is reflective writing, produced by reflective writers” (p.33), and that “reflection assists in development of writing... it asks that students acquire four “kinds” of knowledge: self-knowledge; content knowledge; task knowledge; and judgment” (p. 44).

Donna Qualley in her book *Turns of Thought: Teaching Composition as Reflexive Inquiry* (1997), uses the term “written metacommentaries.” The author discusses two

reflective writing assignments which she uses in her composition classes. In one reflective assignment Qualley asks her students to examine their writing and writing process for each paper they produce. Another assignment (at the end of the semester) asks students to read all of their papers and reading responses as a single text. The purpose of this last assignment, according to Qualley, is “overtly reflective”. Thus, she writes “I want students to examine their own work for patterns or themes and to theorize about what these patterns (or lack of patterns) suggest about them as readers, writers, thinkers, and learners” (p.79). Qualley, like Yancey, believes that “students can learn a great deal about themselves as readers, writers, thinkers, and learners when they have an opportunity to reexamine the written texts they have produced throughout the composition course” (p.82). Both reflective writing assignments Qualley describes are metacognitive. Qualley pointed out the fact that reflective writing, thinking and learning are all components of “reflexive” pedagogy. In Qualley’s words, the following are the epistemological features of reflexive pedagogy:

A reflexive pedagogy emphasizes understanding. Understanding represents both the process and product of the transaction between knower and known...Occasionally we might experience understanding as a sudden flash of insight, the eureka moment. More frequently, however ...the realization that we understand emerges gradually, and we only become aware of it when we make a reflexive turn...Understanding occurs by degree and is always subject to change with additional knowledge and experience. Our understanding can deepen and develop in complexity, or we may later refute an earlier understanding altogether (p.151).

In her book Qualley analyzed numerous students' essays and responses and concluded that "understanding is always partial, provisional, incomplete," and that there is no such thing as non-positional understanding. "We understand an other by continual reference to our own perspective, although we may not always be aware of doing so" (p.151).

Metacognition

Definitions

As noted early in this chapter, the present study focuses on metacognition. I have delayed the attempt to provide a definition and discussion of metacognition in the interest of first covering pedagogical views affecting reflection. However, it is finally appropriate to discuss the term 'metacognition' and to emphasize its centrality to the notion of reflection as used in this study; the following sections are devoted to this important notion.

Research on metacognition involves the study of what people know about their own cognition. Approaches to investigating metacognition include cognitive experiments, the study of individual differences, neuroimaging, educational applications, and computational modeling, and involve special populations defined by neuropsychological, clinical, life-span, and developmental dimensions.

Within cognitive psychology, the field of metacognition research has grown substantially in recent years. A scientific understanding of cognition will ultimately require an appreciation not just of the abilities and proclivities of cognitive agents, but also the metacognitive monitoring and control processes that guide the development and refinement of those skills and behaviors.

I would like to provide several definitions and characteristics of this term given by researchers before going into an in-depth discussion of metacognition.

Livingston (1997) offers these comments on ‘metacognition’ as:

- 1) Metacognition is characterized by higher order thinking which involves active control over the cognitive processes engaged in learning.
- 2) Planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task. Such activities are metacognitive in nature.
- 3) Higher order thinking which plays a critical role in successful learning helps to determine how students can be taught to better apply their cognitive resources through metacognitive control.

According to Winn and Snyder (1996), metacognition consists of two processes occurring simultaneously: monitoring your progress as you learn, and making changes and adapting your strategies if you perceive you are not doing so well. According to these researchers, metacognition involves self-reflection, self-responsibility and initiative, as well as goal setting. And, as stated by Ridley, Schutz, Glanz, & Weinstein (1992), metacognitive skills include taking conscious control of learning, planning and selecting strategies, monitoring the progress of learning, correcting errors, analyzing the effectiveness of learning strategies, and changing learning behaviors and strategies when necessary.

Some researchers (Brown, 1978; Livingston, 1997) say that confusion in understanding the term ‘metacognition’ exists because of the wide usage of the prefix “meta” in the literature. A reader may wonder why prefix -meta needs to be added when

she comes across such terms as metalearning, metamemory, meta-attention, metacomprehension, metalinguistics, etc. Metacognition is those mental abilities that are considered to be beyond (or “meta”) conventional conceptions of cognitive abilities, i.e. stepping outside of the original cognition to talk about the cognitive process (Slife, 1987), or simply put, metacognition is thinking about thinking.

While there are some distinctions between definitions, all emphasize the role of executive processes in the overseeing and regulation of cognitive processes. I approach the present study with the desire to explore the claim that the processes defined as metacognitive represent important aspects of knowledge, in particular, knowledge about one’s own cognitions rather than the cognitions themselves. This concept has been clearly recognized for decades. Flavell (1976) addressed the issue clearly over three decades ago:

‘Metacognition’ refers to one’s knowledge concerning one’s own cognitive processes and products or anything related to them, e.g., the learning-relevant properties of information or data. For example, I am engaging in metacognition (metamemory, metalearning, metattention, metalanguage) if I notice that I have more trouble learning A than B; if it strikes me that I should double check C before accepting it as a fact; if it occurs to me that I had better scrutinize each and every alternative in any multiple-choice task situation before deciding which is the best one; If I sense that I had better make a note of D because I may forget it...Metacognition refers among other things, to the active monitoring and consequent regulation and orchestration of these processes in relation to the

cognitive objects on which they bear, usually in service of some concrete goal or objective (p.232).

According to Flavell (1979, 1987), metacognition consists of metacognitive knowledge and metacognitive experiences or regulation.

Metacognitive Knowledge

Metacognitive knowledge refers to acquired knowledge about cognitive processes, i.e. knowledge that can be used to control cognitive processes. Flavell (1979) divides metacognitive knowledge into three subcategories: knowledge of person variables, task variables and strategy variables. Knowledge of person variables refers to general knowledge about how human beings learn and process information, as well as individual knowledge of one's own learning processes. For example, one can be aware of the fact that his/her study will be more productive in the quiet atmosphere of the library than at home where there are many distractions. Knowledge of task variables includes one's awareness about his/her ability to read and comprehend a scientific text in a longer period of time than reading and comprehending a novel. Knowledge of strategy variables means realizing whether file cards, written journals, re-reading, etc., would help the learner.

Metacognitive Experiences/ Regulation

Metacognitive experiences involve the use of metacognitive strategies (Brown, 1987). "Metacognitive strategies are sequential processes that one uses to control cognitive activities, and to ensure that a cognitive goal (e.g., understanding a text) has been met" (Livingston, 1996, p.2). These processes help to regulate and oversee one's learning, and consist of planning and monitoring cognitive activities, as well as checking

the outcomes of those activities. For example, having read a text, learners may question themselves about the concepts discussed in the text. The cognitive goal is to understand the text, but self-questioning “is a common metacognitive comprehension monitoring strategy” (p.2). If a learner finds that she is unable to answer her own questions, or that she does not understand the material discussed in the text, she must then determine what needs to be done to ensure that she meets the cognitive goal of understanding the text, for example, to go back and re-read the text with the goal to answer the questions she had generated. If after re-reading the text she can answer the questions, the learner may determine that she now understands the material. Thus, the metacognitive strategy of self-questioning is used to ensure that the cognitive goal of comprehension is met.

Livingston's View of Cognitive vs. Metacognitive Strategies

It is important to understand the difference between cognitive and metacognitive strategies because most definitions of metacognition include both knowledge and strategy components and can be confusing.

Livingston (1997) suggests that the defining criterion for determining what is metacognitive should be whether a given activity involves “thinking about thinking” and involves overseeing whether a cognitive goal has been met. The author writes that “cognitive strategies are used to help an individual achieve a particular goal (e.g., understanding a text) while metacognitive strategies are used to ensure that the goal has been reached (e.g., quizzing oneself to evaluate one’s understanding of that text)” (p.2). Livingston also suggests that metacognitive experiences usually precede or follow a cognitive activity and that they “often occur when cognitions fail, such as the recognition that one did not understand what one just read” (p.2). Such an impasse is believed to

activate metacognitive processes as the learner attempts to rectify the situation (Roberts & Erdos, 1993).

Metacognitive and cognitive strategies may overlap “in that the same strategy, such as questioning, could be regarded as either a cognitive or a metacognitive strategy depending on what the purpose for using that strategy may be” (Livingston, 1996, p.2).

To show this difference in purpose, Livingston gives the following example: a self-questioning strategy can be used while reading as a means of obtaining knowledge (cognitive), or as a way of monitoring what you have read (metacognitive).

The implication of this discussion is that because cognitive and metacognitive strategies are closely intertwined and dependent upon each other, any attempt to examine one without acknowledging the other would not provide a clear and adequate picture.

Knowledge is considered to be metacognitive if it is actively used in a strategic manner to ensure that a goal is met. The example given by Livingston shows how a certain goal can be met: a student may use knowledge in planning how to approach a math exam: “I know that I (person variable) have difficulty with word problems (task variable), so I will answer the computational problems first and save the word problems for last (strategy variable). “Simply possessing knowledge about one’s cognitive strengths or weaknesses and the nature of the task without actively utilizing this information to oversee learning is not metacognitive” (Livingston, p.3).

Other Views of Metacognition

The study of metacognition has provided educational psychologists with insights about the cognitive processes involved in learning and what differentiates successful students from their less successful peers. It also holds several implications for

instructional interventions, such as teaching students how to be more aware of their learning processes and products as well as how to regulate those processes for more effective learning. This section provides several further thoughts offered by researchers on metacognition.

Metacognition enables students to benefit from instruction (Carr, Kurtz, Schneider, Turner & Borkowski, 1989; Dunlosky & Metcalfe, 2008; Hacker, Dunlosky & Graesser, 2009; Hartman, 2001; Van Zile-Tamsen, 1996; Waters, Borkowski & Schneider, 2009) and influences the use and maintenance of cognitive strategies. While there are several approaches to metacognitive instruction, the most effective involve providing the learner with both knowledge of cognitive processes and strategies (to be used as metacognitive knowledge), and experience or practice in using both cognitive and metacognitive strategies and evaluating the outcomes of their efforts (develops metacognitive regulation). Simply providing knowledge without experience or vice versa does not seem to be sufficient for the development of metacognitive control (Livingston, 1996).

Conversely, Sternberg and Wagner (1982) observed that direct instruction in metacognition may not be beneficial. When strategies of problem-solving are imposed rather than generated by the students themselves, their performance may be impaired. Conversely, when students experience the need for problem solving strategies, induce their own, discuss them, and practice them to the degree that they become spontaneous and unconscious, their metacognition seems to improve.

Metacognition, or the ability to control one's cognitive processes (self-regulation) is linked to intelligence (Borkowski et al., 1987; Brown, 1987; Hertzog, 2005; Necka &

Orzechowski, 2005; Shaughnessy, Vennemann & Kleyn-Kennedy, 2008; Sternberg, 1984, 1986a, 1986b; Sternberg & Pretz, 2005; Wilhelm & Engle, 2005) because the executive metacognitive processes of planning, evaluating and monitoring problem-solving activities as well as the ability to appropriately allocate cognitive resources, such as deciding how and when a given task should be accomplished, is central to intelligence. Despite the fact that most individuals of normal intelligence engage in metacognitive regulation when confronted with an effortful cognitive task, some are more metacognitive than others. But, as Livingston writes, “the good news is that individuals can learn how to better regulate their cognitive activities” (1997, p.3). According to Livingston, most often metacognitive instruction occurs within Cognitive Strategy Instruction (CSI) programs which emphasize the development of thinking skills and processes as a means to enhance learning. CSI programs are based on the assumption that there are identifiable cognitive strategies, previously believed to be utilized by only the best and the brightest students, which can be taught to most students (Halpern, 1996). Use of these strategies has been associated with successful learning (Borkowski, Carr, & Pressley, 1987; Garner, 1990).

Bloom and Broader (1950); Brown (1978) and Whimbey (1990) have noted that those students who persevere in critical thinking and problem solving, students who think flexibly, critically and insightfully and who can consciously apply their intellectual skills, those students possess well-developed metacognitive abilities.

Costa (1991) writes that “while inner language ...begins in most children around age 5, metacognition – a key attribute of formal thought – flowers at about age 11” (p.39); but the fact is that not all humans achieve the level of formal operations because not all adults metacogitate (Chiappetta, 1976; Vocate, 1987). For the teachers, Costa

(1991) provides an extensive list of strategies for enhancing metacognition among which he mentions journal keeping and modeling (pp.212 -214).

CHAPTER III: METHODOLOGY

Research Questions

Following the universally accepted guideline that the choice of research design “depends upon the questions that are asked” (Nelson, Treichler & Grossberg, 1992, p.2), the research questions raised earlier in the first chapter are repeated here to help orient the discussion of methodology in this chapter:

1. How do advanced graduate students conceive of reflective assignments?

- a. How do they define the term 'reflection'?
- b. What do they see as goal(s) and benefits of assignments they see as 'reflective'?
- c. What assignments have they completed that they now view as 'reflective'?

2. To what extent, and in what ways, do the answers found for the questions in (1) by these graduate students reflect notions that would be defined as 'metacognitive' by specialists in the field? In other words,

- a. To what extent do the graduate students' own definitions and goal statements seem to embody metacognitive concepts;
- b. What kinds of actual content appears in these participants' own reflective writing; that is, how can the content of these pieces be broken down into categories (plans for future practice, narration, etc.)? Do these relate to each other in any particular way, and are they addressed differently by the writers themselves? Do similar patterns in content type

appear across writers, or does there seem to be variation in individual reflective styles?

3. What experiences do these students report as triggers for genuine metacognitive changes in their awareness of the metacognitive strategies that characterize their learning and development?

- a. Do they cite reflective writing experiences as having led to important changes in that area?
- b. Do they cite other kinds of experience, and if so, what kinds of other experience do they consider important to their growth in metacognitive awareness?

Qualitative Research

This study aims to describe the beliefs, attitudes, and feelings of the participants regarding their experiences with reflective assignments, as well as to look at their practice by examining written reflections that they have produced. As the research questions must be answered by probing the participants' reactions, ideas, attitudes and narratives, they are eminently suited to a flexible, qualitative treatment. For this reason, I have chosen to use qualitative methods. I see myself as a qualitative researcher who uses different methodological tools and deploys diverse strategies, methods, and materials. I will be performing a number of tasks, ranging from interviewing to interpreting written documents, and including intensive self-reflection and introspection. I see the end result of this study as a complex account which will represent my best understandings and interpretations as a researcher of the subject under investigation.

This study is qualitative because of the nature of the research questions. In addition, it depends on the insights from different disciplines and is, therefore, interdisciplinary in nature. On this note, it is useful to quote Nelson et al. (1992), who comment on the complexity of qualitative research:

Qualitative research is an interdisciplinary, transdisciplinary, and sometimes counterdisciplinary field. It crosscuts the humanities, and the social and physical sciences. Qualitative research is many things at the same time. It is multiparadigmatic in focus (p.4).

The present study has developed a qualitative description of metacognitive reflection on learning. It addresses the perceptions of advanced graduate students on the role of reflection as metacognitive activity in the learning process; the study explores these students' understanding of their metacognitive strategies, especially as discovered in reflective assignments, and analyzes the content of assignments they have viewed as reflective. This study involves "an interpretive, naturalistic approach to the subject matter", in which the researcher attempts to "make sense of and interpret phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 1998, p.3). Denzin and Lincoln (1998) provided a good overview description of qualitative research:

Qualitative research involves the studied use and collection of a variety of empirical materials – case study, personal experience, introspective, life story, interview, observational, historical, interactional, and visual texts – that describe routine and problematic moments and meanings in individuals' lives. Qualitative researchers deploy a wide range of interconnected methods, hoping always to get a better fix on the subject matter at hand (p.3).

The qualitative researcher engages in a set of practices providing solutions to a problem in a concrete situation. The qualitative approach involves an emergent construction that changes and takes new forms as different tools, methods, and techniques are added (Weinstein & Weinstein, 1991). This flexibility results from the in-depth nature of the questions being examined. As Gay (1996) put it,

...qualitative researchers are not just concerned with describing the ways things are, but also with... how people feel about the way things are, what they believe, what meanings they attach to various activities, and so forth (p.13).

As a qualitative researcher I have certain goals. One of these goals is to understand the meaning of participants' experiences using their accounts of experience to better understand the situation or the action that participants are involved in from their own point of view (Maxwell, 1996). Maxwell pointed out that the term 'meaning' is used "in a broad sense to include cognition, affect, intentions, and anything else that can be included in what qualitative researchers often refer to as the participants' perspective" (p.17). Gay (1996) recalls Maxwell when he states that "the researcher often seeks to describe the meaning of findings from the perspective of the research participants, not the researcher him or herself" (p.210).

In this spirit, I have attempted to understand the opinions expressed by advanced graduate students in the English department of a U.S. university. I was interested not only in graduate students' experiences with reflective assignments, but also in their beliefs about, attitudes toward, and practice involving such experiences.

Qualitative research, as a set of interpretive practices, privileges no single methodology over any other. And, as Denzin and Lincoln (1998) have noted, qualitative

research does not have a distinct set of methods that are entirely its own. Qualitative researchers use semiotics, narrative, content, discourse, archival, and phonemic analysis, description and statistics. They also draw upon and utilize various approaches, methods, and techniques, which include ethnographies, interviews, psychoanalysis, cultural studies, survey research, and participant observation, among others. This diversity of source areas will be kept in mind as I carry out this study to provide important insights and knowledge, as “no specific method or practice can be privileged over any other, and none can be eliminated out of hand” in qualitative research (Nelson et al., 1992, p.2).

The following assumptions about qualitative research are mentioned in Merriam (1998):

1. Qualitative researchers are interested in meaning – how people make sense of their lives, experiences, and their structures of the world.
2. Qualitative research is descriptive in that the researcher is interested in process, meaning, and understanding gained through words and pictures.
3. Qualitative researchers are concerned with process, rather than outcomes or products.
4. The qualitative researcher is the primary instrument for data collection and analysis and data are mediated through this human instrument.
5. The process of qualitative research is inductive in that the researcher builds abstractions, concepts, hypothesis, and theories from details.

This study was conducted in accordance with these assumptions. It is descriptive in that I as researcher was interested in the process, experiences and reactions the participants reported having had with reflective assignments in academia, their

understanding of such assignments, what they have thought about their experiences and what they have produced in response to such assignments. At the core of my study is a concern with the role of metacognition in such exercises, and more broadly, in the experiences of my participants.

Overview of Research Design

The data collection instruments for this study consisted of individual and focus group interviews with American and international graduate students, interviews with faculty members, and written documents produced by the advanced graduate students for various courses, as well as a researcher's journal in which I regularly recorded my own reflections as the research progressed. Two rounds of interviews were held with the graduate student participants. Brief interviews were held with two instructors who have taught the graduate student participants. A focus group interview was conducted with the graduate student participants, to clarify and elaborate on certain issues. As Denzin & Lincoln (1998) have claimed, "the use of multiple methods, or triangulation, reflects an attempt to secure an in-depth understanding of the phenomenon in question" (p.4). The use of different types of interviews, documents and a journal in this study was intended to meet this criterion and ensure triangulation.

Study Site/Setting

The site for the study was a liberal arts college in Western Pennsylvania, and more specifically, graduate program in Composition and TESOL at this university. This program attracts a diverse international student body and offers courses in composition theory and second language teaching and learning. Approximately twenty teaching associates (TAs) provide support for the students, many of whom are experienced

teachers. Students holding such Teaching Associateships, and faculty members in the Composition & TESOL and Literature & Criticism programs, were the participants in the interviews.

Individual and focus groups interviews with the participants were conducted in two locations: 1) in the library on campus; 2) in faculty members' offices on campus. The places for individual interview meetings were determined by agreement with participants, and the time was scheduled at the participants' convenience. Follow-up questions took place by e-mail and during the second interview.

Research Participants

Since the goal of selecting participants in qualitative research, as opposed to quantitative research, is to obtain an in-depth understanding of the participants' experiences (Erlandson, Harris, Skipper & Allen, 1993; Gay, 1996), this study used purposive sampling.

In a qualitative study, according to Gay, "the sampling is usually purposive, meaning that the sample is selected purposefully, i.e., precisely because it is believed to be a rich source of the data of interest" (p.214). The purpose then is not to generalize to a larger population, as in quantitative research, but rather to obtain the deepest understanding of a single situation. Gay (1996) also pointed out that occasionally, a sample can be selected randomly, "not for reasons of generalizability, but rather to increase credibility of findings" (p.215). This procedure is known as purposive random sampling.

In a qualitative study the researcher has to make two basic decisions in purposive sampling: who and what to study; as well as "who and what not to investigate; that is, there must be a process of elimination in order to narrow the pool of all possible sources

[i.e. of data]” (Gay, 1996, p.83). For the present study, the information being sought involved introspective views of reflective learning. Since such views must be based on experience, and participants should also be articulate and able to describe their perceptions, I chose advanced graduate students involved in pedagogical training, with teaching experience of their own as well as their rich learning experiences before and in the graduate program. Given the complex nature of the metacognitive aspect of this study, I felt that graduate students would be better able to elaborate on topics that require depth and self awareness. A secondary group of participants interviewed for this study were two members of the permanent graduate faculty who have designed assignments that the graduate student participants identified as reflective and metacognitive. The decision to consult these faculty members flowed naturally from the fact that they had designed some of the reflective activities in which the graduate participants had engaged. Researchers (Erlandson, 1993; Gay, 1996) have stated that there are no guidelines for the sample size in a qualitative study and that the actual number of participants is rarely specified in advance. The decisions about the number of people to be interviewed are made as the study progresses. For the present study, I initially recruited twelve participants. The majority of the group consisted of American graduate students and two international graduate students who volunteered to participate. The participants were both male and female; there was no deliberate attempt on my part to seek or explore distinctions between these groups. The invitation to participate in the study interviews was issued to the graduate population as a group. No age restriction was imposed. Despite keeping in mind my desire for diversity in the group only two international participants volunteered to be interviewed.

To recruit the participants, I posted an invitation for English Graduate students on the EGO (English Graduate Organization) listserv (Appendix F). I received twelve responses to my invitation. All twelve respondents had strong personal interest and a desire to learn more about reflection. They indicated that their experience with reflection left them with questions about the process, and they wanted to learn how to practice reflection and reflective assignments in their teaching.

The two graduate faculty members were interviewed after the interviews with the graduate student participants. I approached those professors who taught courses cited by my participants, and briefly interviewed them about the purposes and goals they attributed to their reflective assignments.

Once the main graduate student participants were identified, I met with them individually. I explained the purposes of the study and the activities they were expected to engage in. The participants were given consent forms and were assured that they had the option to withdraw from the study at any time, and had the nature of the study explained to them. The participants were also assured that any information they provided would be kept in strictest confidence, that they would have the opportunity to review the interview transcripts, and that their names would remain entirely confidential. Two of the twelve participants were not able to participate in the interviews: one moved to a remote location, another reported that she was extremely busy and stressed; however, she did provide written versions of some reflective assignments (one of the written documents provided by this participant was eventually withdrawn from the study at this participant's request, due to her unwillingness to share and disclose the contents, which she considered personal and private).

Research Instruments

The Interview

Interviews were the major data collection method used in this study. They allowed me to gain important insights into participants' lived and current experiences with the research topic. It was one of my intentions to discover an understanding of metacognitive reflection through participants' stories, as stories are a way of knowing. As Seidman (1998) observes, "When people tell stories, they select details of their experience from their stream of consciousness" (p.1). Also, according to Seidman,

interviewing as a basic mode of inquiry and recounting narratives of experience has been the major way throughout recorded history that humans have made sense of their experience...At the root of in-depth interviewing is an interest in understanding the experience of other people and the meaning they make of that experience...Interviewing provides access to the context of people's behavior and thereby provides a way for researchers to understand the meaning of that behavior. (pp.2-4).

The interviews included two rounds of individual interviews with the participants, of about 45 minutes to an hour. After the interviews, the participants were invited to a one-hour focus group interview (a detailed description of this kind of interview is addressed below), to allow them to share and comment on each others' views. Later the participants were sent follow-up questions by email as needed. The interviews went smoothly, and because the majority of participants were themselves experienced, yet developing teachers, they tried to share, contribute and provide as much experience and information as they could; this kept the discussions very personally engaging as well as

intellectually stimulating. All participants wished me luck in undertaking such a serious project and expressed interest in seeing the findings and the final manuscript.

I used a semi-structured format for the interviews. In this type of format the researcher introduces the topic, and then guides the discussion through posing specific questions to obtain detailed information (Rubin & Rubin, 1995). Semi-structured interviews differ from unstructured conversations, in that they involve preplanned questions and predetermined topics of discussion.

For individual interviews, I prepared a set of questions to obtain specific information from participants (Appendix B). I conducted all interviews in the same manner following the same sequence in asking the initial interview questions, although the follow-up questions differed from participant to participant. Each question in the interview corresponded to a specific purpose. For the individual interviews, the questions were designed to investigate particular topics such as the benefits and difficulties with reflective assignments, general perceptions about metacognition, and narratives about experiences with assignments the participants perceived as 'reflective'. To avoid short answers such as "agree", "disagree", "yes", or "no", I used open-ended questions to encourage the participants to elaborate on their responses as much as possible.

I followed the recommendations of Lincoln & Guba (1985), Rubin & Rubin (1995) and Seidman (1998), who suggested using three types of questions in qualitative interviewing: main questions, probes or exploring questions, and follow-up questions. I began with main questions to set the tone for the interview, then with the help of probes (unplanned questions to participants emerging from their responses) I asked for details, depth and clarification, as well as examples and evidence. Seidman (1998) warns

researchers that extreme exploration or probing of the participants' words can make them defensive and shift the meaning making from the participant to the interviewer "the interview can become too easily a vehicle for the interviewer's agenda rather than an exploration of the participant's experience." However, at the other extreme, "too little exploration... can leave an interviewer unsure of the participant's meaning in the material he or she has gathered. It can also leave the participant using abstractions and generalities that are not useful" (p.69). Therefore, I tried to keep a delicate balance when asking the participants exploring questions, which, according to Seidman (1998), have yet another function – they show the participants that the researcher is paying attention to what they are saying. More precise elaboration on certain themes was achieved with the help of follow-up questions. The follow-up questions took place during the second round of interviews and through email follow-ups.

In preparing for the interviews, I followed Maxwell's (1996) recommendation that the researcher should try to predict how particular questions will actually work. Regarding predicted effectiveness, I tried to anticipate how the interviewees would understand the questions, and in turn, how they would likely respond to them. While designing the questions, I put myself in the interviewees' place and imagined how I would react to these questions. I modified the questions several times to achieve precision, clarity and understandability. For instance, I tried to avoid using professional jargon such as "meta-memory" or "meta-language" which might have confused the interviewees and drawn them away from authentic narratives of their personal experience.

I did not limit the interview questions to the initial set, but rather expanded on them as much as possible. Educators such as Gay (1996) and Rubin & Rubin (1995) recommend that researchers should not be constrained by specific questions or categories, except in the most general sense. Gay (1996) and Seidman (1998) emphasized that the goal is not to obtain answers to already specified questions, but rather to find out what participants have experienced and believe. In addition, Rubin & Rubin (1995) suggest that qualitative interviewing should be flexible and continuous rather than being “prepared in advance and locked in stone” (p.43). For this reason, I allowed greater flexibility for the interview questions throughout the study in order to allow the emergence of questions that promoted new ideas and themes during the interviews. As I expected, I used the emergent design for interviews throughout the study because “a particular answer may suggest a new line of inquiry or it may suggest different people to talk to than originally planned” (Rubin & Rubin, 1995, p.47-48). Although new participants were not added due to the interview process, topics did emerge from our conversations in ways that I had not planned.

I took multiple notes in my research journal during each interview and immediately after the interview was finished. In particular, after the interview I tried to write down any reaction or reflection on whatever issues may have arisen that seem interesting or important for the study. I also developed a habit of writing down thoughts and ideas as they emerged in contexts other than the interview settings. Sometimes, these involved quite unexpected settings; for example, I would watch a show, a film or listen to a radio interview and would suddenly come up with surprising insights triggered by connections with my research ideas.

In preparation for the interview, I took the following steps:

1. Fully informed the subject of my motives, intentions, and the purpose of the research;
2. Determined what level of privacy the subject would like (pseudonyms were used);
3. Scheduled the time and place for the interviews;
4. Designed appropriate questions that lead into and examined the metacognitive nature of reflection on learning.

I terminated the interview when information had become redundant or when the interview questions had been adequately covered. I thanked the subjects for their participation and cooperation and provided information for further communication. Follow-up questions or requests about scheduling another interview took place over e-mail.

The stages of an interview. There are several suggested stages for an interview proposed by different scholars. I followed those given by Rubin & Rubin (1995) to guide the discussion while interviewing. Rubin & Rubin point out that these stages may be mixed with each other or be spread across different interviews:

1. Creating a natural involvement. Rubin & Rubin recommend that the researcher begin the interview with an informal chat about something related to the topic of the study. For example, to make the interviewee comfortable I suggested buying them a cup of coffee from the library's coffee shop and talked to them informally about their studies and teaching. Gay (1996), supporting Rubin & Rubin, said that "some time should be spent in establishing rapport and putting the interviewee at

ease” (p.263). And Seidman (1998) suggested that “sharing the experience in a frank and personal way may encourage the participant to continue reconstructing his or her own in a more inner voice than before” (p.73).

2. Encouraging conversational competence. According to Rubin & Rubin, some interviewees might be nervous and hesitant to answer the interview questions. Therefore, the researcher’s task is to show them that she is interested in listening to what they say about their experiences. Rubin & Rubin noticed that people gain confidence when they know that they will be asked about something they know about, something concerning their own experience and life. Accordingly, I asked the participants about their own experiences with reflective assignments.
3. Showing understanding. The authors recommend that the interviewer should encourage the participant “to be frank and open, as well as to provide answers in depth” (Rubin & Rubin, 1995, p.131). To do so, I showed my understanding of the content of what is being said by asking follow-up questions. Showing understanding can also be achieved through facial expression, nodding, or by tone of voice. Rubin & Rubin suggested that when interviewees pause in the conversation, the researcher should not jump right in and ask a question. Rather she should wait a while and allow a period of silence so that the participants can continue the conversation. The same recommendation is given by Seidman (1998): “It is important to give your participant space to think, reflect, and add to what he or she has said. This may take a second or two for some participants and 20 seconds for others” (p.77). At the same time Seidman warned the researchers that if the silence on the part of the interviewer is too long, it can put undue

pressure on the participant. Thus, I tried to keep a delicate balance between jumping in too soon with a question and waiting too long in silence.

4. Getting facts and basic descriptions. For this stage, the authors recommend that the researcher obtain the basic information about the topic of the study. This can be done during the initial stage when the participants are asked to talk broadly about their experiences with reflective assignments. The researcher's task is to "listen to a lot of descriptive material...but generally hold off asking...intellectually difficult questions until the next stage" (Rubin & Rubin, p.134).
5. Asking difficult questions. At a later stage, once the interviewee is comfortable, the researcher is able to ask difficult questions, i.e. in this case, I felt that I could ask for in-depth explanations about various issues concerning participants' experiences with reflective assignments: benefits, difficulties, culture specific observations, educational issues, etc.
6. Toning down the emotional level. This stage concerns sensitive topics about the participants' lives. Since this study included only minimal and subtle reference to sensitive issues, this pointer was not relevant. However, it was kept in mind, as reflection in some cases did involve the participants' evaluation of shortcomings they wanted to correct in their learning process.
7. Closing while maintaining contact. At this stage I thanked the participants for the time and shared experience and assured them that all material would be kept confidential and treated with respect. In addition, I told the participants that there would be further possible contact via email or short follow-up interviews for clarification of certain points after transcribing the data.

I recorded the interviews using a digital recorder in order to access the material in a form that is accurate and retrievable. The recorder not only provided accurate data, but also a complete record of what was said during the interviews. With recording, “we do not have to worry that we have missed something” (Gay, 1996, p.218). Yet another advantage of using the recorder is that it gives the researcher unlimited access to the recorded material at any time. It also means the researcher can concentrate on the interview in the process without the distraction of taking specific notes.

In addition to using the recorder, Rubin & Rubin recommend taking notes, because this practice forces the researcher “to listen and hear the main points...[and to] scribble down possible questions to use later in the interview and keep track of the discussion” (p.127). Following this recommendation, I was taking notes and writing memos to avoid missing important data. Interviews with professors were brief but guided by the same ideas presented here for the participant interviews.

Focus Group Interview

A focus group interview is a “carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment. The discussions are relaxed, and often participants enjoy sharing their ideas and perceptions. Group members influence each other by responding to ideas and comments of others” (Krueger & Casey, 2000, p.5). Focus groups are typically composed of five to ten people, but the size can range from as few as four to as many as twelve. “Group members could vary by age, gender, occupation, and interests” (Krueger & Casey, 2000, p.10). The focus group presents a more natural environment than the

individual interview because participants are influencing and are influenced by others – just as they are in life.

As a researcher, I served several functions in the focus group: I acted as a moderator, listener, observer, and eventually analyst, using an inductive process. As Krueger and Casey put it, “The inductive researcher derives understanding based on the discussion as opposed to testing a preconceived hypothesis or theory” (p.12). I was expecting to use the focus group to gain a better understanding about reflective assignments by hearing the participants interact and elaborate on themes raised in the individual interviews. My expectations were successfully met.

As in the case with individual interviews, I took the same basic preparatory steps as outlined earlier. The focus group interview questions (Appendix D) were based on the responses from the original interviews, and were asking for further elaboration on the narratives and views that emerged in those interviews. I terminated the focus group interview when all major questions were covered. I thanked the subjects for their participation and cooperation and asked for their assistance in further communication if the need aroused. Follow-up questions took place by e-mail and were answered in a timely manner with helpful feedback. All graduate student participants were provided the opportunity to review their transcripts before the dissertation was submitted.

Written Documents

Written documents were another source of data used in this study. Erlandson, Harris, Skipper and Allen (1993) wrote that “the term *document* refers to the broad range of written and symbolic records...Documents include practically anything in existence prior to and during the investigation, including historical or journalistic accounts, works

of art, photographs, memos...newspapers, brochures...notes, notes from students or teachers...” (p. 99). The authors pointed out that “the data obtained from documents can be used in the same manner as those derived from interviews or observations” (p. 99). Gay (1996) stated that “a document may be any written or non-written record which exists and may enhance the researcher’s overall understanding of the situation under study” (p. 221).

Written documents were important for obtaining a view of the participants’ actual practice, for comparison with the views they expressed in the interviews. They constituted important evidence which helped me to support certain statements and conclusions gained during the interviews. Upon agreement with participants, samples of their academic reflective assignments which they identified as useful were collected, and then the contents of these writings went through an in-depth analysis.

The table below shows the kinds of documents that nine participants provided for analysis and considered reflective:

Table 1

Written Documents for Data Analysis

Name	Graduate syllabi	Reflective work	Teaching materials for undergraduate students
Boris		Reflective Analysis of Writer’s Process Log Personal Teaching Philosophy Reflective journal entries for Intro to TESOL class	Portfolio requirements for ENGL 101 & ENGL 121 containing reflective components
Ekaterina	Teaching Writing Syllabus	Writer’s Process Log Response/reaction papers on reading	
Liz	TESOL 510: Applied Linguistics for		

	<p>Second Language Teaching</p> <p>TESOL 610: Applied Linguistics for Teachers</p> <p>TSL630: Developing Intercultural Competence</p> <p>ENGL 730: Teaching Writing</p>		
Olga		<p>Reflections on assigned readings for Teaching Writing class</p> <p>A Letter of Reflection for TEFL/TESL Methodology class</p> <p>Reflection on creating a Syllabus Project Rational for Teaching Writing class</p> <p>Online Reflective Materials</p>	
Ella		<p>Reflections on keeping a process log (about apples, poems, memories)</p> <p>Memo-reflections (5 memos) for preparing dissertation rationale (questions, struggles, insights, ideas, etc)</p> <p>Reflections on exercises (apples, poems, memories)</p> <p>Weekly reflections on ESL/EFL Internship class</p>	<p>Syllabi for American Language Institute (Writing and Reading courses)</p> <p>Syllabi for ENGL 202 and ENGL 101</p>
Sergey		<p>Writing Literacy Autobiography 'The Making of a Writer'</p>	<p>Writing prompts for ENGL 101</p>
Dmitrii		<p>Literacy Autobiography</p> <p>Part of dissertation talking about reflective writing</p>	
Mikhail		<p>Reflective Letter for Qualifying Portfolio</p>	<p>Students reflective essays based on</p>

		<p>Personal reflection to the <i>Language and Cognition</i> course and another (not specified course).</p> <p>Online Reflective Materials</p>	<p>Mikhail's prompts</p> <p>Students' Reflective letters about the course</p> <p>Prompt for reflection for ENGL 101</p> <p>Prompt for reflection for ENGL 202</p> <p>ENGL 100 Reflective Cover Letters for Portfolio (written by Mikhail's students)</p> <p>Requirements for writing ENGL 100 Portfolio and Portfolio Cover Letter</p>
Anna		<p>Individual reflections (why does writing really matter?; the story of how you got here into this program doing research)</p> <p>Reflective Teacher Journal</p> <p>Excerpt from dissertation ideas notebook after having decided to completely change topics</p> <p>A story/memory worth keeping.</p> <p>Statement of Teaching Philosophy (written for class)</p> <p>The process behind the teaching philosophy</p> <p>The process behind the project proposal</p>	<p>Prompt for Writing a Cover Letter.</p> <p>A sample Cover Letter</p>

As noted earlier, one participant Liz, who was not able to participate in interviews, specifically requested that I not analyze one of her writing samples, a copy of which she had initially provided. According to this participant, this particular document had very personal value to her and she would not want to share it. This request was respected and the document was not analyzed.

I also did not analyze teaching materials submitted by the participants that they used in their own teaching of undergraduate students; I felt that these, as well as assignments completed by the participants' students, would go beyond the scope of this study.

Research Notes

Rubin and Rubin (1995) indicated that it is important to keep a record of the researcher's reactions toward both interviewees and interviews. The authors emphasized that during the interviews and immediately after the interviews have finished, the researcher should "jot down in...notes" about how she felt about the interviewees and what they said (Rubin & Rubin, 1995, p.120). Following this recommendation, I took notes during and after interviews, which helped me with formulating additional questions and reflecting on the situation at hand. Taking notes is

extremely helpful as a clue to what kind of material is likely to be missing, as a warning of where bias may enter the analysis, and as an indicator of what parts of an interview...may be less rich or even less accurate than others. (Rubin & Rubin, 1995, p.120).

Maxwell (1996), encourages the use of what he calls the 'memo':

The term 'memo' refers to any writing that a researcher does in relationship to the research other than actual field notes, transcription, or coding. A memo can range from a brief marginal comment on a transcript or a theoretical idea recorded in a field journal to a full-fledged analytic essay. What all of these have in common is that they are ways of getting ideas down on paper (or on a computer disk) and of using this writing as a way to facilitate reflection and analytic insight. (p.11).

Later, Maxwell again emphasized the potential importance of these notes: "You should regularly write memos while you are doing data analysis; memos not only capture your analytic thinking about your data, they facilitate such thinking, stimulating analytic insights" (p.78). While conducting this study, I kept such notes or memos as a regular

practice. I wrote memos as a means of recording important points, such as any follow-up questions that occurred to me in the process of transcribing interview data. I also used memos as a reminder to record any ideas, points, explanations, observations or references.

In addition to taking notes at the time of interviews, I tried to keep a regular research journal, noting my observations at every stage of the study, including my thoughts while working on analysis of the data.

Data Analysis

One common problem identified by researchers (Maxwell, 1996) in regard to qualitative studies is the delay in transcribing the data and letting it accumulate. According to Maxwell, it is better to avoid postponing data analysis because researchers may become overwhelmed and the process of interpretation of data may become more complex. "One of the commonest problems in qualitative research is letting your unanalyzed field-noted and transcripts pile up" (Maxwell, p.77). Therefore, it is recommended that data analysis begins "immediately after finishing the first interview" (Maxwell, p.77).

For the above reason, I began transcribing, analyzing, and interpreting the data immediately after I collected it. Following Maxwell's suggestions, I first carefully listened to the recorded interviews prior to transcription and then read the interview transcripts and documents thoroughly before analyzing them. Another of Maxwell's (1996, p.78) suggestions which I followed was "taking notes and memos...and developing tentative ideas about categories and relationship" during the listening and reading stages.

I also used the opportunity to check the data with participants and get their feedback during the period of data collection. After completing each interview, I began transcribing and examining the data, coding the concepts and themes, and deciding which topics should be further elaborated. While checking the already transcribed documents, such as notes and memos, email follow-ups, and written documents provided by the participants, I highlighted different themes and ideas with different colors.

I followed several steps in conducting the data analysis:

- 1) First, I transcribed each interview verbatim and entered the transcribed data into the computer saving it as a Word document. I gave the files both real and pseudonymous names of the participants, so that I could later add additional data based on follow-up questions through emails or second interviews.
- 2) As a second step, I coded and categorized each document into emerging patterns, concepts, and themes. Each category included all the material from all data collected that represented one theme or a concept. For instance, the participants' beliefs and attitudes regarding understanding, benefits of problems with reflective assignments. Memos, notes and information from document analysis were also added where appropriate.
- 3) The third step consisted of joining together all similar concepts, themes and ideas, thus refining the set of categories even further.
- 4) I compared the material within and across categories in order to determine relations between themes and to see which themes are similar and which contradict each other.

The categories were organized to form themes and concepts, to allow me to write a clear description and explanation of the main topic of the study.

5) As a final step, I presented the findings in the report where data has been interpreted in terms of literature and theories used in this study.

Since this study focused on what the participants actually said about how they perceived reflective assignments, direct quotations were often included in my reporting of the data. In fact, some researchers recommend using quotes rather than simply paraphrasing (Gay, 1996; Rubin and Rubin, 1995). The shortcoming of the transcribing process, as the authors point out, is that the researcher has to transcribe all interviews, which is immensely time consuming. However, because the transcription of all data gathered is highly preferred in qualitative research, I transcribed all interviews and kept written records of all email follow-ups, and documents.

I coded all data (written and recorded) manually. As Rubin & Rubin put it, “computers can take much of the drudgery out of coding a large data set, but any claims for a computer software package that it can think for you are exaggerated” (p.241). Maxwell (1996) added that “although there are now a substantial number of programs available for analyzing qualitative data, almost all of them...may distort your study toward categorizing” (pp.80-81). A sample coding of one practice interview session and two written documents with one participant (Liz) follows below.

Interview Data

Pilot Study for Testing Interview Questions

In order to see how the interview questions would work in the main study interview sessions, I conducted a pilot study consisting of a practice interview session

with one graduate student. The interview took place in a library group study room and lasted one hour.

I transcribed the whole interview verbatim first, and then selected the most representative pieces to test some tentative ways of analyzing the data.

In the course of our conversation, I was reminded that the production of substantial accounts demands extended recollection over a considerable period of time. The last response given by the interviewee was, “It is difficult to retrieve from memory what was in the syllabi... my doctoral course work was finished two years ago.” This insight pointed to the benefit of recruiting advanced students (with experience) but who have recently taken courses.

The interview helped me to refine the set of questions. In particular, as the interviewee taught both ESL and American students and was able to provide some information comparing her experiences teaching these two groups of students, I felt I needed to be aware of this as I interviewed other TAs. I also modified the phrase “reflective writing assignments” to “reflective assignments”, in order to give participants the opportunity to talk about all reflective experiences and not just in writing. I revised the sequence of interview questions as well.

In the course of the interview, several interesting themes emerged that were later used in the main study’s coding. For example, the theme of *authority in reflection* arose (*Why write about me if I am not an authority and I am not famous?*). Another example was the theme of *teacher influence* (*The teacher read my piece in class and this is why I had a positive experience about reflective assignment*). Another theme involved *specificity of guidelines and explanations* (*I sometimes wished there would be more*

specific guidelines or explanations ...because sometimes it was difficult to decide what I was doing and where I was going). However, even this one interviewee was ambivalent, and expressed the opposite idea (*Maybe guidelines would be limiting because it is hard to structure one's thinking*). Another potential theme: *cases where the interviewees have two divergent descriptions for a single assignment (This [reflection] is not about writing, but it is related to writing)*. This last idea calls up the possibility that the ultimate outcome of reflection may be different from the purpose or goal the reflector may have set out to meet; or alternatively, the goal may change as reflection proceeds.

Sample Coding and Transcription of one Practice Interview Session

Liz (the participant's name has been changed), was a doctoral student working on her dissertation and had been in the graduate doctoral program for three years. Prior to coming to the university, Liz taught undergraduate American and ESL composition courses in a university in the Northwest.

I started the interview with a question about what Liz thought of when she heard the term 'reflective' assignment. She responded that she thought of reflecting on past thoughts and experiences and writing about them.

Next I asked Liz about what experiences she had had with reflective assignments. Liz gave a non-metacognitive statement having said that in a lot of her graduate classes in MATESOL Program in the 90s she did a lot of reflection on readings. Liz gave an example that she would read something and reflect on what it meant to her and what she thought about the particular reading. She mentioned the fact that during her internship in 1998, she kept a journal each day. My follow-up questions were: What experiences have

you had throughout school, or even in family life, where the learning process has been talked about in some way that might be seen as ‘reflective’?

Then I asked about the kind(s) of writing activities/assignments she could call reflective? Liz provided a rather circular definition, using the term ‘reflection’ to define ‘reflection’ “it could be anything that involves reflection, reflection on reading, for instance”.

My question #4 was: What kinds of reflective writing assignments listed below did you yourself have as a student in this program?

Liz responded that she wrote reflective journals, reflections to individual papers written for a class during the semester, cover letters to portfolios, reflections to individual or group projects.

I asked if she could remember anything else?

Liz said that she also wrote letters to friends. I followed up with a question: “What do you mean by letters to friends?”

Question # 5: What do you see as a purpose of these reflective writing assignments?

Asked about the purpose of reflection, Liz hesitated often and used many hedges in her answer, which referred generally to looking back on some past experience.

L: [Example of metacognitive statement] I think these assignments are very valuable in terms of learning. There is that... ah ...distance... that... helps you to go back...to...ah... look at your previous experiences in depth...analyze them in retrospect...kind of...

Q6: What have you done when you thought you were being asked for such writing?

L: I picked a situation I could reflect on and reflected on it.

Q7: What kinds of reflective writing do you assign to your students?

L: I once asked them to describe in detail what they did, where they were and what they felt when they learned about the events of September 11. I asked them to describe their feelings and experiences in a reflective narrative essay. I also ask my students to write reflections on the assigned readings.

Cultural and educational background plays an important role as well: I had some students who would not want to share any personal information because they were not used to write about themselves, other “famous” writers were always an authority for them. [This is an example of another emerging theme which may show up in the other interviews as well, and namely: “Why write about me if I am not an authority and I am not famous?” This can be expected to be especially strong with international students, and to take a particular form with them; but it may show up in some sense more generally as well].

Q8: How were reflective writing assignments explained to you by the teachers who required reflective writing in this program (only briefly in the syllabus, explicitly in class, no specific explanation was provided, else)?

L: Mostly – only briefly in the syllabus because...I assume that they think that we [graduate students] know what they expect and that there is no need to provide a detailed explanation. [Follow up question here: did you always feel that way yourself? Were there times when you felt confused about what to write? If so, when did that happen?

Q9: What is your personal general understanding of reflective writing assignments?

Liz: I did have a lot of reflective assignments, and once the teacher read my reflective piece to the class as an example, so my understanding is – this was what the teacher

expected. [Follow-up question for interview 2: did you feel that way when you wrote it as well, or only when the teacher read it out loud?].

Q10: Do you sometimes/often/never feel intimidated by reflective writing assignments?

Liz: Depends on a topic. [Follow-up question for the second interview: which topics or experiences led to feelings of intimidation?]

Q11: Anything else?

Liz: I think reflective writing assignments are very useful and have great personal value. My experiences with reflective writing assignments had always been very positive...may be because they started positively...(smiles)...I mean because the teacher [theme: teacher influence] read my piece in class. Me: So, you definitely knew it was what he expected?

Q12: What specific difficulties have you had with reflective writing assignments in academia? That is, what problems can you list in understanding what is expected of you when you are asked to respond to a 'reflective' assignment?

L: In relation to reflecting on readings, I sometimes wished there would be more specific guidelines or explanations [theme: guidelines and explanations] on what exactly I needed to pay more attention, or on what aspect(s) in an assigned reading I should have concentrated because sometimes it was...uhm...difficult to decide what I was doing and where I was going. In relation to other reflective writing assignments, not the ones based on the reading, it is hard to tell, may be guidelines would be more limiting [theme: conflicting motives] because it is hard to structure one's thinking. Like this sample I brought you, in the syllabus, the teacher first wrote "write about the role writing plays in your life" but then he changed it and said we could reflect on any one experience. So, as you can see, this book is not about writing but it is related to writing...and... I don't

know what kind of guidelines or structural instructions could have been given to this reflective piece of writing. It is very personal.

Me: Yes, certainly, I understand.

Q 13: Liz, what specific benefits do you see in reflective writing assignments in academia? That is, what use do you see in a 'reflective' assignment?

L: Awareness as a student and as a teacher of one's assumptions, positions, more objective judgments about experiences...and that...element of distance...when you look back on something that had happened sometime ago and you look at this experience at a different angle [This is another example of metacognitive statement].

Me: What about using reflective writing for developing metacognitive skills?

L: Definitely. Reflection is metacognition.

Me: Tell me more about this what components of reflection do you see as metacognitive?

L: Analyzing your experiences with learning and reflecting on them.

Q14: Have you ever had any kind of training in developing reflective/metacognitive skills? Where?

L: Yes, in my two graduate classes. In Second Language Literacy Class and in Language and Cognition, where we discussed how the mind pulls things out of the memory [theme: class content relevant to metacognition]. [Follow-up question for the second interview: Can you give me more specific details?]

Q15: How do you think reflective and metacognitive writing assignments might change what you will do in the future?

L: Could you please repeat this question? Thank you. Uhm...I think ...as a teacher this kinds of assignments will help me to evaluate the students, to develop their learning and writing skills.

Q16: Do you personally consider reflective writing assignments helpful or unnecessary? Why? Please explain. Me: This sounds repetitive but this is more like a closure and a summary to the whole interview.

L: Necessary for any educational program. I had a very positive experience overall. When you start writing you open up.

Me: Anything else you might add? Liz: Nothing I can't think of really. It is difficult to retrieve from memory what was in the syllabi... my doctoral course work was finished 2 years ago.

After this practice session, I coded the data, letting the interpretations come to me as I was examining the data response by response. After I divided the data into smaller categories and began reassembling the information into themes and concepts. Then I worked on figuring out the theoretical implications of the data – what broader questions I could answer and what insights I could provide. I chose what themes to emphasize based on the theoretical framework and what I found stimulating, useful, or challenging. I reread the transcribed interview and made decisions about which themes could be examined further and which should be dropped for the lack of support. As I was doing this initial coding, I was discovering new themes, concepts and ideas, and designated new coding categories to include them. At the end, I significantly modified interview questions for more clarity (Appendix B). This practice session helped me to get a feeling of working with recorded data, its transcription, coding and meaning making.

Document Analysis

Sample Coding of Written Documents

After I conducted a trial interview with Liz, I copied and analyzed written documents provided by this participant from the MATESOL program which required reflection and contained metacognitive components. The sample coding and transcription of two of Liz's written documents is shown below.

Document Analysis (TSL 690 Internship Report)

This document consisted of two parts: the first part was a narrative description of the setting where Liz had her internship and was titled '*Internship Report*'. This description included time period, name of the place where she had internship, name of employers, her position, list of classes she taught, number of hours she taught, when classes met and what was going on in those classes, the activities she performed, and the perception of her attitude being a member of the professional staff. The second part of Liz's writing sample was titled '*Reflections*' and included statements which I categorized and initially coded the following way:

[General statement]: ...this internship has been one of the most valuable experiences in my TESOL education.

[Challenge]: ...I faced the challenge of designing and putting together a curriculum for students...

[Metacognitive comment on the nature of the task]: Some of the students (most) were not exposed to English outside of the classroom there at the Center.

[Metacognitive reflection on experience]: This experience provided me with an opportunity to put into practice everything I had learned as a TESOL student.

[Stating of standards]: Teaching English as a Foreign Language in a non-English environment places a heavy responsibility on the instructor to provide quality and quantity language input.

[Stating of standards]: Good student texts are very important and should be designed with the EFL situation in mind.

[Report on strategy choice]: For this reason I spent as much time as I could with the students outside of the classroom. The informal instruction times enhanced the formal classroom instruction. I was able to refer to a game, a shopping trip, or a previous field trip to activate schema thus making the language instruction more meaningful.

[Plan for the future]: If I teach English outside of United States in the future, I will take more tapes, music, dialogues, anything to help present the language in an authentic way.

[Statement suggesting a possible change]: I would probably administer more tests to evaluate individual language proficiency.

[Emotional reaction]: Upon reflection, I realize that I love teaching ESL/EFL. I am very grateful for the internship experience and opportunity to teach in Beijing, P.R. China.

Although a full discussion is beyond the scope of this chapter, I have found that the written material raises interesting themes. One particularly strong theme involves the use of narrative as a potentially essential grounding for reflection, since all of Liz's most reflective pieces seemed to begin with narrative statements and only then proceed to abstraction or generalization.

In addition to the individual themes, I noted patterns in the overall structure of reflections. For instance, I noticed the relation between the narrative part of the document, and following it metacognitive evaluation. In other words, Liz first described in detail the context of her internship setting and performance, and then gave a metacognitive evaluation of her experience.

Document Analysis (writing sample 2: TSL 580 Practicum)

This document has a structure similar to the first one in that metacognitive statements follow the descriptive-narrative part about the setting, courses, students, and teaching materials. Thus, Liz's '*Practicum Report*' starts with the narrative description of the first course setting, students, activities and is intertwined with several statements metacognitive in nature.

I coded the statements in Liz's second paragraph as follows:

[Metacognitive challenge]: While student attendance and motivation was not extremely high, I learned a great deal from the students and this instructor.

[Metacognitive statement initiated by modeling]: I was impressed with the way Amy always models unfamiliar words several times. She gives a simple definition of a new word or phrase, often showing derivations. After that, she provides several examples of how this word or expression is used in sentences. She uses humor and a natural, conversational style of speech when instructing students.

[Metacognitive emotional reaction]: It was a great experience to hand out student information sheets and go over the syllabus.

[Metacognitive reasoning statement]: Since these students were all planning to enter an American University, I focused on activities to help bridge the gap between the ELI and the university classroom.

[Metacognitive evaluation]: From the students I learned that each class is different, what is right for one group may not be the best for another group. I now understand that learning how to modify your speech and pace ESL instruction is something you learn by doing.

[Metacognitive statement referring to the future]: Another thing I will try to do for my students is provide variety in the listening, practicing and speaking activities and exercises.

[Metacognitive emotional reaction]: It was wonderful working with an experienced teacher like Amy Short.

[Metacognitive statement referring to the future]: I intend to practice her method of introducing new words and phrases and will attempt to make ESL instruction as natural, and conversational as possible.

[Metacognitive emotional reaction]: She was an excellent model.

As was the case with the first writing sample, I was able to code several (six) metacognitive statements and break them down into the following eight meta-linguistic categories:

1. Metacognitive statement initiated by modeling
2. Metacognitive challenge
3. Metacognitive reasoning statement
4. Metacognitive evaluation

5. Metacognitive statement referring to the future
6. Metacognitive emotional reaction

After the initial coding I chose what themes to emphasize based on the theoretical framework and insights from the literature review. I reread the written document, so that I had its general content clearly in mind. When I was rereading the document, I was also thinking about the themes, concepts, and ideas that I was trying to explore in the practice interview with Liz. Some of my efforts panned out; others were dropped for lack of support. After I came up with a starting point for my coding categories, I was gradually reconstructing the themes, concepts, and ideas which I was able to successfully examine. I went back to the written document again, and this time marked off these concepts, themes, and ideas each time they occurred in the written sample. Later, when I was coding the actual written documents for the study, I discovered other themes, concepts, and ideas and designated new coding categories. When I added new coding categories, I went back to the original written documents again and looked for and marked each place that was an example of the material that belonged in the new categories. At the later stages of the data analysis I tried to figure out how the themes related to each other and to recognize what the data was saying.

Ethical Issues

To my knowledge and as I have stated in the IRB protocol, I took care to ensure that no physical, social, or economic harm could come to the participants of this study from their engaging in the activities required for the study. I asked for the participants' permission to interview and quote them. I also assured the participants that their records and identities would be kept confidential; pseudonyms were used to replace real names.

I provided the participants with an accurate and detailed description about the study and about the anticipated benefits. The participants were given an informed consent form for careful reading before they agreed to participate. Moreover, I explained to the participants that even if they agreed to participate, but later decided to withdraw during the study, they would have the right to stop participating at any time without giving reasons.

Validity

Validity refers to “the correctness or credibility of a description, condition, explanation, interpretation, or other sort of account” (Maxwell, 1996, p.87). Regarding interviews, Gay (1996) pointed out that validity is “the degree to which interviews accurately reflect the feelings, opinions, and so forth, of those interviewed, and consequently, permit appropriate interpretation of narrative data” (p.242). Throughout the study, I paid close attention to possible threats to validity such as researcher’s bias, and reactivity.

Qualitative researchers rarely make explicit claims about generalizability. Maxwell (1996) differentiates between two types of generalizability: internal and external. He pointed out that “internal generalizability refers to the generalizability of a conclusion *within* the setting or groups studied, whereas external generalizability refers to its generalizability beyond that setting or group” (p.97). Maxwell suggested that what is important in qualitative research is the internal generalizability on which the “validity of conclusions all depend” (p.97). Thus, the findings of this study cannot necessarily be generalized to other institutions or individuals practicing or using reflective assignments.

One of the major threats to valid description is the incompleteness or inaccuracy of the data. To avoid this potential threat, Rubin & Rubin (1995) recommend that the researcher “get beyond ordinary listening and hear meanings,” for instance, focusing interviews “to obtain more depth and detail on a narrower range of topics than you would in ordinary conversations” (p.8). Rubin & Rubin advise researchers to “encourage people to elaborate, provide incidents and clarifications, and discuss events at length” (p.8). The depth, detail, and richness which researchers seek in interviews are called *thick description*. But even if the participants are encouraged to provide more details or clarifications, the threat to valid description still remains. To try to minimize this problem, I used verbatim transcripts of the interviews, rather than only using notes or memos of what the participants said. I also used recordings, which are considered a major strategy for assuring the accuracy of data in qualitative research (Gay, 1996).

One major threat to valid interpretation is, according to Maxwell, “imposing one’s own framework or meaning, rather than understanding the perspectives of the people studied and the meaning they attach to their words and actions” (1996, pp.89-90). As a researcher I was careful not to impose my own perspectives instead of obtaining the perspectives of the participants. Maxwell’s useful suggestion, which I followed in this study, is that in order to avoid researcher’s bias, the researcher should avoid asking leading, closed, or short questions that do not give participants the chance to express their own perspectives. *Member check* is another helpful way to avoid invalid interpretation. I contacted the participants in order to get their feedback about the data they provided during this study.

Reactivity

Reactivity is the researcher's influence on the individuals or settings (Maxwell, 1996). The researcher's influence on the participants in any study is impossible to avoid. However, the goal is to be aware of such influence. I tried to avoid asking leading questions and always kept in mind how I could influence what the participants said.

Triangulation

In addition to the rich data and member check mentioned above, I used the method called triangulation or "collecting information from a diverse range of individuals and settings, using a variety of methods" (Maxwell, p.93). As defined by Gay, triangulation refers to "the use of multiple methods, data collection strategies, and/or data sources" (1996, p.242). The use of different methods, sources and strategies of collecting, interpreting, checking and validating of data (notes, memos, the research journal, interviewing, document analysis, email follow-ups) secured the results of this study with more credibility than had the study been limited to one source or method.

Validating the Accuracy of Findings

In order to determine whether the findings of this study are accurate from the standpoint of the researcher, the participants, and the readers of the account, I followed the strategies offered by John Creswell (2003, p.196). In particular, I took the following steps to prove credibility of my findings:

1. I *triangulated* different data sources of information (individual and focus groups interviews, pilot studies, faculty survey, document analysis and personal observations) by examining evidence from these sources and using it to build a coherent justification for themes.

2. I used *member-checking* to determine the accuracy of the qualitative findings by letting the interview participants to read the transcriptions and determine whether these transcripts were accurate.
3. I used *rich, thick description* to convey the findings and to transport the readers to the setting and give the discussion an element of shared experiences.
4. I clarified the *bias* I brought to the study because self-reflection creates an open and honest narrative that will resonate well with readers.
5. I also presented *negative or discrepant information* that ran counter to the themes. Because real life is composed of different perspectives that do not always coalesce, discussing contrary information adds to the credibility of an account for a reader.

The primary strategy utilized in this project to ensure external validity was the provision of rich, thick, detailed descriptions so that the readers will have a solid framework for comparison.

Researcher Bias

I approached this research with certain beliefs and attitudes about reflective assignments in academia. My major attitude was uncertainty about the nature and purposes of this kind of assignments. From several conversations with my fellow graduate students both American and international, I learned that some of them also shared similar feelings (some graduate students said they were intimidated by assignments which required reflection). Also, one of my initial beliefs was that the feeling of confusion and uncertainty was particularly strong among the international students because in some countries reflective assignments are not practiced and there is no language equivalent of this concept. This belief proved to be at least partially wrong.

Another belief that I had about reflective assignments was that many students and teachers do not clearly see the difference between general reflection and metacognitive reflection and this, in its turn, created vagueness surrounding the notion and the purpose of ‘reflective assignments’. This belief proved to be at least partially wrong as well. Thus, I found it essential to keep an open mind and to question my own initial biases in the process of conducting this research. I was aware that I needed to be open to both positive and negative features of reflective assignments, as such features may have played a helpful role in my participants’ experiences.

Background Studies

Freshmen’s Perceptions of Reflective Writing

As an initial step in approaching this research project, I conducted a small study among university freshmen to obtain their views on reflective writing. I was curious to know whether the younger generation of American students might have been taught certain metacognitive strategies in high school; if so, I hypothesized that they would have a sense of what reflection was and how to deal with it. I also wanted to determine whether undergraduate students could be considered potential study participants. To access student perceptions about reflection, I conducted a small-scale study in two sections of a research writing class. I developed a questionnaire (Appendix E) related to the final semester paper assigned by one of the course instructors in the program. The questionnaire was approved by the course instructor and distributed to the students in the form of a one page handout. I asked the students to write their responses at home either in the paragraph format or in the “question and answer” format.

From the results of this small study I was able to see that college freshmen's experiences with reflective writing varied. Among the 41 participants, six different groups emerged:

Group 1: 10 students responded they have never experienced reflective writing in any form before taking this research writing class.

Group 2: 14 students had experienced reflective writing at least once in high school or in college without understanding the purpose of reflection: "the teacher required reflection after each paper we wrote and it was all the same," one student responded.

Group 3: 8 students responded that they wrote reflections constantly in the form of journals or as a requirement for different classes. These eight participants named the following disciplines where reflective writing was required: college writing, psychology, criminology, music, nursing.

Group 4: Two students responded that they might have had reflective writing in high school or at work but were not sure whether it was reflective writing. One student wrote that writing reflections in his 202 research writing class was educational for him and helped him to understand all his previous writing in depth.

Group 5: Five students did not give any accounts of experiences with reflective writing.

Group 6: Two student responses were very negative and characterized reflective writing as "a waste of time" and "excessive unnecessary work".

This small background study had several limitations. In particular, I used the term 'reflective writing' instead of reflection or reflective assignments, thus limiting potentially informative responses. Second, the study involved a limited number of

students. Third, the questionnaire I developed was too long; I realized that some questions needed to be rewritten for clarity, some could be eliminated and others needed to be modified. Also, the form of my questions might have had an impact on student responses.

However, the study did show me something of the extent to which students vary in their understanding of reflection, and did serve to highlight the need for instructors to provide better guidance to students on the reflective process.

Online Faculty Survey

To obtain a broader variety of opinions and professional feedback about reflection and reflective assignments in academia, I designed an on-line faculty survey. This survey was developed with the help of the Applied Research Lab under the supervision of Dr. Tom Short and graduate assistants at the lab.

The survey was revised and modified several times, and, finally sent out twice by Applied Research Lab personnel using the Student Voice software. The survey was sent out to all faculty (graduate and undergraduate), teaching assistants and graduate students. This on-line survey consisted of thirteen questions: yes/no and open ended.

The survey generated more than 230 responses covering various disciplines, and the results were extremely informative, in particular, I learned that reflection and reflective assignments are used in many different disciplines in the university and are seen in very different ways by individual faculty members. I was fascinated to learn that reflective assignments are currently used in a wide range of academic disciplines and on both graduate and undergraduate levels: in Anthropology, Art, Biology, Business, Chemistry, Communications Media, Composition, Counseling, Criminology,

Developmental Studies, Educational Psychology, Economics, English, Geography, History, Law, Library, Literacy, Humanities Literature, ESL, Foreign Languages, Management, Math, Music, Nursing, Nutrition, Philosophy, Physics, Psychology, Political Science, Special Education and clinical services, Sociology, Safety sciences, Student Affairs in Higher Education, Women's Studies.

I also learned from this anonymous online survey that the absolute majority of survey participants considered reflection beneficial for student learning. The survey showed that the absolute majority of faculty believed that reflective assignments were an important and integral part of their courses for monitoring student progress and learning and that explicit instruction, scaffolding and modeling should be provided. These views were consistent with the results obtained in the interviews with two graduate faculty members. However, several contradictory views were expressed about explicit guidance and instruction and about the ideal frequency for using reflective assignments. A few responses were quite negative, for instance, "Metacognition? Please, do we really need more jargon?" or that reflection and metacognition were "a waste of time." Some respondents were quite confused about the notion of 'reflective writing'; one faculty member suggested to me in an email that "all writing is reflective."

CHAPTER IV: INTERVIEWS: FINDINGS

Having analyzed the transcripts of individual and focus group interviews, I have found eleven themes which will be discussed under the following headings:

1) Definitions of Reflection and Reflective Writing; 2) Types of Reflective Assignments; 3) Instructors' Assumptions Seen from Graduate Students' Perspective; 4) Participants' Reactions to Reflective Assignments (including newness of reflective assignments; participants' reactions to certain types of reflective assignments; forced reflections; uncertainty; other reactions; ethical considerations); 5) Reflective Moments; 6) Metacognitive Triggers (including special narratives: Ekaterina, Boris, Olga, Mikhail); 7) Benefits of Metacognition; 8) Time and Gradual Metacognitive Change; 9) Evolving Ideas and Practice; 10) Plans for Future; 11) Reflection and Cultural-Educational Contexts.

After the discussion of these eleven themes, I will present insights about reflective assignments and reflective practice drawn from the interviews with two faculty members.

Definitions of Reflection and Reflective Writing

When asked how they defined the terms 'reflection', 'reflective writing' and 'reflective assignments', the most common response type given by the advanced graduate participants addressed the idea of a two-part process, with a story first (narrative), even if short or implied, followed by an evaluation or re-thinking, looking back at or thinking back about the process or experience involved in the narrative and writing about the resulting insights. Ten of the twelve participants explicitly mentioned this idea; some typical responses are cited here.

Sergey explicitly referred to the *narrative* component of reflection when he talked about his dissertation writing experience:

... *self-narrative*... is reflective writing, I didn't call it reflective writing in the dissertation, I referred to it as reflective in nature, but I called it a narrative because it would be telling about events in a sequence and has that *narrativity* quality to it. So that I found the most interesting part of the dissertation project and definitely more personally useful because I figured out a lot of things... narrative sets up the opportunities for reflections.

As a teacher Sergey seemed to imply that narrative plays a role in reflection, when he spoke of "thinking back to something in the past":

To me this is a kind of writing in which a student looks at how he or she writes or to think back to something in the past either that relates to the writing or just in other ways relevant, and it's a deliberate attempt to bring up what is, perhaps, subconscious.

Sergey also pointed out metacognitive component of reflection when he said that "It's all about those connections or seeing patterns in, say, repetition and see 'Oh, whenever, I do this, I always seem to be doing that'. Seeing connections and patterns in how one learns."

Recalling a central feature in the participants' definition of reflection, Dmitrii spoke of narrative as a powerful metacognitive trigger when he said:

I realized that a shift had occurred, the narrative shift. I was allowed to write narrative, I was able to think about my own experiences and actually do more reflection and try through my own memory to trace things back. So, I realized that that was a possibility to visualize and analyze the chain of events. So, it was like a

permission to draw upon on your own experiences as an authentic research method. So, when I heard this [in the graduate class], I was like, oh, wait, you mean my experiences matter? And that seemed to be one of the underlying messages in class – yes, your experiences matter, yes, you are at a certain level of education, you can contribute to the field, you are not an undergraduate student.

Other participants provided similar definitions of reflective writing:

[Reflection] is thinking about the process that you took to actually get your outcome... and why you did it (Olga).

I think of writing that requires writer to stop and think back about some process or experience and then write about it... It's a deliberate attempt to bring up what is, perhaps, subconscious. It is a web. It's like a chain reaction, you go back in time and you change one thing, and then it sets this chain reaction – that changes everything (Sergey).

When I hear the term reflection I think of looking back at something you have done. Thinking about writing (Ekaterina).

I think of reflecting on your past thoughts and experiences and writing about them (Liz).

Reflection to me is some kind of critical consideration of an experience (Mikhail).

Reflection asks a student to look back at how the acquisition of knowledge, experience, or both has changed him or her (Maria).

Thinking about something after it was done, thinking about it in different ways and looking at what happened and why. Reflective writing is a way of discovering

knowledge and bringing something subconscious to the surface. It is consciousness raising and evaluation” (Suzette).

A variant of this response involved specifically reflecting on one’s learning, particularly with an evaluative tone. Boris, for example, stated that “reflecting on one’s learning...includes reflecting on personal strengths and weaknesses, and particularly notions of progress, whether or not there has been improvement and in what directions, so...thinking about learning.” This was echoed by Mikhail who thought that” reflection is a critical analysis [of learning], perhaps progress made... .” Ibrahim gave a similar response: “seeing what kind of improvements, what kind of development happened.” He continued:

Reflection to me...is sort of like a form of evaluation to see the things you did in the past or the things that you already know and try to see if you can compare them, see if you technically learned something or acquired extra knowledge, so, it is not a formal evaluation but a form of evaluation, to me as an instructor.

Moving more specifically into this area, some participants linked ‘assessment’ and ‘evaluation’ with an emphasis on formal evaluation. Ekaterina noted that reflection “has been a big portion of NCATE assessment,” including the requirement to submit a reflective cover letter.

Responses focused on a variety of concepts, including memory (Ella), recommendations for change (Mikhail), and consciousness raising (Suzette). One participant, Ekaterina, linked reflection explicitly to the teaching process; two others did so at least implicitly, as they spoke of the ‘feedback’ that students receive on their learning.

Anna linked reflection to synthesizing reading material when she said “I had to do a reading reflection for Dr. R’s class. But it was more to show that we had read than our own processes, you know that is a reflection too. You are synthesizing what you read.”

Two interesting responses took the definition in another direction. In addition to her other comments, Anna’s reflective moments take the form of worrying, especially about her dissertation:

I reflect about my dissertation all the time...most of my reflection is in the form of worrying...like what if this happens, what if I talk about this, may be I should do this, what do I need to do next...I do a lot of worrying about things .

Sergey compared reflection with psychotherapy:

This is like psychotherapy, a ‘talking cure’, according to Freud. This is what psychotherapy is – it is reflection. In a reflective process a patient cures himself, uncovers the source of the issue of the problem.

Types of Reflective Assignments

When asked what types of assignments they considered reflective, interview participants named the following assignments which they have completed themselves or assigned to their students: journals; individual reflections to papers and projects; post-writing reflections (responding to questions such as, what did you learn from this, what would you do differently next time, what would you change if you had more time?); reflection on courses; cover letters to portfolios; teaching philosophies and reflective letters. Sergey said that he had his students write “reflections about one major paper for midterm” and a “reflection at the end of the semester covering all of the papers,” he said

that he considered these two types of reflection different from each other, as “reflection focusing on one versus the whole collection.”

Three participants (Suzette, Ekaterina, Sergey) cited classroom *observation* as a reflective project. Suzette said that the most important type of reflective project she ever did was a “thirty hour long observation” of her own teaching for four different classes when she had to audio and videotape most of the classes and later reflect on and analyze interaction among students, amounts of teacher and student talk and the types of questions asked. Suzette said “I learned so much from thinking about what I expected of the class or what happens in the class and then what actually happened. I learned so much about my teaching but also about how students learn, and that changed my teaching.” This suggests that observation of audio and video recording of one’s teaching can be a powerful means for reflection.

Ekaterina said that when she did her student teaching for an education class, she was required to keep a notebook and reflect on her experiences as a student teacher. Ekaterina also mentioned exit interviews, which she said might be reflective, though she was not sure. Anna also considered interviews to be potentially reflective; in particular, recalling a particular oral exit exam, she said “I think for that I really reflected a lot because I really had to think about what I knew and organize what I knew, so that when I was interviewed for an hour I could think about how I had learned, how that would effect my teaching and things like that.”

Anna and Dmitrii said that they were asked to reflect about how they learned languages. All participants said they had to reflect on their writing in the graduate courses.

Instructors' Assumptions Seen from Graduate Students' Perspective

Many participants reported that professors in graduate school assumed that their students knew what reflection was and how it should be done. Many participants reported that reflection was never taught to them directly - that is, that there was no formal instruction. They recollected that reflection was either set up as an assignment, or put into words other than 'reflection', for example, through directions ("Look back at your experiences with something or your feelings about something"), or questions ("What do you think you can add or change in the paper?"). Some participants said that only in graduate school had their professors used the actual word 'reflection,' and only in graduate school did the participants manage to achieve a better understanding of reflection.

Sharing their experiences about teachers' assumptions, the participants described the requirements for the reflective assignments they had been given, and expressed their attitudes about the clarity and specificity of the requirements (or the vagueness of instructions in some cases). They generally seemed to agree that it depended greatly on the professor, i.e. some teachers were more explicit than others. Some participants (e.g. Ekaterina) said that after international students asked for additional professor's explanations, the instructor provided enough information that helped the American students to understand what was required of them.

Some students said they were never given specific requirements but were asked to answer a question. At times, participants were unsure of what kind of response was required. For example, Dmitrii, speaking about instructors' assumptions said:

What I don't know is, does this do what the teacher wanted. I can say I wrote a lot here about me, but I don't know whether this is what [the instructor] really wanted.

Ella addressed the issue of unspoken assumptions on the part of faculty in these terms:

They just sort of assumed that we knew what they were talking about... I guess generally they assumed that if we didn't understand exactly what reflective writing was when they would give us a writing prompt, they seemed to think we would understand what they wanted from us.

Other responses ranged from Olga's relatively confident comment to Mikhail's wonder over whether reflection had been a part of his early schooling, and Dmitrii's implied message about minimal instructions:

Usually teachers just say – reflect, and people usually take it, just assume what it is and everyone usually assumes about the same (Olga).

I don't think it was taught at all. I think we just had to do something that was considered reflective ...ah...we sort of had some guidelines – not all the time but I do remember some sort of explanations like this and that, so I used this and that as a way to teach myself (Ibrahim).

I don't know. I am recalling in grade school there were assignments like, you know, write about your summer, which I guess was reflection, although ...[In] graduate school it was couched in those terms: “this is a reflective assignment, this is a reflective letter” (Mikhail).

The only words/explanations I had were “relate your personal experience to this...” and that's all that was said (Dmitrii).

Sergey commented on his instructors' attempts to explain their reflective assignments:

I cannot easily recall any instruction in that, I think it's just something, maybe we were asked to write about something without really being called reflection... I didn't have any formal step by step instruction in what reflection is and how to do it. We were told in other words, other ways of explaining that ...think back and remember, think about the process you have just completed, you know, that sort of phrasing. But we were not told "think about this, then do this, then do this," no specific instruction.

Suzette echoed Sergey when she said:

I don't recall an instance where it was explicitly taught. I know that I don't recall the word being used even in the graduate level or explained. In this PhD program we probably touched upon it as what do you think about something or what have you learned or how would you do things differently, what do you think you would change?

Participants' Reactions to Reflective Assignments

Newness of Reflective Assignments

Trying out new things, making new undertakings or being exposed to new experiences often creates feelings of uncertainty, fear and frustration at the outset. One interview participant, Boris, clearly spoke about the transition from an initial reaction of fear and uncertainty to adjusting to a new assignment, and later to awareness and growth. This, Boris emphasized, happens gradually and involves risk:

My *initial feeling* about doing these [reflective] assignments was chaotic, was frustrating, I was a bit lost, like I am not sure about what I am doing here. It's

intimidating at the initial stage. The frustrations to me are always at the beginning... You might not like what you see but that's part of learning because that's where we grow is that zone. Innovation involves risk, and risk sometimes leads to failure. The balance sheet, however, always favors professional growth and development, and ... it's confusing, it's intimidating, and it is always risky, it never stops being risky. But if it's done well, it will always be rewarding.

The reflective assignments that Boris completed and provided for analysis were the most informative and contained many metacognitive statements in the reflective analysis of his learning and teaching experiences. These will be referred to in the section on the analysis of written documents.

Several interview participants emphasized the early stages addressed by Boris, as they reported that the newness of reflective assignments caused confusion, fear, shock, frustration, feelings of being lost, overwhelmed or doing something wrong, or feeling intimidated. Some participants said that reflective assignments created risk and uncertainty due to the fact that participants did not have enough experience with such assignments.

Other participants, like Boris (e.g. Ella and Ibrahim), reported feelings of uncertainty, and specifically addressed their initial feelings about doing reflective assignments. Ella expressed some fear about her performance in response to a reflective assignment: "I was first taken aback, feared it, had a feeling of doing it wrong."

Ibrahim noted, in addressing his reaction to a particular assignment, that he had felt he was "not sure about what I am doing here." Ibrahim also stressed the lack of

experience in his background as a factor that complicated his transition to reflective work:

I remember the first time when I didn't really understand what it [i.e. reflection] was for because remember, I didn't come from the background where we had to do reflective writing. In the beginning I never understood what they [reflective assignments] were because I have never done them before taking classes in this graduate program.

Several participants (Anna, Ella, Dmitrii, Boris) also reported not having a clear understanding of what was expected of them, or cited lack of experience in undertaking a new task. Dmitrii speaks for the feelings of these participants:

There are some experiences that may be very important to me, but with the whole crisis of representation, you know... It's like, I can't explain to you in adequate words what the experience meant to me, so I don't know if you're going to understand that in exactly the same way I understood it. That's the graduate student. As an undergrad, I just wanted to get the paper done and get an "A." But then, on the other hand, thinking as an undergraduate, I'd be thinking, "You are going to give me a grade based on my own life experiences, what if I didn't have any in this field, am I going to get a lower grade?." So, I had these kind of fears in the back of my head. .. It was also my first experience writing a narrative. So, I was like...ahh...I don't know what to do.

Participants' Reactions to Specific Types of Reflective Assignments

Participants reported that different types of reflective assignments led to positive or negative reactions. For example, journals made some participants "cringe" (Ella), or

were “annoying and monotonous” (Suzette). Ella brought up one specific reason for dreading journals, in that she felt there was no audience for her writing, and that even the instructor would not be responding to them: “Knowing that the journals are not going to be read but only counted made it difficult for me to motivate myself to write anything of value or ... anything reflective. So, I kind of get blocked knowing that.” Ella also expressed a negative reaction to assigning reflective journals as an instructor when she said:

...as annoying as they are for the students to write, they are even more annoying to collect and read and I can't even tell why in the world we do this. After the first time I did it I hated it, and so I said wait, why am I doing this? So, I sort of transformed them into small reflective pieces.

Suzette pointed out a different problem when commenting about the requirement for regular written reflection on readings; she implied that writing multiple reflective responses could become tedious and unproductive in her opinion: “A few times I had to do a lot of reflection on reading. I felt like ‘enough already’. Sometimes I felt like I was repeating myself, it was so monotonous.”

Forced Reflection

Several participants brought up the issue of ‘forced’ reflections, saying that when they were forced to reflect they did not have any interest or motivation; these participants considered some assignments such as reflective journals a waste of time. However, other participants felt ambivalent about this issue. For instance, Boris said that such assignments were out of his comfort zone; however, despite this he admitted that “we grow in this zone.” Anna echoed Boris when she observed from the instructor’s point of

view that “when they [the students] actually were forced to think about how their writing changed, they explained to me things that worked in the class and things that didn’t work.” Talking about her learning in general, Anna said “The farther along I went, the better my abilities became whether reading or writing, because I *had* to do certain things.”

Uncertainty

As noted earlier, the theme of uncertainty runs through the interviews. When participants were asked what difficulties they had with reflective assignments, many of them expressed either difficulty understanding the reflective assignments or uncertainty as to whether what they were going to produce would be acceptable. Some expressions of uncertainty are given here:

I was never sure what the professor wanted (Anna).

[I did not know] whether or not this thing is going to be acceptable (Dmitrii).

I guess my main difficulty is whether or not this accomplishes what it’s meant to accomplish (Sergey).

We have to contextualize that there has been so little in terms of reflective assignments. Understanding what is expected of you when you are asked to respond to a reflective assignment is the most difficult part for me. I have a sense of my level of motivation, and whether or not these strategies are useful. But what I don’t know is whether what I know about myself does what the teacher wanted. I can say I wrote a lot here about me, but I don’t know whether this is what you really wanted (Boris).

Anna did not see the purpose of the reflective assignments, and at first her attitudes toward completing them as a student were somewhat negative:

I don't like the idea of just telling me what you're thinking of what you read. I think that's really hard and I remember struggling with that as a student, like if I just was supposed to reflect on my writing I never knew what the professor wanted.

As an instructor she reported that she tried to adjust her practice to prevent the problems she had herself struggled with:

I feel that to be more structured with the prompt allows students to reflect better, maybe. I want them to be more focused because in my own experience, with the unstructured reflections I had ... I was never sure what the professor wanted.

I felt like I didn't really understand why I had to do it, which may have resulted in me being like "well, this is what the teacher wants, so I am going to say this, this and this."

Other Reactions to Reflective Assignments

Interview participants voiced certain other difficulties which they experienced with reflective assignments. Boris, for instance, observed that it was difficult for him to investigate his own thinking, when he said "It is so much easier to turn your gaze to the external knowledge than to go inward."

Anna described her feelings towards reflective assignments as frustrating, again noting the problem with repetitive journal writing stretching over a semester:

I generally don't like them. I think they are frustrating because usually...with my experience here, it was a semester long assignment, that you had to do every

single week and it is very frustrating to think that now I have to sit down and type for two pages about what I did this week or what I learned this week or what am I thinking about this week.

Talking about a specific class where she had to write a reflective rationale about her future dissertation research, Anna attributed her fears to her lack of knowledge:

Thinking about my own dissertation, it was often very scary and confusing and I worried about what I was going to say and how I was going to make myself sound intelligent, because a lot of my fears were that I just didn't know enough and wouldn't be able to do it.

Some participants, when asked about their problems and difficulties with reflective assignments, responded from the instructor's point of view or spoke of their undergraduate students "not being trained" to reflect (Dmitrii), about their own students' minds being "too young at that age to be able to make connections" (Ella) as opposed to the graduate students who "can see things a little easier" (Ella). Some participants (Dmitrii, Ekaterina, Ella, Anna) saw difficulties in getting their students to understand reflective assignments and recognized that this was very difficult to do. Dmitrii specifically observed that undergraduate students' responses were shallow because they were not asked to reflect upon their own experiences in high school; they had not learned habits of reflection, and were often not trained to write narratives or go beyond the five paragraph essay structure.

Ethical Considerations

Three out of twelve participants pointed out that they were concerned about ethical considerations related to reflective writing assignments because they considered

these assignments very personal. This is how Dmitrii commented on the issue of reflective assignments being too personal:

When I first get them, I am a little bit put off because I am like... I don't want to tell you about me. You are getting into personal stuff. What do you want me to say? Do you really want me to dig deep inside my soul and bring the stuff out? In the pure definition, the idea of the reflective paper is 'yes, I agree with what I just read, this is my reflection.' You know, I satisfied the requirements. But then the teacher is going to say, 'no, no, no, I want more.' How much more do you want? Ahhh...

As mentioned in the previous chapter, one of the participants who provided written samples of reflective writing for data analysis later requested that I not analyze her writing and asked me to shred those materials because she felt her writing was too personal and she did not want to share it and expose herself. This material was not analyzed in this study.

Metacognitive Triggers

When asked in what ways the awareness of their learning strategies helped them learn, read and write, and what experiences they attributed to genuine metacognitive changes in their learning and development, the participants pointed out specific experiences as well as bringing up more general themes. Among the topics mentioned were reading a certain book, writing a narrative, the influence of education and technology, graduate classes, exposure to different expectations, professor's comments in a graduate course, professor's criticisms, learning from success and failure, class discussion and sharing with others and writing papers.

A range of experiences leading to metacognitive ‘triggers’ are cited here. Boris shared a story about how reading a book about learning strategies helped him in his further reading and learning:

A friend of mine presented me a book called *How to read a book* by Charles Wender and Adler in which they talk about four different types of reading, four levels of reading. I never thought that there were strategies or ways of reading, and they talk about reading for significance, reading several books against the topic that is not in any of them. It blew my mind away, I was like, wait a minute, do you mean I don’t have to sit here and read every single word and every single chapter? You know, I should be focusing in only, so when I realized this, it opened up an entire new world for me in terms of reading. Not every book needs to be or deserves to be that equally read, or even every chapter therein. It might be parts of one chapter are relevant, and that was the transition for me from reading every single word, every single book to reading like a scholar. I don’t think I would have succeeded in the graduate school without this particular strategy. So, awareness of reading strategies for literature really was everything. To be very honest with you, I don’t know that I am greatly familiar with a lot of the strategies that I use in my own writing. Reading - I am very composite in but that’s again because I am teaching literature. *Crime and Punishment*, *Brothers Karamazov*, *War and Peace*, you will go crazy if you will read every single word.

Ekaterina said that technology changed the way she learns:

When I first was an undergrad, there was no Internet and most people didn’t have computers, and being forced...when you would get an assignment requiring to

have an Internet source, you'd be like "Oh, gosh." Now, on the opposite we try to beat the student "you must not have all Internet sources." So, technology changed the way I find the things out.

Mikhail, Ibrahim, Anna and Sergey credited graduate classes and going to conferences for changes in their learning and development. In fact, graduate study featured in several of the responses to this question. Olga spoke of changes in her metacognitive awareness as linked to her encountering different expectations as a graduate student. Ibrahim cited experiences in formal education as his primary metacognitive trigger:

Classes I took, papers I wrote, going to conferences, and teaching and becoming an instructor. The experience of being in a PhD level class definitely, writing proposals, reflecting on a course, on a letter, on a proposal.

Ella, Ekaterina, Boris, Anna and Mikhail attributed changes in their metacognitive awareness to comments and criticism from their graduate teachers. For example, Anna's metacognitive shift in her awareness of her own writing strategies was triggered by a professor's praise of her writing. After a professor told her that her paper was good, and she thought it was ok, Anna said: "that changed my outlook at my own writing and made me think more about my writing and helped me to develop it further." On a similar note, Mikhail identified professors' criticism as one of his learning triggers when he said: "I think the whole dissertation process is to learn how to take good criticism, learning how to ponder criticism, learning how to use criticism. It is not always easy."

Sergey cited "a specific project" in a graduate course as a trigger, as well as his reading, a theme he brought up earlier in his description of reflective experiences.

Sergey's response is quoted here at length, because he brings in and integrates multiple issues, including his own personal assessment of his inner state as contributing to his experience of reading as a trigger for development:

Speaking about a particular experience, there was a specific project in the Theories of Literacy that was a trigger. Also, my previous extensive reading in psychology for my dissertation would bring about insights and connections about what I was experiencing in my everyday situations/relationships in my life, and that would make bells go off or light bulbs flash and that same information would stay in my head and then the next day, next week when I would have a similar experience, that similar experience would trigger my memory of what I read which was connected to something in the past that happened, you know, it's a whole timeline situation when every little thing lights up everything else on that line. And I began to recognize when this was happening after I became aware of what complexes were and how they affected this and that, making connections. And so, I did find that happening after I became aware of the influence of certain complexes that I had, so that sort of awareness from my reading. And that awareness came because my reading reminded me of actual experiences I had had before. So, it all becomes linked together and the awareness of my reading which was connected with past experiences allowed me to recognize new experiences as they occurred.

Other themes mentioned were also indirectly related to graduate study involved experiences from graduate courses. Ibrahim said that revision triggered his learning about writing. Suzette, Ibrahim and Sergey stated that talking, discussion, reading and

studying were experiences that triggered their learning. For example, Mikhail's awareness of his learning strategies was triggered by a combination of class reading and discussion:

I can think of a class I had in the summer where there was a group discussion of readings that I had done that I would hit upon. It was a combination of having done reading that got me thinking while doing discussion that further pursued an idea and then just revelations, things opening up, evolving.

One of the participants, Anna, included classroom observation in her metacognitive triggers, an experience she had as a graduate assistant:

When I was a master's student in TESOL, I was a graduate assistant, which meant that the first year I had to observe people teach and the second year I had to actually teach; and my being in the classroom the first year watching other people teach actually influenced the way I was retaining information in my own master's classes, like I started looking at things differently to see how I could apply what I was learning in my class to the way I would later teach. Observation led me to really think more about, reflect more about what I was learning in my own classes.

Ibrahim said that positive or negative experiences trigger his reflective thinking, in this quote his attention is focused on negative experiences:

I do reflect mostly when things don't go right for me, for example, let's say I wrote something and it didn't work out quite well and so, I really stop and reflect. Once I got a low grade on my paper and I went through all of the requirements again and tried to see what I did not do well. That was some sort of reflection.

Mostly, I would reflect when something goes wrong or something goes really well, I would also reflect. Once I got money for my project, so I wrote a thank you letter but it was more like a reflection, how this grant is going to help me and all.

Metacognitive Triggers: Special Narratives

Four participants' experiences (Ekaterina's, Boris's, Olga's and Mikhail's) best represent the purposes and the goals of the present study. Their stories are reflective accounts of genuine metacognitive triggers which characterize changes in awareness about learning and development. These stories are cited here in full to show not only what can trigger human learning experience, but what the triggering experience looks like seen through the learner's eyes and how it can be incorporated into reflective assignments aimed at metacognition.

Ekaterina's Metacognitive Triggers

Ekaterina's metacognitive triggers were activated by advice on writing given by a professor, a question asked by a professor, and by reading a book chosen for the course by a professor. Her stories follow below.

Story 1. I had Professor M for Theories of Composition in the summer and I said “Professor M, I just can't write this paper, I worked and worked and worked on it, and it sucks, it's bad, I don't know what to say, and he said to me “Remember the day you presented this book, you remember how you talked, how you had people leaning over the table, and there were times when your voice was almost shaking but it was not bad, it was an intense reaction to that thing that you read?” And he said, “Put that in your writing, and you will never feel that way about it

again.” After that moment it changed everything I wrote from there on. I keep all my papers, in the folders, I keep everything, but I don’t remember writing it – it was just the academic blah, blah, blah. But after that moment, I remember writing my papers, I can recall liking them, and I think it was the big point when I was told to think how I said it, and I remember reflecting on it, like he said, reflecting on the voice that I had, it wasn’t really an assignment about reflection, but there was a point when he said to me “Bring that person who talks into the paper instead of making her sit to the side and let the academic voice talk”; and he told me that I could have both, and I never thought that way before. I thought that I was becoming too emotional and that meant I had to abandon the academic one, and that’s not true. I have presented conference papers that way and I have gotten something published that way...so, it changed everything.

In this story Ekaterina’s metacognitive triggers were activated by advice on writing given by a professor.

Ekaterina’s next story is linked to her first one. In this story a question asked by a professor triggered her reflective thinking about teaching. This second story like the first, involves her awareness of her own identity.

Story 2: In one of Professor X’s classes he said “How much of yourself do you bring to the classroom and how much do you hide, and why?” And I was like “what?” When I first came here, my southern accent was a lot deeper, and I saw people laugh or think I was stupid because I was from the South but, you know, I have learned to deal with it. I did change some of the words that I said and the way I pronounced them and I did make an effort to speak differently. And, so

when I answered the question on that day, I said “I don’t tell them where I am from, people from West Virginia aren’t supposed to be smart, I think that people won’t value me as a teacher if they think I am from a dumb place, and I also don’t tell them how old I am.” And I was always constantly choosing to dress up more than other people to act and to speak in a certain way and it made me think why did I choose to do it the way I did? And I did much of it to create a teaching persona based on what I wanted to do and what I wanted the students to believe about me. But the more I had done it, the less I have had to rely upon it. And, now, I tell them, and a lot of it came from the Teaching Writing class, I can’t be who I am because of where I am from and so a lot of things we do in class, I do the writing prompt along with them. So, they hear about my home and they hear about my dad and the crazy place I am from. And I think it’s the professional genuineness that the students respond to. So, *him asking that question, made me think of what I teach and why* (italics mine).

Ekaterina’s third story illustrates an experience of sudden illumination based on an assigned reading:

Story 3: The other experience was reading Derek Owen’s “Composition and Sustainability.” I read it and it changed everything about what I wanted to do. [The author] said that you don’t have to teach English according to the institutional standards, you can teach it with an ulterior motive, so to speak, and I don’t mean it in a negative sense the way it sounds. He said, I choose my readings because I think it is important that my students think about this, and why would I

teach something I don't think is useful? And I said to myself "Oh my God, you can do that?" So, that *book* made me say that I can do this with the purpose.

Boris's Metacognitive Triggers

Boris cited journal writing in graduate school, reading about metacognition and criticism from professors and journal reviewers as his primary metacognitive triggers.

Boris's story: *My first experience doing a journal in a grad school TESOL class was a definite metacognitive trigger (italics mine)* - until that time, I hadn't given a lot of thought to the development of self knowledge, weaknesses and strengths, and differing contexts for learning strategies over the course of a semester. Most students don't - they treat the day-to-day as exactly that, isolated events that are not part of a larger whole (I see it in my own comp students this semester - the majority have never been asked to look over everything they've done and draw conclusions about their learning). It came up even more explicitly in a teaching writing course I had as a grad student.

A second trigger would be reading about metacognition (italics mine). Sounds obvious, right? But certainly not everyone reads about it. It was part of my doctoral research into knowledge types in Anderson and Krathwohl's revision of Bloom's taxonomy.

The third, and perhaps most important trigger, is criticism from professors and journal reviewers (italics mine). Praise often just reinforces what we already do; rarely does it validate something new or risky. It's hard to take criticism (affective filter?), especially after spending a lot of time and energy on projects like dissertations and publications. We have to be able to take criticism then really do

something with it, otherwise we limit ourselves to strategies and forms of knowledge that may not "work." How many people can really concede an argument by saying, "You're right" or "I'm going to have to think on that," or "Wow, I guess I was pretty short-sighted" - and really mean it? I think the emptiness that characterizes Zen enlightenment is an attempt to get at this. Perhaps the greatest advantage of metacognition is humility.

Olga's Metacognitive Triggers

Olga's metacognitive triggers were activated by personal conflicts, different learning styles or by different perspectives on a subject that one never expects anyone to say.

Olga's story: We had a group meeting, and we [had] been meeting throughout the whole semester, and one of the group members never really spoke much, I think it is a cultural thing, you know they don't express themselves much like American students, and I am the total opposite, I will say exactly what I am thinking, it might offend somebody and I don't mean to. And, so all of a sudden, she says, I don't agree with anything you are saying, the whole group, nothing in the whole group, she does not agree with anything we are doing in the whole syllabus, and everyone is shocked and arguing and fighting and it told me that you have to accept other people's ideas instead of forcing them away and trying to at least think how it can help your class instead of pushing your side. Her whole disagreement was that in her language this was the problem and we weren't focusing on that at all and she had a huge point that we were disregarding.

Mikhail's Metacognitive Triggers

Mikhail's awareness was triggered by a stressful negative situation in which he experienced "pain and struggle." This story stands out, in that it identifies a painful, negative experience, rather than a supportive or neutral one, as a potential trigger for learning and awareness.

Story 2: Pain and struggle often encourages me to think more deeply about how to deal with [a problem] or how to prevent the same pain. Example: three weeks ago my mom fell and broke her hip and shattered her leg and I had to leave Pennsylvania and go to Florida for two weeks to help to take care of her. So, I had to reflect on what are my options with teaching my classes for this time period. I came up with, I wrote a proposal to my chair that I would teach over the Internet using webcam, I did this and it was incredibly stressful because the technology was inconsistent; and this whole thing has got me thinking about if I ever had to be gone from the classroom, how would I be able to teach from a distance? How would I do distance learning? So, it was a stressful situation with some conflict involved in terms of having someone else to come in and teach my syllabus, or do I just cancel everything or do I still attempt to continue to teach, and if so what would that require? And personal relationships where I expected one thing and someone would have done something else. And I had to think, well how do I handle this? Then I had to reflect on how much I want to handle this? Do I want a revenge? For the past six months I had this kind of constant conflict and struggle.

When asked about ways in which the awareness of his own learning strategies helped him learn, read and write, Mikhail responded that “schedules, deadlines and pressure can be very useful” in that “they can be a very good motivator.”

Reflective Moments

All participants were asked in what ways they might reflect and how reflection comes to them. Interestingly, many of the responses included situations far removed from the formal academic context: while driving the car, washing the dishes, walking, reading, listening to music. This calls to mind a statement by Donald Schon, that “knowing-in-action [can be] tacit, spontaneously delivered without conscious deliberation” (1987, p.28); in other words, the brain is in fact active during ‘down’ times and reflection may not always have to be a consciously willed process. It may happen almost automatically, even during times when explicit mental tasks are not being performed.

Several representative samples of how participants described their reflective moments are given here. Sergey noted that not deliberately focusing on one thing and taking time off, as well as talking and discussion, were powerful means for reflection:

I find the most incidents when reflection comes to me naturally are in the morning and in the evening when I am not fully awake and I am not fully asleep.

Especially in the morning, my mind would start thinking about all sorts of things like in the shower, and in the evening when I lay down in bed, and I am not asleep yet but I am not doing anything deliberately, things are coming to my consciousness.

He continued, talking about how a reading experience triggers reflection for him:

Recently I have been reading a lot of literature from psychology, how the mind works, association and repression and all these psychological terms, so when I am reading these books I will read something, this has happened many times, I will be reading along saying ok, I understand that, this makes sense, and then I will read something that's just like a kick in the head, and then it will stop me from reading and I will have to sit back and absorb that idea but at that moment of absorbing the idea, it sinks in like a water into a sponge and it connects with memories that I have and that sparks some reflection. So, what I read can make me reflect about something... Every day I will be reading something, and maybe once every ten pages, I will just have to stop and ...you know, this is such an interesting idea that it touches something back in the psyche, and I will try to pull it up to the surface where I can experience it more consciously. I have to do that reflection to dig deep, grab hold of something and start to pull it to the surface.

Brain digging.

In another part of his interview, Sergey again said that reading was a powerful tool which promoted reflection: 'Things that I read bumped me to reflect, how what I read connects with other things I have experienced.' Dmitrii had also referred to reading as an activity which triggered his reflection when he said that when he was reading, he was making connections and associations in his mind, for example: "Oh, this reminds me of this and it may not necessarily be ..."

Mikhail and Dmitrii said that they were often reflecting as instructors. Mikhail, for example observed that he was always reflecting and thinking especially as a teacher:

“I am always thinking how did that go, how could that go better and what could I change?.”

Dmitrii has also responded as an instructor when he said:

I think about reflection if I am studying anything, I try to relate it back to my own experiences, especially being an ALI instructor. I try to ask myself: ”Ok this is this stage in their language learning, what was I like when I was at that stage?” I try to pinpoint parallels in my own life. Once I had my students to watch *Spanglish* as a class project and I wanted them to write a reflective piece about it, I wanted them to relate to the experiences, basically the linguistic stuff we learned, to the learning experiences of the characters. Some of them did an ok job, they were able to piece it together, and others just didn’t go into a depth or didn’t bring their own experiences. I realized I needed to be more specific on what I ask for a reflective piece.

Boris responded as a person who reflects and questions things constantly and as a parent:

I am not sure I ever don’t reflect. I reflect constantly. I reflect when I’m driving and listening to the audio books, questioning what I do and whether or not it’s appropriate or could be better, rearing my children when I interact with my daughter reading stories to her every night before bed.

Maria echoed Boris, having said that she reflects constantly and identified education as a major cause of her reflective habits: “I reflect constantly, on everything, probably too much! I think that’s a symptom of years of higher education—I feel compelled to analyze everything into oblivion.”

What the responses in this section have in common is that they all involve reflection undertaken spontaneously by the participants, not in response to a formal class assignment, however, these spontaneous reflections are clearly seen as beneficial by the participants.

Three participants' responses (Anna's, Ella's, Suzette's) involved reflection within formal academic contexts, especially the dissertation writing process. Ella, for instance mentioned writing a reflective letter for her graduation portfolio and noted that in the past when she had to reflect, it was something she had to do, something that had a general goal or purpose: "I had to, and it was not the matter of whether I felt or could or wanted to I had to do it." Ella went on further to elaborate that now when she was in the dissertation process, she kept a researcher's log, not because she had to but because she found benefit to it. This is how Ella described her reflective habits which, overtime, became independent, internalized and beneficial for her personally. She specifically emphasized the transition from being asked to reflect (something she had to do to) to independent reflection,

[I keep the researcher's log] to actually just write down my thoughts, and then I do try to go back to organize my thoughts like we did in Qualitative Research Methods because I can sort of... I have some general themes, you know, issues, problems, questions and just things I worried about perhaps. I can go back as I am writing these, and see if am I answering these questions, am I feeling better about these things, do I still need to work on these? Reflection has come to me sort of... it started as something I had to do... and a lot of times and I know I am not the only one, we would be assigned journals, and for the first few weeks we would

do ok, keeping up, you know, writing a journal entry a week, or whatever and then it would fall off and we would not do any and then you realize it is going to be collected, and so the night before you sit and write ten journal entries because you had to have ten. So, it wasn't until I actually didn't have to do them, then I found value in them, that I can do it when I want, as much as I want and use them how I want.

Suzette underscored the metacognitive connection to other cognitive work when she talked about her dissertation being “the ultimate reflection”:

Writing a dissertation is an ultimate reflection. I would write some things and then I would go back to what I had read and different sources, and may be change something or I would write something which I'd see does not necessarily connect. So it is a constant juggling [act] keeping it focused but making all the connections between the different aspects, and it gets very complicated because there are multiple variables and how they connect, and that requires a lot of metacognition.

Another participant's response (Anna's) also involved reflection within formal academic context, and in particular, the dissertation writing process (also cited earlier under the section on *Definitions*, p. 108). Anna pointed out the emotional side of reflection as well when she said:

I reflect about my dissertation all the time, usually when I am sitting still, it just comes to me and then I worry about it. I think now most of my reflection is in the form of worrying. And I think - what if this happens, and what if I talk about this, and maybe I should do this, and what do I need to do next...and I do a lot of worrying about things.

Benefits of Metacognition

All participants acknowledged benefits for metacognition and saw these benefits in their own and their students' awareness of using learning strategies, realization and better understanding of themselves as learners, their growth and improvement in thinking such as the ability to make and discover connections, and in their developing the habit of reflection, for instance through writing. They often attributed the shift in their metacognitive awareness and growth to making connections while performing reflective writing assignments in graduate school, despite the fact that some of them admitted having had mixed feelings of fear and uncertainty and/or negative reactions in the beginning.

Awareness

Sergey saw metacognitive benefits in “self-awareness, realization of a process, discovering or rediscovering connections between past and present, cause and effect” and, as he put it, “it’s useful in revealing what otherwise would be unrevealed through narratizing.” Liz observed that the benefits of metacognition were in one’s “awareness, as a student and as a teacher, of one’s assumptions, positions and more objective judgments about experiences.”

Ibrahim and Boris, speaking as teachers, echoed Sergey when they said that becoming aware of strengths and weaknesses is a benefit for their students. Ekaterina, also speaking as a teacher, said that “getting people to see what they are good at” is a benefit, and also “pointing out strengths and weaknesses and ...taking it further to that metacognitive level, why is it good or why is it bad, how can you do that differently.”

Dmitrii noted that developing reflective habits was an important skill that teachers should possess. Mikhail saw the benefits of metacognition in “synthesizing the learning experience, rather than simply walking away with an experience,” and in “exploration of learning.”

Anna said that reflective assignments helped her to realize how she learned:

“Once I realized how I learn things, it did help me to synthesize readings better and really get more out of them that way. When I figured out that I am a better learner if I read something rather than listen to something, it made me really focus on my reading more.”

Boris suggested that perhaps the “greatest advantage of metacognition was humility” which includes a lack of false pride. A few more examples of participants speaking of the usefulness of metacognitive awareness are given here:

For the students it is a troubleshooting of their learning, identifying strengths and weaknesses...in other words becoming aware (Ibrahim, focus group interview).

Making breakthroughs and being able to talk about and connect the bits and pieces of information, compare, and make improvements in writing (Ella).

Sergey observed that the metacognitive component was useful in “perhaps even initiating the habit of reflection.” So, in the next class they take, they [the students] will just decide to do it without being told (Sergey, focus group interview). Suzette, echoing Sergey, pointed out the habit and the value of metacognitive component when she said:

With metacognition, it is really important for us and our students to know how we learn, I mean when they are in the academic environment. If they find out that they learn more by going to the library by listening to rap music, well, maybe it is something they have never known before, so if they find that out by

reflection, it is more like the strategies but any time they realize that they learn, how they attained that learning, I think it is very useful (Focus group interview).

Application of Learning Strategies to New Contexts

Boris saw benefits of metacognition specifically in successful use and application of the learning strategies:

To me, the best way to put it would be whether or not the students can use strategies to their benefit. Example, I have been talking about application beyond the classroom and it's a bit difficult because we will never know. There is no one way, it is such a long term process. Are the students going to highlight, annotate and put little flags when they leave the classroom? I hope they will, to their benefit. For students in particular, I think it should be helpful to them in their other classes, learning strategies, if they are successfully appreciating learning strategies, if for example, in reading strategies they know how to read inspectionally or they can read analytically, or read multiple things on the same topic, I think it would be a tremendous benefit to them in other classes where they are required to read. To me, I don't think there is going to be anything more useful than awareness of one's own strategies for successful and effective learning. So, when I see this question I want to say "how can it [metacognition] not be useful?" I am hard pressed to find any sphere where metacognitive work is of no value.

Metacognitive Qualities in Revision

During the focus group interview, two participants (Sergey and Ibrahim) expressed the idea of reflective quality in revision and linked it to metacognition. Sergey,

for example, said that “when we ask students to look back at their first drafts and make judgments, revision is the metacognitive part of the assignment.” Ibrahim agreed with Sergey and added that it was not only revising, changing and editing that belonged to metacognition, but the process itself. That is, when one engages in revision and editing, the experiences “give you another skill on another level...there is a reflection going on that teaches you something that you do elsewhere. You can take a pattern from that and apply it elsewhere.” Ibrahim here underscored a benefit not brought out in the individual interviews, namely the possibility of applying metacognitive reflection obtained in one context to different challenges or tasks in other contexts.

Making Connections

Ella, talking about the metacognitive qualities of reflective assignments, expressed the idea of ‘making connections’ through reflection and attributed this to metaprocessing when she said that “when you are connecting a specific experience with something else, that definitely belongs to the metacognitive component of reflection.” Talking about a class that she took as a student, Ella said “In the Teaching Writing class, we called it metaprocessing... and it took me awhile to think what exactly metaprocessing was.” Dmitrii said when he spoke of how he reflects “when you are digging deeper, that’s where you usually find the connections.” Sergey expressed the same idea of making connections when he said that “This is like geology, everything is laid down in layers. How deep do you want to dig?” Suzette and Ibrahim echoed Sergey when they spoke of the metacognitive component of reflective assignments: “There is another layer of thinking which you need to get through and this is a more difficult layer which not everyone can handle.”

Time and Gradual Metacognitive Change

All participants agreed that the microchanges underlying the gradual improvement in metacognitive awareness that drive the transition to the next macro-stage happen over time. They felt that quantity gradually turns into quality as the habit of reflection becomes internalized. This is how participants commented on the change of their reflective habits overtime:

I learned how to connect things, ask questions. I started to do this later when I realized that it was expected of me... I think I started to make connections across my reflections, like when I first started working on a dissertation, I started to do memos to a researcher's log, your thoughts and feelings, whatever you working on. And we were taught how to look for connections, what are the themes, what do you see happening across all of these when you spread them all out, what do you see? And so, I have actually found that useful now as I occasionally would write a memo to myself about whatever I am working on and I can see patterns and connections that I never used to do before. (Ella)

Sergey tried to trace the changes in his awareness when he stated:

I generally don't notice the change because it's a gradual change. I am trying to think about a conscious shift that promoted my awareness the way I do things but I can't easily think of one.

Evolving Ideas and Practice

A pattern that has shown up in several ways is the change from negative views or confusion at first, to a later position of acceptance and appreciation for reflective activity. This section shows how some of the participants evolved in their views, sometimes

adopting practices in their own teaching that represented growth or change from their own experience as students.

As mentioned earlier, Ella's original comments on her teaching experiences with assigning reflective journals to her students were quite negative. However, judging from the last point she makes in this excerpt from her interview, it seems that she is now finding a way to use reflective assignments more effectively with her class (by making them shorter):

I have noticed that... at least in the beginning I started to do exactly what I had done as a student...and so those dreaded journals...when I first started teaching...we did journals, we did them because I had to do them and thought well, you know, why don't you guys do them? So we did them and then, as annoying as they are for the students to write, they are even more annoying to collect and read, and I can't even tell why in the world we do this. After the first time I did it I hated it, and so I said wait, why am I doing this? So, I sort of transformed them into small reflective pieces.

In a similar vein, recall that Anna's original comments on her experiences as a student were quite negative, as she experienced confusion and worry over what the instructor wanted. However, she has used this experience to 'reflect' as she develops her practice as an instructor, and she feels she is finding ways to make reflection work better for them:

I think that before when I did a reflective assignment for class, I would just do what I thought the teacher wanted, especially in reflection on what we have read, I would try to spit back maybe some facts to show that I understood rather than kind of synthesizing that information; and I think with my students, I do a better

job explaining why I want them to reflect, so that they are better able to explain their process. When I first started to ask them to do reflections, I knew it was a good idea but I couldn't really explain why and I think now, after having done it for a couple of years, I am better able to get that point across...I've had my students this semester do a lot more reflection after every paper, I had to give them some guided questions and asking them to think about their process, and in the past I usually only did that near the end.

Ella commented on her evolution with respect to reflection as well; she has incorporated into her research a reflective element she would not have tried without her classroom experiences with reflective assignments:

Something that I would have never ever done before is that I have a researcher's log, and also having that realization that I actually do reflect and make notes to myself, I did these things before but never paid attention to them.

I can see patterns and connections that I never used to do before.

Mikhail also talked about the shift from his initial insecure use of reflective assignments to a more conscious and confident decision to use these assignments in his writing classroom:

Couple years ago I was still trying things out in terms of reflective writing, I was just getting started as an instructor here. Now I have more opportunity to teach more classes, more students and reflective writing is something I absolutely do not want to remove from my curriculum. I find it very useful for me and for students.

Plans for Future

When asked how reflective assignments might change what they will do in their professional life in the future, some participants shared that they planned to incorporate reflection into their professional lives, thus providing another sign of their evolution.

Several examples are given here:

I have made an effort to work in more reflective assignments into my classes but it's been experimental and I am still experimenting, and I am going to continue experimenting. For example, I have never yet used a reflective assignment in my research writing class. I am going to work in the reflective assignments in every sort of class that I teach, it is a part of college writing, it's part of literature.

Example, in the portfolio segment, the reflective segment says the following: For journals, how has your writing changed over the semester? How does your journal reveal the changes in your reading practices? How have you developed as a writer? The self-assessment is involved in college writing but I have shied from using that word.

Dmitrii planned to write more self-reflective journals:

Once my dissertation is done, I plan on doing more teaching journals, like self-reflective journals on my own teaching to myself, I am just so busy right now.

Mikhail said that he plans to use reflective writing assignments for feedback which will help him to redesign his courses:

I will use students' feedback to help me redesign or re-approach my courses. For example, I redesigned my 202 course this semester, and I was constantly

reflecting on what works and what doesn't work until I got to a place where I really felt like it is effective.

Suzette said that she will use reflective assignments for two purposes: 1) as an assessment of her students' success and as a means to help the students succeed in the tests and in learning the material, and 2) as a feedback for improving her teaching and redesigning her courses, as feedback to herself and to her students.

Ekaterina stated that she plans to use reflective assignments as alternative means for indirect student engagement in the learning process. She said:

instead of the teacher having to say [directly] 'why we do this', it's going to mean more for the students if they can figure it [the value, meaning and benefits of the assignment] out for themselves, they are more likely to believe themselves than they are to believe us [the teachers].

Authority in Reflection in Cultural-Educational Contexts

Some participants touched upon the theme of authority in cultural educational contexts and how these might affect individual learners' reflective habits. For example, Suzette, Sergey, Dmitrii, and Boris said that they wouldn't want to generalize and attribute their responses to all Asian or Middle Eastern undergraduate student writers; however, they noticed a tendency in many of those students to be less reflective due to lack of training and experience with reflective writing. Ibrahim observed that cultural-educational contexts can affect students' reflective habits:

Not to generalize, when I ask ESL students to write about learning in a reflective way ...the Arabic students are good with verbal reflections, they can give you a lot of verbal feedback, but they tend to be shy in their writing, it seems like they

tend to want to say something good, but only one ESL student out of the whole class said I didn't see the point of this assignment at all, I didn't learn anything, only one student who ever said that to me. A lot of ESL students see all the activities as teacher-centered and are not able to be [able] to judge. But everyone is different, so it is hard to generalize by culture.

Sergey echoed Ibrahim's concern over cultural experience, elaborating on the difficulty in some cultures to get students to offer personal opinions or viewpoints:

I have lived and taught in Japan, I knew from the culture that they don't express their personal ideas very easily and even in the context of an English class where they are learning American culture, there was still that hesitancy to speak their own opinion. There was more of consulting with their peers about the right answer, ok, then it's ok to say my opinion. They are taught from day one to consider the group before themselves. And so, they get a consensus from their peers of what they should say before they say it. So, from Arabic, Middle Eastern and Asian cultures students I would anticipate having the same reaction of not wanting to reveal anything personal, even if it is not anything private but just personal.

Dmitrii talking about international students said that some of these students are used to citing famous authors or somebody who represents an "authority," and these students feel like: "Why write about me if I am not an authority and I am not famous?"

Anna said that she thought that her American students "because of their individual bringing up do really well with this sort of activities because they don't have to work with anybody else and they can talk about themselves." At the same time, interview

participants agreed that many native English-speaking American students also lacked well-developed habits of reflection, due to a lack of experience and training.

The second round of interviews, which focused on the participants as educators, showed that all participants are now using reflective writing assignments in their writing classes or reflect independently on their teaching. This testimony regarding their practice also serves as powerful if indirect evidence regarding the value they place on reflective activities.

Interviews with Faculty

I conducted two brief interviews with two faculty members. I asked what they were looking for in the reflective writing assignments. One professor (Professor R) explicitly stated that he was looking for three things: voice, authenticity and insight, “those three words”, he said.

Another professor (Professor N) provided a more extended answer and first spoke of “quality learning” which she was looking for in all levels of students she was teaching. When talking specifically about writing assignments for future writing teachers, Professor N’s goal was to develop “automatic internalized reflective habit of mind” which would make the teachers’ minds work “on multiple levels of applications that are going on simultaneously in the classroom”, to make students think about what they write “in terms of their felt understanding” of their relative strengths, concerns, questions around doing the “reflective appraisal” of what they have done. Professor N wants her students to look at their own performance, to see how others approach tasks and projects, but more important to look back and see what they have done. This professor [professor N] defined assignments calling for metacognitive reflection on learning as providing a

mutual “payoff” for the student’s gain and for teacher’s better understanding of the student needs and being able to help the student better and to become a better teacher.

Engaging in Practice

Both professors pointed out that they use the reflective writing assignments in their classes because they want their students to engage in reflective practice in order to “guide their practice with purposeful insights” (professor R), to “connect themselves” with their experiences and with what they are doing for better understanding of what they are doing in their writing, to develop their, metalinguistic awareness, metacognitive metalinguistic processing which will help students to think about their own writing in ways that can develop their internal locus of control, to become better able to manipulate language by having come to better understanding of what they are doing, what their goals and intentions are, in what context they write best, what kinds of ways of getting their writing going are most helpful for them, to think about how they choose what they do when they do what they do. According to Professor N, the students can bring about points of frustration, “X-Ray” their reading, clarify certain issues, and develop a better potential for discovery and understanding. As Professor R put it,

I think we can’t engage in practice without sort of knowing why we are engaging in that practice and the reflective process enables people to guide their practice with purposeful ideas.

Difficulties with Reflective-Metacognitive Assignments

The professors pointed out problems that their students had with reflective writing assignments. These problems included students’ lack of experience with reflective

writing, audience problems and unawareness of expectations, and variation in student types.

Lack of Experience

According to Professor R, one issue causing students' frustration and confusion in doing reflective writing assignments was their lack of experience with reflective writing or the novelty/newness of reflective writing assignments which represented a dilemma for some of them. Professor R elaborated:

When students don't have any experience with reflective writing, they may offer kind of stereotypical responses that don't show that they had experience connecting themselves with what they are doing. Yes, when students don't have that kind of experience, the actual writing is, you know, very stereotyped, very innocuous, impersonal, etc. In the American educational environment in the last ten years or so there has been a widespread use of reflective writing, and so some people have had contact with that, whereas others in other educational contexts sometimes in international context where this is kind of a novel thing, they don't have much of an idea about how to respond.

Professor N stated that "those students who have intuition, assumption and experience from the beginning are better able to respond to an assignment in ways that I might have hoped for."

Audience Problems and Unawareness of Expectations

Both faculty members echoed each other and pointed out the problems their students had with audience problems and unawareness of teacher expectations. Professor R emphasizes this here:

Yes, you know, I think it's sometimes may be an audience problem: with some students who don't really know who they are writing for and why some people would be interested in something personal about themselves. That leads them to sort of not know what kind of information they have they should select. They don't know what those expectations are. They don't know that an audience wants to have a feeling that when they talk about their practice, they have got some genuine feelings and thoughts about it from a kind of personal point of view. That's rather novel to them - why would people be interested in that? That represents, I think, a little bit of a dilemma for some new or novice reflective writers.

Professor N expressed the same idea of students being unaware of the teacher expectations, that more "clarity", "openness" and "time" is needed for setting those expectations.

Student Types

Professor N pointed out that teachers have to deal with different types of students: "lazy" students who when pushed "will write wonderful, insightful, incredible stuff"; and of students with different metacognitive levels of metaprocessing, Professor N said, "that's not how their brains work." Professor N said that this dilemma was another problem in teaching and raised questions about how to walk that line and how to deal with that tension.

Sometimes in a class of sixteen people there will be two who will not do what I expect them to do: one is just not very good, the other will do something that's much more interesting than I might have ever imagined.

Students' Educational Contexts

Both professors reported similar views on students' educational contexts influencing their students' awareness and experience in responding to reflective writing assignments and meeting teachers expectations. Professor N said that:

Typically students from Asian countries have had a background and experience in their schooling of very minimal participation, they listen, make notes, memorize, they give back. So, for a student from Korea or Japan or China, and some Eastern-European countries as well, to come into a context where suddenly all the students are talking and the professors have those expectations that students do that, that can be mind blowing. It can be so different from what their experiences as students have been in the past that they find it difficult to get it to a hold. Of course that's not all Asian students, not all Asian-American students but that's a difference that I'd point to. And that's not just about reflection or metacognition, it is about a whole ideology of understanding of how we learn and what the expectation is of students what the respective roles of teachers and students are.

Professor R said, in reference to reflection,

...some people have had contact with that whereas others in other educational contexts sometimes in international context where this is kind of a novel thing, they don't have much of an idea about how to respond.

Both professors echoed each other having said that the notion of 'reflective writing' needs to be examined when applied to different contexts. Professor R:

There might be a lot of different definitions if you will, or ways of framing the notion of 'reflective writing' and that kind of need to be examined, you know, because from one context to another, it may be somewhat different, you know.

Dr. N expressed a similar implied idea of the importance of formulating the reflective task:

It is important that you don't say: "Here is a list of ten questions" and then they just answer those ten questions, they don't diverge from that and then that's what you get (Personal Interview).

In the next chapter I will report and discuss major findings based on the participants' reflective writing.

CHAPTER V: WRITTEN DOCUMENTS: FINDINGS

This chapter reports the main findings based on the participants' reflective writing. The samples of reflective writing which participants presented for analysis, i.e. the assignments they completed focusing on metacognition and learning, can be divided into four groups: 1) metacognitive reflections on writing (e.g. reflective analysis of writer's process log); 2) metacognitive reflections on reading (response papers, individual reflections); 3) metacognitive reflections on learning the second language (reflective journals); 4) mixed metacognitive reflections (for instance, literacy autobiographies), on writing, reading and learning. When reflective accounts were mixed, I have addressed the writing, reading and language learning experiences of the participants separately. Nine out of twelve participants provided written samples. The chart provided in Chapter III is repeated here to show the patterns of these submissions.

Table 2

Written Documents for Data Analysis

Name	Graduate syllabi	Reflective work	Teaching materials for undergraduate students
Boris		Reflective Analysis of Writer's Process Log Reflective semester-long journal entries for Intro to TESOL class Personal Teaching Philosophy	Portfolio requirements for ENGL 101 & ENGL 121 containing reflective components
Ekaterina	Teaching Writing Syllabus	Writer's Process Log Response/reaction papers on reading	
Liz	TESOL 510: Applied Linguistics for Second Language Teaching TESOL 610:		

	<p>Applied Linguistics for Teachers</p> <p>TSL630: Developing Intercultural Competence</p> <p>ENGL 730: Teaching Writing</p>		
Olga		<p>Hard copies:</p> <ol style="list-style-type: none"> 1. Reflections on assigned readings for Teaching Writing class 2. A Letter of Reflection for TEFL/TESL Methodology class 3. Reflection on creating a Syllabus Project Rational for Teaching Writing class <p>Online reflective materials located on a personal website:</p> <ol style="list-style-type: none"> 1. Educational Biography 2. Philosophy of Teaching and Learning 3. Reflective Teaching Rationales: <ol style="list-style-type: none"> a) "Seminar on Traveler's English: The essentials" b) "Music in the ESL Classroom: An overview and analysis of its forms and uses" c) "Introduction to American Culture" d) "Introductory College ESL: Discovering English Through Rap" e) "Accent Reduction Course" f) "Speaking Through Music" 4. Reflective Essay on learning 	
Ella		<p>Reflections on keeping a process log (about apples, poems, memories)</p> <p>Memo-reflections (5 memos) for preparing dissertation rationale (questions, struggles, insights, ideas, etc)</p> <p>Reflections on exercises (poems, memories)</p> <p>Weekly reflections on ESL/EFL Internship class</p>	<p>Syllabi for American Language Institute (Writing and Reading courses)</p> <p>Syllabi for ENGL 202 and ENGL 101</p>
Sergey		<p>Writing Literacy Autobiography 'The Making of a Writer'</p> <p>Part of dissertation talking about reflective writing</p>	<p>Writing prompts for ENGL 101</p>

Dmitrii		Literacy Autobiography	
Mikhail		<p>Reflective Letter for Qualifying Portfolio</p> <p>Personal reflection to the <i>Language and Cognition</i> course and another (not specified course).</p> <p>Online Reflective Materials MarlenHarrison.com</p>	<p>Students reflective essays based on Mikhail's prompts</p> <p>Students' Reflective letters about the course</p> <p>Prompt for reflection for ENGL 101 Prompt for reflection for ENGL 202</p> <p>ENGL 100 Reflective Cover Letters for Portfolio (written by Mikhail's students)</p> <p>Requirements for writing ENGL 100 Portfolio and Portfolio Cover Letter</p>
Anna		<p>Individual reflections (why does writing really matter?; the story of how you got here into this program doing research)</p> <p>Reflective Teacher Journal</p> <p>Excerpt from dissertation ideas notebook after having decided to completely change topics</p> <p>A story/memory worth keeping.</p> <p>Statement of Teaching Philosophy (written for class)</p> <p>The process behind the teaching philosophy</p> <p>The process behind the project proposal</p>	<p>Prompt for Writing a Cover Letter.</p> <p>A sample Cover Letter</p>

As discussed in the previous chapter, the findings of this research report that participants' reflection on past experiences made them aware of many aspects of their learning and development. While reflecting on and analyzing their experiences in writing, participants expressed certain concerns accompanied by emotional reactions of worry, fear and uncertainty and self-questioning; they admitted certain problem issues such as previous complexes or uncertainties about previous learning and teaching experiences. They also raised questions about their teaching and learning beliefs. To achieve

awareness, the participants reported that they were constantly making connections between their past and present experiences. Through metacognitive reflection, participants became aware of new teaching and learning possibilities and could envision their application in future professional teaching practices.

A detailed analysis of participants' reflective writing suggests that these developing professional educators gained better understandings and saw personal value in rethinking, reevaluating and readjusting their learning strategies in reading and writing, in analyzing and rethinking personal experiences, and changing attitudes towards past negative learning experiences. Through written metacognitive reflection in the context of certain assignments, participants made discoveries, and formed better and more informed literate practices about themselves as teachers and learners; they better understood and gained wider awareness of the use of their own metacognitive strategies that characterize their learning and development.

The main findings drawn from the written documents are presented under the following three sections, which parallel the sections used for the presentation of interview data in the previous chapter:

I. Narrative as an essential component of reflection.

II. Types of reflective assignments.

III. Three main stages of reflection based on Boud et al.'s (1985) theoretical framework:

- 1) The first stage of reflection: 'returning to experience'.
- 2) The second stage of reflection: 'attending to feelings'.
- 3) The third stage of reflection: 're-evaluating experience'.

Narrative as an Essential Component of Reflection

The narrative forms a 'frame' for reflection in most cases. The results of this study showed that through written reflective narratives the participants articulated their learning and development. Reflection is built into the narrative and happens after the writer has given a general personal account of her experiences and/or feelings related to a particular situation. As was stated earlier in Chapter II, in order to produce a meaningful and successful reflection, learners need to describe their experience in a narrative form, to work through the attitudes and emotions which might color their understanding, and to order and make sense of new ideas and information which they have retained.

It seems generally the case that, asked to reflect, these participants grounded their reflection in narrative; conversely, asked to provide a narrative, they added a reflective component as they wrote. Given this inevitable intertwining of narrative and evaluation, and the links made below from the research literature, I have chosen to cover the narrative element here together with the participants' evaluative and reflective additions to the narrative.

This connection is strongly supported by the literature on reflection. As Dowst (1980) writes, "assignments calling for reflection... should first call for a generalization of some sort, one proceeding from a writer's reflective review of his or her *experience*" (p.77, italics mine). Powell (1985) supports this idea when he states that the details in the exploration of topics are "hidden in the written narrative"; Powell believes in the value of narrative as a "technique for encouraging students to explore the nature of their own learning experiences and thus deepen their understanding of themselves as learners" (p.50). According to Clandinin and Connelly (1991), "*reflection* and *deliberation*, are the

methods of practical inquiry and springboards for thinking of narrative as method, with *reflection* implying a preparation for the future, and *deliberation* implying past considerations” (authors’ italics, p.263). Clandinin and Connelly operate with both terms [reflection and deliberation], since narrative requires a treatment of past, present, and future. These authors stated that “reflection and deliberation are methods that move back and forth in time, carrying with them uncertainty” (p.263). Also, according to Clandinin and Connelly (1991), “narrative method is the description and restorying of the narrative structure of educational experience” (p. 259). Among the constituents of narrative, Clandinin and Connelly list experience, time, personal knowledge, reflection and deliberation.

As the findings show, narrative is built into reflection and is closely interconnected with the reflective process, which falls under Donald Schon’s proposition that thinking and doing should not be separated. Schon (1983) justifies this claim saying that: “When we step into the separate domain of thought we will become lost in an infinite regress of thinking about thinking”; but, he continues, “in actual reflection-in-action doing and thinking are complimentary...Continuity of inquiry entails a continual interweaving of thinking and doing” (1983, p.280). Within this context of “continual interweaving of thinking and doing” which happens during reflective process or ‘reflection-in-action’, Clandinin and Connelly (1990, 1991, 2000, 2006, 2007) named five major constituents of narrative which are experience, reflection, deliberation, time and personal knowledge. All these constituents were found in the participants’ reflective writing.

Deliberation

The act of deliberating is central in understanding the processes of narrative and reflection. Deliberation is defined by Clandinin and Connelly (1991) as a “trait of thoughtfulness in action or decision”, “weighing and examining”, “careful consideration”, “mature reflection”, “careful discussion and examination.” Multiple examples of deliberation were found in participants’ narratives when they talked about their educational and learning experience, and these expressed a broad range of linguistic forms that express deliberative themes: caution (“...we have to remember that...we cannot continue to assume...”), admission (“I have to admit that...”), agreement (“I agree with the author... I agree that...”), personal opinion (“I think that...”), hope (“I hope that...”), and belief (“I believe that...”, “I can’t believe...”).

Experience

The narrative is particularly strong in supporting these deliberative modes because writers constantly engage in reflective analysis and metaprocessing when they retrieve learning experiences from memory and connect them with their present learning or situate those experiences in their current learning contexts. I found that narrative in reflection is based on and strongly connected with analogies and examples from the participants’ personal lives and experiences. The reflective chain in these narratives tends to travel the following path: narrative of past experiences, connecting past experiences with current learning contexts, reflective analysis or metacognitive reflection. Personal learning experiences create the context for reflective analysis. These experiences can be quite remote, rooted even in early childhood; for example, as one of the study participants (Boris) wrote: “My assumptions about language learning and language teaching are

rooted, oddly enough, in an experience I had at the age of six.” The experience in question may also be one based in a formal learning experience, though the participant now applies its lessons to teaching. Boris also provides an example here, with a recollection from his early teaching experience, comparing what his students were experiencing with an experience of his own from childhood: “The school’s methods at the time were almost entirely audio-lingual, and I could see in my students’ eyes the same look I most likely gave my old piano teacher.”

In the analysis of narrative reflection on past experiences, I also found that participants sometimes felt aware of being “ill-informed about their prior assumptions about English learning.” That is, the participants showed a strong motivation and desire to better understand past language teaching practices and to infuse them with new awareness and realization of learning outcomes, in the hope that this awareness will benefit their future career.

Through narrative and making connections between past and present experiences, the participants progressed, using Kellogg’s (2008) terminology, from ‘knowledge telling’ to realization and awareness of changes in their learning, and ultimately to ‘knowledge transforming’.

Types of Reflective Assignments

Another central finding of this study is that the content and the quality of reflection depend on how the reflective assignment is set up, i.e. the specificity of requirements such as clear articulation of the task and expected outcomes. Multiple kinds of written reflective assignments were submitted by participants for analysis; as noted earlier, these included literacy autobiographies, individual reflections to assigned

readings, writer's process logs, reflective analysis of writer's process logs, reflective journals on teaching and learning experiences with a final reflective introduction, reflective memos, reflections to memory and sensory exercises, response papers, individual reflections on courses, reflective letter for qualifying portfolio, personal teaching philosophy, internship reports, reflection on internship experiences, practicum report, and written reaction/reflection papers on a film.

Interestingly, of all these assignments only two produced especially rich reflective narratives: 1) the reflective semester-long journal entries which directly called for an extensive analysis of specific learning experience with a final culminative analytical reflective introduction to these journal entries at the end; and 2) the reflective analysis of writer's process log, which also represented a culmination and analytical synthesis of a semester-long written reflective log entries. These are discussed first in the following paragraphs, followed by types of assignments that produced interesting but less striking results.

Since the participants took different graduate courses during different time periods and with different graduate instructors, the written reflective work they produced for those courses and instructors and submitted for analysis differs in both type and content. Also, the types and the number of reflective assignments each participant provided for analysis and viewed as reflective varied considerably.

Semester-long Reflections on Learning with a Final Reflective Analysis

Assignments specifically calling for analysis of personal learning in reading, writing and language learning produced especially rich metacognitive reflections. These

assignments were based on required reflective journal entries or logs which preceded a final reflective analysis or an ‘introduction to journal entries’.

These assignments stretched over an extended period of time, usually throughout a semester; and this kind of reflection produced a particularly rich variety of fruitful examples of metaprocessing of the participants’ learning experiences, as well as providing insights into their use of learning strategies.

Writer’s Process Log

Writer’s process logs written throughout a semester, were submitted by two participants (Boris and Ekaterina). Reflective analysis of the writer’s process log was provided by only one participant (Boris). Both assignments, the process logs and their reflective analysis were extremely detailed and metacognitively reflective. I will focus on Boris’s reflective analysis of writer’s process log, which is an especially representative salient sample of metacognitive reflection on learning based on personal narrative describing writing experiences. Boris’s reflective sample embodied both general reflective elements and specifically metacognitive statements. His reflective narrative clearly embodied both the *reflective* notions of ‘looking back’ and ‘rethinking’ and the *metacognitive* concepts of deliberate evaluation of strategy use and change/adjustment of strategies, planning, monitoring, and learner self-awareness. These notions and concepts correspond to the definitions given by scholars and specialists in the fields of reflection and metacognition.

Boris used narrative extensively in the reflective analysis of his writing process. Through narrative, constant reflection on his past and present experiences and connecting those experiences with his current writing process and practice, Boris made several

detailed observations of his experience, each of which was followed by a thorough metacognitive analysis and reflection on his learning. Boris's metacognitive reflection is deeply intertwined with and is built into his narrative. The outcomes of his reflective narrative are extremely informative; and given his own testimony in the interview data, these were also personally rewarding to him. The results of his reflective metaprocessing provided an ultimate payoff for himself as a learner and a future teacher. These results are also based in and informed by Boris's openness, honesty, sincerity, as well as the effort and the motivation which he invested into reflective analysis of his writing.

Journal Entries with a Final Reflective Analysis

The particular example provided by Boris this assignment was based on the collection of journal entries assigned throughout a semester and calling for assumptions, beliefs and recollection of meaningful experiences related to language learning and language teaching. As a final step, this assignment called for a journal introduction with reflective analysis of the journal entries written throughout the semester. It is interesting to note that Boris gave a title to his journal introduction, this title was *Indecent Exposure*. Each entry was written with exceptional reflective detail, presenting Boris's thorough recollection of his teaching experiences, especially those related to his teaching abroad. Boris's reflective entries followed the same pattern which he used in the reflective analysis of his writer's process log; that is, he recollected the experience(s) in a narrative, emotionally reflected on those experiences when he was discussing his motivation, interest, beliefs, values and teaching and at the end gave recommendations for future teaching, made plans for future teaching and evaluated what he had learned.

Literacy Autobiographies

Reflective narrative in literacy autobiographies (provided by Dmitrii and Sergey) was rather extensive but not as deep as the narrative content found in the semester long assignments. Dmitrii and Sergey used narrative in their literacy autobiographies, which covered their past and present experiences in learning how to read, write, and learn languages. Recollecting their literacy experiences and reflecting on them, Dmitrii and Sergey went back into their childhood and young adult years. Through narration about past experiences, they made connections with their attitudes about learning, reviewed their understanding about their learning experiences, reflected on them and developed awareness of their early reading, writing and language learning experiences. These literacy autobiographies tended to reflect only early literacy experiences such as the ones encountered by the participants in kindergarten, junior or high school and in family-related situations “my parents were both school teachers and we had a lot of books in the house” (Dmitrii, Sergey); they tended not to contain deeply reflective elements, and also did not reflect participants’ learning experiences as adults or graduate students.

Reading Response Papers

Response papers (submitted by Ekaterina and Olga) based on assigned readings also produced solid analytical reflections. A syllabus submitted for document analysis by Ekaterina was very detailed and carefully discussed the task requirements for the expected outcomes of the term’s responses. In their response papers, the participants were becoming aware of change and adjustment in their teaching strategies, analyzing their past experiences and making connections with new information gathered from the readings. Participants’ narratives in response papers clearly expressed emotional

reactions brought about by metaprocessing of their experiences and reflecting on them as their minds went through the complex nature of reflection: thinking, making connections, analyzing, evaluating and re-evaluating.

Not very extensive but truly thoughtful narratives were found in individual reflections based on assigned reading material. These consisted of one or two sentence brief descriptions of content, brief narrative summaries about readings, and rather specific recommendations for teachers as well as personal considerations and concerns about teaching, realizations and re-evaluations of teaching and/or learning experiences.

Other Assignments

One teaching philosophy (Boris) and one reflective letter for a qualifying portfolio (Mikhail) represented further interesting samples of reflective analysis, though they were not as extensive or as filled with insight as the assignments discussed earlier. It is interesting to note that, even though all participants had written such documents and had submitted qualifying portfolios, only these two participants submitted these kinds of written documents and considered them to be good examples of reflective work that they felt they wanted to share as part of this study.

Reflections produced in response to other kinds of reflective assignments (memos, short reflections on projects, letters to the teacher about the course) lacked depth of analysis, though participants viewed them as a good start for developing ideas in connection with various projects.

Stages of Reflection

One major important characteristic that both reflection and narrative have in common is *experience*. Narrative builds on stories of experience. However, according to

Boud et al. (1985), “experience alone is not the key to learning.” What turns experience into learning is reflection, and more precisely metacognitive reflection on one’s learning experiences. I would like to remind the reader that the framework proposed by Boud et al. in a 1985 is not the only one to talk about reflection, but it is the only one that talks about reflection in such terms. I have only adopted this ‘classic’ older source because of its clear step by step way of looking at reflection as a whole and because of its useful and helpful applicability to analyzing, interpreting and better understanding the data while creating a meaningful account of metacognitive reflection.

Findings presented in the following sections are grouped under the three main ‘stages of reflection’ based on Boud et al.’s theoretical framework. These findings directly reflect notions and propositions expressed by scholars and specialists in the fields of reflection, metacognition and narrative inquiry. In the years since Boud et al. proposed their framework (see, for example Belanoff, 2001; Grossman, 2009; Hillocks, 1995; McCann, Johannessen, Kahn, Smagorinsky & Smith, 2005; Swartzendruber-Putnam, 2000), relatively little of substance has been added to the subject. I realize that Boud et al. are not a recent source, but I am citing them because they are classic and no later scholarship proposed different framework that would be more adequate in describing the stages of reflection.

The First Stage of Reflection: Looking Back and Remembering Past Experiences

The idea of ‘looking back’, remembering and ‘rethinking’ past experiences and connecting them with one’s present experiences is the core idea and the essence of the very definition and the notion of reflection. In describing the stages of reflection, Boud et al. (1985) have said that the first stage is ‘*returning to the experience*’, or a “replay of

events” and that this stage “precedes any cogitation” (p. 28). At this point, “what takes place first is a clarification of the personal perceptions of the learner” (p.28). The learner stands back from the immediacy of the experience and whatever personal challenge it may have presented at the time, reviews it. The learner can then start to view the experience from other perspectives, or to stand back metaphorically to look at the wider context of the situation or experience. I found that the participants constantly referred to and verbalized this idea of ‘looking back’ in their reflective writing:

Looking back, I realize that school and academic discourse aside, I ultimately bear responsibility for the types of writing I want to develop (Boris).

I remember the success of the only English teacher.... (Ekaterina).

It is rather difficult to travel back to discover...My earliest memory of writing... (Sergey).

Going back to their past experiences and reflecting on them, the participants were making connections and exploring those connections. For example, Ekaterina, when she was talking about one successful teacher model, first looked back and retrieved from memory one specific episode: “I remember the success of the only English teacher....” then made the connection with her present learning experience, which helped her to develop awareness of her current personal goals: “I am here now to help myself become someone like her...” Sergey spoke of looking back to a more recent time, looking at a paper he had written: “In preparing to write this paper, I came to a realization of an interesting connection...”

The Second Stage of Reflection: Attending to Feelings

It is very common for the first two stages of reflection to be interwoven because. As noted earlier in this chapter, looking back and remembering past experiences is often accompanied by feelings and emotional reactions.

Boud et al. (1985), state that the description of the experience should be, as far as possible, clear of any judgments, as these tend to cloud our recollections and may blind us to some of the features which we may need to reassess. However, what can emerge in the descriptive narrative process is the observation of judgments and interpretations which took place at the time of the experience itself or shortly thereafter. The second stage of reflection, according to Boud et al., is ‘*attending to feelings.*’ What this means is that our emotional reactions come into play at this stage. This can take two quite different paths: on the one hand, emotion can override our rationality to such an extent that we react with blurred perceptions; but in the best case, they may foster the development of confidence and a sense of self-worth that can lead to pursuing the paths unavailable to us before. Utilizing positive feelings is particularly important as they give us impetus to persist in challenging situations, “they [positive feelings] can help us see events more sharply and they can provide the basis for new affective learning” (p.29).

Uncertainty and Related Emotions

As was the case with the individual interviews, I found that the theme of uncertainty runs distinctly through participants’ written reflections, and as Clandinin and Connelly (1991) state, “Reflection and deliberation are methods that move back and forth in time, carrying with them uncertainty” (p.263). I included the theme of uncertainty under Boud et al.’s second stage, as this seems to represent a feeling response to the

narrative. I have grouped expressions of fear and inadequacy (such as those by Boris below) with statements of uncertainty, as there seems to have been a close connection between apprehension, feelings of inadequacy, and uncertainty as to the goal of reflective work.

Some examples are cited here:

I was not sure where she [the teacher] was heading...(Dmitrii).

I do not know how to give students what they need (Ekaterina).

I feared it [reflective writing] more than anything...and was vastly unprepared (Boris). Looking back at my journal entries has been a somewhat embarrassing experience akin to intellectually exposing myself...I approached this class with some trepidation (Boris).

On a related note, Anna expressed fear and worry about future teaching when she said: “I worry a lot, it’s very hard to think... I am afraid, I fear...” Ekaterina expressed her feeling of being overwhelmed: “I feel bombarded with information...”

Other Troubling Emotions

Another cluster of emotional expressions groups around the idea of noting problems, difficulties and frustrations. For instance, Sergey reflects on a past learning experience, saying, “I recall the frustration...” On the theme of difficulty, Ekaterina observed, “It’s so very hard to be a positive grader.” Boris’s in his reflection first notes a difficulty, then moves beyond the emotion to evaluating the difficulty in terms of his style in writing reactions:

I found it *difficult* to synthesize the readings: this truly is higher-order cognitive processing, and it doesn’t come easily to me. Although I eventually found an

“angle” in the first two reaction papers, the third was far too broad...and didn’t make a lot of sense. One *problem* I am now acutely aware of is my misguided need to synthesize *everything*. I really must get past this soon, or I am bound to be crushed by dissertation research. I also have a tendency to push for “quantity. A particularly harsh self-evaluation came more rarely, as in expressions of shame: “I am ashamed to admit I did not know the difference between ESL and EFL...”(Boris).

Positive Emotions

Some participants expressed feelings that relate to positive awareness and assessment of their skills. Olga spoke of feeling “strongly encouraged,” and of having a sense of freedom and comfort: “I have this feeling of freedom, I feel less guilty, I am comforted.” Boris expressed a positive form of surprise at his abilities: “I surprised myself with how much I was able to draft...” The outcomes of reflection at this stage can lead to productive changes, which include developing a positive attitude towards learning in a particular area, greater confidence or assertiveness, or a changed set of priorities (Boud et al., 1985). However, Boud et al. caution that “Change is hard won; we can desire to do something and believe that it is possible, but still it is difficult to do” (p.35). This movement toward change brings us to Boud et al.’s third stage.

The Third Stage of Reflection: Re-evaluating Experience

The third stage of reflection is ‘*re-evaluating experience*’ (Boud et al., 1985). This stage also corresponds to Schon’s famous notion of ‘reflection-in-action’ and Yanceys’s (1998) notion of ‘constructive reflection,’ covered in the literature review in Chapter II. Like the first two stages of reflection, the third stage is also often accompanied by the expression of feelings and emotional reactions which come into play

when participants come to certain realizations, revelations and discoveries. The third stage of reflection is also characterized by making plans for the future.

As the goal of reflection is to prepare minds to the new experience, Boud et al. have noted that,

The outcomes of reflection [the third stage] may include a new way of doing something, the clarification of an issue, the development of a skill or the resolution of a problem. A new cognitive map may emerge, or a new set of ideas may be identified. The changes may be quite small or they may be large. They could involve the development of new perspectives on experience or changes in behavior. The synthesis, validation and appropriation of knowledge are outcomes as well as being part of the reflective process. New links may be formed between previously isolated themes and the relative strengths of relationships may be assessed. A significant skill in learning may be developed through an understanding of one's own learning style and needs (p.34).

Given the psychological complexity of the reflective process which goes through minds as they metaprocess and re-evaluate their experiences, I found themes which derived from participants' written reflective narratives and which belong to the third stage of reflection. These themes are: *categorization in restorying/recasting the narrative structure, benefits of metacognition, plans for the future, identity, sharing personal experience, honesty and openness.*

Categorization in Restorying/Recasting the Narrative Structure

One of the themes that emerged during the analysis of written documents was recasting the narrative structure. I tagged some of the participants written statements as belonging to a category I thought of as ‘what I was doing or used to do’ (seen as a category). I include this theme under Boud et al.’s third stage, as some participants re-evaluated their student, learner or instructor’s perceptions and experiences or formed new links through an understanding of their learning style and needs when engaged in reflective narrative. For example, as an instructor Boris says “Ironically, after years of instructing students to write sentences based on grammar patterns and formulaic prompts, I found myself unable to do it.” As a student Boris confesses: “I noted that I have been relying too much on technology”; in the admission here, Boris is engaging in evaluation, as well as moving toward a change in his future behavior. Dmitrii, an experienced instructor and also an advanced graduate student, looking back at his earlier reading strategies observed: “I used to read everything, I wasn’t able to synthesize the information.”

Benefits of Metacognition

The findings of this study support the proposition that re-evaluation of experience occurs during the third stage of reflection, i.e. when the mind revises or evaluates some aspect of the experience presented as narrative. Moving from narrative about reading/writing/language learning experiences through deliberation and reflection [stage one] participants examine their previous beliefs and experiences [stage two] which leads to transformation of their past beliefs about past experiences and eventually results in change of metacognitive awareness about teaching and learning [stage three], as well as

change in present and future behaviors. Through reflective writing, participants metacogitated about learning styles affected by cultural differences, thought about teaching pedagogy, made connections with prior personal experiences, and analyzed and re-evaluated those experiences.

Boris's metacognitive reflection. The most representative sample of metacognitive reflection on learning, where all three stages can be clearly traced, was found in Boris's reflective analyses. As noted earlier, and as is amply shown in the many quotes I have offered from both his interviews and his writing, Boris was the most metacognitively active study participant; his writing samples bear witness to the fact that his metaprocessing of personal learning, development and writing experiences went through serious focused and deliberate thinking and introspection. Through his reflective narrative Boris looked back at his past experience, made observations, revelations and discoveries about himself (stage one); his discoveries were often intertwined with emotional reactions of shame, admission, confessions and other forms of awareness (stage two 'attending to feelings'); after going through the first two stages of reflection, Boris made metacognitive statements about the application of knowledge and re-evaluated prior learning experiences (stage three). He commented on his feeling of satisfaction gained from this third stage when he wrote:

I can now frame my former thoughts and experiences...I was unable to do this just five weeks ago, when I am ashamed to admit, I didn't even know the difference between ESL and EFL... I've grown and no longer feel so bad about...

Boris came to understand himself better as a learner and as a writer and became aware of the major metacognitive processes and learning strategies that characterized his learning

and development and helped him learn, write and make plans for his future professional teaching career. The conclusion to his reflective analysis shows that Boris fully and successfully metaprocessed the course material and fulfilled the teacher's expectations:

While I have gained valuable insights into strategies for teaching writing, more importantly, I have learned about myself as a writer. I have never before engaged in metacognitive reflection of my own writing process. The result of this reflection has helped me to isolate my strengths and weaknesses, as well as show me that I must continue with my writing.

I've learned the value of metacognition...and am seeing more and more that metacognition is crucial to learning, on the part of the student as well as the instructor. [Metacognitive reflection] helps to consciously frame something that I've sensed but had no words for. Articulation and reflection - words to live by.

The next passage from Boris's reflective analyses shows how he reflectively metacogitates and analyzes his experience of sharing his writing in the peer response groups. His metacognitive narrative shows a gradual unfolding, from using terms like "uncomfortable" and "discomfort" to speaking of discoveries and "surprising insights" about self:

My writing benefits enormously from social interaction in peer response groups. It took me considerable time, however, to become accustomed to working in response groups. During the first week, I regularly noted how uncomfortable and nervous I felt sharing my writing. Looking back, however, I sense that my initial discomfort was due to lack of familiarity: I had never before shared my writing with anyone else face-to-face. By the second week, I was noting how much better

I felt about sharing my work. The most surprising result, however, came as I look back at my log entries from the third week. I no longer made any mention of how I felt about sharing, but was much more concerned with the quality of my responses to my peers! While I was rather exhausted toward the end of the third week, I felt comfortable both sharing and responding, and noted in my log that I felt my listening and interpersonal communication skills had also improved. I was deeply impressed at how my classmates' perspectives allowed me to see my writing in a new light...Peer response helped me to improve. Peer comments made me realize that readers would have a difficult time following my train of thought.

Other examples showing the benefits of metacognition found in the participants' writing samples included expression of concerns, raising questions about learning and questioning oneself, developing awareness about change in understanding, realizing or discovering something about their learning, becoming aware of adjusting/changing future teaching practices, awareness of challenges, pointing out difficulties in understanding the text, and overcoming past beliefs about teaching. Some statements are given here showing the benefits of metacognition as experienced by the participants as they write of feeling more aware of their own strategies and reactions:

I discovered that my most powerful motivation for creative writing is self-discovery (Boris).

Prompts are powerful means for helping me to get started (Boris).

Social interaction greatly benefits my writing (Boris).

I found that I respond better to some prompts than others (Boris).

It becomes okay to try a new thing because evidently there going to be another draft (Ekaterina).

Participants also spoke about learning from activity. As Boris observed, “The collaborative learning essays helped me rethink my views on group work.”

Olga and Ekaterina noted that they learned from reading; Olga came to certain realizations when she reflected on reading: “I realized that..., what I read made me realize ... This came alive for me personally in class...”

Other examples of participants’ realization and awareness are:

There can be standards along with empowerment (Ekaterina).

I realize that many changes have occurred...technology, the need for expanded views of literacy, especially visual literacy including the ability to think critically (Dmitrii).

After reading this chapter...a solution to this problem might be... (Mikhail).

All these things are so revealing to me and to my understanding of the social situations in classrooms today (Olga).

Ekaterina questioned herself and raised questions about future teaching practices when she was looking for answers “How do you reach a student...Now how do I get there?...Why...?” and “How much easier would their final papers...have been if I would have known to tell them to just write it?” Self-questioning and raising questions is a metacognitive learning strategy recognized by specialists in the field (Brunning, Schraw, Norby & Ronning, 2003; Kornell & Metcalfe, 2006; Livingston, 1997; Yancey, 1998). Through accumulation and transformation of knowledge, participants were making connections and becoming aware of changes. As Sergey observed, “Somewhere in here

[a particular concept or a reading] it started to make sense.” This phrase, “somewhere in here,” reflects Vygotsky’s notion of the ‘zone of proximal development’ (Vygotsky, 1978).

Participants made personal revelations and assumptions based on previous negative and positive learning experiences. As Sergey speculated about his previous negative school experiences, he spoke of previous writings he had done: “Perhaps because of the impression that such work is inappropriate or unacceptable in school...I have never revised or sought to publish any of them.” Boris, in contrast, pointed out a humbling gain in awareness when he wrote: “Exposing myself has had a definite advantage...it showed me how small I was.”

Plans for the Future

As the goal of reflection is to prepare minds for new experiences (Boud et al., 1985), the participants indeed, made plans for future writing teaching, learning and development. In making plans for the future, the participants were aware that they had gained confidence; for example Sergey wrote : “There are a number of things I now feel that I’ve done right and wish to expand upon when I return to [teaching]... and I will save these reflections and make practical use of what I have learned.” Boris saw a need for future learning: “I also realize I have a lot more to learn and I have picked a number of areas that I will continue to research”; in particular, he expressed an interest in professional teaching issues: “I am keenly interested in motivation, learner differences, learning strategies...”

Other plans for the future included these: plans for future writing (“I plan to continue devoting time to my writing” and plans for “exploring more options in

publishing creative work” (Boris)); recommendations for future teaching (“The teacher should be aware of how effective the use of a particular assignment is” (Dmitrii); and setting teaching standards (“...what we, as teachers need to do...” (Olga)). In addition, participants drew implications for instructors from their reading; and one (Anna) made a plan to organize the new plans she was making: ”There is so much more that I have decided I will have to make a file cabinet and label folders for easy retrieval.”

New Perspectives

The document analysis showed that when the participants were re-evaluating their experience (third stage of reflection), a few more themes emerged. Even though these themes did not occur frequently, they offered new perspectives on the outcomes of metacognitive reflection. For example, the theme of *identity* derived from narrative but was found only in a few written documents:

I realized that at heart, I am a creative writer, I love creative writing (Boris).

I am here now to help myself become someone like her [the successful English teacher]... (Ekaterina).

I did not have any interest in becoming a writer or a teacher of writing at that time; my chief interest was in music (Sergey).

Two participants (Ella and Anna) explicitly stated that reflective writing was a personal experience “Writing is very personal; *to share* such a thing often takes a lot out of us” (Anna). On a potentially related theme, one participant’s (Sergey’s) written documents touched upon the themes of *honesty* and *openness* in a narrative and discussed the benefits and influence of these two concepts on one’s learning.

CHAPTER VI: ANSWERING RESEARCH QUESTIONS

In this chapter I revisit the data, with the goal of addressing how the three major research questions were answered in the course of the study.

Research Question 1

1. How do advanced graduate students conceive of reflective assignments?

- a. How do they define the term 'reflection'?
- b. What do they see as goal(s) and advantages of assignments they see as 'reflective'?
- c. What assignments have they completed that they now view as 'reflective'?

Question 1(a): Definitions

All responses pointed out to the cognitive element of reflection. The participants defined '*reflection*' as a two-part process, with a story or narrative first "looking back at something one has done" (Ekaterina), even if it's short or implied, followed by a metacognitive evaluation or re-thinking of a process or experience and writing about it. Some participants said reflection was "critical consideration of an experience" (Mikhail), or "critical analysis" (Mikhail), some linked reflection to memory and "trying to figure out or think about how things have affected one in the past" (Ella). These definitions fit in well with the three stage model described in Chapter V.

The participants defined *reflective writing* as a kind of writing in which a student looks at "how he or she writes or thinks back to something in the past, something that relates to the writing or is in other ways relevant" (Sergey). Some participants defined reflective writing in terms that mirrored Sergey's "deliberate attempt to bring up what is,

perhaps, subconscious.” Some, yet again, emphasized the cognitive element of reflection, such as Ella’s definition of “seeing and making connections” in the mind between memories and experiences. Suzette defined reflective writing as “a way of discovering knowledge and bringing something subconscious to the surface,” and as “consciousness raising.” The participants cited reflective assignments as involving “feedback about an experience” (Ibrahim), “progress made” (Boris), “recommendations for change” (Sergey), and “recommendations for adding or subtracting something” (Sergey).

Question 1(b): Goals and Advantages

The second part of the first question (part b) asked *what participants saw as goals and advantages of assignments they considered ‘reflective’?*

The answers emphasized the role of executive processes in the overseeing and regulation of cognitive processes. Participants responded to this part of the question both as teachers and learners and saw goals and advantages of reflective assignments in “pointing out strengths and weaknesses,” “making the students to become more aware,” “providing opportunity to think,” “questioning comprehension,” “getting students to realize what they are able to do and to bring that out,” “synthesizing the learning experience,” “helping to think more about what one has learned, struggling with... and considering how or what one needs to work more on,” as well as “letting the students see that they are allowed to be themselves,” “putting the students in charge of their own learning,” and “developing the habit of reflection.”

Question 1(c): Types of Reflective Assignments

The third part of the first question (part c) asked *what assignments have participants completed that they viewed as ‘reflective’?*

The kinds of assignments which participants completed and viewed as reflective included a wide range of different assignments, which they seemed to believe were equally able to spur reflective insights:

- Writer's process log
- Reflections on keeping a process log
- Reflective analysis of writer's process log
- Individual reflections on courses, assigned readings or projects (such as syllabus project rationales for teaching a writing course)
- Memo-reflections for preparing dissertation rationale (questions, struggles, insights, ideas).
- Reflective letters about individual courses
- Reflective letters for graduate qualifying portfolios
- Reflections on exercises about poems and memories
- Weekly reflections on ESL/EFL Internship
- Reflective journals
- Literacy autobiographies about reading, writing and learning languages
- Personal teaching philosophies
- Reaction/response papers on reading, discussion or films
- Cover letters to portfolios
- Teaching observations
- Blogs, i.e. online journals which promote constant reflection on practice and experience.

As noted earlier, in the limited examples provided by participants, only two types were found to have prompted deep reflection: the writer's process log with final reflective analysis, and journal entries with the introduction to those entries as a final step of this kind of reflective assignment. Both involved long-term assignments with numerous entries to be made over the weeks of a whole term or a considerable part of the term.

Research Question 2

2. To what extent, and in what ways, do the answers found for the questions in (1) by these graduate students reflect notions that would be defined as 'metacognitive' by specialists in the field? In other words,

- a. To what extent do the graduate students' own definitions and goal statements seem to embody metacognitive concepts;
- b. What kinds of actual content appears in these participants' own reflective writing; that is, how can the content of these pieces be broken down into categories (plans for future practice, narration, etc.)? Do similar patterns in content type appear across writers, or does there seem to be variation in individual reflective styles?

Question 2(a): Metacognitive Concepts

All participants acknowledged benefits of metacognition through reflection as they saw these benefits in their own and their students' *awareness, realization and better understanding* of themselves as learners, readers and writers, in growth and improvement in thinking, such as the ability to *make connections and discover new knowledge*, and in *developing the habit of reflection* through reflective writing. Participants attributed the

shift in their own and their students' metacognitive awareness to their developing ability to exert active control over the cognitive processes involved in learning, such as selecting better learning strategies, controlling and adjusting their strategies, and making connections with experiences while performing reflective writing assignments.

Having analyzed twelve participants' responses, I could clearly see that these responses embodied and reflected the notions that are defined as 'metacognitive' by specialists in the field. In particular, participants' responses reflected the views on metacognition in learning expressed by such scholars in the field of metacognition as Borkowski et al., 1987; Brown, 1978; Clayton, 2009; Costa 1991; Dunlosky & Metcalfe, 2008; Flavell, 1976, 1979, 1987; Hartman, 2001; Israel, Collins Block, Bauserman & Kinnucan-Welsch, 2005; Kellogg, 2008; Livingstone, 1997; Ridley, Schutz, Glanz, & Weinstein, 1992; Vygotsky, 1986; Winn and Snyder 1998). Most importantly, all answers emphasized the role of executive processes in the overseeing and regulation of cognitive processes. Based on the definitions and goal statements given by participants, a group of metacognitive concepts expressed by specialists in the field of metacognition emerged and are listed below. These concepts inform and complement each other; in fact, read closely, one can easily see points of overlap between them.

- 1) Metacognition is universally connected to *awareness* about how one learns and is characterized by higher order thinking that involves active control over the cognitive processes engaged in learning (Clayton, 2009; Dunlosky & Metcalfe, 2008; Livingstone, 1997).
- 2) Metacognition is linked to *memory*, i.e. retrieval of autobiographical memories (Lorie, 2002).

- 3) Metacognition consists of two processes occurring simultaneously: *monitoring* progress as one learns, and *making changes* and *adapting strategies* if a learner perceives he is not doing well. Metacognition involves self-reflection, self-responsibility and initiative, as well as goal setting, making plans for future, evaluation, re-evaluation and analysis (Clayton, 2009; Dunlosky & Metcalfe, 2008; Winn and Snyder, 1998).
- 4) Metacognitive *skills* include taking conscious control of learning, planning and selecting strategies, monitoring the progress of learning, correcting errors, analyzing the effectiveness of learning strategies, and changing learning behaviors and strategies when necessary (Clayton, 2009; Dunlosky & Metcalfe, 2008; Ridley, Schutz, Glanz, & Weinstein, 1992).
- 5) *Self-questioning* or asking clarificatory questions is a common metacognitive comprehension monitoring strategy (Dunlosky & Metcalfe, 2008; Hartman, 2001; Livingston, 1997; Powell, 1985). This strategy was clearly detectable both in the interviews and in the written documents.
- 6) Metacognition is the *ability* to plan a strategy for producing what information is needed, to be conscious of our own steps and strategies during the act of problem solving, and to reflect on and evaluate the productivity of our own thinking (Clayton, 2009; Costa, 1991; Dunlosky & Metcalfe, 2008).
- 7) *Activities* such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task are metacognitive in nature (Clayton, 2009; Dunlosky & Metcalfe, 2008; Livingston, 1997).

- 8) Metacognition plays a critical role in successful learning; it helps to determine how students can be taught to better *apply* their cognitive resources through metacognitive control (Clayton, 2009; Israel et. al., 2005; Livingston, 1997).

Question 2(b): Content of Reflective Assignments

In the second part (part b) I asked *what kinds of actual content appears in these participants' own reflective writing; that is, how can the content of these pieces be broken down into categories?* Having analyzed written documents with participants' reflective writing, I was able to break down the content of these documents into several categories, such as narrative content adjusted to the type of reflective assignment, and benefits of metacognition, as well as to relate the material to the three main stages of reflection.

Narrative as an Essential Component of Reflection

Participants' written reflective documents contained written narratives about their experiences in learning in many domains. These narratives have provided powerful means for documenting the complex cognitive activities experienced by these writers during their graduate studies. Literacy narratives provided by this study's participants detailed reflective stories about reading, writing, and learning foreign languages. For me as a researcher, these narratives represented powerful tools for accessing, categorizing and researching participants' lived experiences; for the advanced graduate students their written narratives provided opportunities to seek new insights: new definitions for learning, reading and writing.

Once again, the inevitable narrative element in these written reflective pieces is consistent with what has been found in landmark studies, including those supporting the

use of narrative inquiry as research methodology in different disciplines (Clandinin & Connelly, 1990, 1991, 2000; Clandinin, 2006, 2007; Brandt, 2001, 2009; Selfe & Hawisher, 2004; Sohn, 2006). In particular, reflective, analytic narratives composed for graduate courses have played an important role in helping students become better writers and in training future teachers (McVee, 2004; Aldama, 2010).

Content Adjusted for Type of Reflective Assignment

The second important theme that emerged from the analysis of written documents was ‘specificity of reflective assignments’, i.e. the specificity of requirements for reflection and the way the task was set up and defined greatly influenced the outcomes of reflection, reflective process and depth of metacognitive analysis. For example, assignments specifically calling for analysis of personal learning in reading, writing and language learning produced especially rich metacognitive reflections. These assignments were based on reflective journal entries which preceded the final reflective analysis or were extensive reflective journals calling for reflective analysis. These assignments stretched over a longer period of time, usually throughout a semester, and the use of narrative in this kind of reflection produced the most fruitful metaprocessing of one’s learning experiences and reflection on the use of learning strategies.

Narrative and reflection found in participants’ reflections based on reading differed in qualitative content, again based on the nature of the reflective assignment. For example, brief summaries about the content of readings followed by emotional reactions and evaluative comments were found in weekly individual reflections. Other reflective assignments based on the assigned readings, such as response papers, produced much more thoughtful reflections on learning. Narrative in literacy autobiographies was based

on personal memories, as opposed to reflections based on reading, where the content was 'ready.' Thus, again, the way a reflective assignment sets up and defines the task directly influences the final outcomes of reflection. Thus, the types and purposes of reflective assignments define the outcomes of reflection and produce different narrative structures.

Three Main Stages of Reflection

Based again on Boud et al.'s (1985) theoretical framework, I categorized the main body of written data into three main stages of reflection, with each stage having its own themes.

The first stage of reflection: Looking back and remembering past experiences.

The first stage of reflection is 'returning to experience' or replay of events, this stage, according to Boud et al., "precedes any cogitation." At this initial stage of reflection participants 'returned' to their experiences, which they shaped as narratives or literacy narratives about reading, writing and language learning. To return to specific experiences participants looked back, remembered past experiences and retrieved from memory specific information which they applied to the tasks of reflective assignments. As the written documents witnessed, at this first stage of reflection, the participants stood back from the immediacy of the experience and whatever personal challenge it might have presented at the time, reviewed it from other perspectives, or stood back metaphorically to look at the wider contexts of the situation or experience.

The second stage of reflection: 'Attending to feelings.' The second stage of reflection, according Boud et al., is 'attending to feelings.' Through analyzing written documents, I was able to see that the first and the second stages of reflection were often interwoven as looking back and remembering past experiences disturbed and triggered

participants' feelings and emotional reactions. Those feelings were a full range and included "uncertainty," "fear," "confusion," "shock," "worry," feelings of being "ashamed" and "overwhelmed." It is worth noting that at this second stage of reflection, participants' feelings tended to be mostly negative, and also tended to be related to their first reactions to the reflective assignments, which were new to most of them.

The third stage of reflection: 'Re-evaluating experience'. The third stage of reflection, based on Boud et al.'s framework, is 're-evaluating experience' or coming to an 'outcome of reflection'. Based on the analysis of written documents, at this stage participants expressed positive feelings and positive emotional reactions as they had been re-thinking and re-evaluating their experiences, becoming "clear" about their beliefs, "resolving problems," and "making connections" leading to "discoveries," "revelations," "understanding" and formation of new knowledge. As one of the participants (Sergey), put it, speaking of how he felt when he discovered or resolved something through reflection, "success, fulfillment and accomplishments make one feel happy and successful." Thus, my findings based on the analysis of written documents confirmed Boud, et al.'s belief about what happens at the third stage of reflection:

A new cognitive map may emerge, or a new set of ideas may be identified. The changes may be quite small or they may be large. They could involve the development of new perspectives on experience or changes in behavior. The synthesis, validation and appropriation of knowledge are outcomes as well as being part of the reflective process. New links may be formed between previously isolated themes and the relative strengths of relationships may be assessed. A

significant skill in learning may be developed through an understanding of one's own learning style and needs (1985, p.34).

Positive outcomes of reflection enable students to continue on to future learning and involve changes in emotional state, attitudes or sets of values. These positive outcomes could include a positive attitude towards learning in a particular area, greater confidence or assertiveness, or a changed set of priorities. But, as Boud et.al. point out, "Change is hard won; we can desire to do something and believe that it is possible, but still it is difficult to do" (p.35). As was noted earlier, the third stage of reflection is characterized by re-evaluation of experience which embodies benefits of metacognition and making plans for the future.

Benefits of Metacognition

The participants' own reflective writing clearly addressed benefits for metacognition. The following categories emerged as being central to metacognition: awareness and self-awareness about one's learning, realization and better understanding of selves as learners and writers; growth and improvement in thinking, such as the ability to make and discover connections, synthesis of learning experience, exploration of one's own learning, development of the habit of reflection through writing, and transformation of knowledge.

Other perspectives on the benefits of metacognition expressed by participants through their reflective writing included these: revelations and discovery of knowledge through reflection on personal experiences; student and teacher awareness of one's assumptions, positions and more objective judgments about experiences; awareness of personal strengths and weaknesses; making breakthroughs and being able to talk about

and connect the bits and pieces of information, compare ideas, and make improvements in writing.

Through written narratives the participants accomplished a number of results: they shared their learning experiences; identified and posed questions; offered reflections relevant to re-defining their teaching and learning personalities; analyzed their own literacy narratives; and explored pedagogies and projects through reflective analysis. More research is needed in exploring these and other questions, for instance surrounding the use of reflective narratives in teaching and research.

The analysis of written documents also showed that similar patterns in content type do appear across writers, and that variations in individual reflective styles were related to a number of factors, such as: one's willingness to share personal information and the desire to be open and sincere when engaged in reflective process, the amount of one's learning and/or teaching experience, and one's motivation and attitude towards reflective assignments.

Research Question 3

3. What experiences do these students report as triggers for genuine metacognitive changes in their awareness of the metacognitive strategies that characterize their learning and development?

- a. Do they cite reflective writing experiences as having led to important changes in that area?
- b. Do they cite other kinds of experience, and if so, what kinds of other experience do they consider important to their growth in metacognitive awareness?

Question 3(a)

Participants reported a range of experiences related to reflective writing which triggered genuine metacognitive changes in their learning and development. Among such experiences, the participants cited specific assignments, for example, autoethnography (a form of personal narrative about one's experiences), course papers, writer's process log, the reflective analysis of writer's process log, and semester long reflective journals specifically devoted to one's learning and/or teaching. Along with the assignments, participants said that when they engaged their minds in reflective writing, they learned to make connections with their past and present learning and/or teaching experiences, analyze and re-evaluate these experiences, discover new knowledge or come to a better understanding of certain experiences. Several participants have also reported that with the help of reflective writing they learned what it truly means to metaprocess and think about one's own thinking.

Question 3(b)

Participants also cited other kinds of experience which they viewed as triggers leading to metacognitive changes in their awareness. Among these kinds of experience participants named professor's advice, professor's comments and praise of their work and professor's criticisms in graduate courses.

Participants also reported that exposure to different expectations and points of view in graduate school, for example sharing thoughts and exchanging opinions with others during class discussions or peer-reviews of their own and their colleagues' writing, as well as learning from success and failure, had greatly contributed to their growth in metacognitive awareness and changes in learning.

Participants also reported that reading and reflection related to their graduate coursework often triggered feelings, emotions and experiences through which they would discover new knowledge and connect it with past experiences.

Among non-academic and non-writing activities which caused them to reflect, the participants cited the following activities: dishwashing, driving, listening to the radio, listening to music, walking, reading and generally times when they were and not purposefully concentrating on something specific.

CHAPTER VII: FINDINGS AND IMPLICATIONS

This chapter will address and review in detail the main findings of this study and relate these findings with research goals and purposes and with related insights that have been presented in the literature. In the course of the discussion, I will present suggestions, both for educational practice and for future research.

The overarching purpose and goal of my research was to create a solid and informative account of metacognitive reflection on learning. I also wanted to learn what teachers and developing professional educators needed to do in order to effectively aim for the goal of empowering students through reflective activities. In the rationale for this study, in Chapter I, I posed the following questions, which had led me to this research: Is it necessary to require metacognitive reflection as part of the learning process? When does metacognitive reflection work? What is the best way to teach reflection aimed at metacognition? What kinds of explanations do teachers need to provide to the students? What levels and types of students (graduate or undergraduate) should be engaged in reflective thinking? When does reflection work, what specific components of the writing, in terms of content, are most instrumental to learners? While this study could not hope to answer all of these questions, it did address many important issues which must be taken into consideration for successful implementation of reflective assignments aimed at metacognition.

The results of this study lead to several implications for the use of metacognitive reflection as a tool to enhance learning; these implications also raised questions which could lead to further research. I discuss the findings and implications below under the following subheadings: 1) Role of Narrative in Reflection; 2) Personal Investment; 3)

Identity in Reflection; 4) Authority in Reflection: Cross-Cultural Contexts; 5) Application to New Contexts; 6) The Most Successful Reflective Assignments Aimed at Metacognitive Reflection; 7) Structure of Reflective Assignments and Need for Scaffolding; 8) Influence of Education; 9) Benefits of Metacognition; 10) Emotions and Cognition in Reflection; 11) Forms of Emotional Reflection; 12) Developing the Habit of Reflection.

In each case, I divide the section into two parts: the first, entitled *Discussion*, will review the relevant theme from this study, relating it to the published literature on reflection, metacognition and related areas. The second subsection, entitled *Implications/Suggestions*, will offer suggestions for personal, classroom or community practice relevant to the particular topic. In this second section, I will also point to limitations of the present study, as these lead to ideas for further research. Finally, I close this chapter with a short reflection of my own on my experience conducting this study.

Role of Narrative in Reflection

Discussion

This study adds to the massive body of research on the role of narrative in learning and education, which has been strongly and emphatically covered in both recent and earlier published research by different researchers in a wide range of disciplines. These disciplines include art, literature, composition, education, counseling, medicine, philosophy, and socio-cultural studies (Charon, 2006; Clandinin & Connelly, 1990; 1991; 2000; Clandinin 2006; 2007; Dewey, 1998; Daiute & Lightfoot, 2004; Fireman, McVay & Flanagan, 2003; Payne, 2006; Ryan 2004; Schon, 1987, 1991, 1995; Winslade & Monk, 2008). In particular, the data obtained in this study uphold both earlier and recent

views on the importance and value of narrative in studying the human experience and the value of narrative as a “technique for encouraging students to explore the nature of their own learning experiences and thus deepen their understanding of themselves as learners” (Powell, 1985, p.50). In other words, narrative in reflection is necessary to extract that knowledge which Polanyi (1967) termed “tacit.” And as Dewey (1998) observed in his classical work *How we think*, in order to reflect on experience and the relationships being inferred, learners need to describe their experience in a narrative form, to work through their attitudes and emotions, and to order and make sense of new ideas and information which they have retained. Thus the findings of this study strongly reflect and support especially those classical views which directly tie narrative to reflection and learning, and not to any other specific domain or discipline (Boud et al., 1985; Dewey, 1998; Schon, 1987, 1991, 1995; Polanyi, 1967).

One of the most important findings generated by this study is that the most productive written reflection seems to need narrative as a starting point; and that narrative almost inevitably leads to reflection - that is, narrative functions as a basis for reflection, often even if writers are not asked to elaborate or evaluate their narratives. This study showed that narratives, both verbal and written, detailed participants’ stories about reading, writing, teaching and learning and were powerful means for deep metacognitive analysis of their learning.

Constructing their own narratives produced a strong drive engaging the participants in metacognitive reflection, which ignited cognition and started off the process of rethinking, reevaluation, and readjustment of the participants’ mental settings. These changes were largely affected by the nature of the experiences that led to

reflection. Positive experiences led to successful learning and positively affected writers' motivation to reveal and discover more about themselves as learners. Negative experiences also contributed to learning, as they involved re-evaluation of the participants' previously held beliefs or assumptions about themselves or about some issue of importance to them. One of the participants (Boris), for example, said he was feeling ashamed not to know the difference between ESL/EFL. This kind of critical awareness can lead to changing a previous viewpoint (for instance, "I know what there is to know about language teaching"). Thus, the nature of experiences (positive or negative) can lead to different kinds of reflection and correspondingly different changes in behaviors and plans.

When the writers retrieved experiences from memory, they created virtual psychological landscapes for new contexts; they then metacogitated about these experiences, metaprocessed and reflected on them. Narrative about personal experiences created a safe context for reflective writers where they shared their thoughts and experiences, engaged in deep and personally meaningful interpretation of these experiences. Being engaged in reflective process through narrative, the writers were able to come to a better understanding of personal discoveries and revelations originating in the mind through narrative and reflection and to apply the discovered knowledge to the immediate situation which they were trying to explore.

A particularly strong benefit came from the exploration of ideas, events or experiences in a new light – exploration which might not have occurred without an assignment deliberately focusing the writers on these processes. Indicators of progress included the level of detail in the reflective analysis, as well as the kinds and amount of

experience, the extent of a participant's openness and the desire to share personal information. These factors seemed to directly affect the quality of interpretation and the final results of the process, which came in the form of new discoveries, learning and awareness.

Implications/Suggestions

Given the powerful base that narrative plays in reflection, it is reasonable to suggest that educators should include narrative, and re-tellings of narrative, from the earliest possible stage in learners' school lives. Students who have not experienced learning with an emphasis on these activities are sometimes surprised and confused when they meet the task of narrative-plus-reflection relatively late in their schooling, at the undergraduate or even the graduate level.

Teachers at all levels could include narrative components in their class activities. Even a theoretical or abstract class, for instance, might ask students to share five-minute reflections at the start of a class, where they show how their own experience might relate to or tie in with what the class is learning. If such activities occur regularly enough, they could make reflection into a natural ongoing part of every learning experience.

Negative experiences can be used as impetus for learning. A suggestion here is that when instructors are raising awareness of how to use experience in reflection, they might also point out how negative experiences in life can contribute to learning, something most people know, but that is not usually endorsed in educational contexts. Teachers could underscore that negative events have meaning to students, and that one can learn from them.

Personal Investment

Discussion

The study showed that the strength and quality of interpretation of experience or reading varied from writer to writer and depended on the teacher's guidance, the way the assignment was set up, the amount of learning and teaching experience of the writer, and other factors. However, one that stood out was the writer's openness, sincerity, desire and readiness to share and disclose personal information to others without fear of being judged.

It is reasonable to suspect that the degree of sincerity in narrative, along with one's personal readiness and preparedness for self-disclosure, affects the final outcomes of one's learning and discovery, growth and awareness. In other words, the payoff is directly affected by personal input and investment. The degree of personal sincerity and the efforts one undertakes to investigate this sincerity through "confessing" one's shortcomings or limitations, affects the quality of discovery of new knowledge, revelation and awareness at the end. The extent to which the writer allows himself to be sincere and honest to himself will benefit the relevant discovery, revelation or awareness. The idea here is not to write a confession, but to uncover something personally meaningful through being open to oneself.

Honesty in reflection is an important catalyst for developing awareness and leading to a rewarding payoff. In terms of sincerity and openness, only one participant (Boris) seemed especially ready to share openly in his reflections; and this openness seems to have correlated strongly with his deriving the most benefit from the reflective

process, as well as feeling most enthusiastically optimistic about the benefits of reflection.

However, there is a down side here: it is not always easy to put very private, very honest things down in writing for a teacher or peers in a class. Given the classroom dynamic, where the teacher ultimately evaluates one's performance, it can put students in a vulnerable situation if they are asked to elaborate on weaknesses in their work. Moreover, some communities or cultures discourage personal disclosure, making it potentially all the more difficult for individuals from those cultures to expose their deepest fears or self-critical thoughts.

In fact, some participants shared a sense of discomfort or concern on this front. Three out of twelve participants pointed out that they were concerned about ethical considerations related to reflective writing assignments because they considered these assignments very personal. Potentially more telling evidence comes from another participant, who provided written samples of reflective writing for data analysis, but then later requested that I not analyze her writing. This participant asked me to shred those materials she had given me, because she felt her writing was too personal and she did not want to share it and expose herself. This material was not analyzed in this study.

Implications/Suggestions

This area, then, presents a difficult paradox: on the one hand, openness and honesty leads to positive results; on the other hand, students may feel vulnerable, and teachers may feel overwhelmed or worry about ethical issues, if reflection takes a highly personal turn.

Although this set of issues is complex and cannot be put to rest with a single solution, educators need to keep this delicate balance in mind. On the one hand, people can be accommodated by allowing them to keep the reflections (or at least some reflections) private in a semester-long journal writing activity. Another specific strategy might involve free-written pieces in class, where students are encouraged to write their personal feelings, but are assured beforehand that they will not have to hand in or share what they write. Generally, it is important to remember that openness and freedom to express themselves should be encouraged, but it is best to structure some activities so that the sharing of personal material is not required. Educators may even stress the value of keeping a personal journal, and may underscore this by reading powerful published personal accounts as part of their course curriculum. These classroom practices may lead to students' themselves adopting reflective journaling, even in cases where it does not feature at all as a course requirement.

One of the limitations of this study is that I did not try to explore the idea of 'honesty' and 'openness,' specifically, to find out if the participants felt that reflective writing is personally risky and demanding. However, the fact that the issue spontaneously arose with four participants suggests that further research on this issue is needed and would be beneficial.

Identity in Reflection

Discussion

The theme of 'identity' was not shared by all graduate students in their written or verbal reflections and/or narratives, but it is widely recognized by many researchers

(Atkins, 2008; Brockmeier & Carbaugh, 2001; De Fina, 2003; Eakin, 2008; Mackenzie & Atkins, 2008) who study narratives in various fields and disciplines.

In the present study, the theme of ‘identity’ derived from participants’ reflective narratives was found only in a few written documents. Three examples of participants’ reflective writing containing metacognitive reflection on their identities were Boris’s realizations (“I realized that at heart, I am a creative writer”, “I love creative writing”); Ekaterina’s affirmative statement (“I am here now to help myself become someone like her [the successful English teacher]...”), and Sergey’s sincere confession (“I did not have any interest in becoming a writer or a teacher of writing at that time; my chief interest was in music”). Dmitrii also reflected on some stress between his personal and professional identities in the interview: “I never really pictured myself as a writer, I am getting a PhD in English and I don’t enjoy writing, and I am in the composition program...but there is a demand for this profession in the market, unlike with my previous major.”

Implications/Suggestions

Awareness of one’s identity is important, and it can readily come from reflection; but an instructor may need to point this out as a goal for a reflection, since it may not always occur spontaneously. Thus, the suggestion here is that if the teachers want reflection on identity, they need to prompt for that explicitly because prompts, according to some participants’ responses, represent powerful means for starting off specific types of reflection (e.g. Boris, personal interview).

It represents a limitation of this study that I did not try to explore the idea of ‘identity’ specifically to find out if the participants thought that reflective writing can be

used to help them define answers to questions about how they see themselves. However, again, the fact that the issue spontaneously arose with four participants suggests that further research on this issue is needed and would be beneficial.

Authority in Reflection: Cross-Cultural Contexts

Discussion

A cross-cultural perspective offers important insights into the conditions that influence students' reflective writing. The results of this study uphold the views on authority in writing expressed in published research (Alexander, 2001; Foster & Russell, 2002; Foster, 2006), specifically in that issues of power relations do seem to arise in cross-cultural contexts in connection with students' roles as academic writers and their perception of personal authority and freedom as writers.

Four out of twelve participants (Suzette, Sergey, Dmitrii, and Boris) raised the issue of authority in reflection when they were talking about reflection in cultural contexts. The participants said that they wouldn't want to generalize and attribute their responses to all international student writers in American academia; however, they felt they had noticed a tendency in many of those students to be less reflective, and they felt that cultural-educational contexts may affect some of the international students' reflective habits as compared with those of American students. For example, one of the participants (Dmitrii) said that in certain countries and cultures where he has taught, it was considered rude to voice a personal opinion especially if one was not famous or was not a widely recognized authority; according to Dmitrii, this could be an obstacle to reflection in American academia for people from those cultures. Another participant (Anna) observed that due to the differences in political and educational systems, for example, collectivist

vs. individualistic cultures, American students are relatively comfortable talking about themselves since this fits in with an individualistic value system, while people from collectivist cultures may find it more difficult to write from a personal perspective.

Implications/Suggestions

The issue of authority in writing points to crucial differences in the ways that students from different backgrounds might learn to become academic writers. Therefore, the suggestion here is that students from cultures other than mainstream American be made explicitly aware about reflective assignments in the American curriculum from the onset of their college study, and be challenged to write transformatively to master new forms of authorship and authority based on self-directed planning, researching, and writing in American academic communities.

The limitation of this study is that I did not try to explore the theme of authority in reflection as it would have been beyond the scope of this study as designed. Although I originally thought that cultural factors and experience with other educational backgrounds might be important, I was not able to explore this idea in more depth because most participants did not come from other cultures. Further research on this issue would be needed and beneficial.

Application to New Contexts

Discussion

The results of this study are consistent with the general body of literature on metacognition research (Waters, Borkowski, Schneider, 2009) showing that the use of learning strategies acquired in one setting can be applied to other contexts outside a given

course. However, the existing research contains virtually no suggestions as to how reflection or reflective writing can help students apply their learning strategies to different learning contexts.

Only two participants in this study (Boris and Dmitrii), spoke about application of learning to new contexts as a result of reflective writing. As Dmitrii observed: “With reflective assignments, you are actually demonstrating to your professor as well as to yourself ways that you can find practical application, or ‘I never had this experience but I can see now’.”

When Boris spoke of the purposes of reflective assignments, he suggested that the idea of application to new contexts needs to be explicitly encouraged:

Exploration of connections encourages reflective practice but only insofar as teachers take the extra step and ask students to consider the broad *applicability* of strategies to other classes and beyond academe. [One question about reflective assignments] is whether or not the material you are learning is applicable outside the actual course that you are taking.

Implications/Suggestions

The suggestion here is that assignments might specifically ask learners to think of practical application outside the actual course that the students are taking.

I did not try to explore the idea of ‘applicability’ of learning strategies specifically, to find out if the participants felt that reflective writing can help students to apply their strategies beyond the course or context where they were developed. However, the fact that the issue spontaneously arose with two participants suggests that further research on this issue would provide useful insights to educators and learners alike.

The Most Successful Reflective Assignments Aimed at Metacognitive Reflection

Discussion

I have not found any published research on what kinds of reflection are most productive for learning. The literature on reflective assignments is very scarce and is limited to portfolios and journals for undergraduate students, although some sources (Yancey, 1998), point out the problems with the genre and discourse of reflective texts.

The results of this study showed that the most powerful assignments which triggered metacognitive reflection on learning were those that specifically called for 1) multi-dimensional reflective analysis of the writer's progress recorded in throughout a semester in writers' process logs; 2) semester long journal entries calling for detailed recollection and analysis of personal learning and teaching experiences with a final reflective analysis at the end; and 3) reflective assignments based on specific reading material (such as response papers). Assignment types 2 and 3 were integrated in the same course, as the instructor combined them together; in this case, the end results and expected outcomes were especially rewarding. These assignments allowed writers to reflect on their experiences over a longer period of time, usually a semester, when the writer recorded her observations in the reflective journals or response papers and then later looked back and analyzed what she has written. Interestingly, though the participants seem to have benefitted most from these semester-long activities, they also tended to find the requirement for regular writing boring or burdensome, at least at the outset. Moreover, these substantial, long-term journal assignments can also be problematic for instructors who are hard-pressed to find time to read even portions of them, and for students who feel pressed to respond repeatedly, and who feel that their

efforts will not be properly appreciated if the instructor does not actively respond to what they write.

Implications/Suggestions

Educators need to once again here be aware of a delicate balance: students may express dismay at the assignment that they keep a regular, semester-long journal; but at the same time, these may be among the activities they have gained most from and appreciated most at the end of term. Teachers might find ways to make the initial entries in a semester-long journal project particularly stimulating, interesting or interactive. Alternatively, “guest speakers” from previous semesters might form a panel to share with students what they felt they learned from semester-long journaling. As for the problem of instructor time, perhaps students could choose three of their most powerful or important entries and ask for detailed feedback on those; or the instructor could hold interviews with individual students in which the student is able to talk about the meaning of their own personal journals. The solutions to these dilemmas can be as varied as the teacher’s imagination and the class situation allow. Further implications/suggestions will be offered here under discussion of specific assignment types.

Literacy Autobiographies

Discussion. The findings of this study show that metacognitive reflection on learning found in personal literacy autobiographies was not as deep as the content found in the semester-long assignments. Even though the writers recollected their literacy experiences and reflected upon them, their recollections tended to cover mostly early literacy experiences in reading, writing or language learning; these tended not to lead to evaluation or reflection, and were rather left as simple narratives by the writers.

Implications/suggestions. One suggestion here is that literacy autobiographies may be more useful if paired with re-thinking and revision activities, as it was suggested by a graduate faculty instructor I spoke with informally, who assigned literacy autobiographies to a graduate class, and found that new perspectives emerged from the exercise, but only after several forms of re-telling and pair or group discussion:

When I asked for literacy autobiographies, I got pretty general stories of the type I think you may have seen. But when people did two and three re-thinkings about their experience, they realized that there were insights to be found that did not just jump out at them in the first writing (Dr. Jeannine Fontaine, personal communication).

Short Journal Entries

Discussion. The results obtained from the data showed that short journal entries which did not specifically ask for detailed analysis and/or reflection were seen by many participants in a negative light as boring and monotonous. These participants questioned the worthwhileness of writing these journals, even though those short journal entries might have been a necessary tool for starting off the process of developing the habit of metacognitive thinking at the earlier stages of these participants' graduate studies. Several issues actually converge here: journals assigned throughout a semester in the earlier stages of graduate coursework, or ones that asked only for general reflection, might have been resisted by the participants due to their lack of experience or educational or cultural backgrounds.

Implications/suggestions. One suggestion would be to offer alternatives to the students when they are at the initial stages of learning about journal writing. For

instance, students might be given a choice to either write journal entries with clear specific requirements or complete other (possibly guided) assignments developed by the instructor aimed at metacognition.

Teaching Philosophies and Reflective Letters for Qualifying Portfolios

All participants involved in this study were doctoral students who submitted qualifying portfolios as a requirement for their doctoral degrees. In this connection, it is interesting to note that only two of them considered statements of Teaching Philosophy and the Qualifying Portfolio Letter especially “reflective.” One participant (Mikhail) who provided a QP letter as writing which he considered reflective, stated that that his letter was about his studies and progress in the program and future goals, which according to him were constituents of reflection. This statement clearly upholds the research on reflection (Boud, et al., 1985; Belanoff, 2001; Yancey, 1998) in that reflection involves analyzing progress and making plans for future.

Structure of Reflective Assignments and the Need for Scaffolding

Discussion

There is little research on how reflective assignments should be structured, especially at the graduate level, and how these assignments might be effectively set up. However, it was clear that at least some of the participants expected more guidance and direction from their graduate instructors about the content and organization of reflective pieces, especially at the start of their program of study.

The data obtained from the interviews showed that the participants repeatedly talked about what the professors wanted or expected. Many participants voiced the need

for more structured and specific guidelines in reflective assignments because they were never sure what was expected of them in reflection by their graduate instructors.

This study suggested that much of what teachers tell students about writing a reflection at the initial stages is vague and confusing (personal interviews, background study). Many participants reported that most teachers do not provide students with detailed explanations that would help them work on making connections about what they are learning.

Four of this study's participants and two faculty members directly pointed to the value of scaffolding for teaching students reflective and metacognitive skills. Professor N, for example, recognized the fact that the teachers "can just assume that those students who are inherently better at metacognition will perform better every time without guidance or suggestion on clarity," but that there is "some value in working with and scaffolding and helping those who aren't brilliant at metacognition to do better."

Another faculty member (Professor R) voiced an observation that it is important not to frame the reflective task in terms such as "here is a list of ten questions," so that the students just answer those ten questions and do not diverge from that and "then that's what you get." However, professor R did not elaborate further on how the instructor should elaborate so as to prompt students to produce a more genuine, deeper reflection.

One advanced graduate student (Boris), who had recently finished graduate coursework and had a first-hand experience with reflective assignments, also pointed out the value of scaffolding in order for the students to avoid the initial shock and confusion when they receive reflective assignments. Boris spoke as an instructor and compared his own experiences with reflective tasks with his students':

I found that students need a lot of scaffolding. Once I started doing this [writing reflective pieces], the insights that I gained were really motivating. And I found that students generally experience the same thing: they are a bit shocked about the whole process, but then they love being able to (if you can get them over that chaos) - they love doing this, they love the opportunity to engage in this kind of assignment. To me as a teacher, it is crucial, I need to address that initial reaction, that “Oh, my god, what is this assignment?” because if they are too overwhelmed by it, or too shocked by it, they might never be able to feel positive about it.

Implications/Suggestions

Teachers should provide the kinds of knowledge that underlines expert behavior with reflective assignments, which is necessary for the students in order to be aware and not guess or assume what is expected of them. Students need to know about the existence of relevant strategies for reflection and how to monitor and regulate their learning strategies at all levels. Specific classroom strategies might include the provision of a sample reflection; or in the “ten questions” situation, teachers might show how the responses to the questions can be woven into a coherent account of some learning activity. Small-group discussions on how to go about a given reflection might also help students feel more comfortable with unfamiliar reflective assignments.

Influence of Education

Discussion

The participants offered many testimonies about ways in which they learned that were based on formal education, but not on formal 'reflective writing' assignments. For example, many participants cited graduate education in general, or features of graduate education such as graduate coursework, group work and discussion; exposure to different graduate faculty and their methods of teaching and points of view; going to and presenting at professional conferences and learning how to use technology for professional teaching. They felt that these greatly contributed to the development of certain qualities which they worked to develop during their graduate study: for example, such qualities as open-mindedness, acceptance, appreciation and more positive attitudes towards the opinions and points of view of others. As one participant (Mikhail) noted in the interview:

On the personal base, I think I am more willing to consider everything as opposed to having a narrow vision of things, not just what I am angry about or what I dislike, may be putting myself into someone else's shoes more than I did twenty years ago.

Another participant (Ibrahim) echoed Mikhail when asked how education changed him in relation to matters like learning and thinking:

It [education] made me more open minded. I used to have a polarized sort of feel to myself, I still have but I never understood how things could be interpreted in millions of ways. I know that certain things can be interpreted in different ways but I sort of came to reality with it, I have seen it, I have done it myself, it made

me open-minded, if I want to boil it down to one word. It contributed to my professional identity.

Implications/Suggestions

In this section, specific suggestions for action are not relevant. However, it is good for educators to keep in mind the fluid boundary between metacognition and learning activities in general. Students may be changing and re-evaluating their experiences even when they are engaged in a class or program that involves relatively minimal explicit reflective work. It is also good to evaluate our views on the relationship between explicit reflective assignments and the learning process generally—in other words, to be open to different ways in which explicit reflective work can aid and support the educational process more generally.

Benefits of Metacognition

The results of this study are consistent with the published research and literature on the benefits of reflection and metacognition for successful learning (Boud et al. 1985; Brown, 1987; Brunning, Schraw, Norby, Ronning, 2003; Candy, Harri-Augstein, & Thomas, 1985; Clayton, 2009; Cornford, 2002; Costa, 1991; Dewey, 1998; Dunlosky, Metcalfe, 2008; Ferry & Ross-Gordon, 1998; Gregg & Steinberg, 1980; etc.).

All participants recognized the value and benefits of metacognition when they talked specifically about how they used or adjusted their metacognitive strategies, and about how they learned to be aware of using, controlling, and adjusting those strategies. For example, they described how the ways they previously handled the information worked or didn't work for them; they spoke about learning and applying particularly useful reading strategies, learning to prioritize the most important information and

learning where it best fits in. Most importantly, as the document analysis showed, the participants were able to verbalize, rethink, reevaluate, analyze, reflect and metaprocess in reflective assignments in ways they felt they would not have been able to do otherwise.

As one participant (Boris) put it:

I think more in terms of levels of cognition now. I approach things like theory differently now because I am thinking in terms of what do I need to be able to do with this: am I reading for fun, is this a book that going to be something crucial for the project I am working on and the way I attack this material has to be completely different. So, yes, I would say, the ways that I approach information have changed dramatically. What I attribute as a cause to this is probably, I guess it is metacognitive, it is thinking in terms of objectives, learning objectives. What kind of knowledge is this? What is my objective?

The results of this study showed no signs of the concern expressed by Bolton (2001), i.e. that “reflective practice can be hindered by too much self-consciousness and self-awareness.” Since I did not try to explore this idea specifically, this might be a subject for future research.

Emotions and Cognition in Reflection

Discussion

The results of the study uphold the published research on how cognition and emotions trigger and facilitate learning, and how human brain systems mediate through these complex processes (Boud et. al, 1985; Gray, 1990; Pessoa, 2009; Sweeny, 2009; etc.). However, there is very little research linking emotions and cognition to reflection.

The results of this study showed that emotional reactions to personal experiences often accompanied participants' narratives and were powerful triggers fostering reflective process. Neurobiological research (Damasio, 2000; Goleman, 2006; Gray, 1990), strongly suggests that the brain systems which mediate emotion overlap with those that mediate cognition to such a degree that it is difficult, if not impossible, to maintain any clear distinction between them. Thus, cognitive science is affirming that much of cognition involves emotion. It is true that the really personal does play a role, given the results from this study.

Implications/Suggestions

The suggestion arising from this result is quite straightforward: instructors should encourage students to describe their emotions in reflection, as emotions might trigger thinking and produce unexpected spontaneous results. Students may still approach learning with the idea, prevalent through some centuries, that cognition, thinking and learning are separate from emotion, and they may feel that emotional expressions have no place in their learning. Of course, researchers do realize that strong emotion can be a hindrance to learning; but students need to realize that personal involvement with their learning is often a spur to successful learning, not an impediment.

Even though the topic of emotion is beyond the focus of the present study, it has powerful implications for successful classroom implementation of reflective assignments aimed at metacognition.

Forms of Emotional Reflection

Discussion

Worry

The results of this study showed that one of the forms that reflection might take is a form of worry or worrying. This finding adds to the research on metacognitive behavior (Wells, 2008). For example, one of the participants (Anna), when she was referring to her dissertation, specifically mentioned ‘worrying’ as a major feature of her reflection. And according to research on metacognition (Wells, 2008), ‘worrying’ is one of the forms of coping with stress which triggers human cognition. According to Wells,

Worry is a slow conceptual process involving the contemplation of relatively novel future events and ways of coping with them. It is readily modified by feedback from internal or external sources. The conscious strategic nature of worry should mean that it is amenable to high levels of volitional control even if awareness of such control is low or nonexistent. However, it is important to distinguish between intrusive thoughts that might be more automatic and involuntary and act as triggers for worry and the sustained conceptual nature of worrying itself, which represents response to such intrusions (p. 92).

Wells shows that much psychological distress results from how a person responds to negative thoughts and beliefs—for example, by ruminating or worrying—rather than from the content of those thoughts. He presents innovative, practical techniques and specific protocols for addressing metacognitive processes of a positive and negative nature.

Implications/Suggestions

The far ranging implication here, requiring further research, is that it may be possible to train learners to re-channel worry energy into productive planning. If student worries can be acknowledged openly and welcomed in the learning situation, students can feel more comfortable using these worries as a springboard to positive change.

Subconscious Reflection

Discussion. The study participants clearly indicated that they reflected not only in writing and not just in the academic context, but in other situations not requiring deliberate reflection or concentration. For example, when they were driving a car, listening to the radio or music, washing the dishes or were reading or walking. The fact that metacognitive insights come in unguarded moments is important. It shows that there is potentially already an unconscious process going on, and that efforts to nurture conscious reflection may be able to draw on that process. The literature cites famous cases of writers and scientists who report coming up with solutions even in sleep (Sweeny, 2009).

Implications/Suggestions. The suggestion here is that formal assignments might help spur spontaneous reflection, though I have no direct evidence to support this link, and only further research might illuminate this question. On a simpler note, again, educators may want to acknowledge the stories of famous insights that have occurred in unguarded moments, and may, in advising their students, acknowledge the potential value of taking a long walk, or even abandoning a problematic project for a time, as a way to arrive at new insights.

Developing the Habit of Reflection

This study confirmed two related ideas about nurturing reflective learners: that before teachers can effectively aim for the goal of empowering students through reflective activities, they must aim to develop the habit of reflection themselves; and that it takes considerable time to move from focus on “knowledge telling” (cognitive functions) to “knowledge transforming” (metacognitive functions) in the brain. Kellogg (2008), terms this maturation a “developing expertise” which on average, lasts for a period of ten years as the brain matures. While the issue of neurological development is not at stake here, this idea can serve as a metaphor for the development of metacognitive skills at any level.

Some participants talked about being “forced” to reflect, especially when they talked about reflective journals. I believe that to develop a habit of reflection, even if students do seem to resent reflective assignments, they should still be asked to do them, because participants acknowledged that they learned from reflective assignments even when they did not enjoy them. In graduate school, students’ minds are trained to develop metacognitive thinking skills through reflection which some resist in the beginning but benefit from later.

Conclusion

The complex process of metacognitive reflection is aimed at engaging learners' minds in thinking about their learning. Thinking about learning calls on learners' memory about specific experiences. Recollection of those experiences triggers learners' feelings, emotions, beliefs and attitudes associated with those specific experiences. This complex chain of cognitive operations forces learners to reconceptualize their values, reassess and reevaluate previous beliefs and attitudes and to readjust their strategies towards learning. And this is exactly what learners do metacognitively in reflective assignments aimed at metacognition - they unpack and question their previous assumptions about certain experiences, transform their understanding of their previous beliefs, attitudes or practices and become aware of certain learning strategies which help them learn read and write.

An overarching observation which emerged and ran through this study was that by articulating their beliefs, attitudes, problems, difficulties, concerns, by questioning their beliefs and raising questions; through narrating, analyzing and reflecting upon their learning experiences, I could see how this study's participants were becoming teachers and professional educators.

Another observation which this study shed light upon was that with the help of reflective assignments, and if teachers prompt for certain topics specifically, if they deliberately focus the writers on the exploration of, for example, such themes as identity, authority, positive and negative experiences, emotions or the influence of education, reflection can take many different kinds and lead to very unexpected and surprising results.

In the context of metacognitive reflection on learning I have adopted several of the views, some of which are particularly relevant to the current study: insights offered by Dewey, Polanyi, Bruner and Flavell about rethinking and reconceptualizing experience; Schon's idea of 'reflective practicum'; Yancey's views on reflection as a habit of mind, one that transforms; Boud et al.'s theoretical framework and division of reflection into three stages, which has been particularly useful for analyzing the data; Clandinin and Connelly's approach to narrative inquiry as new research methodology for studying human experience; and Livingston's view of metacognitive reflection as a specific approach to enable learners to examine their own learning and uncover their own assumptions about what they are doing as means to identify and question their own strategies.

Reflection on the Research Process

Given the topic of this research, it seems only natural to end with my own statement reflecting on my experience in researching and writing about this complex topic. My journey through time and experience working with the complex intertwined nature of reflective and metacognitive concepts, and working with research methodology, has not been an easy one. I have learned a great deal about metacognitive reflection and how it leads to the construction of individual meaning. I have learned the value of metacognition for teaching and learning, and I now can't imagine my future professional life without thinking about ways to implement reflective assignments aimed at metacognition.

I learned that reflection and reflective assignments are aimed at the development of cognitive/metacognitive skills which are necessary and important for successful

learning. I also learned that the processes associated with metacognitive activities include planning, monitoring, and the use of strategies. I learned that reflective assignments promote self-organized learning, even though it can be extraordinarily difficult to identify what one is learning when engaged in a learning task, or at a time quite close to the original learning activity. I learned that developing the habit of reflection takes time and training. I have also learned that the outcomes of reflection depend on one's teaching and/or learning experience, as well as on motivation and one's degree of willingness to share personal information.

On a more practical level involving the daily 'feel' of doing a study of this sort, I experienced every step of the qualitative research process. It is one thing to read about qualitative research or to compose a plan to follow, but a very different matter to go through it, to live with it as a daily reality.

Of course, there were many difficult moments. For instance, I learned to handle the initial shock and frustration of not knowing how to put structure on the data which I collected through interviews and written documents and how to organize, hear and understand verbal and visual data so that it answered the goals and purposes of my research and created meaning.

I also underwent many positive (but unexpected) changes in my own life style while being absorbed by the themes in this study. For instance, I learned to take notes on occasional pieces of paper while listening to radio programs in the car about issues which I could relate to my research. I would be listening to a radio talk about human emotions, and suddenly I would find myself making connections in my head; these connections would in turn trigger thoughts which I would later incorporate into the discussion of my

dissertation research. Some conscious decisions flowed as well from this research: in the year of 2005, I became a member of the International Association for Metacognition (IAM). The International Association for Metacognition (IAM) is a research society devoted to disseminating research on metacognition in different disciplines.

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APPENDICES

Appendix A: Interview Questions

Opening: In order to make the participants feel comfortable and at ease during the interview, I provided them with certain pertinent information such as the background for the study, the goals, ensured anonymity and explained what will and will not be done with the data obtained. Prior to the interview, I gave a brief survey to the participants:

1. What is your name and age?
2. What country are you from (where relevant)?
3. How long have you been in this graduate program?
4. Which of the following have you written?
 - Specific reflections on your learning process in writing
 - Specific reflections on your writing strategies
 - Reflections to individual papers written for a class during the semester
 - Reflections to individual or group projects
 - Reflective journals
 - Cover letters to portfolios
 - Other kinds of reflective writing assignments (specify)

A: Experiences with assignments:

1. What do you think of, when you hear the term, 'reflection', 'reflective assignment', 'reflective writing'?
2. What experiences have you ever had with reflective assignments and where (example: throughout high school, etc.)?

- a) How was reflection taught to you? What forms of reflective assignments did you experience most often?
3. How were reflective assignments explained to you by the teachers who required reflection (only briefly in the syllabus, explicitly in class, no specific explanation was provided, else)?
4. What kinds of reflective assignments did you have as a student in this program?
5. How have you ever reflected on your own learning?
6. How, in what ways do you think you might reflect? Can you elaborate more on your experiences here in ways that you don't do now?
7. What kind(s) of activities/assignments can you call reflective?
8. Can you tell me what were the requirements for the assignments you call reflective?
9. How specific were they?
10. What do you see as a purpose of reflective assignments?
11. What have you done when you thought you were being asked to reflect?
12. Talking about specific assignments you have done, were you trying to discern what the teacher wanted on the one hand, or trying to satisfy goals of your own. Do you think the instructor's goals and your own were compatible— try to establish what each of those two were.
13. How did you feel about these assignments?
14. Were there times when you felt confused about how to reflect? If so, when did that happen? Which topics or experiences led to feelings of intimidation, confusion, etc?

15. What specific difficulties do you/ did you have with reflective assignments in academia? That is, what problems can you list in understanding what is expected of you when you are asked to respond to a 'reflective' assignment?
16. What specific benefits do you see in reflective assignments in academia, that is, what use do you see in a 'reflective' assignment?
17. Have you ever had any kind of training in developing reflective/metacognitive skills? Where? Could you give me more details (depending on the answer)?
18. How do you perceive of metacognitive component being useful?
19. What parts of reflective assignments do you think belong to metacognitive area?
20. How do you think reflective and metacognitive assignments might change what you will do in your professional life in the future?
21. Do you personally consider reflective assignments helpful or unnecessary? Why?
22. *Start guiding the subjects towards metacognition:* Have you ever had an assignment about your own strategies, about how you write or read, how you learned in a particular course, and what you learned in a particular course? Can you describe such assignments?
23. In what ways did the awareness of your own learning strategies help you to learn, read, and write?
24. Anything else you would like to add?

Part B: Metacognition other than writing:

1. Have you changed the ways you yourself go about learning, handling information, and if so what do you attribute as a cause to that?
2. How have you been aware that you were able to adjust your strategies to read and write? Ex. Remembering new ways to read the passages.

3. How do you think education changed you in relation to things like these?
4. Do you think you have changed the way you go about reading and writing and if so, why?
5. Can you elaborate on what happens during reflective process, can you think of a particular example, etc?
6. When a certain realization came to you during one reflective activity, did it carry over to others? Do you have any way to speculate on why that might have happened?
7. How much and in what ways do you think about your learning processes, about yourself as a learner, about the ways you develop ideas best, etc?

Part C: Teaching practice:

1. What kinds of reflective assignments do you assign to your students?
2. Can you tell me what you see as a purpose of the reflective assignment(s) you assign to your students?
3. What levels of students do you teach (American/ESL?)
4. How well do they perform on reflective tasks? How do they respond?
5. Can you name any culture-specific factors influencing your students' reflective habits?
 - a) What cultural factors, according to you, inhibit or promote your experiences with reflective assignments?
6. What can you tell me about teaching metacognitive/reflective skills in writing or in general?

Appendix B: Questions for Faculty Interviews

1. What types of reflective assignments do you use?
2. Could you describe one or several reflective assignments that you give to your students: what do you yourself see as their goal(s), how do you explain their purpose to your students? What do you want your students to accomplish in these assignments?
3. Do reflections produced by your students meet your requirements?
4. What do you see as major benefits with reflective assignments?
5. What do you see as major problems/difficulties with reflective assignments?

Appendix C: Questions for Focus Group Interview

(Introductory note to the group.) The purpose of this group discussion is to share your ideas, opinions, suggestions and feedback about academic reflective writing assignments. Please feel free to express and share any thoughts, observations and experiences about reflective writing assignments that you have. Your honest feedback as a student is very important for creating a good informative account of reflective writing for both students and teachers. The atmosphere is friendly and nonjudgmental, everyone's opinions are welcomed!

- a. How can you define reflection and what assignments do you think can be called reflective? What comes to your mind first when you think about reflective assignments in academia?
- b. Have you ever had a reflective assignment? Please describe.
- c. When and where have you experienced reflective assignments (in high school, at the university)? Was the purpose of reflection clear to you?
- d. Did the teachers explain you the purpose of reflective assignments, did they teach you how to reflect (for instance, did you have a list of guiding questions, any verbal explanations or were you taught any metacognitive skills/strategies on how to reflect?)
- e. Share your experiences with reflective assignments: was it intimidating, enjoyable, clear/unclear, etc?
- f. Were reflective assignments helpful to you as a writer? Did it help you to develop certain points or arguments of your paper?
- g. What were the most enjoyable moments in your reflection and what kind of reflective assignment was it (a paper, a group project, a cover letter to portfolio, etc.)?

- h. What were the most difficult or confusing moments in your reflective response and what kind of reflective assignment was it (a paper, a group project, a cover letter to portfolio, etc.)?
- i. What would you like to know about reflective assignments? In other words, are any issues you would like to be explained to you, if there are, what are these issues?
- j. How do you think cultural and educational background could have influenced your experiences with reflective assignments?
- k. Can you name any positive points associated with reflective assignments which helped you to develop your learning skills?
- l. Can you name any problems or concerns with reflective assignments?
- m. How early do you think reflective skills should be taught to the students? Should they be taught at all?
- n. Is there anything else you want to add about reflective assignments?

Appendix D: Student Questionnaire from Background Pilot Study

Write a personal reflection for your conference paper in the form of an informal narrative. This narrative should be about processes that helped you begin and then build your conference paper, about how you yourself would evaluate it, and about what changes you would make. Below are some guiding questions which will help you in your reflection process. Please pay special attention to and answer questions 13 and 14. Describe the process of writing your conference paper. What did you do first? What did you do next?

1. What helped you to formulate your thesis and narrow down the topic? In other words, what contributed to your final preference of the chosen issue you wrote about (a book, article, discussion, peer's feedback, professors' feedback, etc.)?
2. Who/what was the most helpful to you in writing this paper? How were they helpful?
3. What was the most difficult part of writing your paper? Why?
4. What was the most pleasurable or interesting in the process of writing your conference paper?
5. Was the choice of your topic conditioned by your cultural background, your hobby, occupation, sport activity, etc?
6. How did your cultural and educational background affect writing of your conference paper? (e.g., did you use your personal opinion when your used research or did you cite others without personal reference?)
7. What is the strongest part of your paper? Why is it strong?

8. What is the weakest part? Why is this part weak?
9. What do you most want your readers to pay attention to as they read your paper?
10. What kind of feedback would you like on this paper? Do you have any questions that you would want to ask after you submit the paper? What are they?
11. If you could work on your paper again (say next week), what changes would you make to revise it? How would you improve your observations, ideas or organization? (e.g. expand or clarify certain parts). Why?
12. Did this reflection help you in any way to critically look at your work, what did you personally learn from your research? What did you learn as a writer in the process of writing this paper: was writing a proposal helpful to you in organizing your way of thinking, did your peers' comments help you or inhibit your writing?
13. How can you define reflective writing and what kinds of reflective writing assignments did you have? (in high school, in college, in what particular course?)

Appendix E: Recruiting Message to English Graduate Students (using EGO list-serve):

You are invited to participate in the research interview and focus group interview for the project called: “A Qualitative Study of Metacognitive Reflection: The Beliefs, Attitudes and Reflective Practices of Developing Professional Educators.”

The interviews will take approximately 90 minutes in the Stapleton Library on IUP campus. Free coffee and snacks is a reward for your participation!!!

If you are interested please contact me for details at 724 349 7730 or email to

xzjk@iup.edu

Liliya S. Bormotova

PhD Candidate in Composition & TESOL

English Department

Indiana University of Pennsylvania

Appendix F: Informed Consent Form

Title: “A Qualitative Study of Metacognitive Reflection: The Beliefs, Attitudes and Reflective Practices of Developing Professional Educators”

You are invited to participate in this research study. The following information is provided in order to help you to make an informed decision whether or not to participate. If you have any questions please do not hesitate to ask.

The purpose of this study is 1) to create a good and informative account about US and ESL students’ perceptions and experiences with reflective writing; 2) to contribute to the current body of knowledge in the field of composition and TESOL and to form better and more informative literate practices for composition teachers using reflective writing.

Participation in this study will involve: one individual interview, one focus group interview and possible follow-up questions after the interview by phone or e-mail. Each interview will be no longer than 90 minutes. I will be asking for copies of your academic reflective writing of your choosing that represent your practices and experiences with reflective writing. There are no known risks or discomforts associated with this research.

You may find the interview experience enjoyable and the information may be helpful to you when you have a reflective writing assignment. The information gained from this study will help me to better understand the effectiveness of reflective writing as a teaching writing technique. You will have a documented narrative of your interview, or a documented account of your part of the discussion in the focus group interview.

Your participation in this study is voluntary. You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigator or IUP. If you choose to participate, you may withdraw

at any time by notifying the Project Director, Dr. Jeannine Fontaine, or me. Upon your request to withdraw, all information pertaining to you will be destroyed. If you choose to participate, all information will be held in strict confidence and will have no bearing on your academic standing or services you receive from the University. The information obtained in the study may be published in professional journals or presented at professional meetings and conferences but your identity will be kept strictly confidential.

If you are willing to participate in this study, please sign the statement below.

Researcher: Liliya S. Bormotova, PhD Candidate, Indiana University of Pennsylvania
English Department, Leonard Hall

335 Locust Street

Indiana, PA 15701

724 – 349 – 7730

E-mail: xzjk@iup.edu

Project Director: Dr. Jeannine M. Fontaine

334 Sutton Hall

Indiana University of Pennsylvania

Indiana, PA 15701

724 – 357 – 2457

E-mail: jfontain@iup.edu

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (phone: 724-357-7730)

Appendix G: Voluntary Consent Form

I have read and understand the information on the form and I consent to volunteer to be a subject in this study. I understand that my responses are completely confidential and that I have the right to withdraw at any time. I have received an unsigned copy of this informed Consent Form to keep in my possession.

Name (PLEASE PRINT) _____

Signature: _____

Date: _____

Phone where you can be reached: _____

E-mail: _____

Best days and times to reach you: _____

I certify that I have explained to the above individual the nature and purpose, the potential benefits, and possible risks associates with participating in this research study, have answered any questions that have been raised, and have witnessed the above signature.

Date: _____

Investigator's signature: _____