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Pathways to Reflection: Exploring the Reflective Analytical Practices of Novice Teachers

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PATHWAYS TO REFLECTION:
EXPLORING THE REFLECTIVE ANALYTICAL PRACTICES
OF NOVICE TEACHERS

by

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A DISSERTATION

Presented to the Faculty of
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This mixed methods study explores reflective analytical practices of novice teachers who taught in a University Reading Clinic just prior to student teaching. Novices’ reflective practices are compared to reflective practices of experienced teachers in a pilot study in the same setting. A theoretical model of novices’ reflective analytical practices is developed and tested. Twenty-three novices wrote structured reflection notes after each week of teaching. Theoretical coding identified six themes: Descriptive Level, Confidence, Locus of Control, Adaptations, Discourse, and Transfer. Graduated scoring and repeated measures ANOVA explored trends, correlations, and effects among themes. Descriptive Level and Locus of Control were unchanged over time in the Reading Clinic. Confidence followed a significant positive linear trend. Adaptations, Discourse, and Transfer followed significant quadratic trends, rising through mid-term then leveling off. Significant correlations were found between Descriptive Level-Discourse, Locus of Control-Discourse, Locus of Control-Adaptations, and Discourse-Adaptation Slope. Significant effects were found between Descriptive Level-Discourse, Discourse-Locus of Control, Locus of Control-Adaptations, and Confidence-Adaptations. When compared to experienced teachers in the pilot novices relied more heavily on discourse, with a nearly
significant effect (p<.051) on personal Locus of Control for teaching outcomes; and exhibited different trends in Confidence over the teaching term. Experienced teachers documented significant connections between Adaptations to lessons and observed Transfer to student. For novices, Locus of Control and Confidence had significant effects on Adaptations to lessons, but there was no significant correlation or effect on Transfer to student. Significant novice effects between Discourse-Locus of Control and the fact that Discourse on problems and dilemmas was the most frequent axial code indicate that Discourse around teaching should be carefully scaffolded and developed during teacher preparation. Confidence also needs to be observed and developed over time, so that novices become aware that teaching practice will have times of both high and low confidence. The ability to use the disequilibria that accompanies lowered confidence as an initiator for transformative growth and practice change is a hallmark of accomplished teachers.
Dedication

This work is dedicated to my husband and my children, as are all of my efforts both large and small. Their patience, support, and belief in me are gifts beyond measure. One of my goals in life is to demonstrate for my children that there is no obstacle, real or perceived, that cannot be surmounted with persistence, passion, and love. But it occurs to me that Joel, Carson, and Claire already know this, and that I am the one who is just learning this lesson.
Acknowledgements

I am profoundly grateful to the teachers who agreed to allow me this window into their teaching practices. As I analyzed the reflective notes that make up the body of this work I was reminded again and again of the fortitude, energy, and passion that teachers both experienced and novice bring to the profession of teaching. The ability to put ego aside in order to search for the right combination of curriculum and innovative presentation is something that not all individuals in this world possess. But the novice teachers of this study demonstrated this ability again and again. In this time of scrutiny and revision of the public education process in our country the words and deeds of these novice teachers give me great hope for the future.

I owe a great debt of gratitude to my friend and adviser, Dr. Guy Trainin, who spent countless hours helping me shape and refine my ideas and beliefs about teacher preparation so that this project could emerge as the worthwhile analysis that it has become. My doctoral program has been rich and varied in research, learning, and service opportunities and this is due to Dr. Trainin’s generosity and large reserves of patience. I have appreciated the many times he has challenged me and the times he has stood aside and let me shine.

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Chapter One

Purpose, Background
**Introduction**

Expert teachers balance knowledge of content with pedagogy for teaching in order to guide their students to academic success. But for decades, teaching has been viewed and organized as an activity that does not require sustained learning and growth for adequate performance. (Ball, Cohen, 1999) We do a disservice to all teachers, especially novice teachers just beginning their professional careers, when we provide frameworks that imply that teaching is static and unchanging, with a finite set of skills to be mastered. In reality the professional lives of teachers are often quite the opposite. Most teaching professionals find a typical day “fraught with surprises” (Shulman, 1999, p. xiii).

To engage successfully with these daily surprises and the fluid demands of teaching so that student learning remains paramount, teachers must develop strategies for reflective practice: the analysis of their teaching interactions, questioning, and thoughtful adaptation of teaching methods. Teachers who can do this with automaticity so that it becomes a regular part of their teaching practice are enacting a reflexive practice: one in which they combine analysis with action in practice.

**Focus of this Study**

This study analyzes the reflective practices of novice teachers in a structured reading clinic setting. It also explores connected themes within these reflections. This analysis will advance the field of teaching by making transparent the intensive processes involved in teaching for a novice, and the ways novice teachers engage with the continual decision-making in teaching interactions that Shulman (1986) likens to the activity of physicians: on-the-spot, in the moment; a continuous stream of necessary decisions.
Data sources for this study are novice teachers’ written reflective responses to teaching a student in a University-based diagnostic reading clinic. The written reflective responses, which are submitted after each week of teaching, provide a window into the combination of pedagogy, content knowledge, and reflection that novices enact during and after instruction to analyze teaching interactions and plan next instructional steps.

In a pilot study described in Chapter Three, (Hayden, Pasman, Trainin, 2009) I analyzed the written reflective responses from experienced teachers in the same reading clinic. That analysis provided a model that describes the decision-making themes and correlated experiences teachers reflected on as they taught struggling readers. Correlated themes that emerge from the analysis of the structured reflections of novices will be compared to the model that emerged for the experienced teachers.

Describing a model that is sensitive to the way novices reflect could provide a framework for helping novices develop the reflective practices that are the mark of a teaching professional. Such a framework could provide teacher educators with insights into methods for enhancing and analyzing the reflective practices of novices. Use of such a framework in teacher education programs could prepare novices to enter the teaching field as learners, ready to engage with the reflective practices and pedagogical strategies necessary to making thoughtful adaptations that lead their students to mastery of content knowledge. Practices such as these are hallmarks of the teaching professional.

The Teaching Professional

**Grounded by content standards.**

In the changeable conditions of teaching (Shulman, 1999, p. xiii) clear content standards provide the guidance and framework for thoughtful, grounded instructional
action. Best practice standards stem from the active expansion of the research base in education and the need to transform this base into pragmatic classroom applications. As such, they are usually broadly stated and subject to revision with the introduction of new research. The ability of teachers to work within this active and dynamic knowledge base, grounded in current theory and practice while analyzing and assimilating new practices that emerge from the research is one hallmark of a teaching professional.

**Expert in pedagogy.**

There are daily challenges to teaching practice, some within the classroom and some from outside of it. Each classroom and teaching interaction has its own character. The students present a seemingly unending variety of skills, knowledge, and motivations. Environmental challenges from outside the classroom such as administrator changes or issues of building climate demand energy. Continual introduction of new instructional techniques or materials to meet curriculum adoptions or state and federal requirements make skill acquisition and strategy implementation an ongoing event. Teachers must be adept at pedagogy: mastery and flexible application of a varied set of instructional techniques, in order to manage these challenges so that student learning remains paramount and uninterrupted.

**Reflective in practice.**

Although teaching is governed by content standards and guided by pedagogy, by its very human nature it cannot be controlled or defined by rules, steps, procedures, or even curriculum. No effective best-practice standard or research-supported technique can be guaranteed to work every time for all students. In short, teaching well means
constantly adjusting practice to fit the goals, the learner, and the context in which they interact.

Novices must develop the ability to cope with these changing, complex requirements and uncertain conditions in order to be effective teachers. To do this well, teachers must develop and enact practices that allow analysis and synthesis of teaching events. A teacher who is willing to examine the influence teaching actions and interactions have on student outcomes and who is willing to think critically on a regular basis about practice demonstrates reflective practices. These practices provide an avenue for systematic and intentional inquiry into one’s own teaching and learning, as well as the learning of students (Cochran-Smith, Lytle, 1993). Reflective practice is a hallmark of a professional who can act wisely, and can articulate or explain teaching decisions and actions (Shulman, 1999, p. xiii).

**Previous Research**

**Developmental stages.**

Ball and Cohen (1999, p.4) describe the archaic and simplistic views that still characterize teaching as a job, not a profession. These views depict teaching as just common sense: innate and instinctive. As a result there is no need for sustained learning and concurrently, no sequence of development in teacher expertise. Views such as these inhibit sustained growth, because they foresee no point for teacher development or growth as teachers are perceived to have “little professional capacity for learning and change” (Ball, Cohen, p. 5).

Contrary to lay views of teachers, Berliner (1986) described the sequence of development of teaching expertise. A teacher in the expert stage is able to function
seamlessly in the classroom—bringing experiences, reflective practice, and analysis
together to make and implement immediate decisions that usually work. This expert
teacher still processes the copious amounts of information that each day brings, but does
so in a way that appears effortless.

**Pedagogical content knowledge.**

Shulman (1986) describes the pedagogical content knowledge that the expert
teacher enacts in order to generate student learning. The pedagogical component, or the
science and method of teaching, includes skill in organizing, preparing, and presenting
plans; evaluating student progress; recognizing individual and cultural diversity; and
handling management, policy and procedure (p. 5). Expert application of pedagogy
creates an environment where successful teaching and learning can take place.
Concurrently, teachers must be highly knowledgeable in content; so much so that they
can do more than organize and present material. The expert teacher must be able to make
content transparent by asking questions that spur students to talk or write about what they
know.

**Reflective practice.**

Dewey (1916/1985) describes learning as active discovery. This is the basis for
thinking about teacher reflections. In active discovery, learning is made explicit through
talking and writing about ideas, interacting with them in the process of actively struggling
to solve a problem. A teacher who does this is reflective; contrasting sharply with
“normative” teachers who view their role merely as “impacting information” (English,
2008, p.3). To be an expert teacher, highly knowledgeable about content and able to
make it accessible for students, teachers must be thoughtful and artful at posing questions
that direct students’ attention to the essential parts of content most important for building knowledge. Teachers must be able to self-question before they can develop strategies for posing these kinds of thought provoking questions to their students. Teachers’ self-questions should take many forms, focusing on:

- teaching methods used, and their potential for successful student learning
- how to extend student learning
- when to seek more information on a particular teaching skill, strategy, or content area

Additionally, teachers must be reflective about the learners they are working with, and about the teaching practices they are using. Do the teaching practices fit the learner and the goal? (Bruner, 1985)

**Problems and dilemmas.**

The complexity of teaching can be usefully disentangled if we divide the challenges a teacher faces into problems and dilemmas (Cuban, 1995). Problems are routine, structured situations that produce conflict because a goal is blocked. Experienced teachers have routines for dealing with pedagogical problems of management and instruction, and thus can maintain their experience of flow when they encounter a problem. A primary task for novices is to develop these routines.

Dilemmas are much messier than problems, because they require teachers to choose among “competing highly prized values.” (Cuban, 1995, p. 6) Dilemmas are never solved automatically, as problems may be. Dilemmas interrupt teaching, and are the parts of the day that are carried home at night and worried over: the serious work of teaching. Dilemmas require reflection and agency: self questioning of methods and
success, fearless self-analysis of what needs to come next, and the belief in our ability to carry it out successfully.

Thinking reflectively and deeply about all the events in the teaching day would be exhausting and impractical. Experienced teachers can use the distinction between problems and dilemmas as a sorting mechanism for reflection, and will typically not need to reflect deeply on problems. These can be handled through procedures and management routines that can be mastered in the first few years of practice. Successful resolution of dilemmas will require reflection. Choosing which dilemmas to reflect on is an important element of reflective practice.

Novices, having had fewer opportunities to develop routines and procedures of their own for dealing with problems, may initially find the distinction between problems and dilemmas meaningless. All conflicts that arise during the teaching day must be reflected on and responded to in some way. This is one reason that the first years of teaching can be so difficult. Much of the reflective activity of novices may center on defining the problems that surface during the teaching day and developing solutions. As novices gain pre-service experience they may be able to respond to some problems more effectively than others, and may begin to reflect on dilemmas as well.

**Code Development**

To analyze the reflections of experienced teachers, codes were drawn from the literature base. Evidence of Shulman’s (1986) pedagogical content knowledge in the teacher’s reflections came from teachers’ descriptions and dialogue around content delivery and adaptation, and management of the daily tasks of teaching. These statements were coded as *Description* in the pilot study, and as *Descriptive Level* for this study.
Berliner’s (1986) descriptions of the expert as able to balance content knowledge and pedagogy successfully in order to negotiate the complex, problem solving that teachers must do led to codes for Confidence; for assigning responsibility or Locus of Control (to self, the student, or shared) and for Growth in using specific techniques.

Duffy and colleagues (2008) distinguished between reactive responses and thoughtful adaptations teachers make during teaching. Their work provided the basis for coding Adaptations to lesson plans, (during lessons or for subsequent lessons) for implementation of New Ideas, Asking Questions, and for Transfer of learning skills and strategies to the student.

**Purpose of This Study**

This study of novice teachers has two purposes. The first is to explore the reflective practices of novices. The second is to study the themes that emerge from that analysis in detail in order to support or refute a theoretical model for reflective practice that I have formulated based on my review of the literature and on the connected themes that emerged from the experienced teachers’ reflections that were analyzed in the pilot study.

**Definition of Terms**

novices: those just beginning their professional career in teaching. In this study they are pre-service teachers who are completing their last semester of courses prior to student teaching and will student teach in the following semester.

reflective practice: a willingness to regularly examine the influence one’s teaching actions and interactions have on student outcomes, and to think critically about one’s teaching practice. Reflective practices provide an avenue for systematic and intentional
inquiry into one’s own teaching and learning, as well as the learning of students. For this study, reflective practice is defined as self analysis and self questioning of one’s teaching methods to determine their success (or lack) when measured by student learning.

Reflective practice leads to thoughtful adaptation and change.

Critical incident: A teaching event or classroom event that signals to a teacher, in some way, that something has happened that requires deeper thought. A critical event does not stop the teaching, but it heightens a teacher’s awareness that something about the teaching needs to be changed or adjusted. It’s a moment of cognitive dissonance that a teacher will need to reflect on in order to move forward. The event leads to a pause in a teacher’s thinking about the teaching; this pause leads to deeper, more reflective thought; and in this way the critical incident can initiate transformative thought and change in practice.
Chapter Two

A Review of the Literature
Theoretical Frameworks

Laboratory Model Reflection

Dewey (1904) outlined two views of practical preparation for teaching: apprenticeship and laboratory. While these are opposite ends of the spectrum, many teacher education programs blend both. Apprenticeship encompasses teacher training in best practices and skills through the daily work of instruction. Laboratory models ask teacher educators to go beyond observed practices to provide real and vital experiences for novices. Ideally, teacher training provides both skill training for research-supported best practice, and activities that address the heart of teaching: the day-to-day, moment-to-moment analysis and decision-making teachers must engage in continually.

This research is situated in the laboratory model. While best practice, research supported skills are vital for successful teaching, the mindset of reflection is also vital. The analysis and decision-making that teachers must do to successfully meet the needs of students cannot come from an apprenticeship-only view of training. Reflective practice does not come easily to some people, but it is a crucial mindset that must be initially framed for teachers, modeled and reinforced by teacher educators, and then connected to student outcomes so that teachers see the value of developing reflective practice.

Novices, Experts

Good teachers are “improvisational and intuitive” (Ayers, 1986, p.17). No two learning situations are exactly alike; different students need different things from us. Expert teachers are those who have moved well beyond the rule conforming, rational, inflexible novice. Experts become fluid and flexible. They organize frameworks for viewing instruction, removing classroom “white noise” that obscures, so that the real
learning can be analyzed. Experts do things that usually work, and shift briefly into conscious reflective activity only when things go awry (Berliner, 1988).

The ability to improvise and do things that usually work requires deep understanding of theory, content, materials. Just as jazz musicians must know musical theory deeply, and intuitively understand the direction and structure of a piece to improvise in a meaningful way, teachers must know their content and teaching theory deeply before they can trust their intuition about what students need in a particular moment. When teachers have developed this informed intuition they can improvise meaningfully with the presentation of content so it becomes accessible to students in that moment. The jazz musician who doesn’t understand theory and the direction of a musical piece produces improvisational noise and disconnected notes, with little or no relationship to the spirit and direction of the music. The teacher who doesn’t possess a deep understanding of content and teaching theory can plan and implement many teaching activities that don’t result in success in measurable student learning of vital content. But deep understanding can develop from reflective practices.

Berliner (1988) defined novices and advanced beginners via years of experience and accomplishing necessary basic tasks. New teachers must apply the apprenticeship parts of their training to implement daily procedures for classroom management: planning and delivering instruction, collecting data, meeting with parents and colleagues. Advanced beginners have developed proficiency with these tasks, and have a bank of experiences that affect their teaching behaviors, but still have little sense of important features to focus on in their teaching day. Very little reflective questioning, responsibility, and thoughtful adaptation happens at these levels.


**Disequilibria and Reflection**

In 2004 Shulman and Shulman described an elegant model of the complexity in developing teacher expertise. It defined accomplished teachers as those who were ready, willing, able, and reflective (p. 259). In this circular model, vision, understanding, motivation, and practice interact with each other to influence teacher reflection; and the reflection influences a teacher’s vision, understanding, motivation and practice.

This research is primarily concerned with the influence of reflection on practice, but the Shulman and Shulman (2004) model provides entry into thinking about the disequilibria that accompanies reflectiveness. A teacher who is “ready, willing, able, and reflective” (p. 261) will be willing to live with a certain amount of cognitive disequilibria. This disequilibria challenges current ways of thinking. The reflection that develops from these challenges leads to teacher change. A teacher who is reflective on dilemmas of practice is willing to examine closely his/her methods and their varying levels of success, and is able to live with a certain amount of discomfort and temporary shaking of confidence while current teaching dilemmas are confronted.

Dewey’s views on pragmatism provide the basis for these notions of disequilibria and change. Reflective thought is a different type of thinking; one that involves “doubt, hesitation, perplexity, mental difficulty” Transformative thinking originates for this discomfiting state. (1933/1989, p. 121).

In teaching, we may encounter a problem of student learning or behavior that interrupts our teaching routine, and we are not happy with the discomfort this causes. English (2008) writes that this discomfort or disequilibria arises from interruptions to our old patterns of responding. This creates a negative space between old experiences that
don’t quite fit the present dilemma, and new experiences that could correct and transform our practices. When this happens “opportunities arise for reflectively exploring and experimenting with new ideas and new (practices).” (p. 5) We begin to try out solutions. Some may be things we have tried before. But sometimes, these incidents force us to think adaptively and try something new.

A student learning or behavior problem and a teacher’s reflective response to it can become a critical incident that forces transformative thought. The analysis of teacher reflections in this study will attempt to capture and examine some of these dilemma and disequilibria resolution behaviors.

**Professional Relationships and Strategic Processing**

Alexander and Fives (2000) note that each stage of teacher development is distinguished by the interchange of knowledge, motivation, and strategic processing. More experienced teachers have strategies they use to calm a classroom, manage transitions, incorporate new learning and research into their instructional repertoire, and adapt their instruction based on student feedback and performance. Less experienced teachers develop these strategies by engaging in self-assessment, establishing personal goals and objectives, having reasonable expectations of themselves, seeking mentoring, actively pursuing new knowledge, and being willing to challenge what they know when confronted with conflicting results. These activities describe the stance of the teacher who engages in reflective practice. In particular, a reflective teacher recognizes that he/she must develop a collaborative stance with other teachers and teacher educators in order to remain current on practice and also to assist in critical analysis of his/her
practice. This stance supports systematic and intentional inquiry into practice that can lead to transformative growth in practice.

**Critical Disequilibrium**

In the pilot study (Hayden, Pasman, Trainin, 2008) teachers with fewer than five years of experience had less of a drop in perceptions of self efficacy for teaching and more level perceptions of efficacy throughout teaching. They used their reflections to ask questions on techniques and implementation. Conversely, teachers with more experience asked self-questions and hypothesized about their student’s responses. They used the reflections to have a conversation with themselves, or self discourse: talking through challenges in teaching their student. By doing this, they often came to a new plan for action and further inquiry. They worked through the disequilibria that challenges current ways of thinking to transformative thought about their teaching practice. They were “ready, willing, able, and reflective” (Shulman, Shulman, 2004, p. 261).

Wunner (1993) describes professional disequilibrium for beginners as a time of coming to grips with “new tasks and a new culture of work” (p. 231). During this time, beginning teachers question their knowledge and techniques, seek new ideas and support, and reevaluate their experiences on a continual basis. Novices may have more difficulty moving into reflective practice than experienced teachers, because they will, of necessity, be more focused on task and skill acquisition. Experienced teachers may slip more easily into reflective thought and personal inquiry, while novices may ask more questions on skills. What is clear is that all teachers will experience disequilibria in the reading clinic experience. The kinds of inquiry that come from this disequilibria will provide an interesting point of comparison between novices and experienced teachers.
Chapter Three

Pilot Study, Research Questions
Purpose of Pilot Study

The pilot study was conducted in 2008. Its purpose was to investigate the development of reflective practices and thoughtful adaptations of teachers with different levels of experience, as described in the teachers’ written reflective responses to teaching. The analysis examined the disequilibria, reflective practices, and critical incident experiences of teachers within this teaching setting and explored connections and correlations among themes in their reflective responses.

Participants

Participants were thirteen graduate level teachers who were enrolled in a six hour graduate reading assessment, evaluation, and instruction course with teaching component in the summer 2007 term at the same Midwestern University reading clinic as the present study. The class took place over five weeks and had the same focus on developing reflective inquiry, theoretical frameworks, and critical views of reading assessment and instruction as the course that is the focus of this study. Teachers in the pilot study taught either two individual students or an individual student and a small group, four days a week for four weeks. Teaching experience levels ranged from zero to twenty years of experience teaching reading.

Data Sources

Data sources for the pilot were the written structured reflections of each teacher. Each teacher wrote two structured reflections per day: one for each of their individual or small group lessons, before planning for the next lessons. This resulted in a total of 182 reflections that were analyzed.
Structured reflection format.

The written structured reflections followed a format derived from the SOAP notes (Subjective, Objective, Assessment, Plan) used by physicians for problem-oriented medical record charting (Weed, 1983). The reflective SOAR notes include Subjective reporting of the day’s lessons, progress toward Objectives, Analysis of the lesson and student learning, and Reflection about the lesson, teaching, and learning that resulted. A shortened example of a SOAR note reflection follows:

Subjective: K. is so... easy to work with. She listens, is always attentive and gives her very best. She is just a DELIGHT! I began the lesson working on the spelling rule. On the Spelling Inventory, she spelled switch and left out the t. My metacognitive question was, “What is a strategy that a good reader uses when they come to a word they don't know?” She said they sound it out. She spelled switch just like it sounded.

Objective: 1) One of my goals for working with K. was practice spelling using complex consonants. Today we went over the tch spelling rule and I had her spell a list of 15 words ending in tch.

Analysis: I brought three books to class and wanted K. to select a book that she was interested in. She chose Bridge to Terabithia by Katherine Paterson. I need to make sure it is at a 6th grade level, so it [is] challenging enough for her. I need to include a check for fluency and prosody when she reads aloud.

Reflection: I just don't know how to incorporate spelling into my lesson. Maybe I could have her write a news article or a travel brochure using her
spelling words. I need suggestions on how to introduce and incorporate a spelling lesson for a sixth grader that is meaningful and lasting.

Analysis

**Qualitative analysis.**

Codes were established through a recursive process for theoretical coding (Strauss, Corbin, 1998). The data were examined for conceptual codes. Initial codes were established for teachers’ statements on *Growth* in use of strategies, *Responsibility*, *Transfer* of learning from participant to student, *Description* level, *Confidence* level, *Lesson Plan Changes*, and *Conversations* with professors or classmates around teaching events. Through recursive analysis it became apparent that what teachers were saying in their reflections could be organized into separate but related codes that addressed larger themes: *Reflective Level, Confidence, Locus of Control, Adaptations, Discourse, and Transfer to Student*. By returning to the theoretical literature to think more deeply about these themes, and revisiting the text of the teachers’ reflections, patterns of variation in property and dimension emerged for some themes. These were represented by axial codes.

**Quantitative analysis.**

In order to represent these variations in property and dimension in the axial codes within themes, levels were developed and assigned a value that could contribute to or subtract from the overall theme. This graduated scoring resulted in weighted scores for some axial codes within themes that could be measured and represented across the teaching term. In this way the development of reflective practice in these areas, as
captured by the structured reflection note format, could be charted over the course of the data collection period.

**Mixing of data.**

By using graduated scoring I assigned a quantitative variable to axial codes that emerged from the qualitative analysis. I was then able to explore correlations between themes. Thus, the quantitative data was embedded in and emerged from the qualitative data, and mixing occurred during the analysis. In this way I developed what Thomas (2003) calls a grounded typology: “a classification system that a researcher derives by means of analyzing collected information rather than by adopting someone else’s typology”. (p. 9)

**Confidence.**

For example, experienced teachers made statements indicating higher or lower perceptions of *Confidence*. A positive score was assigned to statements indicating higher levels, such as, “I am feeling good about my ability to make connections between reading and writing for the girls in this group”; or growing levels of confidence, such as, “I don't feel like we made a lot of progress today but now I know a little more about where my instruction needs to go”. A negative score was assigned to statements indicating lower levels of confidence, such as, “This made me feel that I wasn’t doing a very good job”. By combining these, a *Confidence* score per day could be recorded, and *Confidence* levels tracked across the data collection term.

*Confidence* became an important theme to measure in this way, because feelings of confidence impact the disequilibria teachers experienced (Shulman, Shulman, 2004). Across experience levels, feelings of disequilibria can contribute to transformative
change, and the disequilibria felt by teachers in this pilot study varied in dimension depending on the immediate circumstance and the response options each teacher perceived were available. Scoring Confidence levels and observing the variation in these levels over time provided a window into the way teachers experienced disequilibria. Looking at other themes that correlated with Confidence illustrated the kind of approaches teachers took to resolve disequilibria during the teaching term.

Other themes were scored in this way as well. Variations in reflective description were combined into a Level of Reflection Theme. Levels of assigning Responsibility were given graduated scores and combined into a Locus of Control theme. Incorporating New Ideas, evidence of Growth and Lesson Plan Changes were combined into Adaptations. Conversations with professors or classmates and Asking Questions about some element of a teaching interaction became a Discourse theme. Examples of these themes with text from the teachers’ reflections are provided below.

**Level of Reflection.**

Detailed description, self assessment statements, and statements that showed application of reflective practice became the supporting codes for this theme. All of these codes provide evidence of pedagogical content knowledge (Shulman, 1986). Vague descriptions of the lesson such as, “I felt that this lesson went ok” contrasted with more detailed descriptions such as, “(child) has a positive attitude, and is willing to work on the tasks I set for him. His mood and energy level were good”. Self assessment statements described in detail the challenges teachers were facing: “Looking back, I wish I would have waited until at least Thursday or maybe even one day next week to send home that list because he wasn’t fluent enough with those words”. Applications of reflective
practice provided evidence that teachers were using the reflective note process to analyze and adapt their practice: “This bothered me and as I was leaving the Reading Center no answers surfaced. It was when I began filling in my SOAR notes I realized some adjustments need to be made in my instruction”.

Locus of Control.
Responsibility for student learning, and transfer of learning provided evidence of Locus of Control. This theme illustrated the growing responsibility for and connectedness to teaching events that teachers experienced as they developed expertise (Berliner, 1988). Locus of Control could be internally focused on the teacher alone, shared between the teacher and student, or externalized and assigned to the student alone. Some Responsibility statements focused on the teacher alone, such as, “I hope I have provided J. with a way [that] prepares him to write in the classroom”. Some described the shared responsibility that teachers and students have for learning: “I have him convinced he is as much there to teach me about older readers as he is there to get help with his reading. He grins every time I tell him something he just taught me.” Transfer of learning from teacher to student also reflected the Shared Responsibility code, as in this example:

He understood why he needed to do each of the steps but when he was done telling me the steps and the why, he (said): “Wish my teacher had talked about this before, all she ever said was ‘just read’. This makes sense to me.”

Some statements described specifically the Responsibility students have in the teaching interaction, in positive terms: “He was every bit as attentive in the second session as he was in the first and was open to everything that I had planned for the day.” Some
statements describe this student responsibility in negative terms: “Kids will do anything, talk about anything just to get out of doing a lesson.”

**Adaptations.**

This theme was illustrated by reflective statements that discussed applying *New Ideas, Growth* in using instructional strategies, and instructional changes made during the lesson or for future lessons. Statements of *Growth* described the work teachers were doing to develop proficiency with a teaching strategy: “I really wanted to try to say ‘that word sounds like’ or ‘looks like’ when they were stumped on a word. Then it will help them figure out the word. I tried today and it was really hard for me”; or they celebrated success: “I did a much better job with the consonant-vowel-consonant pattern lesson. I am looking forward to continuing to expand that lesson each day”. Some reflections described *Lesson Plan Changes* that were made during the lesson, and were what Duffy et. al. (2008) labeled reactive responses: “I had a longer set of metacognitive questions planned; modified them after realizing (students) weren't at a level of comprehension or attention to engage in that length of conversation.” Some *Lesson Plan Changes* planned a thoughtful adaptation to further a broader learning goal:

During those times when we have to be reading and attention is more difficult I will try to give her a specific task to be watching for in the text.

For example I might say, I want you to watch for a word with short a, and stick out your tongue when you see it.
Discourse.

Conversations with the professor or with classmates around content knowledge questions or learning problem resolution were codes that supported the theme of Discourse. Examples of conversations include: “After talking with Dr. W. today, I am going to start with some sight word work at the beginning of the session, move to a word work lesson, have him read a book, and then do a dictated writing activity” and “[classmate] and I continued to talk this afternoon about helping J. develop a system or script for how he interacts with a book.” An example of a question related to transfer of learning is: “But what is the crucial step or method that causes the ‘aha!’ moment when kids realize that they must do this for themselves?”

Expert pedagogy develops from these abilities to question and discuss methods, process the events in a teaching day, and develop a collaborative stance (Berliner, 1986; Alexander, Fives, 2000). By engaging in Discourse with professors and colleagues the participant creates avenues for systematic inquiry into her practice, and opens the possibility of transformative practice change.

Results

Analysis of experienced teachers’ reflections revealed significant correlations and trends among their experiences. Specificity in Reflection correlated with a higher incidence of teaching Adaptations, r = .55 p < .05. Thus, teachers who wrote very specific reflections made significantly more adaptations to their lessons. Additionally, teachers who expressed an internal or shared Locus of Control for the lesson were significantly more likely to see evidence of Transfer to Student, r = .59 p<.05, when their student applied a skill or strategy without being prompted to do so. Discourse was negatively
correlated with confidence, $r = -0.74 \ p < .01$, so that as teachers’ confidence grew they engaged in less Discourse with professors and colleagues. As teachers assimilated new teaching practices into their repertoire and found a clear teaching path, their confidence rose and they engaged in fewer conversations about instruction with instructors and colleagues.

Although Reflection, Locus of Control, and Discourse were significantly correlated to other themes, none of these three themes showed clear linear or quadratic trends over time. There were significant linear ($r = 0.11 \ p < .05$) and quadratic trends ($r = -0.003 \ p < .05$) for Confidence and a great deal of variation, with individual teachers having days of high and low confidence. At the beginning of the term Confidence dropped sharply as the experienced teachers struggled to adapt instruction; then rose and leveled off as they found ways to adjust their instruction and assimilated new techniques into their teaching practice. Teachers rarely discussed Confidence by the end of the term, as their sense of equilibrium returned.

There was a significant quadratic trend for Adaptations ($r = -0.009 \ p < .01$). Teachers started the term making a high number of Adaptations: an average of three per lesson. This number increased over the first week of instruction, as teachers realized that teaching a struggling reader in this setting would require new practices and struggled to adapt to their student’s specific learning needs. The number of Adaptations peaked near the end of the second week of teaching, and declined over the remainder of the term as teachers assimilated new instructional strategies into their practice and found a clear teaching path for instruction in this setting and with these particular students. Teachers ended the term making fewer Adaptations than at the start of the term.
Transfer to Student followed significant linear (r = .11, p < .01) and quadratic (r = -.001, p < .01) trends. Beginning in the second week of teaching teachers saw evidence of Transfer to Students. The quadratic trend was present, indicating a subsequent leveling off of Transfer, but had not yet reached ceiling during the course of the study.

Discussion

Experience was not a significant predictor for any of the themes we explored. Indeed, as demonstrated in the case studies, some teachers with fewer years of experience reflected at a more specific level, displayed more internal Locus of Control, and engaged in more Discourse on instruction leading to more Adaptations. By looking at each teacher as a case and re-examining the correlations, a model emerged that has the potential to describe the decision-making themes and correlations among experiences that these experienced teachers reflected on as they taught struggling readers (see Figure 3.1). Solid line arrows indicate statistically significant relationships; dashed arrows indicate statistically insignificant relationships.
The correlations between Reflection, Adaptations, Locus of Control, and Transfer to Student, and the significant trends in Confidence, Adaptations, and Transfer to Student present a possible validation of the necessity of disequilibria for transformative practice change that leads to increased student learning. This alone is enough to warrant further study of this model.

**Reason for Novice Study**

This study compared the responses of novice teachers to those of the experienced teachers in the pilot study to see if the model of correlated themes and time sensitive trends would emerge from the reflections of novices as well, and to explore additional...
themes that emerged in reflections of novices. To that end, these specific questions guided the proposed research:

- What reflective practices will emerge in the reflections of novices?
- What are the differences between novices and experienced teachers on the themes and correlated experiences discovered in the pilot study of experienced teachers?
Chapter Four
Research Method
Method

Design

This study explored the reflective practices of novices through analysis of their structured reflection notes completed while teaching in a diagnostic and instructional University reading clinic in the semester just prior to student teaching and culminating certification activities. This was a mixed methods design study with two focuses: 1) to explore the reflective practices of novices through theoretical and axial coding and 2) to study the themes that emerge from that analysis in detail in order to support or refute a theoretical model for reflective practice that I have formulated based on my review of the literature and on the connected themes that emerged from the experienced teachers’ reflections that were analyzed in the pilot study (see Figure 3.1). In this design the qualitative analysis identified important variables within the data that were used to develop a theoretical model. The subsequent quantitative phase tested and studied these variables in detail. The quantitative data was embedded in and emerged from the qualitative phase. Mixing of the two types of data came at the analysis stage of the research. Thus, the model that emerged is grounded in the data. (Creswell, Plano Clark, 2007)

Qualitative phase.

The qualitative phase of this study began with theoretical coding for themes in the novices’ structured reflections to look for concepts that are supported by the research literature (Strauss, Corbin, 1998). Subtopics within the themes were captured through axial coding. These axial codes allowed for more detailed analysis of the broad themes.
In the pilot study (Hayden, Pasman, Trainin, 2008) the axial codes within themes indicated varying degrees of *Confidence, Reflection, and Locus of Control*, and varying descriptions of *Adaptations, Discourse, and Transfer*. Theoretical coding for this study began with these axial codes and themes from the pilot study, and documented the emergence of new axial codes that were not discovered in the pilot study.

**Quantitative phase.**

The quantitative phase described the axial codes that emerged within themes in the structured reflections of novices by creating a quantitative variable for each axial code within each theme. This quantitative variable was used to explore change trends over time in each theme and effects among themes in reflections, and to develop a theoretical model of the reflective practices of the novices in this study. The theoretical model that emerged from the reflections of novices is then compared to the model that emerged from experienced teachers’ reflections in the pilot study.

In the pilot study, the quantitative variable represented the axial codes for levels and variation within the six themes. Each axial code was assigned a score that weighted it. For example, levels of *Confidence* emerged and were labeled with the axial codes *More Confidence, Growing Confidence, Less Confidence*. Graduated scoring weighted these axial codes, so that the frequency of statements of *More Confidence* or *Growing Confidence* was summed, while the sum of *Less Confidence* statements was subtracted. For this study, the same graduated scoring process was used to describe axial codes within *Confidence, Reflection and Locus of Control* themes.

Additionally, themes of *Discourse, Adaptation, and Transfer* were scored by summing the frequency of axial codes for the theme within a reflective note, so that these
themes could also be measured across the teaching term. A daily score for each of the six themes was calculated in this way, allowing theme variation across the teaching term to be measured and examined. In this way the development of reflective practice, as represented by these six themes and captured by the structured reflection note format, was examined over the course of the data collection period.

**Challenges of Using this Design**

Yanchar and Williams (2006) call for caution in using mixed methods approaches. If the qualitative and quantitative data simply present the same findings without adding anything new to the picture, then any differences found are likely to be merely resulting from the different analysis methods used, rather than actually providing new descriptions of the data. However, if the two types of data produce multi-faceted descriptions of the complex reality being studied, then there can be strong support for using mixed methodology in design. Yanchar and Williams further caution that “Sorting this out requires . . . careful theorizing and position taking in conjunction with critical reflection on method, results, and the theoretical descriptions offered.” (p. 7)

With this caution in mind, this research identified theoretically supported themes that appeared in the data; classified levels within these themes that realistically represent their variation in property and dimension via axial coding; and applied either a weighted score that represented these variation levels, or a summed frequency score that represented the number of occurrences of an axial code, so that the progression of each theme over the course of the data collection term could be measured, analyzed, and discussed. Effects among themes are examined for statistical significance. The process of determining change over time in each theme, and exploring effects among themes
produced a description of novices’ reflective practices and their complexity. It measured the development and interrelatedness of these practices in a way that is true to the patterns found in the data. My goal is to provide the kind of genuine descriptions of novices’ reflective practices that can clarify this complex, multi-faceted experience and contribute a model of reflective practices that can be used as a framework for leadership in developing reflective practices by teacher educators.

Participants

Consent to participate was obtained from 23 novice teachers out of the available pool of 31 enrolled in a four-credit hour reading assessment and evaluation course with teaching during the spring semester 2009. The course focused on developing reflective inquiry, theoretical frameworks, and critical views of reading assessment and intervention to establish crucial links between assessment, intervention, and student performance. Each novice taught one K-6 student two hours a week for 9 weeks in the University reading clinic. All novices in this study were female; six were graduate students completing teaching credentials; the remaining were undergraduates in their junior year.

Eighteen novices provided information on their previous teaching experiences. Of the graduate students, four had one to three years of experience working as paraeducators in the public schools, one had two years of teaching experience as an English Language instructor overseas, and one had two years of experience as a school counselor. The undergraduate novices reported a range of two to six semesters of practicum experience during their teacher training.
Data Sources

The data sources for this study were the written reflective responses collected from these 23 novices. After obtaining consent, each novice’s reflective notes and lesson plans were collected from the confidential class web log where they were posted. Due to absences, five novices submitted fewer than the required eight sets of notes, resulting in a total of 177 reflective notes that were analyzed. These reflective notes were written after each week of teaching, reflecting on the two lessons that were delivered during that week. Novices began submitting reflective notes in the second week of teaching, after initial assessments were completed.

The reflective notes followed the same SOAR format as described in the pilot study: Subjective reporting of lesson events, description of Objectives and progress made toward these, Analysis of the learning for both novice and student, and Reflection on the lessons and the learning of the novice.

A Note on Terms

For this study one theme name and one axial code name have been changed. The theme of Reflective Level in the pilot study was changed to Descriptive Level, which seems a more fitting label for what the theme actually measures. Novices’ reflections were labeled as Specific, Vague, or Wavering in the level of descriptive language used. While writing specific descriptions in reflective notes is one element of reflective practice, it is not the only element and may not be the most compelling; thus, calling it reflective level seemed too broad.
To give more clarity to axial codes for *Confidence*, the axial code *More Confidence* was renamed as *High Confidence*. The purpose of this was to provide more of a distinction between *More Confidence* and the adjacent axial code *Growing Confidence*.

**Qualitative Analysis**

Theoretical coding began with the themes that emerged from the pilot study: *Descriptive Level* (formerly *Reflective Level*), *Confidence*, *Locus of Control*, *Adaptations*, *Discourse*, *Transfer to Student*. Through a process of recursive coding, returning to the literature to support and clarify what I was discovering, axial codes emerged for each theme ([Strauss, Corbin, 1998](#)). Table 4.1 presents themes, axial codes, and supporting theory.

**Table 4.1**

Theoretical Framework for Themes and Axial Codes

<table>
<thead>
<tr>
<th>Theme</th>
<th>Axial Codes</th>
<th>Connection to theory</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Descriptive Level</em></td>
<td><em>Specific, Vague, Wavering</em></td>
<td>Content knowledge, pedagogical knowledge (Shulman, 1986)</td>
</tr>
<tr>
<td><em>Confidence</em></td>
<td><em>High, Growing, Less confidence</em></td>
<td>Disequilibria (Shulman, 2004), (English, 2008)</td>
</tr>
<tr>
<td><em>Locus of Control</em></td>
<td><em>Shared, Teacher, Student,</em></td>
<td>Responsibility, connection to events/results (Berliner, 1988)</td>
</tr>
<tr>
<td></td>
<td><em>Student Blame</em></td>
<td></td>
</tr>
<tr>
<td>Theme</td>
<td>Axial Codes</td>
<td>Connection to theory</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Transfer</td>
<td><em>Transfer to student, Growth in</em>, <em>Student skill development, Growth in student: Shift</em></td>
<td>Strategic processing (Alexander, Fives, 2000)</td>
</tr>
</tbody>
</table>

**Quantitative Analysis**

This study used the graduated scoring process, when it could be supported by the literature and when it was needed to represent the variation and dimension present in the data in a meaningful way. Effects among themes were tested for statistical significance to explore the development of my a priori theoretical model of novices’ reflective practices.
Validity

Validity was established in two ways. First, results for themes were triangulated by checking the reflections against the lesson plans for that same week (for evidence of lesson activities that triggered *Discourse*) or against the following week (for evidence of *Adaptation* that arose from analysis of the lesson in the reflective notes). In addition, one novice case was recoded by an independent coder to assess the fit of the themes and axial codes with the novice’s reflections. There was 100% agreement on themes discovered in each reflection, and slightly lower agreement (85%) on two of the problem axial codes that seemed very similar: time management and implementing a teaching strategy.

Reliability

Reliability of the coding scheme was established in two ways. First, an independent coder recoded a subset of reflective notes from two different novices, with 83% agreement. Next, a set of 100 quotations from the sample was provided to the independent coder, along with the axial codes. Four to five quotations were selected from each of the 23 novices in order to develop this list. The list included eight to 10 quotations from each of the themes, with an average of two quotations for each axial code. The independent coder read through each quotation to assign axial codes. Interrater agreement was 82%.

Limitations

This study reported themes gathered from written structured reflective notes. Analysis of these reflective notes captures only one form of reflection, written, with an external structure imposed on the written reflection: the SOAR format. Additionally, this analysis relies on the reported thought-processes of the novices, who may have felt
constrained in some in their reporting of reflective processes. Consequently, the findings of this research are limited by these constraints.

However, because these reflections are written in the context of a supervised reading clinic, several supports exist that established their trustworthiness for truly representing the reflective practices of the novices during the study. One powerful support is the accountability loop: supervisors who read the written structured reflections of the novices have also observed many of the novices’ lessons as they were taught; and because many of the children who are taught have attended the reading clinic over several terms, the supervisors know the children well.

Another support for trustworthiness of the reflections comes from the role of the supervisor: it is subtly but uniquely different from that of a cooperating teacher for student teaching. While the supervisor does assign grades for the teaching experience, the support the supervisor provides is more in the line of coaching vs. the evaluating and recommending that a cooperating teacher does. The supervisor can intervene during the lesson to provide demonstrations of teaching techniques. This is accomplished more easily in the reading clinic setting, where the novice is working with only one student, than in the classroom environment of the student teaching setting. The supervisor reads all of the lesson plans and responds verbally and in writing to the written structured reflections. In this way, the supervisor does more to open the avenues for systematic inquiry and reflection of the novices than a cooperating teacher.
Chapter Five

Results
Introduction

Developing reflective practices as tools for analysis and thoughtful instruction is a focus of the reading clinic class. The concentration on systematic inquiry and analysis, supported by the intensive coaching and supervision at the reading clinic encourages accountability, depth and a measure of professionalism in the reflections that novices write during this teaching experience. This study analyzes those reflections in order to explore the reflective practices novices engage through description of the themes, supporting axial codes, trends over time and effects on other themes. Through this analysis a theoretical model of reflective practices of novices develops and is compared to the model of reflective practices that emerged for experienced teachers.

Qualitative Results

In the pilot study (Hayden, Pasman, Trainin, 2008) we analyzed the written reflective responses of 13 experienced teachers in the same clinic setting. I began analysis of the 23 novices’ reflections with the same initial themes and axial codes, adding axial codes during analysis in order to capture more detail in the novices’ reflections. Complete analysis of the 177 reflections with this expanded coding scheme resulted in the coding of 3,790 quotations in the novice sample. Each theme and supporting axial code is described below. The names of themes and axial codes appear in italicized text throughout the rest of this report.

Theme one: Descriptive level.

The overall Descriptive Level of each set of reflective notes was coded in one of three statements: Specific, Vague, or Wavering. Additionally, instances when novices copied large segments verbatim from one set of reflective notes to another were also
coded as *Copied*. Since novices were expected to reflect specifically and analytically on each week’s lessons, copying sections of reflective notes from one week to the next was considered detrimental to the process. Eighteen instances of *Copied* sections of reflective notes were coded in the sample, but they received a score of zero in the graduated scoring because they added nothing to the *Descriptive Level* of the reflection.

Examples of *Specific, Vague,* and *Wavering* reflection codes are provided below. Because novices were instructed to write lesson objectives following an exact format for constructing focused, measurable objectives, the Objective section of all reflections was highly specific and analytical. To code the overall tone of the entire reflective note, greater consideration was given to Subjective, Analysis, and Reflection sections. The following examples include bolded key words and phrases from these three sections of the reflective notes that illustrate reflective level.

*Code: Description specific.*

One hundred twenty-nine reflections were specific in overall tone. Reflections that were specific gave detailed but concise Subjective descriptions of the lessons and progress toward goals. The Analysis and Reflection sections of the notes were comprehensive and thorough: they provided direction for future lesson planning. An abbreviated example is below, with key words and phrases that signal *Description specific* level in bold print.

**Subjective:** I noticed this week T. is able to retain some information but doesn’t necessarily know how to use it effectively. **He was able to tell me that at the end of a sentence you should lower your voice a little but when he started reading right after that he wouldn’t do it.**
Analysis: I feel more confident this week regarding long vowels. T. seems to understand the basic long vowel patterns like CVCe, but when I had him write words in the sand (rail, tail) he did not know that pattern. I’ve glanced at *Words Their Way* briefly but before I write my next lesson, I need to look into how to really present that vowel pattern. I’m not sure if just a word sort would work well for T. or how I can present it better. I think it is working to do shared writing. After the story was written, I had T. reread it to see if anything needed changed. He thought it looked good, so I read out loud a couple of specific sentences to see if they needed changes and then T. was able to notice an error and we corrected it.

Reflection: One of my goals for T. was to master long vowels and digraphs. We have moved past digraphs but should I keep having him doing a little bit of work with these so he retains them? I am learning I need to anticipate certain activities take more time to complete; not to feel rushed to just get through the lesson. I need to make sure to spend adequate time in each area so that T. is learning and not just doing. I feel like we have made progress since the beginning, but I am not sure if we have made as much progress as we should have by this point; I just realized that tutoring is half over, so I’m wondering what I need to do differently. I know it’s important to show T. exactly how to do something, not just expect him to know it; things have to be very concrete.
**Code: Description vague.**

Twenty-four reflections were vague in overall tone: mostly devoid of specific analysis and inquiry. The novice who wrote vague reflections used generalities and non-specific language to discuss lessons. In the example below the reflective note lacks detail and seems rambling and repetitive. The Subjective, Analysis, and Reflection sections lack the precise description and detailed, focused inquiry that can inform teaching and provide direction for future planning. The reliance on generalities makes it unclear what specific steps the novice teacher plans to implement in lessons in order to move student learning forward. Generalities and vague, non-specific language is in bold print in the example below, as well as coding comments that indicated why this reflective note was coded as vague. In the following examples, my comments on the reflection are enclosed in square brackets.

**Subjective:** This week **seemed to be less successful.** C. **seemed slightly less motivated** than usual. She still worked hard, but did not appear to be putting forth quite the same enthusiasm as I am accustomed to observing from her. C. completed all activities asked of her, but her energy level and mood were not as high as normal. She also **did not perform as accurately** as she has in past lessons, which seemed to result from her lowered enthusiasm.

**Analysis:** This week definitely felt less successful to me as a teacher. I observed a decline in my student’s enthusiasm, in addition to noting less accuracy in her performance. I feel these struggles stem from needed improvements in my teaching skills. I did work in slightly more
challenging activities this week, which may have played a part in the lowered success, but I need to be able to challenge my student in a more exciting manner. As I look back to my last lessons, I do feel they were less exciting and entertaining . . . This past week has provided me with valuable information to improve my next lessons. [In this section the participant does not provide specifics about the valuable information she received this week, or about what she will do differently next week] 

**Reflection:** It is inevitable to run into hurdles with most anything in life. When these obstacles arrive one must remember to learn from them so they are easier to overcome in the future. C. worked with more challenging activities. I will continue the challenges so she can improve her skills and abilities to the point that the challenges become less difficult. I have learned much from the mistakes made, and plan to have more feelings of success after this week. [Again, there are no specifics about what the participant has learned and what she will change in her instruction.]

**Code: Description wavering.**

Twenty-four reflections fell somewhere between *Specific* and *Vague* and were coded as *Wavering*. A wavering reflection shifted numerous times between specific inquiry and unfocused generalities. Overall, *Wavering* reflections provided some thoughtful reflective analysis that could guide and inform broad planning for future lessons, but not enough specifics to effectively plan the next steps in lessons to move student and novice teacher learning forward. The novice who wrote wavering reflections
seemed to be more confused after writing the reflection than before about where to go next with her lessons. This is what differentiated *Wavering* reflections from specific reflections. The example below illustrates this confusion, and specific phrases that contributed to this reflection being labeled *Wavering* are highlighted in bold.

**Subjective:** I am extremely happy with the way this week went in tutoring. I am starting to understand more of what is going on and how to work with N. It was stressful because I didn’t know if I was doing the right things tutoring and we only have a few more sessions. But it is starting to come together more now. [The first three sentences are vague and non-specific.] I started to do some work with the long and short -e sounds to build on N.’s decoding skills. At first I just used picture cards and he was extremely bored with that, but then I pulled out the magnetic letters and he liked those. [In the last two sentences the participant provides specific details on the activities that provided her with a sense of improvement in her teaching.]

**Analysis:** N. is finally showing interest in a few books. Now, I can see his confidence is starting to grow, I constantly praise him on reading fluently and making self-corrections. I sometimes think that I am being too much of a teacher and not enough of a tutor. [In this first section she wavers between confidence and a statement about being too much of a teacher, which she leaves un-defined.] We have filled out many graphic organizers, but have only wrote [sic] a few sentences for each one. I want to build on
this practice. [Here, she provides a specific detail.] Overall, I think this week was good.

**Reflection:** I always get so mad at myself because by the time I get to the Reading Center, I am already exhausted from my day. I sometimes catch myself yawning or checking the time which is horrible. Why should I expect N. to be having fun when I myself am yawning through the entire session. I want to try more hands on activities, such as throwing a ball to spell words, but I am scared that N. will get out of hand for me. I am really learning that I am scared to lose power over my students. But I do see myself as a patient and kind teacher. I want my students to succeed, so I try to set them up for success. [Up to this point, this participant is specific about her concerns. However, the next sentence is an example of the confusion that she still feels:] Which may be good and bad. [Writing this reflection does not seem to have clarified any of her questions about her teaching.]

**Theme two: Confidence.**

Statements about *Confidence* were evidence of the disequilibria that novices felt during the teaching sessions. Accomplished teachers are able to live with some amount of disequilibria as they struggle with questions that challenge their teaching practices, because they know that transformative practice change can come from these experiences of hesitation and perplexity (Shulman, Shulman, 2004, Dewey, 1933/1989). Given the rigorous demands of teaching in the Reading Clinic, I expected to find statements of
disequilibria, which I coded as *Less Confidence*. However, it was crucial that novices also have corresponding feelings of *Growing Confidence* or *High Confidence* to balance the disequilibria they were experiencing and provide support for their teaching. Novices made comments in their reflections indicating *High Confidence, Less Confidence*, or *Growing Confidence* in their teaching abilities. A brief description of each of these levels of *Confidence* is provided below, with illustrative quotes. Within the quotes, bold print highlights specific words and phrases that were used to code the quotation as illustrative of *High, Less, or Growing Confidence*. The descriptions and quotes are followed by a brief case vignette, also with bold highlighting, of one novice’s varying levels of *Confidence* throughout the term.

**Code: Less confidence.**

Novices frequently struggled with feelings of *Less Confidence*. These were documented in 124 coded statements such as “I am not sure if what I am doing is working and what to do next to help him to the fullest”, “Going into this past week I felt incredibly anxious about these tutoring sessions. I was worried that I would either bore my student or I would be horribly unsuccessful at writing my plans and coming up with ideas” and “I still feel like I struggled with the predict strategy this week. I can’t get her excited about using the strategy and this gets me frustrated.” These quotations indicated that novices were encountering new challenges to their budding teaching practices, and were recognizing that there would be issues in their teaching that resulted in hesitation and puzzlement. Learning to recognize and respond to these challenges is a crucial developmental task for novices (Berliner, 1986).
Conversely, 85 participant quotes expressing *High Confidence* were coded, articulated in statements such as: “I feel that **as a teacher I am now better at noticing** what works for him and where he could improve”, and:

She fell near the bottom of the instructional level and after I stopped timing her she ran into more errors. Therefore **I am glad I took the initiative** to stop the timing . . .

and

As the sessions went on, **I was able to connect the mini lessons to each other** . . . **It began to flow better**, allowing K. to see that even though we were working on one thing, it can connect to our comprehension strategies or our story writing.

These quotations indicate that at the same time that novices were experiencing significant disequilibria, they were also noticing instances of things going right in their teaching. These successes contributed to novices’ growing abilities to work through problems of teaching as they arose, and make instructional adaptations both in the moment of teaching and as they planned for future lessons.

**Code: Growing confidence.**

Novices frequently expressed growing degrees of *Confidence* as they tried out strategies for intervention and observed some measure of success. Fifty-nine quotes conveying growing confidence were coded. Examples are: “**Despite my insecurities I am so extremely excited** about D.’s progress. I really am starting to see differences and
little things that he is picking up on” “I feel my teaching is becoming more skilled. I am certainly more organized and creative with my lessons than I had been at the beginning of the semester” and “I am becoming more confident with the writing strategies and am having fun working with her on these.”

Vignette: Helen.

Helen provides a picture of how Confidence changed over the term. Helen was a graduate student who had worked as a paraprofessional in the public schools but was a novice in terms of planning and delivering instruction on her own. Here student had attended tutoring at the reading clinic in previous semesters, and struggled with comprehension and transfer of decoding skills to reading in continuous text.

Several features of the course and the teaching experience affected Helen’s Confidence, causing her to experience disequilibria. She describes her emotions around this lack of Confidence. Bold print within Helen’s quotations highlights the words and phrases that were indicative of her Confidence level.

In the first sets of reflective notes Helen reflects on her lack of Confidence for teaching her student. Receiving feedback from instructors was disconcerting at first: “For lesson 1, I felt really good about my preparation and lesson plan until I got the feedback from Dr. M. and didn’t have time to do anything about incorporating her suggestions into my plan.” Helen also struggled to integrate observation and analysis of her student’s skills with time management and delivery of lesson components:

As much as I want to make observations of her reading, in the moment I’m too consumed with what’s going on with the lesson to do much of
anything (else). Plus, I feel my lack of experience . . . knowing when to move on to another level and what to push her on.

Helen recognized that some of her lesson activities were not as goal-focused as she would have liked: “I was really pleased that she’d gotten her story done at home . . . we glued it into her book and we’re done with that . . . she enjoyed it but from a learning point of view, it was lame.”

By week four, Helen was beginning to describe feelings of Growing Confidence as she integrated learning from the course into her lesson planning: “I feel like I have more tools in my belt that I can use with C.” and as she developed mastery of lesson planning and time management: “I feel increasingly comfortable with the pacing . . . and more capable in the lesson planning . . . making sure there’s good overlap between . . . activities.” Helen acknowledged the initial drop in her Confidence and subsequent growth over time: “The material of this course can be overwhelming initially due to the sheer volume but I feel like each lesson I add a strategy or activity and my confidence and competence grow.”

As time went on Helen continued to acknowledge instructional areas where she felt a persistent lack of Confidence. “An area I’d like to grow in is the writing piece - I don’t feel very capable in the writing activities.” At the end of the term Helen still identified writing as a personal growth need, but she expressed a sense of agency by acknowledging her discomfort and her need for further support so that she could grow in her skills for writing instruction:
I did not enjoy the writing aspect of my tutoring - *it just felt awkward* to me in the one-on-one tutoring setting to “write” - I felt as if I were either doing too much or too little in the activity. *I’m not comfortable* sitting there watching her write. *That would be an area in which I need further instruction / help.*

Over time Helen described evidence of her growing skill in lesson planning and delivery. This evidence resulted in feelings of more confidence, which she described in emotional terms:

For lesson 8, I think *I was able to flex* with her lack of energy, primarily by skipping one reading. I’ll include it in our next session. I think my current format of activities works well for her (and for me). It’s heavy on shared reading and fluency practice. The word study activities are short and sweet - *I think really hit on her areas of need. I feel good* about my lessons.

Helen found evidence of her own success in her student’s progress toward lesson objectives as well: “Given a familiar level 18 text, C. will read with appropriate phrasing. Objective made - she sounded great on this familiar text, *this confirms the decision to move on* to [level] 20.” This objective view of her student’s success boosted Helen’s *Confidence*: it was not merely that Helen felt more confident, she actually saw
measurable growth in her student’s skills that provided powerful support for her confidence.

At the end of the term Helen identified new teaching skills and strategies that she learned and used with success during her teaching:

I love the way picking out three words to do vocabulary maps prior to reading sets her up to easily decode those “big” words when she comes to them in the text. And not only to decode, but to comprehend. Very fun! The strategy work engaged her, too - she did well with the word sort and the word building and I think I’ve got a feel for the right amount of time on those now. I feel really comfortable with a number of the comprehension strategies, which were all new to me. I had not previously thought about making my thinking as a good reader explicit for the struggling readers with whom I work. The course materials on Think Alouds, Dr. M.’s lecture and the book for my project were all helpful in providing this instruction and then the opportunity to apply the concepts twice a week with (my student) were invaluable.

Helen’s growth as a teacher resulted from the increased sense of Confidence that came from confronting challenges at the beginning of the term, arming herself with teaching strategies to apply, and learning to manage activities and the flow of her lesson so that she could observe her student’s progress in an authentic teaching setting. Helen described her successes and challenges in emotional terms at times, in a way that
illustrates the passionate engagement that many teachers, both novice and experienced, have for teaching. Her feelings of disequilibria at the beginning of the term were resolved through discourse that leads to successful adaptations, resulting in *High Confidence* at the end of the term when she had worked through her feelings of disequilibria and assimilated new learning into her teaching practice.

**Theme three: Locus of control.**

The *Locus of Control* theme described novices’ perceptions of responsibility for the success or failure of a lesson. If a lesson is successful and student learning results, is that entirely due to the planning of the teacher? Conversely, if a lesson does not result in student learning, and activities are not well implemented or received by the student, is that due to the planning by the teacher, to student factors, or a combination of teacher and student factors?

Four axial codes captured these perceptions of responsibility. These codes formed a spectrum of internal to external assignments of *Locus of Control*. *Locus of Control: Teacher* captured evidence of teachers taking responsibility for the success or failure of the lesson. *Locus of Control: Shared* depicted evidence of teachers reflecting on the shared enterprise of teaching: the outcomes of a lesson are the result of both teacher and student factors. Successful outcomes resulted from the analysis, planning, effort, and performance of both the teacher and the student. *Locus of Control: Student* placed responsibility for the success or failure of particular lesson elements on student factors alone, while quotes representing *Locus of Control: Student Blame* went beyond *Locus of Control: Student* and used language that assigned full responsibility and blame for a lesson failure on the student.
All four Locus of Control axial codes are described below, with highlighted quotes that illustrate the words and phrasing that supported coding. These descriptions are followed by the case vignette of one participant, Barb, whose varying perceptions of Locus of Control over the term help illustrate the experiences of all novices.

**Code: Locus of control teacher.**

One hundred thirty quotes focused responsibility for the lesson on the teacher. At the beginning of the term novices described their learning about the power teachers have to set the tone of a lesson, for better or for worse. Although novices had heard and read anecdotal accounts of the impact of the teacher on learning environments and outcomes, teaching at the reading clinic solidified this for many of them, as the following quotes illustrate: “Throughout the tutoring process this semester, I have learned that an activities [sic] success or failure is directly dependent upon me as an instructor” and:

I was astonished at the difference in his behavior based on my attitude alone. If I introduced an activity in a fun and exciting light, it amazed me how quick he began to enjoy it, no matter how mundane it might actually be. However, if I didn’t ‘talk the activity up,’ D. quickly became bored and began to show avoidance behaviors.

I also need to keep up my attitude while in the tutoring session. Sometimes . . . my confidence decreases if I don’t feel a smooth transition into another activity, therefore coming to a halt and wasting precious time. I need to remind myself to always keep on a happy face so that K. doesn’t
really know if I’m doing something wrong or unsure of my actions. When she feels I’m unsure about myself, I find she also feels unsure about her spelling, reading, questioning, etc. If I stumble over my words, she’ll stumble over her responses, giving maybe a 2 word response, versus a whole sentence response . . .

As the term progressed novices saw the results of their efforts to establish expectations and set the tone for learning: “She was always anxious to get to these activities and I think that shows my ability to engage her in these activities” and:

Looking back, I think the thing that helped me most this semester was taking time to build a positive rapport with K. In doing this, I think he was much more responsive to me during our lessons, particularly when I had to be a little more firm with him. I think if I had not spent those initial few sessions building rapport . . . the semester would have been much more difficult for both of us and he would not have improved as much as he did.

Novices also saw the impact of their instructional efforts and the emotional connections they made to their students’ successes were highly motivating for novices:

I was thrilled when C. was able to explain why he chose to end a word with a /g/ instead of a /k/ by placing his hand on his throat, and saying, “It makes a sound”, just like I had shown him!! It really made me feel like I
was getting through to him, and helped quell my frustrations at thinking that I wasn’t doing much good.

Recognizing the responsibility of the teacher meant accepting failures as well as successes: “I had to walk him through each sound, something that we haven’t done since we first began this strategy” and “I feel a little defeated today because of the amount of words M. could not decode”.

Ultimately, novices who made Locus of Control: Teacher statements recognized the extensive amount of reflection and the careful and extended planning that a successful lesson requires:

But I do wonder if I failed to provide the repetitions she needs on some of the patterns. I tended to feel ‘hurried’ too in my eagerness to maximize her progress and perhaps I moved on too quickly from some concepts before she’d mastered them. I probably should’ve built in more review of previously covered spelling patterns.

Code: Locus of control shared.

One hundred forty coded quotes expressed the shared nature of teaching interactions. Early in the term these quotes addressed the willingness and preparedness of both the novice and the student to work on reading and writing during lessons: “I am excited about the relationship and rapport D. and I are creating. I see he has a true desire to read and I look forward to working with him to help him become a better reader and writer” and “It is apparent that he is starting to trust me and it shows in the
effort he gives” and “His enthusiasm about reading gives me motivation to do my best.”

As the term progressed, novices wrote about experiences in teaching interactions when they learned together with their student: “Even when he is frustrated or doesn’t want to do something, I can calmly let him know that we need to do the planned activities and I will wait until he is ready” and “The blind sorts were a real eye-opener for both J. and I. We were a little surprised at how much harder sorting is when you cannot see the words.”

In these quotations novices gave voice to the experience of learning alongside their students. Sometimes the learning goals of the novice and her student differed, as when the novice learned that she could calmly restate the need to do the planned activities as a method of redirecting her student when he was frustrated. Other times both the novice and her student learned how to use a particular strategy (e.g. blind word sorts). In any of these cases the outcome was the same: the interaction resulted in shared learning.

Numerous quotes gave specific examples of the interactive nature of the teaching: “K. was quiet at first, but (then she) realized I was interested in what she had to say” and:

I was so excited when I heard K. begin to use expression within the reading. When I modeled for her, I used expression, but I mainly focused on proper phrasing and breathing in the right spots so the phrasing would make sense. K. did just that, but added emphasis also to the characters . . .
and “actually, although I modeled for L., he really wanted to do most of the writing himself, which I was excited about because he has avoided writing up to this point.”

Quotes illuminated how novices learned to share responsibility in the lessons, describing the reciprocal give-and-take that happened in teaching interactions that led to internalized learning for students:

during the new text reading, we stopped halfway through to ask an on the surface question and an under the surface question. For the under the (surface) question, she took it a step further and made a prediction about what was going to happen next. Of course, I pointed out to her that she’d made a prediction and that’s what good readers do.

I feel like I have helped her with getting her ideas down on paper during our shared writing. I still feel like I was trying to impose my ideas on her, but I did pull back when she told me no or noticed when I changed something. I have to learn to let things go. It is her writing, not mine.

Making inferences didn’t start out to [sic] well. I felt kind of bad . . . I’m not sure I explained well how to make an inference. N. seemed a little confused, which caught me off guard. From that point, I couldn’t come
up with a better way to explain it to him that was any different. . . I told him we were going to work on this more and I would figure out a way to explain it differently so he could understand it next time.”

When novices described shared *Locus of Control* events they did so in terms of learning with and from the student, and learning how to guide a lesson: when to let their student take over, and what to take responsibility for. Recognizing and reflecting on these moments sharpened the focus on vital issues for planning and delivery of instruction: keeping student learning foremost in mind. Recognizing and sharing *Locus of Control* for learning with the student made that student’s learning outcomes the primary focus of the lessons.

*Code: Locus of control student.*

One hundred thirty-two examples of *Locus of Control: Student* were discovered. Many of these quotes focused on the positive dispositions students brought to lessons by being alert and motivated to give their best effort. These quotes described student strengths that could be counted on: “He definitely has a great work ethic”, “He is very cooperative and always ready and willing to work/read” and “He is a pleaser and makes an effort at proving to others that he will work hard at completing the given work and/or achieving a goal” and “C. is generally a very hard worker. She displays much intrinsic motivation”.

Many *Locus of Control: Student* comments focused on specific positive contributions that students made to the lessons: beyond a general focus and motivation to work at reading and writing. Contributions showed ways students actively took control in
the lesson for the benefit of their own learning by practicing, assimilating, and integrating new strategies into their repertoires.

(It) helped to have her read again and pay more attention to what she was reading. Many times, after she would reread (correctly) she would ask “what did I say the first time.” This was a positive sign to me because she was interested in what mistake she made.

E. is a very hard worker and she appears to be very motivated by tracking success . . . (and) by contest. . . she was able to come across a word she didn’t know, think about what would make sense in that sentence and then use the visual information from the word to correctly decode the word with prompting. For example, when she came across the word “puzzled” in the book. She was thinking about what would make sense and knew about the “p” and the “z”, she then was able to come up with puzzled. She didn’t think aloud about all the steps, but you could tell that she was thinking about those things.

In addition to student factors that contributed to learning, novices reflected on the challenges students presented: student factors that hindered or interrupted the lessons.

Codes for Locus of Control: Student for challenging factors differed from Student Blame (discussed in the next section) because novices reflected on these incidents in non-blaming, objective language. Novices often attributed challenges to students’ individual
personality or motivation factors: “It is hard to keep him on task” “N. tends to stray from the story line and try to make up his own” “she was low energy, yawning, a little squirrely” “Tuesday was J.’s birthday, so he didn’t really want to do much, but he hung with me for the most part.”

Novices sometimes described how they responded to challenges. In the following quote the novice treads a line between Locus of Control: Student and Student Blame when she speaks about her student’s attitude and confidence level. However, the general lack of pejorative language in the total quote, and the fact that the novice followed her discussion of attitude with a statement of how she would adapt her teaching to meet this challenge (the second bolded statement in the following quotation, coded as Locus of Control: Teacher) led me to code the first bolded quote as Locus of Control: Student rather than Student Blame:

There were a couple times this week where I feel like he regressed in areas of reading fluency and decoding ability. I think these are directly related to his attitude and confidence level during the sessions. Because of this, I will look for ways to build his confidence by giving him positive reinforcement . . . I’ve noticed how much it affects his reading when I am praising specific things while he reads.

A student challenge was sometimes interpreted as an attempt to change the direction of the lesson, providing opportunities for the novice to practice management of student behavior as well as goal directed teaching. How the novice responded could
determine success or failure in meeting the goals of the lesson. In the following quote two axial codes for *Locus of Control* occur, just as was illustrated in the previous quote:

> Although the tutoring sessions didn’t go as I had expected . . . I learned something about myself. I was able to stay in control even when he started crying. In the past I might have simply let it go just so he would stop crying. I think this showed him that I was in control and **he wasn’t going to get his way just because he was crying.** [*Locus of Control: Teacher*]

> By the end of the session **he was very apologetic and stated he was going to make a better choice** next time. [*Locus of Control: Student*]

**Code: Locus of control student blame.**

Twenty-six quotes used blaming, pejorative language to assign control for a lesson failure to the student. While there may be some overlap of language between *Locus of Control: Student* and *Student Blame*, the determining factor in deciding how to code these statements was the strength of the blaming aspects in the language, and how a novice followed up such statements. In the previous section a novice referred to her student’s attitude, but followed this immediately with an attribution about her student’s confidence level, and with a *Locus of Control: Teacher* statement in which the novice stated positive interventions she would make to turn the direction of the lesson. *Student Blame* statements stand alone as blaming, and are unanswered by the novice. They are not followed by plans for intervention. Statements such as these interfere with reflection and analysis because they take a stance that seems irrefutable; that certain challenges are
deeply rooted in student dispositions and have no solution: “D. was giving me attitude”
“C. didn’t even try” “N. just wants to play the entire time” “It really was like pulling
teeth to get anything out of him” “He is good at avoiding it and will mess around and
before I know it, time is up” “I’m not sure if it’s because he can’t or he just doesn’t
want to”.

All 26 Student Blame quotes were found in the reflections of just seven novices.
Of that group of seven, one novice made nine Student Blame comments, another made six
Student Blame comments, one novice made three comments, and four novices made two.
It is interesting to note that the participant who made nine Student Blame comments did
not pass the course, primarily because she did not respond to attempts from her
supervisor to provide instructional support, was unwilling to meet with her supervisor,
and made very few attempts to intervene or adapt instruction to better engage her student.

Vignette: Barb.

Barb was a serious undergraduate student who had already begun presenting the
results of her academic work at education conferences. Her student had worked at the
reading clinic in previous semesters. While he was able to complete decoding and
comprehension tasks, integrating his responses to text was difficult for him, as was being
able to use a strategy on his own without prompting.

Barb’s reflections are representative of the varying stances novices took for Locus
of Control throughout the term. Reflections on Locus of Control provided windows into
the ways novices interpreted learning interactions. Novices sometimes assigned control
of lesson successes and failures to their students; occasionally in blaming, pejorative
language. Sometimes novices attributed a lack of success to their own preparation and
sought out ways to adapt and improve their own skills and strategies for teaching their student. Reflections on shared *Locus of Control* described a feeling of creative tension (Senge, et. al. 2000) where *Locus of Control* in teaching interactions was explored and discovered as a give-and-take relationship in which both the participant and the student contributed to and benefitted from the learning interaction.

Early in the term, many novices’ statements of *Locus of Control: Student* referred to the alertness and work ethic that students contributed to the teaching interaction. Barb noted this student factor: “On Thursday I noticed that T. seemed a little bit quieter . . . not as energetic as he sometimes is . . . This did not deter him from working hard.”

Barb also reflected on times of *Locus of Control: Shared*, when she was learning as much as her student: “This week I tried Quick Reads (fluency curriculum) for the first time and it was a learning experience for both of us.” Barb found support for her selection of lesson activities in the measurable progress of her student toward lesson objectives. In the following statement of *Locus of Control: Shared* Barb describes how she used modeling and prompting to help her student develop skill in identifying digraphs, and then describes his progress in using the skill independently:

Objective: T. will identify 90% of the digraphs in the book . . . Met. After modeling how to mark the digraphs in the book, he was able to do this task with some guidance. It was mostly independent and he fell right at the 90% mark . . . other times I had to prompt him and he reread the sentences and came up with another digraph on the page.
Throughout the term Barb sometimes used Student Blame to describe a lack of effort from her student: “Tutoring was the last place he wanted to be on Tuesday, and it seemed like he was barely trying with anything I tried to have him do or work on.” But more often, Barb used language that was less blaming to assign Locus of Control; this type of quote was coded as Locus of Control: Student: “T. especially wanted to avoid writing on Tuesday. Even when generating ideas with him, he would just give me a blank stare.”

By mid-term novices reflected regularly on Locus of Control, and typically made multiple statements of varying stances of Locus of Control within one day’s teaching session. As they learned more about their students, and more about methods for effective teaching of reading, novices made more comments reflecting their own responsibility for effective planning and delivery of instruction, and for their students’ achievement. In the following quote Barb described what she was learning about herself, and how this affected her sense of control in the lessons. This Locus of Control: Teacher reflection addressed the difference between having personal skill in reading and being able to analyze the reading task and plan instruction that met the needs of a struggling reader.

I have been learning about myself as a teacher. I know that one area I have a weakness in is vowel sounds and phonics in general. Reading always came easy to me at an early age and so I have noticed I really have to think about how I am going to teach and present something to someone who struggles while reading.
Sometimes Barb’s reporting of progress toward objectives reflected a *Locus of Control: Teacher* stance, when she expressed a desire to see improvement because it was a goal she had set for him.

After emphasizing that it is important to recall events in the story and how to do a retelling I feel like T. is finally starting to get it. His willingness to use this technique *excites* me, as it will hopefully help with comprehension, which is one of our goals for the semester.

The focus here is subtly different from the *Locus of Control: Shared* reporting of progress, when the goal is assessed and celebrated because it will be useful to the student. In the next quote Barb expresses a desire to see improvement because it will be an advantage to her student: “He read the text with a 93.5% accuracy rate, which I would like to see a little bit higher to help with his personal frustration level.”

Recognizing her difficulty with breaking down instructional tasks in reading, Barb reflected from a *Locus of Control: Shared* stance to explore how to teach so that her student would share her love of reading and would achieve success: “I’ve always loved to read and have recently figured out that I so much want to pass this on to T., but I’m not sure how to directly convey this. Is it through my teaching, working with him, or . . .?”

During the last weeks of teaching Barb continued to reflect on *Locus of Control* from different stances. From *Locus of Control: Shared*: “Working with T. this week was fun. *We have gotten into a pattern of working together.*” From *Locus of Control:*)
Student: “. . . he works hard. He no longer asks questions such as how much longer until we are done.”

Barb continued to search for ways to instruct for her student’s success, and to continued to reflect on her contribution to his success in her statements: “I’ve looked over the comprehension packets that you gave us in class on Friday and want to try something other than Think Alouds with T. but I have not decided what strategy to do next week” [Locus of Control: Teacher] and:

Long vowels are hard for T., especially ones with unique, multiple long vowel patterns. This is one area I constantly am looking for new ways to present . . . to help him grasp this concept because I want T. to have learned lots this semester.[Locus of Control: Teacher]

Barb also continued to reflect on the profound impact her actions and reactions could have on the effort and response of her student: “For warm-up, we read part of a book that T. thought was harder. He resisted reading, but I convinced him to try and he actually did a fine job and the book still falls in the instructional level.” [Locus of Control: Teacher]

As the semester drew to a close Barb identified an event that particularly illustrated the shared nature of learning interactions and the impact of both student factors and teacher factors on the moment of assessment when a teacher has to let go of her student and see what he can do on his own. Barb reflected on this moment from multiple stances of Locus of Control:
One area I feel like we have made improvements [Locus of Control: Shared] in is writing. Throughout our tutoring T. has needed lots of support [Locus of Control: Teacher] to even generate ideas and transfer to paper. He has done a good job [Locus of Control: Student] referencing the graphic organizer about what to include. When I gave him the [final assessment] writing prompt on Thursday, I had no idea what to expect. However, T. connected the dinosaur egg [in the prompt] to something [about Super Mario] and he just took off. [Locus of Control: Student] He referenced each piece of the graphic organizer and filled it out, talking about some Mario egg story. It will be interesting to see once the story is wrote [sic] if it is mostly about Mario and didn’t really connect anything to the prompt, but I could tell that this topic was of high-interest and definitely motivated him.

Barb recognized that there are elements of the teaching interactions that are primarily teacher controlled: “One thing I have had to work on is motivating him to continue working” and some that are primarily student controlled: “as he likes to suggest other activities when he knows that he is going to have to work hard.” She ended the term acknowledging that she and her student had learned from each other during the semester:
One thing that I believe has been good this semester is **the relationship that I have had to work to gain with T.** [Locus of Control: Teacher].

This semester has been [one] of **growth for both T. and me. I hope he has learned as much from me as I have learned from him.** [Locus of Control: Shared]

**Theme four: Adaptations.**

The *Adaptations* theme described how novices used what they learned from analysis of their teaching interactions and the events that occurred during instruction to inform their instruction both for that lesson and for future lessons. Three axial codes captured different types of adaptations novices described during the term. *Teaching Plan: Future* included statements addressing student mastery of skills and planning for next steps of instruction. *Teaching plan: Future* statements are sequential and commonsense: they follow a standardized scope and sequence of skill development. *Thoughtful Adaptations: Present* described adaptations novices made during the teaching interaction. These adaptations are departures from the original lesson plan that arise in response to a students’ confusion during a lesson activity, or mastery of a lesson activity. This confusion response or mastery response from the student requires some kind of immediate reactive teaching action from the novice. Typically *Discourse* codes coincided with *Thoughtful Adaptations: Present* codes, since novices used *Discourse* in the written reflection to describe this reactive teaching action and the thoughts or events that triggered the Adaptation. When a novice described the immediate reactive teaching action they made I coded it as *Thoughtful Adaptations: Present.*
Future captured novices’ responsive planning for future teaching, based on thoughtful analysis of what they learned in previous teaching interactions, and targeted to the unique strengths and needs of their student. This type of planning goes beyond the sequential descriptions of skill acquisition captured by Teaching Plan: Future codes; it has more precision and is developed for the specific needs of the student. It is not an immediate reactive teaching action during the lesson as a Teaching Adaptations: Present code would be. Instead, it is a thoughtful, analytical, reflective plan for future lessons.

A brief description of each of these axial codes is presented next, with illustrative quotes. Within the quotes, bolded text is used to indicate specific words or phrases that provided the basis for coding. Then the case vignette of Carol is presented to illustrate how these codes appeared in reflections throughout the term.

**Code: Teaching plan future.**

Seventy-four quotes described the analysis novices made of their lessons in Teaching Plan: Future axial codes. At the beginning of the term some novices wrote Teaching Plan: Future codes to help them determine broad focuses for their work with the student, such as: “I need to find ways to focus on teaching strategies that will help her connect to other text and help her to engage in reading for learning and pleasure.” and “I want to find ways to get her to think about what she is reading and find strategies that will help her determine the words that she does not know.” and “N. needs his reading confidence to be boosted and I want to make a reward chart for him.”

Teaching Plan: Future codes usually included report of a lesson objective that had been mastered or progress that had been made, and description of how the objective or activity would be revised for the next lesson. Novices documented sequential,
developmental, logical next-steps in instruction. For example: “T. is doing so well with the Quick Reads. **His correct words per minute continue to increase each week. We are going to go up a level in the book** because he can read each passage in about 45 seconds!” and “**N. wrote three sentence** [sic] about his story, but wanted to keep drawing. **I will increase it to . . . five sentences,** to keep (him) working” and “**J.’s answers, though correct are brief. I will prompt him for more** complete answers in the future.”

**Discourse** around *Teaching Plan: Future* axial codes was used in response to a variety of planning needs for novices. Sometimes *Teaching Plan: Future* codes planned for a review of skills. The following quote also demonstrates the *Discourse* that novices engaged in as they worked through *Adaptations:*

Next **Wednesday, I would also like to take the time to go over the /th/ch/sh digraphs** as well to make sure we are ready to do a third word sort after Spring Break. I don't want to just keep moving on and on without having a review of what we've covered.

Other times novices engaged in *Discourse* around *Teaching Plan: Future* for confirmation of a hunch about mastery: “**E. was able to estimate words correctly using context 7 out of the 8 presented times while reading the text. Will keep on the next lesson to reaffirm this belief.”**

Continual reliance on *Teaching Plan: Future* processes for planning *Adaptations* was problematic, since it sometimes kept a novice teaching at a lower level of skill
development; preventing her from seeing that her student was ready to move to a higher level of strategy application. The following two quotations illustrate this difficulty. The first quotation is from week three of the term. In it, the novice describes a *Teaching Plan: Future* code that plans a sequential progression of skill development:

One of C.’s goals for the semester is to read short vowel sounds in one-syllable words with 90% accuracy. I had planned to use the Elkonin sound boxes to work on first final consonant sounds, and then move to short vowel work, but C. was very familiar with the /ă/ and /ĕ/ sounds that we worked with on these lessons. I feel like this is a very good technique to use with C. because it uses pictures of the words, and forces him to find all of the sounds in the word. **After having him do this for the /i/ sounds, I will have him do a word sort for all of the /ă/, /ĕ/, and /ı/ sounds. I also want to focus on the transfer of this skill into reading new texts.** He seemed to have troubles doing this on Wednesday, and I had to use the dry-erase board to make the sound boxes for several /ă/ words in the text. **This will probably cover most of my week, and then I plan on doing the rest of the short vowel sounds.**

This *Teaching Plan: Future* quotation planned a logical, sequential series of instruction on short vowels, without accounting for student variation in skill ability that might require further reflection and analysis. Novices who planned for a sequential progression of reading skill development in this way closed off, at least temporarily, their
reflective analysis of what actually happened in a teaching interaction. Students don’t necessarily follow a sequential and consistent progression in their development. A teacher’s daily reflection and adaptation is necessary to insure that teaching activities address the reality of the student’s development and mastery of skills and strategies. For the student described in the previous passage, retaining and consistently using knowledge seemed to be difficult. Six lessons later the same novice posted this Teaching Plan:

*Future* comment:

While we were doing the sound boxes this week, I noticed that C. is reverting back to looking at the pictures for clues as to what the word might be before sounding it out first. For instance, while (reading) he came to “pot”. Instead of starting with the /p/, a sound he knows well, he scanned the picture . . . and said “pan”. I just said, “Close, but let’s look at the word again.” I had to walk him through each sound, something that we haven’t done since we first began this strategy, before he was able to read the word.

In the previous quote, the participant missed a valuable teaching point. Her teaching plan focused on sequential development of short vowels and letter-by-letter sounding. Her student provided a word that made sense and almost matched visually (pan/pot). Rather than taking the student through each sound, she could have drawn his attention to the ending of the word or the vowel of the word to encourage him to quickly revise his response: a higher level skill than letter-by-letter sounding, and one that
contributes to fluent reading and comprehension. When novices used statements that fit the **Teaching Plan: Future** code, their statements lacked the combination of reflective analysis with action in practice. These statements don’t fully convey the practices that demonstrate that the novice is reflective about the learners she is working with and about the teaching practices she is using. Further, by focusing on sequential skill mastery, novices miss opportunities to teach for student mastery and transfer of strategies.

**Code: Thoughtful adaptation present.**

Seventy-eight **Thoughtful Adaptation: Present** codes described adaptations novices made during the lesson, when they became aware of a point of student confusion or mastery that required a different teaching action than originally planned. At the beginning of the term these **Adaptations** helped novices become familiar with the student’s strengths and needs and the adjusted teaching approaches that would be necessary to teach the student successfully. To describe **Adaptation** for her student’s strengths one novice wrote: “He answered all of the comprehension questions correctly on the expository texts we read. **I even threw in some more implicit questions and he answered these questions correctly as well.**”

Other novices combined observation of strengths with adjustments they made to include more motivating activity preferences:

I started to do some work with the long and short -e sounds to build on . . . decoding skills. At first I just used picture cards . . . he was extremely bored with that . . . **then I pulled out the magnetic letters** and he liked those.
and:

J. enjoyed the visual I made. It may have been overwhelming at first, so I took off many of the cards and only used the ones we focused on. Once he used the strategy at the beginning of the book, he would stick it on the chart and then use a strategy after reading a few pages. He surprised me by using a strategy that I was not going to cover, so we put that on the visual as well.

Other novices included observations about their own behavior that could lead to student success or failure:

**I tried to be cognizant this week of how many times I was correcting**

D. during his reading. I want reading to be a fun experience for him and also . . . to ensure that he is able to comprehend what he is reading. If I have him repeat too many words, his comprehension goes down . . .

As the term progressed, *Thoughtful Adaptation: Present* codes captured evidence of the adjustments novices made during their lessons when they noticed that an activity was not working and realized they would have to make a change immediately:

K. seemed really disinterested while reading the warm up text. Since he didn’t seem to be engaged at all in the text, I changed the warm up to a
book that I had sent home with (him) on Tuesday. His attitude improved as soon as I did that.

T. did not know what I meant when I asked him to make a prediction, but when I reworded the question and pointed out something in the picture on the book cover, he flipped the book over to see if there was any information on the back. He then made 3 predictions and another one while he was reading the book.

On Tuesday, we read half of a book for warm-up and I told T. we would come back and finish the book at the end of the lesson and he did not want to do this, so I had him continue reading the entire book, just as I would have done during the new text section. This forced me to be flexibility [sic] in my teaching that day and rethink how to introduce content and the order we did activities.

Some novices described how a temporary change in activity can get a lesson back on track:

After about three minutes of unsuccessfully using the white board and discussion, I suggested we take a break and put [her record of home reading] up on the bulletin board. This tiny break was great - we sat back down and without my prompting, she read the sentence correctly.
By being open to making thoughtful Adaptations during teaching novices had opportunities to refine the teaching strategies that they were learning:

I gave some simple examples, such as sorting by first letter, and then asked him to sort [the words] in any way he likes and then I will guess . . . what he used to sort. As I waited, I observed him . . . manipulating every card, in different spots on the table, stacking a few. After about a minute, my curiosity got the best of me and I asked him what he was using to sort. He informed me he was placing some cards upside down, and some right side up. Obviously he did not understand the concept of vowel patterns, consonant blends, and relating sounds. To counter this, I said “let’s sort by sound” and S. laid out the cards share, scare, and stare. I asked him if there were any other cards that we could include in this group since we were sorting by sound, and he said that there were not. I then asked him about the word “air”. S. said, “That word looks different than share, scare, and stare.” I countered, “but how are we sorting these words?” “By sound.” “Do share and air sound the same even though they look different?” “Oh Yeah!” He then grabbed the hair, chair, pair, and fair.

One time he had trouble reading the word “we” in our warm up text and became frustrated and started to tear up. I did not want the lesson to start off on a bad note, so we stopped reading and I reassured J. that he was doing just fine and that he is a good reader. He was not interested in trying to solve what the word is or what would make sense in the story. He just
kept saying he gets confused. **We stopped reading at that point and moved on** to finding smaller words hidden inside larger words. This seemed to cheer him up and I sneakily put the word be and me together using the magnet tray and letters which he read just fine, then I switched the beginning sound to the w to see if he’d read the word ‘we’ which he did. **So I said, “See you got that word! You know it! Let’s finish our book because we solved that tricky word.”** And at that point he was able to finish the text.

She couldn’t understand the term “mind’s eye”, so I just told her it was a **picture in her head.** I asked her what picture she saw in her head when she thought of a castle with a large tower and a flag, and she used her finger to draw it out on the wall. **We practiced this again** with the dragon and she seemed to be understanding better.

Novices also described the flexibility needed in delivery of a lesson:

I should probably mention that at the last minute, **I realized my word sort in no way meshed** with the rest of the lesson plan, so I dropped it. I asked one of the supervisors if that was OK and she said that is part of teaching. Sometimes you realize something doesn’t or won’t work with that particular lesson and you change your plan.
I also got to practice flexibility, particularly since she didn’t like the one book (or) the writing prompt that tied into it. She’s very cooperative but jumped at the chance to do something else. So I changed the writing prompt and away she went, excited about her start to a story.

She then replied that she knew we hadn't (reached the exciting part of the book), that she'd read the book before and was making incorrect predictions so that I would think she hadn't read it. We then had to venture off plan and find a new book so that she would be able to make genuine predictions.

Since all the students were struggling readers, motivation and effort were very important. Novices reported that flexibility was often required to keep the student and the lesson progressing:

I noticed that N. was starting to be a little disappointed on his [reading rate]. So I had an idea. Sometimes, N. would ask if he could use the timer and time me when it was my turn to read the passage. I noticed that the two passages he scored 99 words per minute also took me longer to read than some of the other ones. I pointed that out to N. I then suggested that we set a goal to reach, as far as how many words per minute he thinks he could accomplish on the current passage. A realistic one that wasn’t too high. He set it at 102 and was able to complete 113!
I am the type of person that likes to have things really planned out, so in the beginning I stuck exactly to my lessons and didn’t deviate at all. However, as I became more comfortable with my teaching and the strategies we were working on, I felt much better about being able to make changes during our lessons, especially when I thought they were going to be beneficial to K. In the last few weeks especially, I felt much more able to pick up cues from K. and steer the lesson in a different direction if I needed to while still meeting the overall goals for the lesson . . . this has been a really important lesson for me in teaching because there are going to be situations where it will be better for me to take a different direction with students than originally intended. Having these experiences . . . has helped me feel much more confident in being able to do this.

This novice recognized that a teaching day may be “fraught with surprises” (Shulman, 1999, p. xiii) and that she would need flexibility and responsiveness in order to teach effectively. This type of reflective analysis of student responses and teacher actions, and flexibility for implementation and adaptation is crucial to effective teaching in every teaching interaction. Documenting instances when they had to make Adaptations during the lesson helped novices become aware that analysis of student responses and reflecting on their own actions could lead to refined delivery and more precise practice.
**Code: Thoughtful adaptations future.**

Novices used their reflective notes to document adaptations they would make to future lessons as a result of analysis of their teaching interactions and student responses. Two hundred four statements describing Thoughtful Adaptations: Future were coded. These differed from Teaching Plan: Future because thoughtful adaptations describe a reflective sequence of teaching, observation of student response, analysis of the student response and the participant’s teaching, and planning with that response and the specific learning needs, strengths, and preferences of the student in mind. This type of reflective analysis diverges from the ordered, scope and sequence progression of learning tasks that Teaching Plan: Future quotes described.

Some Thoughtful Adaptations: Future codes described discovery of a student’s learning need and planning to adapt for it in the next lesson: “After discovering during the previous session that S. consistently put the ‘r’ first in many “r”-controlled vowel words, I created a word sort using Words Their Way”, and:

By having H. fill out the story map I was able to recognize his inability to make inferences in the story. As a result . . . I will be focusing more on implicit questions at the end of each tutoring session rather than on explicit.

Other quotes described Adaptations based on deductive analysis. These were specific changes to one aspect of the lesson that had been unsuccessful. Novices made
these Adaptations with the goal of modifying a specific activity in order to increase the likelihood of student success:

**Even after I modeled** setting an appropriate goal for the text, **H. was still unsure** of what his purpose for reading was. Both lessons he responded with “I don’t know.” **I will switch from a narrative text to an expository one** to maybe help him with setting a goal.

She had some good ideas for writing an original story about Fudge. **I’m wondering if it is possible to work on a laptop during some sessions. I know E. enjoys using a computer, and she has trouble printing legibly on paper. She knows she has bad handwriting, and I’m wondering how to encourage her to be a more engaged and active writer.**

Some Thoughtful Adaptations: Future codes described Adaptations planned after lengthier observation and deeper reflection on student responses to lesson activities. Some of these Adaptations were planned in response to challenging dilemmas such as motivation:

**I also found that he is a very tactile learner and needs to be holding something in order to keep his interest.** (The supervisor) suggested I bring some kind of squeeze ball for him to hold during the tutoring session . . . B. expressed an interest in rocks and minerals so I feel I need to try and include books related to this topic that are also in his reading level so
he will be more interested in reading the new text. I think if I bring in some objects for him to touch that are related to the books we read, he might be more engaged in the story.

Some *Thoughtful Adaptations: Future* were planned in response to a particular learning challenge, and required novices to apply careful analysis and planning for a precise strategy that would meet a unique student need:

**Because of J.’s struggles with writing, I am adding an additional step** onto the writing process. J. and I are taking her writing from last week and breaking apart her thoughts (pulling apart the one run-on sentence) and writing each part on a note card using a complete sentence. My hope is that this . . . will help her see the importance of punctuation and the need for multiple sentences within her writing. Then, I am hoping to make a transfer this knowledge over to her reading as well.

Other quotes focused on analysis and adaptation of the novice’s teaching actions after observation of the student response:

**I modeled (making predictions)** for C., and while most of the time, he did follow my lead, **he mostly just agreed with the predictions that I was making. For the next lesson, I will not model as much and instead ask C. what he thinks will happen and why.**
I want to also keep remembering to say things like, "Say this again and make it sound right, or make it make sense." I did this for the past week and I feel like it really puts the responsibility for finding her error on her, which is just what she needs. Self sufficiency is what I want her to have . . .

on Tuesday I had him read a book that had many phrases repeated. I thought this would help (him) read with better fluency and phrasing because sentences repeated and only the last word would change. However, H. still seemed to struggle through the text and continued to read each phrase . . . word-by-word. After our session was done, I looked back through the text and realized that maybe he didn’t pick up on that strategy because the phrases were pretty long. I should have done more modeling before I had him read independently. On Thursday, this book was also our warm up text and I did read the whole book to him while pointing out the similar phrases throughout the book. After I read it to him I had him read it to me. I noticed a huge improvement in his reading. He read with more fluency and better phrasing.

Thoughtful adaptations: Future captured the reflection and analysis that novices used to think deeply about their lessons and plan adaptations that were more tightly
focused on the needs of their student. Early in the term novices made *Adaptations* to embrace student activity preferences in order to improve motivation. Later in the term the connection between activity preference and learning need became more apparent. Novices reflected on how to use preferences to scaffold involvement and motivation for new learning. Many novices reflected on their own teaching and how they could adapt their actions in order to derive a desired result from the student.

*Vignette: Carol.*

Carol provided a representative example of how novices enacted and reflected on *Adaptations* during their teaching. Carol was an undergraduate novice. Her student tended to take a passive approach to reading, and Carol’s overarching goal was to encourage her student to take an active role in both decoding and comprehending text. Carol’s *Adaptations* were focused on making connections to text, building vocabulary, learning vowel patterns, and building writing skills. Most of Carol’s *Adaptations* were thoughtful responses to her student’s confusion or to these learning needs; but a few of Carol’s *Adaptations* were more concrete and sequential *Teaching Plan Future* responses, such as this quote from the first two weeks of teaching:

I know **I need to think of the time** when doing my lesson plans and . . . of K.’s tendencies **so I can plan stuff that . . . we can get through in one session**, versus not getting to everything this last week.
In these first weeks of teaching Carol documented a *Thoughtful Adaptation: Present* she made when her student was confused and unable to respond to a teaching strategy:

K. still was quiet and wouldn’t really respond [sic] when I talked with her about making connections with what she was reading. *I gave examples, talking about how I love playing with my dog and go on walks with him, thinking it would get her to talk.* (Thoughtful Adaptation: Present)

When Carol’s strategy and *Adaptation* for teaching her student to make connections with text was unsuccessful, she planned a *Thoughtful Adaptation for Future* lessons: “I think I should **focus on the predicting and . . . choose another strategy** (other than making connections) that . . . she could succeed with.”

Throughout the term Carol shifted between *Thoughtful Adaptations Present*, made in the moment of teaching in order to immediately address her student’s confusion or follow her strengths; and *Thoughtful Adaptations Future* when she reflected analytically on what had occurred in the teaching interaction and made plans that built on what she learned through her reflective practice:

I thought it wouldn’t be that hard to understand . . . yet I overlooked that she might not get it by just hearing ‘make a connection’. *I gave examples that would fit me and her both, yet she was still hesitant with*
answering. (Thoughtful Adaptation: Present) I think I will try to stay
away from making connections, for now anyways, and introduce a
new stage to her in a couple sessions. (Thoughtful Adaptation: Future)

By making this Thoughtful Adaptation Future, based on her reflective analysis,
Carol was able to try out and find other comprehension strategies that were a better match
to the needs and abilities of her student. Carol made another Thoughtful Adaptation
Future in order to help her student use strategies flexibly and see the utility of each
strategy: “She . . . really responds well to the questioning strategy, therefore I may
shift between the strategies that she likes, to really point out more ways that those
specific strategies can help us understand what we read.”

At the same time that she provided instruction on comprehension strategies, Carol
began to adapt strategies to help her student build vocabulary by observing and recording
student data that would help shape her teaching approach and help her make Thoughtful
Adaptations Future: “I wrote down the words she had troubles with (during reading),
so I could shape lessons and choose books that would help with those word and
spelling skills.”

Carol used a vocabulary building approach that combined conversation about
word meanings with drawings and application of the meanings to text. She set lesson
objectives that focused on this vocabulary approach; then analyzed her student’s progress
toward these objectives. Here, Carol described a Thoughtful Adaptation Present she made
in the moment to scaffold her student’s growing vocabulary skills:
K. found it hard on Thursday, yet still was able to come up with three sentences that included our vocabulary words. For a couple I said she could look through the book to maybe get an idea from the pictures, because she absolutely had no idea what the word meant.

As she analyzed her student’s responses Carol made Thoughtful Adaptations for the Future:

**I do though need to put limits** on (her) picture, since she is really into detail. Maybe that is something I could send home for her mom to help her with. **I could have K. write the vocabulary word on the card, along with a sentence she makes up, and she could take the cards home and finish the picture.**

In week seven of the term, Carol continued to scaffold her student’s vocabulary learning with Thoughtful Adaptations Present so that she could build her vocabulary:

For the vocabulary strategy she was successful at using the words I picked and coming up with a meaning for them. The word ‘tongue’ though, she was able to say what it was but couldn’t come up with a definition for it, therefore **I said it was okay since we talked about it. A couple of the words we were able to stop during the story and talk about if the meaning was correct or not.**
Carol also made Adaptations to address her student’s word-building needs. Early in the term Carol used a word building activity and was able to determine that her student needed support for two-vowel patterns. Based on this observation she made a Thoughtful Adaptation Future:

Objective: K. will move letter cards to spell words with blends and a combination of long vowel and short vowel sounds. Objective met. K. made words I said with little difficulty. (I found) that she had trouble with the two-vowel patterns. I think it would be a great learning experience to do word work with those vowel patterns, so K. can have practice . . . building those words.

When Carol planned to move from manipulating letter cards to reading complete words from cards, she discovered that she needed to make a Thoughtful Adaptation Present:

Objective: K. will . . . automatically (decode) words as she draws cards with new words on them. Objective met. We did this differently than planned . . . I took a word, wrote it on the white (dry-erase) board, and had her identify it.
The *Thoughtful Adaptation Present* of using the white, dry-erase board to decode words turned out to be very effective for Carol’s student, and she ramped-up this adaptation during actual lessons in order to scaffold her student’s learning of two-vowel words:

I had words I picked out from the new text that had a common feature and I predicted K. would get stuck on. I wrote the word on the white board and asked K. to say the word. I would then ask K. to write the word and ask her what the vowel sound was . . . She was able to see moaned and just sound it out as ‘m-o-n-e-d’. I believe it helped her see that even though the word had the ‘a’ in it, it wasn’t sounded out. **It really was a last minute change to the word study activity, yet I do think it helped** K. see visually how the 2 vowels make one sound if they’re sitting right next to each other.

As the term progressed, Carol continued to make *Adaptations* in the moment of lessons in order to move her student toward a more abstract understanding of decoding words with two-vowel patterns and away from use of the white board for decoding:

I had put the vowel sounds on the sides of a dice that we had worked with in previous lessons, therefore she was familiar with them. Previously, I had focused on her sounding words and putting them into different categories according to their vowel sounds. For this activity, I did it the
other way, had the words (on cards) in front of her and having (her) try to find which ones had the vowel sound (that she rolled on the dice). It was a little confusing at first . . . It was meant to be like a “bingo” game, yet seeing that see was a little confused . . . I shifted and just helped her say the words out loud and think of the vowel sound each had.

Carol made numerous Adaptations in writing instruction as well, and near the end of the term she reflected that she was able to see her student produce writing that was significantly improved from the writing produced in the assessment at the beginning of the term. Carol began writing instruction by planning Adaptations that incorporated motivation and scaffolded assistance into adding details to writing:

I assisted K. in coming up with ideas to write about. I had to prompt her to get the ideas to come out, but she then . . . gave ideas or interests of hers and things we could write about. She saw in the story The Toy Tooth that the information on the (graphic) organizer is put into the story, but with a lot of more detail. Next week, I think our next step is to talk about details we could add to each idea. I think K. will be more interested since it can reflect her personal experiences, so she may be more willing to write, given the organization and idea assistance.

[Thoughtful Adaptation: Future]
Carol discovered that she needed to modify this *Adaptation* in order to make it more accessible for her student:

Objective: K. will add more details to her (graphic) organizer that describe her subject and the situation she has decided to write about (her dog).

Objective met. **Instead of adding it to the organizer though, we looked at the organizer to remind K. of . . . the details that she had down from the previous session. K. then added detail to her previous detail as we put it down on paper for the rough draft.** [Thoughtful Adaptation Present]

Carol continued to make *Thoughtful Adaptations Present* in the moment of teaching with very specific instruction: “I showed her how to add new things to a paper that we already wrote, using a different colored pen and how to write above the old writing.” and:

we took the idea that she had picked about writing about her dog and used the graphic organizer to come up with a setting, characters, and events . . .

**I showed her how to come up with some of the when and where since she wasn’t really sure what to say.** We talked about words that we could put under the time, such as months, days, times during the day, years, etc.

I was proud of K. . . [she gave] about double the information that she had
on the organizer that she used during the writing prompt during the [beginning assessments].

Throughout the term Carol and the other novices made continual use of Adaptations to meet the needs of their students. Near the end of the term the number of Adaptations dropped, as novices discovered teaching strategies that addressed the specific needs and strengths of their students. Documenting Adaptations in their written reflections supported novices’ analysis, helping them to see the next steps in planning and instruction that would support the growth of their students.

**Theme five: Discourse.**

Novices used their structured reflections as a sort of sounding board for exploration of both Problems and Dilemmas in their teaching. Sometimes this exploration took the form of self Discourse—talking through a Problem or Dilemma in order to generate possible solutions. Sometimes novices asked direct, specific questions of their supervisor in the reflective notes; sometimes they made more general requests for help. In the structured reflection notes novices documented conversations with supervisors and how the implemented supervisor suggestions from these conversations; they also wrote about conversations with other novices and with parents. All these types of Discourse provided another piece of evidence about the reflective practices of novices. The actual conversations were an explicit, visible form of Discourse, but the self Discourse that novices documented in the reflective notes, when they were just talking through a challenge without directly asking for help as a way to find solutions on their own,
provides a window into the reflective analysis that inhabits and informs effective teaching.

Each type of Discourse that was coded is described below. Words and phrases that were indicators of each type of axial code are highlighted in bold print. Following these descriptions the case vignette of Anna is presented to illustrate the progression of reflective Discourse throughout the term.

**Code: Discourse colleague, discourse parent.**

Forty-three quotations documented Discourse with parents and with other novices or teachers about instruction and instructional strategies. At the beginning of the term a number of conversations occurred with parents regarding students’ activity preferences and learning needs. Contacts with parents resulted in quotes like, “I was able to talk to his mother today and she gave . . . some good information . . . N. does get distracted easily, but he is a hard worker if you keep him focused.” Novices sometimes documented conversations they had with parents about instructional strategies: “After talking with her mom at conferences . . . mom knows to work with her on predicting and stopping and checking comprehension while reading at home.”

Sometimes parents perceived their child’s instructional level differently than the novice did, or voiced concerns to the novice:

I kind of worry to [sic] about his mom. She called me on Wednesday and said to send home Level 10 books with N. because he can read the level 6 and 8 so well. I wonder if she reads him the books or something. He doesn’t fly through them with me.
On Wednesday, his mother was able to observe our lesson, and he seemed very distracted. She was also asking if he always did things like kick his foot when he was angry, and it was hard for us to stay focused.

A requirement of the course was that novices contact their student’s classroom teacher to discuss goals and objectives for the tutoring and to coordinate tutoring instruction with classroom emphases, when appropriate. This contact was often documented in reflective notes, as was information that parents passed on from the school context, as in the quotes below:

His teacher emailed me this week and informed me that in class he is also very confident. She did talk about how he can become emotional if he gets frustrated and things don’t go his way. It was very reassuring to hear this from another adult in his life and to receive a little feedback from her.

T.’s mother called me . . . She had parent teacher conferences this week and the teacher told her that T. is now reading on grade level! He is reading 120 correct words per minute and was reading 90 last time he was tested! This is great! She mentioned that his teacher said he has problems breaking down words into parts (which we have talked about). I was thinking of ways to work on this.
And novices reflected on the *Discourse* challenges of conferencing with parents in effective ways:

One thing that was very frustrating for me was the parent conference. E. ran around the room for over half of the conference, so my time to talk to his mom was pretty limited. His mom also said that she didn’t see why E. was considered behind in reading and was going to talk to his teacher to see if it was still considered an issue. This made me a little uncomfortable knowing that mom doesn’t believe our work is even completely necessary.

M. seemed a little shy and embarrassed while I was talking with her mother, but I think she got the message I was trying to send . . . that she's doing really well, she’s a great worker, and none of her assessment scores were very low or alarming in any way.

As for the parent teacher conference, I definitely did not feel as prepared for all of the questions as I wish I had been! Looking back, though, many of the questions and concerns raised were ones I am simply not experienced enough to give a good viewpoint on yet. And while the conference was uncomfortable, I do consider myself lucky that I experienced this as early as I did, as I'm sure some of the parents of my future kindergarten students will have plenty more to throw at me! No one wants to see their child struggling, so I do understand why she was upset.
Sometimes novices had the opportunity to share what they were learning in the course with teachers they worked with in other settings.

I’m learning so many things that I will be able to use in my classroom. A teacher I’m working with is very interested in the vocabulary and spelling activities and assessments in Words Their Way. I will be sharing with her the graphs presented in class . . . which illustrated the significant increase in performance with only 10 minutes of word work.

Other times novices learned and shared teaching strategies with their class peers:

“It seems that a lot of my peers have games established that they play during word work. I would like to try and find a game or create one myself that feels more like a game instead of work.” These opportunities to interact with their novice peers and colleagues already in the teaching field provided valuable experiences of collaboration and mentoring essential to reflective practices (Alexander, Fives, 2000).

**Code: Asking for help, implementing suggestions of professor.**

Eighty-two quotations asked for help or reflected on implementing the suggestions novices received from their supervisors. Some appeals for assistance were very clearly related to specific areas where novices wanted to provide instruction: “I want him to work more on monitoring his comprehension while he reads and going back and using context clues if he doesn’t. Do you have any suggestions for this?” and “he seems to have a hard time breaking down words so next week I think I will introduce a word study or something else to work on this skill. Any ideas?” After this specific appeal for
help the supervisor suggested working on syllabification rules and directed the novice to resources for developing this skill. The next week the novice wrote: “Could I get a list of multi-syllabic words together and just work on breaking them down into parts? **Would this be a worthwhile way to work on this?**”

Several weeks later, the same novice reflected on how the implementation of suggestions she received from her supervisor worked: “**I feel like I did a much better job of giving specific praise** for what he was doing. For example for syllabification, I would say, ‘That is great that you knew to separate those two consonants in that word.’”

Some appeals for help were made when a novice had reached a plateau with her student and genuinely did not know how to proceed. Sometimes this appeal came as a direct question asking for the supervisor’s advice on what to do next, as in the following quote: “Right now I am wondering what I can do beyond modeling for T. to help improve his reading with expression. I think I’ll try doing a quick read this week, but **is there something else I should do?**” Other times the appeal was qualitatively different, more of a request for the supervisor to contribute ideas for the resolution of a *Problem* or *Dilemma* that the novice would then consider as she made her instructional decision: “One specific aspect that **I really want feedback** on is to know where to go with J. I really don’t know how to treat his inconsistencies, and how I can make the word sort harder for him.”

Novices often used their reflections as a platform for expressing specific needs for their own teaching skill development: “Can we set up a meeting time to talk about the different (word) sorts? We learned a few in class, but I am uncertain on how to teach N.”
the skills.” And “I would take any suggestions on how to make the activities more engaging.”

Finally, some novices used Discourse to reflect on how they implemented a suggestion from one of the supervisors. These quotes provide evidence of the novices applying what they were learning in the class as well as what was modeled for them by the supervisors: giving support to the value of the intensive supervision that accompanied teaching in the reading clinic setting.

I am mainly pleased with our shared writing because he was full of ideas. Initially J. was cautious about coming up with sentences, but once he did I used that opportunity to pull him in, as per (Dr. M.’s) advise [sic]. I said, “Mmm, Sneakers ran away. Is that interesting or exciting to read?” J. added, “Not really. I know. He zipped down the stairs with Jonathan close behind!”

[Dr. M] came over to demonstrate some ideas for me on how to get her to better decode some words and how to go back and read those choppy sentences more fluently, and I was amazed at how well those strategies worked when I tried them. I did the analogy teaching, where I wrote the word NIGHT on the white board, and we compared it with the word she was struggling with, MIGHT. She was able to decode it herself after seeing the words side by side.
I took [Dr. M.’s] advice and carefully picked out a book that contained only a few words she would have trouble decoding, and this seemed to help out a great deal.

[Emily] stepped in and helped with an ‘oy’ and ‘oi’ vowel pattern activity. We did come to the conclusion that E. was not quite at the level with these as I had thought. I was pushing him a little too hard to apply this concept without using actual print, which is what he seems to need right now. I adjusted this later in the week and touched upon simpler ways of working with these patterns.

**Code: Discourse self: problems, dilemmas.**

The majority of Discourse codes (511) centered on self Discourse about Problems and Dilemmas encountered during teaching. In this type of Discourse novices used their writing to develop self dialogue: listing the features of a Problem or Dilemma as it occurred during teaching, posing questions to themselves about the incident, developing possible solutions, and documenting how the Problem or Dilemma resolved. By the amount and detail of self discourse in the reflective notes, this type of self Discourse seemed to be a fundamental, essential theme of reflective practice.

**Code: Problems.**

Problems are the aspects of teaching that can be addressed through the development of teaching routines and procedures. By contrast, Dilemmas are more
challenging because they have deeper roots, are more deeply ingrained, more complex, and have less clear paths to resolution. In fact *Dilemmas* may never be fully resolved.

*Problems* have solutions, although the solutions may not be readily apparent and may take time to implement. Developing and implementing these solutions, routines and procedures is a primary task of the novice years of teaching. Perhaps because participants in this study were novices, there were more coded quotations for self dialogue about problems (282) than about dilemmas (229).

The types of problems novices reflected on fell into several coding categories. Not surprisingly, a number of problem quotations focused on *Teaching Skill Development*: “I’m still trying to figure out strategies to work on sounding out the word.” and “I need to focus on strategies to work on sounding out words”. Correct Implementation of *Teaching Strategy* was also reflected on:

His prosody was much improved on Thursday, which shows me that he can handle a level 16 text. I am hoping to move to level 18 this week.

**How do I know exactly when to stop progressing forward?** Do I base my decision off of prosody, comprehension, or a combination of both?

*Time management* and the need to be flexible for the inevitable interruptions emerged as an axial code: “Due to our limited tutoring time [student was 20 minutes late] and our pace at getting through previous activities, we were not able to get to the writing portion of the lesson.” Related to this code were the challenges that emerged in *Implementing the Lesson Plan*: “For M.'s think aloud strategy, I was so focused on
having her understand the comprehension Think Aloud Strategy and apply it that I did not have her pick a symbol to help her represent it.”

Resolving these issues of Time Management and Implementation of the Lesson Plan are crucial tasks of the novice years (Berliner, 1986). It is exactly these types of problem reflections that differentiate novices from experienced teachers. Experienced teachers will have procedures in place for resolving quickly these problems of teaching. Novices are still learning how to adapt to these facts of teaching life.

Much Discourse focused on these types of early Problems of the novice years of teaching. Timing and Targeting were reflected on; this is the art of knowing when to re-teach and when to move on:

I know that re-teaching is an integral part of teaching, but should I start reviewing every concept to ensure that he is learning? Is this type of repetition normal for the tutoring sessions? Or should I let things marinate for a while before I visit them again?

Along with Timing and Targeting, novices grappled with how to Monitor and adapt for learning interruptions: “even though hands on activities are great for D., I need to monitor him closely to ensure that he is on task” and “Any suggestions on how I can help him focus on the text first and not let the illustrations be a distraction?”

A primary task of novices is that of successfully Identifying Student Skill Deficits so that they can be addressed through instruction: “he definitely enjoys reading, but he
does have issues pulling out details” and “His reading is a bit choppy because he is spending . . . considerable . . . time to decode the words in the text.”

Many reflections on problems in teaching focused on Challenging Behaviors that novices encountered. Again, experienced teachers have a bank of experiences to draw on for resolving problems of Challenging Behavior. Novices, with their more limited experiences with students, must reflect on these challenges in order to identify and implement effective solutions. Some challenging behaviors could be resolved with relative ease:

**N. would bring small toys to the session.** To get his focus off of playing with his toys, I would tell him that we could use them as our game pieces instead of the boring old pieces I had. This would encourage him to put them aside.

Here, the novice develops a solution to a minor problem that can become a significant interference with learning if not resolved. Novices who plan to work with young children must develop a bank of things to say to a student who brings toys to class, as this is a frequent occurrence in classrooms. For teachers of older students, the toys still come to class—they are just more expensive (MP-3 players, cell phones, etc)!

Developing a procedure for this *Problem* is another early task that must be mastered by novices.

Learning to keep students on task is a related *Problem*. Conversation is crucial to literacy learning; keeping it focused on the topic is a delicate dance that teachers engage
in with their students. Novices reflected on how to guide and scaffold conversations in quotes such as the following:

When we were discussing the book, especially when going over the new vocabulary words, she went off topic a few times, but I don’t think she wasted too much time. Sometimes I do not know if her tangents have a point until she finishes saying them - sometimes, she tells stories that are indeed connected to what we are talking about and relevant. Other times, they are not. I dealt with these tangents by explaining how I noticed they are relevant (“Are you telling me that people get presents on special occasions?”), and other times I “ignore” them and move on: “Okay, let’s look at this word now.”

Scaffolding instruction to overcome student resistance is another Problem of teaching; one that can develop into deeper Dilemmas of avoidance if not addressed successfully early in the teaching interaction. The following quote illustrates a successful resolution to a Challenging Behavior:

He was really resistant to the graphic organizer on Tuesday, so on Thursday I eased him into it by implementing a free brainstorming activity first. After we did this, we were able to use the information we brainstormed and plug it into our graphic organizer and will now be able to begin our shared writing next week. I realized that for writing, I am
really going to have to think outside the box . . . and adjust my techniques as . . . appropriate.

Some Challenging Behaviors novices encountered were longer-lasting and required more work and vigilance. These types of behaviors, if not resolved successfully, can contribute to a deeper Dilemma: Avoidance. Therefore, it is crucial that novices develop skill in resolving these types of Challenging Behaviors at early stages in their teaching careers: “Once again, Tuesday she came in not really wanting to work. She was pretending that she couldn’t read very loud, covered the pages so I couldn’t see where she was in her reading, and rolled her eyes at me”, and “I have to take a stand and let N. know that I am a teacher and we are there to work and study, but have fun also. I feel like he does think it is just a play time.”

Some challenges novices encountered were uncomfortable but very true to life:

I was a little concerned about D.’s referral to the session as a “date” and also asking if we “could kiss at the end”. Although I feel that I handled it ok, I began to think how I would handle a similar situation in my classroom. It was definitely a few uncomfortable moments, but luckily I got D. back on task and he didn’t mention it again.

Developing procedures for resolving Problems described above is a critical task for novices. Such procedures allow novices to avoid entanglement in the distraction of
Challenging Behaviors, learn to implement Time Management, know when to re-teach and when to move on by learning Timing and Targeting, and develop procedures to Monitor learning. Mastery of these initial Problems of teaching prepares the novice for the next stages in teaching, and removes the “white noise” of teaching so that student learning can become the focus of all teaching interactions.

Code: Dilemmas.

Dilemmas are never resolved automatically or with simple procedures, as Problems may be. While Problems have solutions, Dilemmas have horns, and all teachers can find themselves stuck on the horns of a Dilemma. The difference between Problems and Dilemmas is a matter of degree. Dilemmas are student challenges that have deep roots; they are ingrained patterns of behavior, and students grappling with Dilemmas often don’t change their behavior in response to simple procedures or management. Complicating the matter further, Dilemmas often occur in tandem with other equally troubling Dilemmas of student response and student behavior. Learning how to approach Dilemmas of teaching is an ongoing task for both novice and experienced teachers. The occurrence of a Dilemma brings about the hesitation and perplexity (Dewey, 1933/1989) that cause a teacher to recognize that something is interrupting learning; something that requires later reflection.

Since participants in this study were novices still working to recognize Problems in teaching and establish procedures, there were fewer coded quotations for Dilemmas (239) than for Problems (294). During the first two weeks of the term Discourse focused heavily on Problems, far more than on Dilemmas. But novices’ awareness and reflection on Dilemmas was rising steadily during these two weeks and by the third week the
number of Problems and Dilemmas reflected on in Discourse was nearly even. Problems remained a primary topic of Discourse during the fourth and fifth week, but in the last three weeks of the term novices seemed to have resolved many of the Problems they reflected on earlier in the term. This was indicated by the steep drop in Discourse around Problems during these final weeks. Conversely, Discourse on Dilemmas remained relatively constant from week three through week seven of the term; an indication of the tenacity of Dilemmas and the difficulty in resolving them. Figure 5.1 shows the breakdown of Discourse on Problems and Dilemmas for the eight weeks of the term.

![Figure 5.1: Discourse on problems and dilemmas over time.](image)

The types of Dilemmas novices reflected on indicated the greater challenges Dilemmas pose: Avoidance behaviors, Getting More thoughtful responses from students, Motivation issues, Student Breakdowns (emotional breakdowns or interruptions to the learning process) and Flexible Use of Knowledge. Avoidance was an issue that novices encountered frequently. Because all of the students at the Reading Clinic were struggling readers, some Avoidance behaviors were well established patterns of behavior. Novices
enacted and reflected on a number of responses to *Avoidance*. In the following quotation the novice reflects on learning the impact a change of scenery can have on *Avoidance* behaviors:

Tuesday she was feeling very down on her performance with the spelling inventory, and when this happens, she stops working. **She refused to talk and would only write messages on the white board.** I took her out to **the hall** to do our skill work reading, **and this helped turn her around.**

[Maybe] she just needed some encouragement and quiet to get back on track. When we were alone in the hall, she perked back up and read happily to me.

As novices reflected on *Balancing Instruction* and *Getting More From Students*, much self Discourse centered on how novices could plan ahead for their students’ individual learning patterns and preferences so that greater learning could occur. Sometimes *Balancing Instruction* to take account of student energy levels could resolve the Dilemma of *Getting More From Students*:

I am glad that **I moved the writing activity . . . earlier . . . in the lesson.**

**E. had a lot of energy and seemed excited** to be working on a new story.

**Doing the reading activity** on *The Doll People at the end of the lesson* works because she seemed to be looking forward to reading the new chapter.
As novices reflected on *Motivation* challenges that arose during teaching and on possible responses, the learned that sometimes a quick, if possibly temporary resolution could be found as demonstrated in the following quote: “Quickreads are still motivating since she can see her progress on the graph. I have noticed that if she can see a score, graph or grade she is more willing to work towards a goal”. But sometimes finding resolution to the Dilemma of Motivation required modification of the task or deeper reflection, as the following two quotes illustrate:

I think N. enjoyed the racetrack activity the most. I made a racetrack that had the other vowel sounds of oi, oy, and a separate track with sounds ew, ue, u_e. We would first roll a big foam die and move a hot wheel car the number of spaces the die landed on. I added a few rules to the game, such as if he landed on an NFL football he got a free turn (he loves sports!) If you make the activity relatable in some way it might be more enjoyable to the child. In this case, it worked.

I wish there was a way to make writing more interesting for her. Is it appropriate to ask her to write to me while I am on my break? What if I give her a stamped and addressed envelope and she sends me a letter explaining how her week is going? I wonder if doing an authentic activity like that would make her more interested in the writing process.

Much Discourse was centered on Student Breakdowns, either emotional breakdowns or interruptions in learning. Knowing what to do when a student falls apart,
or when skills that seemed to be mastered in previous lessons are suddenly problematic again is quite a challenge to teaching. In the quote below, the novice reflects on her response to an emotional breakdown that had occurred previously and seemed to be a response the student used to avoid tasks. Her description of the extended processing she engaged in to move her student beyond this *Student Breakdown* illustrates how complex and time consuming responding to *Dilemmas* can be:

I showed him the shelf of books he could choose from. **He looked around but never came to a decision** so . . . I offered some suggestions . . . He didn’t like any of the books I picked out so I told him that he would have to choose a book now so we could start the tutoring session. He just stood there . . . **I gave him an option between 2 books**. He was not at all happy with this. So **I then told him that we could come back later and pick a book out but he insisted on having one at that moment even though he just couldn’t decide** on one. I had to be a little firm with him . . . which then caused him to tear up but **I did eventually get him out of the library with no book in hand**. **Once we returned to the tutoring room he was fine** and we began reading. The remainder of the session went well.

Other reflections focused on how to address *Student Breakdowns* in learning. In the quote below the novice focuses on analyzing her student’s observable behavior and identifying what she learns from this analysis:
As he read, **he showed reluctance by quickly saying “I don’t know”** much more than usual this week. This reluctant attitude was reflected in his reading and working on vowel patterns. I used the game “Upwords” to work on the “oa” vowel pattern. I thought this would be fun and different . . . and would encourage him to try making words using this pattern . . . **he was very hesitant in creating any words on his own.** He tried making a couple words on his own, but they were not spelled correctly . . . “coam” for comb and “doam” for dome. These were the only two he attempted on his own. **I tried encouraging** by telling him he did a good job recognizing the long “o” sound. **This showed me that H. gets easily discouraged and is often afraid to step out and . . . try new things.**

In the next quote, the same novice focuses on a change of activity setting as a way to intervene. She describes the *Student Breakdown*, briefly engages in self *Discourse* on the impact of her own response, and then describes a resolution that seemed to help re-focus her student:

**We seemed to make a lot of progress on Tuesday and then on Thursday it seemed like he completely forgot about what we had been working on.**

**I know that a lot of it has to do with my attitude and how much excitement I bring to the tutoring session.** I am so glad that we ended up working outside on Thursday. **I think we both benefited [sic] from the change of scenery and the chance to work outside away from the noise**
**and distraction.** We will hopefully be doing this more often. I think H. will really benefit . . .

This kind of *Student Breakdown* in learning can be very frustrating, and has ties to the *Problem of Timing and Targeting*. But when re-teaching does not seem to be the answer, novices must develop unique and novel ways to intervene in order to break the pattern of *Breakdown* in learning.

*Getting Transfer* and *Flexible Use of Knowledge* was an important focus of all the lessons, and also a *Dilemma* with recurring impact on instruction. Novices planned metacognitive instruction into all of their lessons to specifically teach their students the necessity of learning to use skills and strategies for reading and writing in all areas. One novice described the reasoning for teaching to transfer in her reflections:

I continue to feel like Level 18 is a great level to instruct her at. **While there are some words she can't decode,** I am so proud of the way she is using the *Fix It Strategy* and our *vocabulary review* to help herself with fluency and comprehension. I also feel like **I need to do better about asking her questions that will LEAD her to the right answer.** For example, I could say, “That doesn't sound right. What could you do to make it sound right?” rather than, “Let's read that over again.” **I want her to be able to use these strategies herself without my help.**
Insuring that transfer of learning occurred often involved careful analysis, adaptation, and re-teaching. When reflecting about the Dilemma of Getting Transfer novices first identified the times and skill areas where this was not occurring. Sometimes the areas where transfer was needed could be easily pinpointed, and novices gave specific examples of where a skill was used and where it was neglected: “J. did a good job applying the strategies (we’re) working on to the new text (I did not see this when reading the Quick Reads text)”. 

Sometimes the difficulty was in transferring from verbalizing a strategy to actually using it in practice:

I noticed this week that T. is able to retain some information but doesn’t necessarily know how to use it effectively. For example, he was able to tell me that at the end of a sentence you should lower your voice a little but when he would start reading right after that, he wouldn’t do it.

Determining what part of the reading process was not being transferred required careful analysis and review of the skills a student used. This analytical process was often documented in Self Discourse in a list of skills:

I am little puzzled about some things with J. He is reading with accuracy, he comprehends what he reads, and I know he is relying on visual mainly when he self corrects. What he is not doing is reading fluently (very choppy). He knows what fluent reading should look like.
because I have been modeling it for him. He demonstrates with his hands how it shouldn’t be. When J. is reading independently he is not consistent with matching my rhythm, but he does when we read the warm up text together.

In this *Discourse* process, those skills that had been mastered and that remained to be mastered were identified, thus clarifying instructional paths for novices. Hunches were formed and checked, as in the following quotations:

*I have confirmed something about J. today* that I have been noticing during our previous sessions. I think the main part of J.’s problem isn’t because he does not know the different decoding skills, I see that he is not taking the time to transfer the skills he knows to text without been reminded. One example is, *today he gave a good explanation as he was doing the word sort activity*—he explained that when two vowels go walking which one does the talking. *He also explained another strategy* when he tried to spell the word mommy as “momy”. I was going to tell him how after I tried to chunk it . . . The supervisor stepped in and tried to tell him to use the trick that helps him understand why “momy” would not work. J. already knew that skill and I thought to myself, *if he knows that skill why isn’t he applying it when he reads and spells words.*
Often, after working through *Self Discourse* to identify an area where *Transfer* was needed, novices developed intervention strategies and reflected on their merits:

**She does seem to respond to (the) vocabulary strategy positively**-it allowed her to put in her own ideas (to define) the vocabulary words. I was hoping she would be able to use her own experiences to connect to the vocabulary. **On Thursday though she had trouble with ‘squawked’**.

**Her sentence** she wrote **had no relevance at all** to what it actually meant. I didn’t tell her that. **We read the story together and as we approach that word in our book, I would stop and ask, “So here is squawked. Let’s read this sentence again with ‘squawked’ in it. What do you think it means now?”** We finally **came to a conclusion that it meant yelling**.

In this quotation the novice has engaged in self-discourse about an area of need for transfer for her student. The novice is using a vocabulary strategy of guiding her student to create definitions in her own words, but this strategy breaks down when the word “squawked” is defined incorrectly. The novice adapts her approach, drawing her student’s attention to the word “squawked” in its context. In this way she scaffolds her student’s learning, providing a bridge from the activity of defining a word to doing so in continuous text. She helps her student to see that defining vocabulary in her own words is a useful strategy to use during text reading, where re-reading in order to understand the context can provide even more support for understanding the meaning of words.
Dilemmas became another way that novices framed and identified issues and challenges that arose during teaching. Because Dilemmas have no easy or permanent solutions, the self-Discourse around dilemmas was more detailed and the analysis more focused than the self Discourse around problems. This detailed, focused Discourse helped novices identify specific areas of challenge to concentrate on so that they could design more precise ways to intervene. Specific and analytical reflection on Dilemmas was another way novices were able to refine and tailor their instruction to the needs of their students.

Vignette: Anna.

Anna was a highly motivated undergraduate novice, who interacted with instructors frequently as she polished her instructional skills and strategies. Her student had received instruction at the reading clinic for the previous three semesters. Anna’s initial Discourse centered on Problem Exploration; identifying the needs of her student and the teaching adaptations that he would respond to: “I’m still trying to figure out strategies to work on sounding out the word.” and:

When faced with a more unfamiliar word or a longer sentence, D. will either make up a word that starts similarly or use the pictures to ‘create’ a new sentence. [Discourse: Self: Problem]Most of the time these substitutions are fairly accurate, but I am concerned that they will begin to affect his comprehension. One of my goals for D. this semester is comprehension, so this will be something that I focus on in the future, I am just unsure of how I will approach it.
But even in the first week of reflections Anna identified and explored some
deeper and more challenging dilemmas in her student’s learning approach:

Even though his writing attitudes assessment shows that he enjoys writing,
**there were some definite avoidance behaviors** [Discourse: Self:]
Dilemma) present when asked to write. I really want to work on D.
becoming comfortable with writing in a safe, non-threatening
environment. I **just have to figure out some fun writing activities.**

[Discourse: Dilemma exploration]

**I am also trying to learn how to work with D. when he is having a**
breakdown. [Dilemma: Student Breakdown] There are **definite activities**
that **trigger his behavior** and I am **trying to think of ways to keep him**
**motivated.** [Dilemma exploration] I am wondering if **some type of**
**reward or fun activity at the end** of the lesson would work?

By the second week of reflections Anna had gained some skill for working with
her student’s avoidance: “**He still will try to avoid activities** at times, but **is getting**
**much better when I give him a reminder.**” [Dilemma Resolution]

At this point in lessons she began to use what she was learning through **Discourse**
to plan for her student’s individual pace and working style:
I noticed this week that D. normally has a really great Tuesday . . . Thursday is when he has his difficulties. After talking to his mom, [Discourse: Parent] I learned that he normally gets home later on Wednesday night and he has another activity after tutoring on Thursday. She said that by the end of the week he does get a little worn out. I think it would be good for me to teach more complicated strategies on Tuesday and make Thursday a less-stressful [Dilemma Resolution] fun environment.

Anna began to focus on decision making in lesson planning so that her lessons would be targeted and beneficial for her student:

Objective: D. will work on comprehension through activating prior knowledge with questions before reading and through comprehension questions at the end of the story. Objective met. I truly believe these questions are helping D.’s comprehension . . . Even though it is obvious this isn’t (his) favorite part of the lesson, I feel that I should still keep them [Discourse: Self: Problem: Identifying What Works] in the mix.

Sometimes Anna’s lesson planning and decision making involved finding Balance: knowing when to persevere in a task her student did not love, and for how long:

D. was able to self correct when I would ask him to go back and [re-read]. But I also noticed if I asked him to repeat several times he would
become very frustrated and say “Stop, I’m reading.” On one hand, I want D. to be able to self monitor his comprehension and so it is important to understand the words that he is reading. At the same time, I definitely don’t want to push D. and make reading not as much of an enjoyable experience. [Discourse: Dilemma: Balancing Instruction] Any suggestions how I can find a happy medium?

I am still concerned about D.’s avoidance behaviors. Although taking a lap did work this week, it took several tries to get him to do that. I am trying to figure out ways to keep him intrinsically motivated, but I am having trouble. I feel like I am saying the same two or three things over and over. [Discourse: Dilemma Exploration: Avoidance]

In the third set of reflective notes Anna reflected on the Problem Resolutions she discovered: “. . . now that I have a better idea of D.’s pace I will try to plan accordingly so that writing is always an integral part of each lesson”; and on new challenges that arose in planning for her student:

I am concerned with the amount of time that vocabulary cards are taking us. [Problem: Time Management] Although they are beneficial for D.’s reading, they often take up 20 minutes of our time if we complete all three. Also, he is relying heavily on my definitions and my
suggestions. Is there any way to prompt him to come up with his own ideas to write down? [Problem: Strategy Implementation]

I am still trying to figure out a way to transition more smoothly with D. I have noticed that during the transition time he tends to lose focus or divert his attention to elsewhere (in) the room. Should I start planning activities for this? At first, having him check off the activity we just completed worked well, but now he is doing that quicker than I can set up our next activity. [Problem: Teacher Skill Development]

I am also worried about D.’s retention . . . During most activities he grasps on very quickly and we can move on to the next part of our lesson. However, I . . . worry if he really understands the concept. Occasionally when we will revisit a skill that we had previously worked on, I have to re-teach it to him again. [Dilemma: Student Breakdowns]

Anna explored her own skills for teaching, and expressed concern that she could provide what her student needed:

I am concerned with how I am teaching D. phonics skills. As an upper elementary teacher, I have not had much experience working with phonics, letters and sounds. I want to ensure that D. is obtaining
knowledge of these concepts, and I am hoping that my teaching will do that. [Problem: Teacher Skill Development]

In the fourth week of reflections Anna continued to acknowledge what was working in lessons and engage in discourse around both Problems and deeper Dilemmas that emerged during teaching interactions. Some problems were resolved and some teaching actions met with success: “I think the movements and actions (paired with steps of a writing activity) work wonderfully with D. and I plan on continuing them . . . in other areas.” and “I tried a few new activities with D. this week and he seemed to enjoy them . . . some of them were almost too fun . . .”

Anna’s Discourse around recurring Dilemmas of comprehension and independence became more detailed as she tried to discover answers. In the next quote Anna’s Discourse focuses on an interruption that occurred in her teaching, when she recognizes the Dilemma of trying to get more than just simple correct answers from her student. Anna has to reflect deeply on how to push for more from her student without causing him to shut down.

Whenever I ask him questions, especially comprehension questions at the beginning of the story, he will respond with a very short answer. Sometimes this will only be two or three words. I have tried prompting him to tell me more, and occasionally this will work, but most of the time he either becomes frustrated with the questions or simply says, “I don’t know.” However, he shows later on that he comprehends and does have knowledge of the topics I am asking about. How do I teach
him to elaborate more in his answers and to talk about more details before we do the comprehension strategies? [Dilemma: Getting More from Student]

Anna also reflects on working toward independence for her student:

I am still concerned with D. looking at the illustrations while reading. Even though prosody is improving, he is constantly glancing up at the pictures. I have noticed this during our warm up text and our new text that we’re using. I don’t want to take away the pictures completely, but I feel that D.’s prosody and comprehension would benefit from him focusing more attention on the text.

This pattern of reflecting on independence continued in week five of Anna’s reflections. She wonders how she can guide her student to use strategies independently and accurately; and she searches for answers when her student responds in ways that are unexpected or different:

While D. did better with visualizing this week, I am still a little worried about his “picture” in his head. Sometimes he just puts things in his picture that really didn’t happen in the story. Should I take this as good elaboration, is he taking the story further? Or does he need to learn to only put things that happen in the story in his picture?
I am a little concerned about D.’s ability to read with prosody this week. We have used level 20 texts for the past two weeks, but this last week he seemed to have much more difficulty than he did the previous week. He often started to revert to word calling, especially in longer texts. Is this because he’s not used to such long stories or the occurrence of fewer pictures?

Anna comes to some realizations about the importance and challenge of teaching for metacognitive understanding of a concept: “I was proud of D.’s ability to work with consonant-vowel-vowel-consonant words during our Thursday lesson. However, I was frustrated that he couldn’t explain the strategy at the end of the lesson”. She also encounters the Dilemma of how to successfully incorporate motivational aspects into a learning task that a student does not love. The following quote illustrates the peaks and valleys of the Dilemma: Student Motivation. This Dilemma is not resolved.

This past week really taught me (the) difference each story can make. There was a night and day difference when D. was interested in the story on Thursday versus Tuesday . . . I understand it is important to pick stories students will enjoy, but . . . a child cannot always read stories about animals or over the same topic. What are some ways I can make more difficult or off topic books more interesting for D. and my future students?
Near the end of the term Anna’s Discourse focus narrowed to the two most pressing Dilemmas she encountered with her student: patterns of Breakdowns in learning, and Avoidance. In week seven’s reflections she continued to analyze these two Dilemmas:

D. had problems with sounding out words again this week. This was somewhat disappointing. We have been working a lot on sounding out the words and not ‘guessing’ what it is, but this week he reverted back to old habits. I think this is something that I will just have to continue working on and eventually it will improve.

Earlier in the semester, he would become very excited about each new activity, now he does not seem to be as eager and sometimes will protest. This behavior can . . . lead to time being lost during the tutoring session.

In her final reflection Anna gives a detailed analysis of these two Dilemmas. Her focus on these Dilemmas radiates from a concern for her student’s learning:

D.’s biggest struggle (this) semester has been his avoidance behaviors. He tends to rush through things, wanting to get done without thinking much about the reading and writing process. While I have normally been
able to get him to concentrate and work hard the entire time, I worry about his ability to carry this skill into his everyday behavior.

I am also concerned about D.'s attitude from time to time. D. can become difficult when faced with tasks that may seem challenging or more difficult. I have found ways to get him motivated and keep on pushing through, however, these were most successful towards the end of the semester. It is important for D. to learn that difficult tasks need to be worked through . . .

Anna’s case illustrates the ongoing and informative nature of Self Discourse. She uses Discourse to talk through Problems, sometimes coming to Resolution. Her Discourse on Dilemmas illustrates the ingrained nature of these issues. Anna does not find permanent resolution for the Dilemmas of Avoidance, Motivation, Breakdowns that her student experiences, but she does come to some temporary solutions through her Self Discourse.

**Theme six: Transfer to student.**

When novices observed their students automatically using skills and strategies that they had been taught in lessons, this was evidence of transfer to student. Unprompted use of new skills and strategies indicated that students were integrating these into their personal literacy repertoire, and may be able to transfer them to other settings. One hundred eighty-three quotes documenting transfer were coded. Three types of coded quotations contributed to this Transfer theme. Each is described below, with bold print highlighting specific words and phrases that indicated the transfer code; and then the case
of Connie is presented to illustrate how novices reflected on Transfer throughout the term.

**Code: Growth in student skill development, transfer.**

Sometimes Transfer to student started slowly and with small steps. Novices documented these small steps in quotations describing *Growth in Student Skill Development* (116 quotations) and *Transfer* (58 quotations). Examples are: “He is doing a better job of recognizing when something doesn’t sound right and has gone back a few times to re-read and self correct without prompting. This doesn’t occur every time, but is an improvement from last week” and “M. started saying the words aloud as she wrote them in the sand, which is a huge leap for her (she really doesn’t like doing the whole think-aloud stuff!)” and “She would tell me what picture she saw in her head when I asked, and I saw that as a sign that she understood how to use the strategy.”

Novices also documented the careful prompting they used to scaffold independence and *Transfer to Student*: “He said this: ‘e works with this vowel (pointed out the vowel letter). The e changes the word.’ I then prompted him to guess how the e changed it and he could come up with short or long vowel” and “I have seen N. start to use rhyming words to decode words, especially with spelling. I used ‘met’ as one of the words and when we were looking for other words with the ‘e’ sound, he started rhyming”.

Novices faded their prompting as the term progressed, in order to scaffold students’ independent use of skills and strategies:

G. is getting better at spelling words correctly that use the long vowel. At times it is something as simple as me saying what vowel pattern is that
and then she spells it correctly. I noticed when I asked her to spell the word boat she was hesitant at first but once I said think about the vowel pattern it just came to her. I hope she will be confident to spell using these patterns on her own when writing.

We took turns reading pages. I modeled proper use of punctuation and discussed this with her as I read. When she would not stop at a period I would stop her and have her tell me what she should have done. She soon understood what was expected; so when I said, “stop” she would automatically go back and reread the passage with punctuation.

As the term progressed, novices began to document more specific observations of how their students were adopting skills and strategies into their own repertoire:

Going over a few vocabulary words helped with fluency in her independent reading . . . and discussing the Fix It Strategy caused her to go back and re-read sentences that were a bit choppy. While she never said aloud, “I’m going to go back and fix that,” the fact that she went back at all is GREAT!!!

I think J. is tuning in better to what fluent reading sounds like. I noticed him listening to himself read more and he is able to stop when he has realized an error has occurred and self-correct. He doesn’t do this all
the time, but it has increased from the beginning of the year. He enjoys when I read to him so I try to include a shared reading activity in our lesson so he is able to hear fluent reading before and after his turn to read.

As the game got going, I was thrilled with the words S. was coming up with. **He was doing an excellent job talking through his ideas and got very creative toward the end.** For example, I had created the word “SNOT” from the word “SNOW” (not the most professional word but I did not have many cards to play). After being stuck for awhile, S. admitted that the only consonants he had were K and L. **He made the comment on his own that maybe the K could be silent, and just to try he laid the K down on top of the S, creating “KNOT”**. At first he dismissed it saying it was not a word, but I asked him to lay it back down and take another look. I was thrilled when he recognized the word he created.

Novices were also able to document moments of student mastery, such as: **“He began following the text with his finger, without me saying a thing”**. Sometimes novices spoke in emotional terms about what they were experiencing and noticing during their teaching: “I was just **delighted** when I didn’t ask her a prediction question before we read and she asked, ‘well don’t you want me to tell you what I think’s going to happen?’ I think she’s got that comprehension strategy down! “

Other descriptions of mastery were more detailed:
Objective: C. will correctly sort & identify long -e words. Objective met. I threw in several oddballs without cues, even tried to argue that they should go in another pile and she didn’t flinch - just smiled her toothless grin and said, “It’s an oddball”.

He would pick what category he thought it went in and then I would have him spell it. He did great with the short a words but had a little bit more difficulty distinguishing between the long a words. I drew the picture of “paint” from the pile of cards and we both marked it on our Bingo boards. I had him pick what category it went in. He immediately began writing it in the /a-e/ category. He tried spelling it “pante” and then he stopped and noticed that it didn’t look right. So he erased it and decided it went in the /ai/ group.

With vocabulary, K. is responding so well to writing the word out and making a sentence with it. When we were reading through our warm up text on Thursday, I stopped on pages that had our vocabulary words from Tuesday. . . K. remembered exactly what each word meant, which surprised me. I saw she used what she remembered as well as the pictures to figure what the word meant completely. For example, with a donkey’s bray, she remembered it was a type of noise . . . she then followed with “what a donkey says.”
**Code: Shift.**

In nine of the 183 transfer to student quotes novices described seeing an almost physical response in their students when new strategies or skills they were learning suddenly made sense. They described this moment as seeing a light bulb go off, or seeing a spark in the student’s eye, or a switch turning on. This *Shift* is a different way to describe *Transfer to Student*. Quotations coded as shift describe times when students demonstrated the ability to both use the skill or strategy in a flexible way for their own learning, and to also metacognitively manipulate the skill or strategy so that they can challenge the participant as well. When the student can manipulate the challenge in this way the student takes ownership of the skill or strategy. One passage from the quote below really defines shift: “**It was exciting to see his brain switch its way of thinking.**”

I enjoyed this lesson because it was amazing seeing the impact the “chunking” strategy already has on T.’s ability to break apart words. He also really seemed to enjoy doing it and challenged me to “find harder words.” **It was exciting to see his brain switch its way of thinking. . .**

When we were text reading, T. came to a word he was not aware of and at first he tried to use his old method to sound it out but then it was like a light switched on in his head and he used the chunking technique to sound it out which was GREAT!
Another participant used different metaphors to describe shift: “This week I saw a light bulb go off . . .” and: “I saw a spark in J.’s eye this week when she shared her new book with me.”

Novices used their written reflections to describe the steps they saw their students take to master skills and strategies and adopt them for their own use. Quotations describing these steps were coded as Growth in Student Skill or as Transfer. In a few quotations novices described a Shift in thinking, almost physically observable (his brain switched its way of thinking, a lightbulb went on) when students suddenly realized they knew a new skill or strategy they could apply to an old confusion, and that they could do this themselves, without help. Most Transfer quotations were not as dramatic, instead describing smaller steps that students made to integrate new skills and strategies into their learning repertoire and use them at appropriate times. The reflections of one novice, Connie, provide a representative picture of how novices observed and reflected on Growth in student skill, Transfer, and Shift.

Vignette: Connie.

Connie was a graduate student who had worked as a school counselor and was adding an endorsement in special education. Her student had attended the reading clinic for several semesters. In the first week of lessons Connie began working with her student on self correction. By the second set of reflective notes she was already seeing her student begin to take apply this strategy for herself:
I was excited to see J. doing some self correcting on Thursday. I kept a tally . . . **she made 6 self-corrections** . . . reading the warm-up text and new text. It was exciting to see her applying what she was learning!!

Connie’s student immediately began to adapt the strategy of self correction into her learning repertoire, and Connie continued to reflect on her student’s improvement in the strategy in week three of reflections: “This week during new text **she self-corrected nine times** . . . I interjected only five times during **30 pages of new text**. In the beginning of [lessons], I was stopping her one-two times per page.”

In week three, Connie documented evidence of transfer in other instructional areas as well, describing it as a *Shift*:

**This week I saw a light bulb go off with J. in . . . writing** . . . *some* additional instruction in this area really helped her see missing parts . . . punctuation, capital letters, and the need to better organize her thoughts. I think this will positively affect her reading as well.

In the fourth week of reflections Connie continued to document her student’s improvement in self correction and in writing. Now that her student seems able to apply the self correction strategy on her own, Connie can focus more specifically on a discrete area of decoding that her student needs to learn: using meaning and structure cues in text.
This week she self-corrected 11 times . . . I interjected only six times during 30 pages of new text. Because J. heavily relies on visual cues in reading, I am continuing to help her focus more on meaning and structure.

Connie reflected on her student’s continued transfer of writing skills and strategies. Here again, Connie identifies growth, targets a new need for focused instruction, and then reflects on a surprise:

I saw huge strides in J.’s writing this week. She really enjoyed the process of completing the graphic organizer and then using that tool to organize and plan her stories. J. needed prompting with writing the sentences. We will continue to focus on writing complete sentences. As she improves in this area, we will talk about adding more details to her writing. She surprised me this week with the use of a few transition words in her writing. These were words she independently added into her writing with no prompts from me.

By the sixth week of reflections Connie wrote that her student was providing evidence of a solid Transfer of agency for learning: taking real pride in ownership of her reading and writing:

Thursday, she bounced in and said that things in her “Ramona Forever” book were getting really good!! . . . As we sat down, she pulled out her new book and shared it with me. She was so excited about the book and . .
. had completed about ¾ of (it) in about a week’s time. . . Before now, she
has talked very little about reading outside of tutoring.

Connie reflects on this *Transfer* in her student’s sense of ownership for reading by
reflecting with a physical, observable metaphor to describe this shift in agency:

*I saw a spark in J.’s eye* this week when she shared her new book with
me. . . on Thursday she even brought it in to show it to me. This was a
highlight in my time with J. because *I finally saw her get excited about*
reading!

Pride of ownership was evident in Connie’s reflection on her student’s writing
growth as well: “*She is progressing in her ability to make complete sentences and in*
*adding more details* to her writing” and:

*She has been working hard at correctly using* punctuation, capital
letters, and not using run-on sentences. . . *(she) confidently read aloud*
*her story* to her Grandma. *She took pride in her work* . . . (and) was
excited to share her story with both of us.

Connie ends the term continuing to reflect on her student’s new ownership for
reading, her ability to take self-directed action when she makes a reading error:

“*Thursday, she told me she finished the book because it was getting so good. She is also*
very excited that we will be finishing ‘Diary of a Wimpy Kid’ before the end of the semester” and: “J. is self monitoring during reading and often makes corrections before I stop her (to prompt her).”

In this final quotation Connie notes and analyzes a minor spelling error that her student self corrected:

The only word she missed was swap . . . spelled s-w-o-p. After looking at it again she quickly saw her error and was able to correct it. It was great to see her use what she had learned and correctly spell so many of the words! I am not sure why swap tripped her up but it was great to see her be able to correct it.

The detail in Connie’s previous analysis, and her adaptation in lesson planning led to her student taking on skills necessary to help herself through the reading and writing process. This Transfer is the goal of teaching.

**Quantitative Phase**

In the quantitative phase I used Repeated Measures Analysis of Variance (ANOVA) to first analyze each of the six themes for trends over time, to examine the impact the Reading Clinic course had on the development of Descriptive Level, Confidence, Locus of Control, Discourse, Adaptation, and Transfer. Then I explored correlations among the themes, and finally, I examined the effects among themes. The purpose of this analysis was to explore my a priori theoretical model of teachers’ reflective practices, developed after analysis of experienced teachers’ reflections in the pilot study.
The data sources for this study were the written reflective notes collected from 23 novice teachers over eight weeks of teaching in a structured reading clinic setting. Due to absences, five novices submitted fewer than the required eight sets of notes, resulting in a total of 177 reflective notes that were analyzed. Because the missing weeks of reflective notes were missing randomly and not in a systematic fashion, no novice missed repeated reflective notes, and missing scores are not well tolerated by repeated measures analysis, I imputed means for the missing reflective notes. Means were imputed by averaging the scores for each theme from the reflective note immediately before and after the absent note for that novice. Graduated scoring of the axial codes is described in the following section. Imputing means for missing scores produced a total of 184 overall scores for the six themes in the structured written reflections: *Descriptive Level, Confidence, Locus of Control, Adaptations, Discourse, and Transfer.*

**Theme scoring.**

Axial coding identified varying levels that emerged within themes. These axial codes were assigned a numerical value based on frequency and direction that could contribute to or subtract from the overall theme. For example, in the Confidence theme there were three axial codes: *High Confidence, Less Confidence,* and *Growing Confidence.* I used a graduated scoring system for these axial codes, summing the frequency of *More Confidence* and *Growing Confidence* axial codes, and subtracting the frequency of each axial code of *Less Confidence* in each reflective note, resulting in an overall *Confidence* score for each reflective note. By scoring and weighting *Confidence* codes in each reflection in this way reported *Confidence* levels could be measured and represented across the teaching term, and the relationship between *Confidence* and other
themes explored. Table 5.1 shows themes and axial codes with all possible graduated scores.

Table 5.1
Graduated Scoring of Axial Codes in Data

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<tr>
<th>Theme (total quotes)</th>
<th>Range</th>
<th>Mean (SD)</th>
<th>Axial Codes (frequency)</th>
<th>Score</th>
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<td>Specific (129)</td>
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<td>1</td>
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</tbody>
</table>

**Data Analysis**

I used Repeated Measures Analysis of Variance (ANOVA) to analyze the quantitative data for several reasons. For this study, repeated measures ANOVA explores the difference between the average novice scores on one theme and the average novice scores on other themes, across separate measurement times. Therefore, individual variations are included in the average score for a theme and rare extreme scores, or outliers, do not exceptionally affect the data. This makes ANOVA robust. (Gravetter, Wallnau, 2000)

Another feature of Repeated Measures ANOVA that makes it robust is that it performs all comparisons among the eight time points in this study at once. When data are used repeatedly, as they would be if I used multiple t-tests to compare the themes in
this study, a decision to accept or reject the null hypothesis must be made after each comparison. Each time this decision is made there is a chance of Type 1 error. With Repeated Measures ANOVA this error chance is reduced because all comparisons are run at one time, leaving only one opportunity for Type 1 error, instead of multiple opportunities. For example, the effects of Descriptive Level, Confidence, Locus of Control, Adaptation, and Discourse on Transfer are explored in one comparison, rather than five. This reduces the inflated chance for Type 1 error. (Gravetter & Wallnau, 2000)

Repeated measures ANOVA can also account for the nested nature of this data. The data I am analyzing for this study is nested because I am analyzing the written reflections of the same 23 novices eight different times. The responses of any one of these novices are bound to be correlated over time. Repeated measures ANOVA can account for this similarity and take it into account in the analysis because it measures two kinds of effects: those that occur between the individual novices (Between subjects) and those that occur within each novice’s reflections (Within Subjects). This has the effect of normalizing the distribution of the theme scores for each novice by assuming that each of the 23 novices has equal variance within her observations. (Urdan, 2005).

**Procedures**

Data analysis proceeded in three steps. First, in order to determine the impact the course had on themes that emerged in the novices’ reflections, I tested each theme for significant changes over time in the course via Repeated Measures ANOVA. Using the eight sets of reflective notes as time markers over the course of the term, and entering each novice’s individual theme score at each time point, I produced a scatterplot with a
regression line that captured most of a theme’s score points with the smallest possible amount of deviation of each point’s distance from the line.

Next, I tested each theme for correlation with other themes. To do this I constructed a correlation matrix for each novice, and then averaged the correlations of all the novices. This produced the correlations among themes.

Finally, I examined the effects among themes in order to further explore relationships in novices’ reflections. I began with an a priori theory: that for all teachers, specific Descriptive analysis of teaching interactions and Discourse with instructors and colleagues leads to more Adaptations to teaching; and that more Adaptations to teaching lead to more observed instances of Transfer to student. Additionally, teachers who feel a strong personal or shared sense of Locus of Control are more likely to make Adaptations to their teaching, because they are more likely to recognize that they have a crucial impact on the success of their students. Confidence contributes to this Locus of Control. This theory is represented graphically in Figure 5.2.

![Figure 5.2 A priori model of teachers’ reflective practices.](image-url)
For the analysis of effects to test my theory, the dependent variables are each of the six themes. I organized frames of reference to serve as my guides for analyzing and interpreting the effects among themes. When I set up the analysis to look at effects on any one theme I considered the supporting themes from my a priori model as covariates.

In my model, *Description* and *Discourse* lead to *Adaptation*, and *Confidence* and *Locus of Control* support *Adaptation*. *Adaptation* leads to *Transfer*. Because *Transfer* of skills and strategies to students is the goal and the most meaningful outcome of teaching, my first frame of reference was to explore the effects of *Adaptation* on *Transfer*. Figure 5.3 depicts this first frame of reference for analysis of effects.

Subsequent effects analysis followed specific frames of reference taken from the a priori model, describing the effects of *Confidence* on *Locus of Control*, *Locus of Control* on *Adaptation*, and the effects of *Descriptive Level* and *Discourse* on *Adaptation*. All of these are described in *Effects Among Themes* in the **Results** section of this chapter.

**Results**

**Trends over time in reflective practice themes.**

Significant linear and quadratic trends emerged in the scores for four of the six themes. Linear trends describe a pattern in the data in which average novices’ scores for a
theme cluster near one score point at the beginning of the term then either rise or fall steadily from that point over the course of time in the term, forming one line of clustered data score points on a scatterplot graph. Quadratic trends describe a pattern in the data in which average novices’ scores for a theme cluster near one point at the beginning of the term, then form a c-curve distribution of the subsequent week’s data points on a scatterplot graph.

**Theme: Descriptive level.**

As seen in Table 5.2, scores for Descriptive Level had somewhat restricted range in comparison to the other five themes. This is a result of the way Descriptive Level was scored: with a score of one assigned for a SOAR reflective note that was specific in its overall description, and scores of -.5 and -1 assigned for wavering and vague reflective notes. In some reflective notes there was so much variation in Descriptive Level that separate sections of the reflective note were assigned a separate Descriptive Level axial code, resulting in scores outside the 1 to -1 range.

Table 5.2

<table>
<thead>
<tr>
<th></th>
<th>SOAR note 1</th>
<th>SOAR note 2</th>
<th>SOAR note 3</th>
<th>SOAR note 4</th>
<th>SOAR note 5</th>
<th>SOAR note 6</th>
<th>SOAR note 7</th>
<th>SOAR note 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>.57</td>
<td>.20</td>
<td>.35</td>
<td>.59</td>
<td>.39</td>
<td>.48</td>
<td>.32</td>
<td>.48</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>.88</td>
<td>1.08</td>
<td>.94</td>
<td>.76</td>
<td>.88</td>
<td>.95</td>
<td>1.02</td>
<td>.83</td>
</tr>
<tr>
<td>Minimum</td>
<td>-1</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
<td>-1</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
</tr>
<tr>
<td>Maximum</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Repeated measures ANOVA revealed no significant linear or quadratic trends for *Descriptive Level* over the course of the teaching term, indicating that the level of specificity novices used in writing their reflective notes was unchanged by the course requirement of writing reflective notes. Table 5.3 presents this data.

Table 5.3
Repeated-Measures ANOVA Trends Over Time for Descriptive Level

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear</td>
<td>1, 22</td>
<td>.01</td>
<td>.91</td>
</tr>
<tr>
<td>Quadratic</td>
<td>1, 22</td>
<td>.08</td>
<td>.78</td>
</tr>
</tbody>
</table>

Figure 5.4 shows the scatterplot depiction of the score points for the *Descriptive Level* theme. The horizontal axis represents the eight weeks of the term during which reflective notes were collected and analyzed. The vertical axis represents score for *Descriptive Level*. Many scores cluster at one, indicating that the reflective notes were *Specific*. This is the reason score range was restricted. The flat line across the center of the data is the regression line for the data. It does not follow any significant linear or quadratic pattern. In this figure, larger dots indicate more *Descriptive Level* scores fall at that score point; smaller dots indicate fewer scores at that point.
Theme: Confidence.

Confidence is an indication of the disequilibria that novices experienced as they completed their coursework and teaching at the Reading Center. Disequilibria can lead to transformative changes in practice because it causes an experience of hesitation and perplexity (Dewey, 1933/1989) that signals to the novice that something unexpected has occurred: something that requires deeper analysis. In Table 5.4 the variability in feelings of Confidence can be seen. Novices struggled throughout the term with experiences of both High Confidence and Less Confidence as they worked to master new strategies and skills for teaching and adapt these successfully for their students. However, the overall experience of teaching in the Reading Center for novice teachers was one of improved Confidence.

Figure 5.4 Trend in Descriptive Level over time
Table 5.4
Means, Standard Deviations, Minimum and Maximum Scores for Confidence

<table>
<thead>
<tr>
<th>SOAR note 1</th>
<th>SOAR note 2</th>
<th>SOAR note 3</th>
<th>SOAR note 4</th>
<th>SOAR note 5</th>
<th>SOAR note 6</th>
<th>SOAR note 7</th>
<th>SOAR note 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>-.74</td>
<td>.00</td>
<td>-.22</td>
<td>-.39</td>
<td>-.43</td>
<td>.04</td>
<td>-.11</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.71</td>
<td>1.21</td>
<td>.95</td>
<td>1.12</td>
<td>1.44</td>
<td>1.02</td>
<td>.80</td>
</tr>
<tr>
<td>Minimum</td>
<td>-4</td>
<td>-2</td>
<td>-2</td>
<td>-3</td>
<td>-4</td>
<td>-2</td>
<td>-2</td>
</tr>
<tr>
<td>Maximum</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Repeated measures ANOVA showed a significant linear trend for Confidence ($p<.03$); the quadratic trend was not significant. Data for Confidence trends is displayed in Table 5.5.

Table 5.5
Repeated-Measures ANOVA Trends Over Time for Confidence

<table>
<thead>
<tr>
<th>Within Subjects</th>
<th>df</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear</td>
<td>1, 22</td>
<td>5.39</td>
<td>.03*</td>
</tr>
<tr>
<td>Quadratic</td>
<td>1, 22</td>
<td>.08</td>
<td>.78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Between Subjects</th>
<th>df</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1, 22</td>
<td>3.6</td>
<td>.07</td>
</tr>
</tbody>
</table>

*p<.05
Figure 5.5 shows the significant linear trend of \textit{Confidence} over the term. \textit{Confidence} started out at a low point, as novices encountered teaching difficulties that were challenging and novel; different from their previous limited experiences with teaching. \textit{Confidence} rose steadily and significantly over time. In this figure, larger dots indicate more \textit{Confidence} scores at that score point; smaller dots indicate fewer \textit{Confidence} scores.

![Figure 5.5 Trend in Confidence over time](image)

**Theme: Locus of control.**

Novices appeared to have fixed notions of who controlled the success or failure of a lesson, and these notions remained unchanged by the course. So, if a novice entered the class with a stance of assigning responsibility for lesson success or failure to student
factors, she did not change this stance during the term. The same is true for novices who viewed lesson success from a stance of teacher responsibility or shared responsibility.

The mean scores for Locus of Control over the eight weeks of reflective notes illustrate this pattern of viewing responsibility for lesson success from a fixed stance. While the range of scores is broad, the means and standard deviations show little variance. Table 5.6 presents this data.

<table>
<thead>
<tr>
<th></th>
<th>SOAR note 1</th>
<th>SOAR note 2</th>
<th>SOAR note 3</th>
<th>SOAR note 4</th>
<th>SOAR note 5</th>
<th>SOAR note 6</th>
<th>SOAR note 7</th>
<th>SOAR note 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.78</td>
<td>2.00</td>
<td>2.35</td>
<td>3.09</td>
<td>2.22</td>
<td>1.83</td>
<td>1.72</td>
<td>2.61</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>2.15</td>
<td>1.83</td>
<td>2.10</td>
<td>2.17</td>
<td>1.38</td>
<td>1.88</td>
<td>1.79</td>
<td>2.10</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

Repeated measure ANOVA revealed no significant linear or quadratic trends for Locus of Control, as seen in Table 5.7.
Table 5.7

Repeated-Measures ANOVA Trends Over Time for Locus of Control

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Within Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear</td>
<td>1, 22</td>
<td>.48</td>
<td>.50</td>
</tr>
<tr>
<td>Quadratic</td>
<td>1, 22</td>
<td>.27</td>
<td>.61</td>
</tr>
<tr>
<td><strong>Between Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1, 22</td>
<td>174.08</td>
<td>.000</td>
</tr>
</tbody>
</table>

Figure 5.6 shows the scatterplot graph with a relatively flat, nonsignificant regression line. As with previous scatterplots, larger dots indicate more scores occurred at that particular point, while smaller dots indicate fewer scores.
Theme: Adaptations.

The Adaptations theme included Adaptations made in the moment of teaching (Thoughtful Adaptation: Present) or planned for future lessons (Teaching Plan Future or Thoughtful Adaptation: Future). The mean scores for Adaptations over the eight weeks of the term, shown in Table 5.8, illustrate the quadratic trend of the data. The mean number of Adaptations novices made to their lessons rose steadily through the third week of reflective notes, and then began a gradual drop through week seven with a sharp decline in the last week of reflective notes.
Table 5.8

Means, Standard Deviations, Minimum and Maximum Scores for Adaptation

<table>
<thead>
<tr>
<th>SOAR note 1</th>
<th>SOAR note 2</th>
<th>SOAR note 3</th>
<th>SOAR note 4</th>
<th>SOAR note 5</th>
<th>SOAR note 6</th>
<th>SOAR note 7</th>
<th>SOAR note 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.17</td>
<td>2.65</td>
<td>2.78</td>
<td>2.57</td>
<td>2.35</td>
<td>1.78</td>
<td>1.40</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.85</td>
<td>1.64</td>
<td>1.38</td>
<td>1.81</td>
<td>1.37</td>
<td>1.93</td>
<td>1.47</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>9</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

There were significant linear and quadratic trends for the number of Adaptations novices made to their lessons. These data are presented in Table 5.9.

Table 5.9

Repeated-Measures ANOVA Trends Over Time for Adaptations

<table>
<thead>
<tr>
<th></th>
<th>Within Subjects</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df</td>
<td>F</td>
<td>Significance</td>
<td></td>
</tr>
<tr>
<td>Linear</td>
<td>1, 22</td>
<td>23.59</td>
<td>.000***</td>
<td></td>
</tr>
<tr>
<td>Quadratic</td>
<td>1, 22</td>
<td>15.37</td>
<td>.001**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>**p&lt;.01, ***p&lt;.001</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Between Subjects</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>1, 22</td>
<td>159.94</td>
<td>.000</td>
</tr>
</tbody>
</table>

Figure 5.7 depicts this quadratic trend of implementing Adaptations over time.
Figure 5.7 Trend in Adaptations over time.

Theme: Discourse.

Discourse included statements indicating that novices conversed with colleagues or parents, asked course instructors for help, or engaged in exploratory Discourse with self or instructors around Problems or Dilemmas of practice. Mean scores illustrate the time sensitive trends in Discourse. The number of Discourse events novices documented in reflective notes started out high, rose in the second week of tutoring and then declined gradually over the remainder of the term. As with Confidence and Adaptations, novices documented more extensive self Discourse and Discourse with others at the beginning of the term, when they were getting to know their students and were learning new teaching methods. Once novices experienced a measure of success with their students, and incorporated the new teaching methods they were learning into their teaching repertoire,
the number of incidents of documented *Discourse* declined. Table 5.10 illustrates this trend.

**Table 5.10**

<table>
<thead>
<tr>
<th>SOAR note 1</th>
<th>SOAR note 2</th>
<th>SOAR note 3</th>
<th>SOAR note 4</th>
<th>SOAR note 5</th>
<th>SOAR note 6</th>
<th>SOAR note 7</th>
<th>SOAR note 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.17</td>
<td>5.17</td>
<td>4.74</td>
<td>4.26</td>
<td>4.04</td>
<td>3.04</td>
<td>2.14</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>2.76</td>
<td>4.67</td>
<td>3.02</td>
<td>3.17</td>
<td>2.48</td>
<td>2.10</td>
<td>1.84</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>14</td>
<td>18</td>
<td>14</td>
<td>13</td>
<td>9</td>
<td>8</td>
<td>6</td>
</tr>
</tbody>
</table>

There were significant linear and quadratic trends for discourse. Table 5.11 presents these trends.

**Table 5.11**

Repeated-Measures ANOVA Trends Over Time for Discourse

<table>
<thead>
<tr>
<th></th>
<th>Within Subjects</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df</td>
<td>F</td>
</tr>
<tr>
<td>Linear</td>
<td>1, 22</td>
<td>24.89</td>
</tr>
<tr>
<td>Quadratic</td>
<td>1, 22</td>
<td>11.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between Subjects</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1, 22</td>
<td>91.77</td>
</tr>
</tbody>
</table>

**p<.01, ***p<.001**
Figure 5.8 depicts the trend of declining *Discourse* at the end of the term.

![Graph](image)

Figure 5.8 Trend in *Discourse* over time.

**Theme: Transfer.**

*Transfer* indicated times that novices recorded instances of their students using a skill or strategy without being prompted. These moments provided an indication that students were taking on the strategies or skills for themselves; integrating them into their own repertoire for learning. Mean reported incidents of *Transfer* rose steadily through the fifth week of the term, declined slightly in the sixth week, then rose again in week seven before a sharp drop in the final week of the term. Table 5.12 presents the mean scores that indicate this trend.
Table 5.12
Means, Standard Deviations, Minimum and Maximum Scores for Transfer

<table>
<thead>
<tr>
<th></th>
<th>SOAR note 1</th>
<th>SOAR note 2</th>
<th>SOAR note 3</th>
<th>SOAR note 4</th>
<th>SOAR note 5</th>
<th>SOAR note 6</th>
<th>SOAR note 7</th>
<th>SOAR note 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>.22</td>
<td>1.00</td>
<td>1.13</td>
<td>1.22</td>
<td>1.35</td>
<td>1.17</td>
<td>1.43</td>
<td>.50</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>.52</td>
<td>1.28</td>
<td>1.82</td>
<td>1.62</td>
<td>1.10</td>
<td>1.61</td>
<td>1.50</td>
<td>.93</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

There was a significant quadratic trend for transfer. Data for this trend is presented in Table 5.13.

Table 5.13.
Repeated-Measures ANOVA Trends Over Time for Transfer

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear</td>
<td>1, 22</td>
<td>1.34</td>
<td>.26</td>
</tr>
<tr>
<td>Quadratic</td>
<td>1, 22</td>
<td>8.40</td>
<td>.01**</td>
</tr>
<tr>
<td>Between Subjects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1, 22</td>
<td>39.28</td>
<td>.000</td>
</tr>
</tbody>
</table>

**p<.01
The number of instances that *Transfer* was observed and recorded rose steadily from the first to the seventh week of teaching, before it began to decline. Figure 5.9 shows this quadratic trend of Transfer.

![Figure 5.9. Trend in Transfer over time.](image)

**Correlations among themes.**

I examined the correlations among themes to begin to confirm hypothesized relationships in the novices’ reflective notes. Two aspects of correlations are important to report: the direction of the correlation (positive or negative) and strength of the correlation. Once the covariance score is standardized, correlations can range between -1.00 to 1.00. Within this range, a correlation of -1.00 is a perfect negative correlation, indicating that when the score on one theme rises the score on the theme it is paired with
falls; and a correlation of 1.00 is a perfect positive correlation, indicating that when the score on one theme rises the score on the theme it is paired with also rises.

There were several significant correlations and two approaching significance that are of interest. Table 5.14 presents all correlations among themes. In this table, mean scores and slope scores are included in the analysis for the four themes that had significant linear or quadratic trends in the initial analysis (Confidence, Adaptation, Discourse, Transfer). Negative correlations between each of these theme means and their slopes indicate that the higher a novice’s score for this theme at the start of the teaching term the more shallow the slope of the following scores. So a novice who started the term reporting many instances of Less Confidence would have a steeper slope in subsequent reported scores of Growing Confidence and High Confidence; while a novice who started the term reporting frequent instances of Growing Confidence or High Confidence did not increase as dramatically in subsequent instances of Growing Confidence or High Confidence. Only mean scores are included for Descriptive Level and Locus of Control, since there were no significant time trends for those themes.
Table 5.14
Correlations Among Theme Variables

<table>
<thead>
<tr>
<th>Theme variable</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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<td>1. Descriptive Level</td>
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<td>-.49*</td>
<td>.19</td>
<td>.21</td>
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<td>2. Confidence</td>
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<td>-.03</td>
<td>-.21</td>
<td>-.07</td>
<td>-.24</td>
<td>.18</td>
<td>-.29</td>
<td>.34</td>
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<tr>
<td>3. Confidence Slope</td>
<td>.04</td>
<td>-.01</td>
<td>-.40**</td>
<td>.17</td>
<td>-.13</td>
<td>.27</td>
<td>.03</td>
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<tr>
<td>4. Locus of Control</td>
<td>.56**</td>
<td>-.38</td>
<td>.41*</td>
<td>-.10</td>
<td>.08</td>
<td>.21</td>
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<td>5. Adaptation</td>
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<td>.22</td>
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<td>6. Adaptation Slope</td>
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<td>.33</td>
<td>-.38</td>
<td>.01</td>
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<td>7. Discourse</td>
<td>-.59**</td>
<td>.15</td>
<td>.30</td>
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<td>8. Discourse Slope</td>
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<tr>
<td>9. Transfer</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>-.16</td>
</tr>
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<td>10. Transfer Slope</td>
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</tbody>
</table>

* p<.05 ** p<.01 Nearing significance: +p<.051, ++p<.059

While Descriptive Level did not exhibit any significant trends for change over time, it was significantly and positively correlated to Discourse (p<.05). The more specific novices were in their descriptions the more likely they were to engage in Discourse around their teaching experiences. At the same time, Descriptive Level was significantly and negatively correlated to Discourse Slope. It appears that specific Description provides the scaffold for Discourse as novices grapple with solving Problems and Dilemmas encountered in their teaching. The absence of a significant trend of change over time in Descriptive Level had the effect of decreasing the slope of
Discourse over time; potentially because novices who were Vague or Wavering in their Descriptive Level engaged in less Discourse, thereby decreasing the overall slope of Discourse.

Discourse was nearly significantly correlated with Locus of Control, \(p<.051\) indicating a supportive relationship between novices’ engagement in Discourse (with colleagues, parents, instructors, and self) and a sense of Teacher responsibility or Shared responsibility for the success or lack of success of the lesson. This internal or shared Locus of Control was significantly correlated with Adaptation \(p<.006\), indicating that perceptions of personal or shared responsibility for the outcomes of lessons are linked to making Adaptations to teaching.

Adaptation Slope, representing the growth in the number of Adaptations novices made over the course of the term, was significantly and negatively correlated with Discourse \(p<.05\) and with Confidence Slope, although this correlation was not significant \(p<.059\). A cycle seems to be present: as novices reported more Adaptations to their teaching over time, they engaged in less Discourse with self or others, perhaps because finding and implementing Adaptations led to a diminished perception of need to engage in as much Discourse around analysis and problem solving for lesson interactions. Concurrently, as Adaptations were identified and implemented Confidence rose, resulting in a significant linear trend that was somewhat correlated with a reduction in the number of Adaptations over time. As novices assimilated Adaptations into their practice and found success with these they did not perceive as much of a need to seek out and implement new Adaptations. This is apparent in the significant quadratic trend seen for Adaptations over time.
Transfer is the only theme that did not demonstrate any significant correlation to any other theme. This is interesting, because in the analysis of data from experienced teachers in the pilot study both Transfer and Adaptation were related to one or more themes.

**Effects among themes.**

**Transfer.**

I began analysis of effects by exploring the first frame of reference for my a priori model of teacher reflective practices: determining the effects of Adaptation on Transfer. As seen in Table 5.15 there were no significant effects. Adaptation slope produced an F (1, 20) = 2.37 p=.14, while Adaptation mean produced an F (1, 20) = .15, p = .70. Time*Adaptation slope was not significant: F (3.02, 60.48) = 1.16, p = .33; nor was Time*Adaptation mean: F (3.02, 60.48) =1.19, p = .32.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig</th>
<th>η²</th>
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<tr>
<td>Between Subjects</td>
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</tr>
<tr>
<td>Adaptation slope</td>
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<td>2.37</td>
<td>.14</td>
<td>.11</td>
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<td>Adaptation mean</td>
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<td>.68</td>
<td>.15</td>
<td>.70</td>
<td>.01</td>
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<td>Within Subjects</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Time*Adaptation slope</td>
<td>3.02, 60.48</td>
<td>4.86</td>
<td>1.16</td>
<td>.33</td>
<td>.06</td>
</tr>
<tr>
<td>Time*Adaptation mean</td>
<td>3.02, 60.48</td>
<td>5.00</td>
<td>1.19</td>
<td>.32</td>
<td>.06</td>
</tr>
</tbody>
</table>
These results are not surprising since Transfer was not significantly correlated to Adaptation or to any other theme. However, the analysis of trend over time did reveal a significant quadratic trend for Transfer, and Transfer was significantly related to other themes in the analysis of the pilot study. This theme will be revisited during the comparison of models for experienced and novice teachers. For now, it appears that the inclusion of Transfer in my a priori model has no statistical support from the analysis.

Adaptation.

My next frame of reference, based on my a priori model, was the potential effects on Locus of Control and Confidence on Adaptation. Figure 5.10 depicts this frame of reference.

![Figure 5.10 Frame of reference for exploring significant effects on Adaptation.](image)

The results reported in Table 5.16 are from a model including Confidence and Locus of Control as covariates for Adaptation. Results were analyzed using ANOVA with repeated measures on Adaptation. Locus of Control and Confidence slope, (the change in Confidence over time) had significant effects on Adaptation.
Table 5.16

Effects of Locus of Control and Confidence on Adaptation

<table>
<thead>
<tr>
<th>Source</th>
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<th>MS</th>
<th>F</th>
<th>Sig</th>
<th>η²</th>
</tr>
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<td><strong>Between Subjects</strong></td>
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</tr>
<tr>
<td>Confidence Slope</td>
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<td>.02</td>
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<tr>
<td>Confidence Mean</td>
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<td>5.17</td>
<td>1.46</td>
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<td>.07</td>
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<td>Locus of Control</td>
<td>1, 19</td>
<td>31.93</td>
<td>9.03</td>
<td>.007**</td>
<td>.32</td>
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</tr>
<tr>
<td>Time*Confidence Slope</td>
<td>4.55, 86.4</td>
<td>7.81</td>
<td>2.51</td>
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<td>.12</td>
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<tr>
<td>Time*Confidence Mean</td>
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<td>2.35</td>
<td>.76</td>
<td>.57</td>
<td>.04</td>
</tr>
<tr>
<td>Time*Locus of Control</td>
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<td>3.07</td>
<td>.99</td>
<td>.543</td>
<td>.05</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01

**Locus of control.**

Since Locus of Control and Confidence slope both had significant effects on Adaptation, my next frame of reference was to explore the effects of Confidence as a covariate for Locus of Control. Figure 5.11 depicts this frame of reference.

![Figure 5.11 Frame of reference for exploring significant effects on Locus of Control.](image-url)
The results reported in Table 5.17 are from a model including *Confidence* mean and *Confidence* slope as covariates for *Locus of Control*. Results were analyzed using ANOVA with repeated measures on *Locus of Control*. Neither *Confidence* mean nor *Confidence* slope had a significant effect on *Locus of Control*. *Confidence* mean produced an $F (1, 20) = .008$, $p = .93$, while *Confidence* slope produced an $F$ score $(1, 20) = .02$, $p = .89$. The interaction with time was not significant for either *Confidence* mean: $F (4.47, 89.47) = 1.19$, $p = .06$; or *Confidence* slope: $F (4.47, 89.47) = .44$, $p = .80$. Thus, there was no significant support for Confidence having an effect on Locus of Control.

<table>
<thead>
<tr>
<th>Source</th>
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<th>$\eta^2$</th>
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<tr>
<td><strong>Between Subjects</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence mean</td>
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<td>.008</td>
<td>.93</td>
<td>.000</td>
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<td>.018</td>
<td>.89</td>
<td>.001</td>
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<td><strong>Within Subjects</strong></td>
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</tr>
<tr>
<td>Time*Confidence mean</td>
<td>4.47, 89.47</td>
<td>6.60</td>
<td>1.19</td>
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<td>.06</td>
</tr>
<tr>
<td>Time*Confidence slope</td>
<td>4.47, 89.47</td>
<td>2.48</td>
<td>.44</td>
<td>.80</td>
<td>.02</td>
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</tbody>
</table>

*Effects of Descriptive Level and Discourse on Adaptation.*

My next step was to examine the other possible covariates for *Adaptation*: *Descriptive Level* and *Discourse*. This frame of reference focused on the left side of my a priori model, and is depicted in Figure 5.12.
Neither Descriptive Level nor Discourse had significant effects on Adaptation.

Descriptive Level produced an F score (1, 19) = .09, p = .77. Discourse slope produced an F (1, 19) = .11, p = .74, and Discourse mean produced an F (1, 19) = .98, p = .33.

Time*Descriptive Level was not significant: F (4.29, 81.56) = .51, p = .74; nor was Time*Discourse slope: F (4.29, 81.56) = .84, p = .51, nor Time*Discourse mean: F (4.29, 81.56) = 1.01, p = .41. Table 5.18 presents these results.
Table 5.18
Effects of Descriptive Level and Discourse on Adaptation

<table>
<thead>
<tr>
<th>Source</th>
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<th>F</th>
<th>Sig</th>
<th>η²</th>
</tr>
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<td><strong>Between Subjects</strong></td>
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<td>Descriptive Level</td>
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<td>.09</td>
<td>.77</td>
<td>.005</td>
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<td>.11</td>
<td>.74</td>
<td>.006</td>
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<td>Discourse Mean</td>
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<td>.98</td>
<td>.33</td>
<td>.05</td>
</tr>
<tr>
<td><strong>Within Subjects</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time*Descriptive Level</td>
<td>4.29, 81.56</td>
<td>1.79</td>
<td>.51</td>
<td>.74</td>
<td>.03</td>
</tr>
<tr>
<td>Time*Discourse Slope</td>
<td>4.29, 81.56</td>
<td>2.10</td>
<td>.84</td>
<td>.51</td>
<td>.04</td>
</tr>
<tr>
<td>Time*Discourse Mean</td>
<td>4.29, 81.56</td>
<td>3.57</td>
<td>1.01</td>
<td>.41</td>
<td>.05</td>
</tr>
</tbody>
</table>

Thus, there was no significant support for the section of my a priori model that predicted *Descriptive Level* and *Discourse* would have an effect on *Adaptation*.

*A priori model revisited.*

At this point part of the a priori model had been supported by significant effects; part was not supported. There was no significant effect between *Adaptation* and *Transfer*. *Adaptation* was supported by *Locus of Control* and by *Confidence* slope, but there was no significant effect between *Locus of Control* and *Confidence*. There was also no significant effect of either *Descriptive Level* or *Discourse* on adaptation. The a priori model follows in Figure 5.13, with significant and non significant effects represented by solid arrows and dashed arrows respectively.
Shulman and Shulman’s (2004) description of accomplished teachers as “ready, willing, able, and reflective” (p. 259), and Alexander and Five’s (2000) descriptions of the reflective novice as one who seeks mentoring relationships and enacts a collaborate stance supports the involvement of Discourse in reflective practices. Yet my analysis had not yet revealed effects between Discourse and any other themes. Would Descriptive Level, which was scored to weight specificity in description, have any connection to Discourse? To determine this, I decided to examine the impact of Descriptive Level on Discourse.

**Effects of Descriptive Level on Discourse**

Descriptive Level had a significant effect on Discourse: $F(1,21) = 6.23$, $p = .02$. There was no significant effect of Time*Descriptive Level: $F(4.35, 91.25) = 1.87$, $p = .12$. This indicates that writing descriptive, specific reflections supports Discourse. Table 5.19 presents these results.
Effects of Descriptive Level on Discourse

**Table 5.19**

Effects of Descriptive Level on Discourse

<table>
<thead>
<tr>
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<td>131.90</td>
<td>6.23</td>
<td>.02*</td>
<td>.23</td>
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</tbody>
</table>

**Within Subjects**

| Time*Descriptive Level | 4.35,91.25 | 16.69 | 1.87  | .12 | .08 |

*<p <.05

**Effects of Discourse on Locus of Control and Confidence**

Alexander and Fives (2000) described the reflective novice as one who seeks out mentoring. Would engaging in Discourse with instructors or colleagues as mentors support the development of Locus of Control or Confidence within my sample of novices? For my final frame of reference I determined to examine the impact of Discourse on Locus of Control and on Confidence.

There was a significant effect of Locus of Control on Discourse mean: F (1, 20) = 4.73, p = .04. There were no significant effects of Locus of Control on Discourse slope, F (1, 20) = .76, p = .40; of Time on Discourse slope: F = (4.63, 92.66) = .40, p = .84; or of Time on Discourse mean: F = (4.63, 92.66) = .62, p = .67. Table 5.20 presents these results.
Table 5.20
Effects of Discourse on Locus of Control

<table>
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<td>Discourse slope</td>
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<td>1, 20</td>
<td>23.80</td>
<td>4.73</td>
<td>.04*</td>
<td>.19</td>
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</tbody>
</table>

<p>| | | | | | |</p>
<table>
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<td>Within Subjects</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Time*Discourse slope</td>
<td>4.63, 92.66</td>
<td>2.15</td>
<td>.40</td>
<td>.84</td>
<td>.02</td>
</tr>
<tr>
<td>Time*Discourse mean</td>
<td>4.63, 92.66</td>
<td>3.38</td>
<td>.62</td>
<td>.67</td>
<td>.03</td>
</tr>
</tbody>
</table>

*p<.05

There were no significant effects of Discourse on Confidence. The effects of Discourse slope on Confidence yielded an F (1, 20) = .05, p = .83; and the effects of Discourse mean on Confidence yielded an F (1, 20) = .58, p = .46. Time* Discourse slope was not significant: F (5.2, 103.92) = .81, p = .55; nor was Time*Discourse mean: F (5.2, 103.92) = .34, p = .89. Table 5.21 presents these results.
Table 5.21

Effects of Discourse on Confidence

<table>
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<th>Sig</th>
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<td>Source</td>
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<td>.05</td>
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<td>.00</td>
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<tr>
<td>Discourse mean</td>
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<td>1.25</td>
<td>.58</td>
<td>.46</td>
<td>.03</td>
</tr>
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<td><strong>Within Subjects</strong></td>
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<td></td>
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</tr>
<tr>
<td>Time*Discourse slope</td>
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<td>.81</td>
<td>.55</td>
<td>.04</td>
</tr>
<tr>
<td>Time*Discourse mean</td>
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<td>.63</td>
<td>.34</td>
<td>.89</td>
<td>.02</td>
</tr>
</tbody>
</table>

**A priori model confirmations.**

Some hypothesized relationships were confirmed and others disconfirmed by the repeated measures ANOVA for effects among themes. The a priori model follows in Figure 5.14, with significant and non significant effects represented by solid arrows and dashed arrows respectively.

![Figure 5.14 Support for a priori model of teacher reflective practices.](image-url)
Chapter Six

Discussion, Implications, Recommendations
Introduction

Developing successful teaching practices that result in student learning is a challenging endeavor. Contrary to the view that teaching is mostly instinctive and only requires teachers to use the innate abilities we all possess to organize, present, and assess finite skill sets of knowledge; teaching is in fact a challenging, strenuous, demanding, rewarding, humbling profession that requires stamina and flexibility to deal with the continual decision making and variable demands that are part-and-parcel of the teaching day (Ball & Cohen, 1999).

Developing teaching expertise requires more than competence. It requires the ability to balance, blend, and negotiate content knowledge and pedagogy successfully, moment-by-moment and decision-by-decision, within the fluid and diverse environment of the classroom (Shulman, 1986, 1999). Balancing the pedagogy for classroom management, lesson planning, assessment, analysis, and re-teaching with the deep understanding of subject matter necessary to teach so that content becomes transparent and easily grasped by students requires more in-the-moment decision making than that required of expert chess players and mathematicians (Berliner, 1986). The teacher who doesn’t possess a deep understanding of both pedagogy and content can plan and deliver teaching activities that don’t result in measurable student learning. But deep understanding can develop from reflective practices.

Preparation of novice teachers must address these challenging and rewarding realities of teaching, and must provide novices with strategies to address the many opportunities for decision making and adaptation that are present in a teaching day. Reflective, analytical practices are powerful strategies that expert teachers use to
organize, explore, and resolve teaching challenges. Such practices include a willingness to regularly examine the impact of teaching actions and interactions on student outcomes, and to think critically about teaching practice. Doing so provides an avenue for systematic and intentional inquiry into one’s own teaching and learning and student learning that can lead to teaching adaptations and transformative practice change (Cochrane-Smith & Lytle, 1993).

Reflective practices are a hallmark of an expert teacher. Developing reflective practices is a crucial task for the novice teacher; and one that teacher preparation programs must support.

**Purpose of This Study**

The purpose of this study was to explore the reflective practices of novice teachers, to compare novices’ reflective practices to a model of reflective practices that emerged in a pilot study with experienced teachers, and to study the themes that emerged in detail in order to support or refute my theoretical model for reflective practices of novices. By completing this analysis my goal was to provide genuine, clear descriptions of novices’ reflective practices, and to use these descriptions to develop a model that described the specific ways novices approached and developed reflective practices. Such a model could be used to design teacher preparation experiences that scaffold the development of reflective, analytical practices for novice teachers.

Specific questions guided this research. They are:

- What reflective practices will emerge in the reflections of novice teachers?
What are the differences between novices and experienced teachers on the themes and correlated experiences discovered in the previous study of experienced teachers?

**Qualitative Findings**

Analysis for this study began with six themes: *Descriptive Level, Confidence, Locus of Control, Adaptation, Discourse,* and *Transfer.* Axial codes emerged from each of these themes. Together, these themes and axial codes describe the reflective practices of novice teachers, and provide answers to the first research question. They are summarized below.

**Descriptive level.**

Most of the written reflections collected for this study were *Specific* in tone. One hundred twenty-nine of the total 177 gave detailed but concise descriptions of the lesson and progress toward goals. They were comprehensive and thorough in analysis and reflection, and provided direction for future lesson planning. The remaining 48 reflections did not provide this comprehensive and thorough analysis and were coded as *Vague* or *Wavering."

**Confidence.**

The theme that occurred least frequently in the sample was *Confidence.* The 268 statements about *Confidence* provided evidence of the disequilibria that novices felt during the teaching sessions (Wunner, 1993). Axial codes for *Confidence* were nearly evenly divided between codes for *Less Confidence* (124) and for *Growing Confidence* or *High Confidence* (59 and 85 respectively) in teaching abilities, seeming to indicate that
novices experienced less disequilibria and more growth of *Confidence* in their teaching abilities during the tutoring term.

However, statements of *Less Confidence* were made during all parts of the term, not just at the onset of tutoring, indicating that feelings of disequilibria recurred during the term as new teaching challenges were encountered. Shulman and Shulman (2004) described disequilibria as a recurrent event that challenges current ways of thinking, and the accomplished teacher as one who can live with a certain amount of disequilibria, knowing that transformative practice change may wait on the other side of the disequilibria. It appears that teaching at the reading clinic provided a foreshadowing of the periodic disequilibria-resolution cycle that is a feature of the teaching profession.

**Locus of control.**

*Locus of Control* described novices’ perceptions of responsibility for a lesson’s success or failure. Berliner (1988) described teachers in the novice years as having very little sense of their own responsibility for the learning of their students. But in this sample twice as many novice quotations (270) described *Teacher or Shared Locus of Control* as *Student or Student Blame Locus of Control* (132). *Locus of Control Teacher* quotations described times when novices took responsibility for the success or failure of the lesson; while *Locus of Control Shared* quotations, described instances when novices reflected on the shared enterprise of teaching and learning and concluded that outcomes of a lesson are the result of both teacher and student factors. Recognizing and reflecting on *Locus of Control* within these axial codes sharpened novices’ focus on vital issues for planning and delivery of instruction, keeping student learning foremost in mind.
Only seven of the 23 novices made any statements blaming students for learning failures, while 132 novices’ statements indicated that students were in control of the direction of the lesson, and that student responses or behaviors were the most powerful determinant of the outcome of a teaching interaction. Clearly, novices held shifting views on responsibility for learning success.

**Adaptations.**

Novices used their reflective notes to plan adaptations to their lessons. Seventy-four of the 356 axial coded quotations for *Adaptations* described sequential planning for skill instruction, but did not account for the daily reflective and analytical processes and adaptations that would be necessary to work successfully with struggling readers. A teacher who plans in a long-term, sequential way may be closing off avenues for inquiry into her own teaching and her students’ learning by symbolically removing the need for further analysis. Therefore, these types of adaptations don’t fully embrace the reflective practices that are the focus of this study, and that demonstrate thoughtful analysis of student responses and teaching practices.

Seventy-eight quotations described adaptations that were made in the moment of teaching. These were termed “reactive response” (p. 163) by Duffy and colleagues (2008), and involved a recognition by a novice that some kind of learning breakdown was occurring (e.g. comprehension, motivation) and that changing the activity or some element of teaching delivery could lead to more successful student learning.

By far the most adaptations were those that described a reflective cycle of teaching, observation of student response, analysis of the student response and the novice’s teaching, and planning with that response and the specific learning needs,
strengths, and preferences of the student in mind. This reflective cycle illustrates the active discovery learning that Dewey described (1916/1985) when ideas and problems are actively struggled with and resolved.

**Discourse.**

The *Discourse* theme captured the process novices used to explore problems and dilemmas that arose during teaching (Cuban, 1992). While 82 of the 636 comments were direct requests for help from the supervisor or implementing the suggestion of a supervisor, 511 comments described a process of self discourse that novices used to independently explore challenges in their teaching, test hunches or hypotheses by designing interventions, and work toward resolution. This detailed, focused self discourse helped novices identify specific areas of challenge to concentrate on so that they could design more precise ways to intervene, and helped novices develop the analytical reflective processes necessary for responsive teaching.

Over time in the course the incidence of self discourse focused on solving problems of teaching declined sharply as novices developed procedures to manage problems within their teaching. At the same time, instances of self discourse on dilemmas grew steadily over the first three weeks of the term and remained at a consistently high level until the end of the term. It seems that teaching at the reading clinic provided novices with a pre-service opportunity to reflect on some of the ingrained and long-lasting challenges of teaching.

**Transfer.**

Finally, the *Transfer* theme captured novices’ statements about the growth they observed in their students’ skill development. While a few novices noticed and
documented “lightbulb moments” when their students suddenly realized the value and application of skills and strategies they had learned in lessons, most comments documented students’ gradual progress, mastery, and assimilation of skills and strategies into their learning repertoires.

This noticing and documenting instances of growth in student skill and strategy use provides another challenge to Berliner’s notions of the early years in teaching as essentially non reflective. It may be that the active discovery process of writing reflective notes, in which novices in this sample made their thought processes explicit (Dewey, 1916/1985) through writing about them, helped to jump-start this process of observing and marking student growth and change.

**Summary of qualitative findings.**

The reading clinic experience provided several supports for novices’ development. First, this teaching experience highlighted the disequilibria that is inherent in teaching, and provided opportunities for novices to work through disequilibria by experimenting with and assimilating new strategies for reading instruction. It is crucial that novices realize that these experiences of disequilibria will occur in teaching practice, but they need not become immobilizing experiences. Through reflective analysis strategies can be identified and implemented to address moments of disequilibria and build banks of teaching knowledge.

Teaching in the reading clinic sharpened novices’ focus on essential features of *Locus of Control* and planning for students. By recognizing their power to determine the direction of learning experiences for their students, novices were more likely to plan
thoughtfully, incorporating analysis of student responses as essential information to inform their instruction.

Working with struggling readers initiated a reflective planning cycle for novice teachers. Critical elements of this cycle were observation and documentation of student responses and specific learning needs, detailed analysis of teaching interactions, and planning with this observation and analysis in mind. This planning process is crucial to successful classroom teaching that results in student learning.

The reading clinic experience provided novices with opportunities to enact solutions for some problems of teaching practice and to have initial encounters with dilemmas of teaching practice. New problems will occur in new teaching settings, but having initial success with problem resolution will support novices’ perceptions of efficacy for future problem solving. Additionally, the opportunity to encounter and begin to work with the more ingrained and long lasting dilemmas of teaching practice provided an “insider’s view” of a reality of the teaching profession and gave novices the opportunity to learn ways to negotiate dilemmas of practice from more experienced mentors.

Finally, engaging in an active discovery process in which thoughts and teaching experiences were made explicit through writing helped “jump-start” the cycle of observation and analysis that is vital to reflective analytical practices and that lead to successful planning for student learning.

**Quantitative Findings**

Graduated scoring was used to assign values to the axial codes found during qualitative analysis. Axial code scores were then combined to form a weekly score for
each theme. Themes were analyzed for trends over time in the course, for correlations, and for effects among themes via repeated measures ANOVA to confirm or disconfirm my a priori model of teachers’ reflective practices.

**Descriptive level.**

Novices who wrote their reflections specifically at the beginning of the course continued to write specifically at the end of the course. Conversely, novices who wrote their reflections in a less descriptive and vague way at the beginning of the course continued to write in this way at the end of the course.

The amount of support and emphasis supervisors placed on specificity in description may have influenced *Descriptive Levels* in the reflective notes; more investigation into this relationship is needed. Figure 6.1 explores the breakdown of novices’ *Descriptive Levels* by supervisor. For this figure, novices were described as having a specific *Descriptive Level* if seven or more of their eight SOAR notes were coded as *Specific*. These novices are represented by the solid black bars in the figure. Novices who wrote mostly *Specific* SOAR notes with a smaller number of *Vague* or *Wavering* SOAR notes are represented by the gradient bar in the center of each bar cluster. Novices who wrote in *Vague Descriptive Level* for seven or more of their SOAR notes are represented by the white bar. The total number of novices represented in the figure is more than 23: this is because two novices were shared by supervisor L and supervisor R.

For novices who continued to write *Vague* and *Wavering* reflective notes, Berliner’s (1986, 1988) assertion that little reflective activity occurs at novice stages appears to be correct.
There was no specific trend over time in Descriptive Level. There was an expected significant correlation and significant effect between Descriptive Level and Discourse, so that novice teachers who wrote Specific and Descriptive reflections also engaged in more Discourse with self, instructors, colleagues, and parents.

Confidence.

Axial codes for High Confidence and Growing Confidence were summed and axial codes for Less Confidence subtracted from this sum to compute weekly Confidence theme scores. A significant linear trend was found in Confidence over time at the reading clinic. Starting from a state of lowered Confidence, this rose steadily as novices implemented and assimilated new teaching strategies, and this trend continued until the end of the term.

Confidence was not significantly correlated with any other theme in the novice teachers’ reflections. A marginal relationship was found between Confidence Slope and

Figure 6.1 Breakdown of novices who wrote Specific, Specific/Vague, and Vague reflective notes over the term, by supervisor.
Adaptation Slope so that as Confidence increased over time, the number of Adaptations novice teachers made decreased. It will be important for novices to remember that although Confidence may have peaks and valleys in actual teaching practice, the ability to remain “ready, willing, able, and reflective” (Shulman & Shulman, 2004, p. 261) is the mark of an accomplished teacher.

Locus of control.

The axial codes of Locus of Control Teacher and Shared were summed to compute the Locus of Control weekly theme score. There was no significant trend over time for Locus of Control. However, Locus of Control was significantly correlated with Adaptation ($p < .01$) and nearly significantly correlated with Discourse ($p < .051$), indicating that novices who perceived personal or shared Locus of Control for lessons were more likely to engage in Discourse and to make Adaptations. Locus of Control had a significant effect on Adaptation ($p < .007$). This ability to recognize a need and take action within one’s ability to address that need is another mark of the professional, and one that needs to be developed all the way through novices’ pre-service preparation (Alexander & Fives, 2000).

Adaptations.

Axial codes for Adaptations were summed to compute the Adaptations weekly score. A significant quadratic trend over time was found ($p < .001$). A significant negative correlation was found between Adaptation slope and Discourse ($p < .05$) indicating that novices decreased their engagement in Discourse as they implemented more Adaptations. There was no significant effect of Adaptation on Transfer. This drop in Adaptations over time and the negative relationship between Discourse and Adaptation slope again points
to a need to develop resiliency of reflective, analytical practices, (Shulman, Shulman, 2004) so that novices become aware that they will need to shift into reflection and its scaffolding elements of Discourse and Adaptation whenever they face challenges in their teaching practice or challenges to the learning of their students (Berliner, 1986).

**Discourse.**

Axial codes for Discourse were summed to compute the weekly Discourse theme score. There was a significant quadratic trend over time for Discourse \((p<.003)\).

Discourse was significantly correlated with Descriptive Level \((p<.05)\), nearly significantly correlated with Locus of Control \((p<.051)\) and significantly and negatively correlated with Adaptation slope \((p<.05)\). Discourse also had a significant effect on Locus of Control \((p<.04)\).

These multiple significant and nearly-significant correlations indicate the importance of Discourse to reflective practices and to the active learning component of the laboratory model that is a foundational tenet of this research (Dewey, 1904). Through Discourse novices developed their personal and shared perceptions of Locus of Control, and these perceptions contributed to the implementation of Adaptations. These relationships, plus the much larger numbers of instances of Discourse than of any other theme in the analysis, indicate that engagement in Discourse was the most vital element of reflective, analytical practices for this group of novice teachers.

**Transfer.**

Axial codes for Transfer were summed to compute the weekly Transfer theme score. There was a significant quadratic trend in Transfer \((p<.008)\). However, none of the other themes had any significant correlation with Transfer. Additionally, there were
no effects found between *Transfer* and any other themes. This may be an indication that novices are less attuned to watch for signs of *Transfer* and are, of necessity, more focused on discovering the strengths and needs of their students through *Discourse* and *Descriptive Level* practices, and on finding ways to adapt their teaching to meet these needs. Watching for signs of *Transfer* may be a critical element for mastery in the first years of acclimation to in-service teaching, and may become fully established in later stages of development (Berliner, 1986, Alexander & Fives, 2000).

**Summary of quantitative findings.**

*Discourse* emerges from these findings as the most critical element of reflective practice. *Descriptive Level* alone has no relationship with themes other than *Discourse*, but *Discourse* is significantly supported by *Descriptive Level* and *Discourse* has a significant effect on *Locus of Control*. Axial codes for *Discourse* were more frequent than axial codes for any other theme in this analysis, indicating that novices spent most of their reflective time engaged in some form of *Discourse*. This has critical implications for teacher preparation that will be discussed in that section of this paper.

The finding that *Discourse* and *Adaptation* decreased as *Confidence* increased raises some implications for teacher preparation as well. It is vital that novices develop both awareness that reflective practices are ongoing and crucial elements of teaching practice, and flexibility for shifting in and out of reflective practices as necessary. These characteristics are features of the expert teacher that Berliner (1986) described, and teacher preparation programs must help novices develop deep understandings of these features of the teaching profession.
Finally, it seems apparent that novices’ ability to observe the relationship between teacher actions such as *Discourse* and *Adaptation* to *Transfer* of learning to students comes later in a teacher’s career, just as Berliner described (1986). However, by developing the *Discourse* essential to reflective practices teacher educators may help novices develop these analytical and observational skills earlier in their career.

**Research Questions**

**Question 1: What Reflective Practices Emerged in the Reflections of the Novices?**

In general, novices responded to the disequilibria indicated by a trend of low *Confidence* at the beginning of the term by making more *Adaptations* and engaging in more *Discourse* with instructors, colleagues, and parents around the challenges they encountered while teaching their students. These trends coincided with a significant trend in *Transfer* to student.

**Novices’ reflective practice trends.**

Novices made more statements indicating a lack of *Confidence* at the beginning of the term, when they were grappling with mastery of the intensive skills and strategies for reading and writing intervention that the course provided and learning how to apply those skills and strategies in teaching interactions with a struggling reader. As new strategies were mastered and applied with success, novices reported more feelings of *Confidence*, indicating that they had achieved some level of accomplishment with their teaching and were experiencing less disequilibria.

As novices gained insight into their students’ individual needs and incorporated the new teaching strategies and methods they were learning into their teaching repertoires they began to make *Adaptations* to plan more effectively for their students. *Discourse*
with instructors and with colleagues around class material and instructional problems supported this process of Adaptation, and novices experienced an increase in Confidence and their Adaptations met with apparent success. The resultant growth in Confidence resulted in a tapering off of the number of unique Adaptations novices made or reflected on, and the number of Discourse interactions novices engaged in or reflected on. Figure 6.2 illustrates the direction of these trends.

![Diagram](image)

**Figure 6.2 Illustration of the direction of novices’ reflective practice trends**

Note: Figure 6.2 is intended as an illustration of general patterns of reflective practice, not a representation of actual trend lines.

The overall picture of novices’ reflective practices was one of combined factors leading to Adaptations to teaching. Writing Descriptive reflective notes had a logical supportive effect on engagement in Discourse; and Discourse supported personal or shared Locus of Control. Having a strong perception of personal or shared Locus of Control supported the process of making Adaptations; Confidence also had an effect on Adaptations. More investigation is needed to determine the effect of Adaptations on Transfer to student. Figure 6.3 presents my theoretical model of novices’ reflective
practices. Solid arrows indicate relationships that were supported by this research; dashed arrows indicate relationships that were not supported by this research and require further investigation. The arrows from the previous model that connected *Descriptive Level* to *Adaptation* and to *Discourse* have been removed, since findings of this research indicate that *Discourse* is the more fitting indicator of novices’ reflective practices.

![Diagram](image)

*Figure 6.3. Theoretical model of novices’ reflective practices*

While there was a significant quadratic trend in *Transfer*, there was no significant effect of *Adaptation* on *Transfer*, as my model predicts. This may be related to the number of quotations for axial codes supporting *Adaptation* and *Transfer*. Novices documented many more instances of *Adaptations* (356 quotations) than of *Transfer* (183 quotations). This may mean that struggling readers require a high number of *Adaptations* to instruction before they are able to assimilate new learning skills and strategies into
their personal learning repertoire and achieve *Transfer*; or that novices were more focused on identifying, implementing, and documenting the *Adaptations* they were making than they were on noticing or documenting instances of *Transfer* to student.

**Question 2: What are the Differences Between Novice and Experienced Teachers?**

**Descriptive level.**

For both the novice teachers in this study and experienced teachers in the pilot study, *Descriptive Level* did not change significantly over time. However, there were differences between experienced and novice teachers in the direct effect *Descriptive Level* had on other themes. For experienced teachers *Descriptive Level* was significantly correlated with *Adaptation* but not with any other themes; so that the more description the experienced teachers used while writing their reflective notes, the more likely they were to implement *Adaptations* to their teaching. Experienced teachers seemed to use *Discourse* less frequently, as a checking and confirmation mechanism for their teaching practices.

Conversely, *Descriptive Level* was not correlated with *Adaptation* in the reflections of novices, but instead had a supportive effect on engagement in *Discourse*. Novices used the written reflections to develop and refine their *Discourse* skills around *Problems* and *Dilemmas* of teaching, and this focus on refinement of *Discourse* led to higher levels of *Adaptations* to teaching. This is an important difference in the reflective practices of novice versus experienced teachers.

**Confidence.**

There were significant trends in *Confidence* for both experienced and novice teachers, but these trends differed. Experienced teachers reported a significant quadratic
trend for *Confidence* identifying a drop in personal *Confidence* as they began teaching in the reading clinic that then rose as new strategies for teaching were learned and implemented, leveling off as these new strategies were assimilated into practice successfully. Novice teachers began their teaching at the reading clinic with lower *Confidence* and experienced a significant, positive linear trend as they implemented new teaching strategies with success and assimilated these into their teaching repertoire.

For experienced teachers *Confidence* was significantly and negatively correlated with *Discourse*. As experienced teachers regained their *Confidence* they engaged in less *Discourse* around their teaching practice. No correlation or effect between *Confidence* and *Discourse* was found in the novice sample, but trend analysis revealed that novices’ *Confidence* continued to rise throughout the term while the number of *Discourse* events novices engaged in declined toward the end of the term. Thus, novice and experienced teachers demonstrate similar effects between *Confidence* and *Discourse*. When *Confidence* is shaken, teachers engage in *Discourse* as a means to regain their equilibrium. Once equilibrium is intact, the amount of engagement in *Discourse* declines.

**Locus of control.**

There were no significant trends over time in *Locus of Control* for either experienced or novice teachers. For experienced teachers there were significant relationships between *Locus of Control* and *Transfer* to student, and the interaction of *Locus of Control* and *Adaptation* on *Transfer*. Experienced teachers who perceived a personal or shared *Locus of Control* for the success or lack of success of lessons were more likely to make *Adaptations* to their lessons and more likely to see evidence of *Transfer* in their students. *Discourse* did not play a role in this relationship.
Like experienced teachers, novices who perceived personal or shared Locus of Control for lessons were more likely to make Adaptations. Discourse was a significant support for Locus of Control of the novices, while Discourse had no significant relationship to any other theme in the sample of experienced teachers. Thus, perceptions of personal or shared Locus of Control had a significant effect on the Adaptations that were made by teachers of both experience levels in this study. However, the use of Discourse to support this relationship differed across experience levels.

Adaptation.

Both novice and experienced teachers recorded significant quadratic trends for Adaptation in their written reflections. The number of Adaptations all teachers made to their lessons was minimal at the beginning of teaching at the reading clinic; rose as teachers learned more about their students’ individual learning strengths, needs, and preferences; and then leveled off as teachers assimilated the new Adaptation strategies into their teaching practices.

For experienced teachers Adaptation was significantly correlated with Descriptive Level so that teachers who were more Specific in description were more likely to make Adaptations to their teaching. This direct correlation was not present in the reflective notes of novices. However, there was a significant negative correlation between the number of Adaptations novices made over time and the amount of Discourse they engaged in. As novices made more Adaptations they engaged in less Discourse with self, instructors, colleagues, or parents. Since Discourse typically focused on identifying and resolving Problems or Dilemmas that arose in teaching interactions, it may be that
novices felt less of a need to engage in Discourse as they found and implemented Adaptations successfully.

**Discourse.**

Experienced and novice teachers made significantly different use of Discourse in their reflective notes. For experienced teachers there was no significant trend over time in their use of Discourse, and Discourse was significantly and negatively correlated with Confidence, indicating that experienced teachers engaged in less Discourse as their Confidence rose. It appears that the disequilibria, depicted by the quadratic trend with its significantly lowered Confidence at the beginning of the term, initiated a temporary rise in Discourse that dropped off again as soon as Confidence rose.

Novice teachers reported a significant quadratic trend in Discourse, beginning the term engaged in lower levels of Discourse that increased as the term progressed and as they became involved in teaching interactions that challenged their practice and required new approaches. Novices ended the term with a drop in their engagement in Discourse as they assimilated new strategies into their practice.

While Discourse was not an important factor for experienced teachers as they made decisions for their teaching practice, it was perhaps the most important component of the Descriptive Level theme for novices, and had a significant effect on novices’ Locus of Control as well. It appears that the opportunity and ability to engage in Discourse with self, with instructors, colleagues, and parents is especially supportive to the novice teachers’ development of Descriptive practices that lead to the development of Locus of Control as a support for making Adaptations to their teaching practices.
**Transfer.**

There were significant quadratic trends in *Transfer* for both experienced and novice teachers. This trend mirrored that of *Adaptation*: starting off low, rising over time, and leveling off near the end of the course. Both groups of teachers saw few instances of *Transfer* to student at the beginning of the term. The number of observed instances of *Transfer* rose as teachers implemented more *Adaptations* into their teaching, and leveled off near the end of the term when teachers had found successful *Adaptations* and assimilated these into their teaching repertoires.

For experienced teachers the significant correlations between *Transfer* and *Locus of Control* and between *Transfer* and the interaction of *Locus of Control* and *Adaptation* meant that the more often experienced teachers wrote about a personal or shared *Locus of Control* for success of the lesson, the more likely they were to make *Adaptations* to their teaching and the more likely they were to see *Transfer* of learning to their students. Conversely, *Transfer* was not significantly correlated to any other theme in the reflections of the novices.

**Critical similarities and differences.**

Novices used *Discourse* to support personal or shared *Locus of Control* for *Adaptations*. Experienced teachers relied less on *Discourse*, instead making use of greater *Descriptive Level* to analyze their teaching interactions and plan for *Adaptations*.

Both novice and experienced teachers documented significant changes over time to their *Confidence* levels, and both made use of *Discourse* to help resolve the disequilibria they were experiencing. For both groups, engagement in *Discourse* dropped as *Confidence* rose.
Locus of Control had significant effects on Adaptation for both groups of teachers. The differences again fell in Discourse, which played no role in the relationship experienced teachers described between Locus of Control, Adaptation, and Transfer; but was significantly correlated to Locus of Control and Adaptation for the novices.

**Implications**

**The Importance of Discourse for Novices**

Discourse emerges as the strongest, most frequent, and most useful result of using a structured written reflective process for novice teachers. Engaging in Discourse in the written reflections provided several benefits for novices.

First, novices were able to engage with their ideas and questions about the teaching experience at the reading clinic and to make their thought processes and analyses of teaching events explicit. By doing so, Problems and Dilemmas of teaching could be explored and sometimes even resolved, and novices could take advantage of the assistance of the instructors, who served as expert mentors, in the search for responses to challenges and Adaptations to teaching.

This reflection requirement started a cycle of Discourse that enabled novices to solve some Problems of teaching and begin to engage with the more long-lasting Dilemmas of teaching. As a result, these novices will enter the teaching profession with the recognition that Dilemmas are an inherent feature of teaching, one that all teachers engage with repeatedly in their professional experiences.

Second, the requirement to write reflective notes engaged novices in a relationship with an experienced mentor. This mentoring relationship is one that Alexander and Fives (2000) identify as important to the development of a reflective
novice. It supported the *Discourse* described above, and it also scaffolded novices through the disequilibria that is a product of teaching in the reading clinic. Engagement in *Discourse* with the mentor helped novices move from disequilibria to resolution and assimilation, and began to develop the notion that disequilibria is a recurring component of the teaching profession, but one that can be resolved with positive results that can transform teaching and learning.

Third, the structured reflection requirement helped novices realize that reflective processes of analyzing their own actions and their students’ responses could lead to refined lesson delivery and precise practice. This realization was evident in the *Locus of Control* statements when novices explored their growing awareness of personal and shared responsibility for success or failure of lessons.

**Confidence and the Accomplished, Reflective, Expert Teacher**

The relationship of *Confidence* to *Discourse* and *Adaptation* is one of interest. For both experienced and novice teachers, engagement in *Discourse* and implementation of *Adaptations* dropped as *Confidence* rose. While increased *Confidence* is a sign of resolution of disequilibria, it is important that teachers at all experience levels develop the ability to engage in reflective thought, with its attendant *Discourse* and *Adaptations*, whenever they are confronted with a challenge of teaching or learning (Berliner, 1986).

The recognition that reflective, analytical practices are constant companions to accomplished and effective teaching practices is crucial (Shulman, Shulman, 2004). Maintaining this recognition therefore falls to all of us engaged in teacher preparation and ongoing teacher development.
Recommendations

Scaffold the Development of Discourse

Discourse is a vital element of reflective practices for novices and one that needs to be explicitly taught to pre-service teachers from the early stages of their professional development. Novices relied on Discourse to meet the challenges in their teaching interactions much more heavily than experienced teachers did. The written reflective notes that form the data sources for this study are one method of scaffolding this development; but this learning needs to happen earlier in a novice’s preparations.

One format for scaffolding the development of discourse is through explicit dialogue in early teacher preparation classes. Using case studies and real life examples, professors and instructors in teacher preparation should use explicit Think Alouds to model discourse, demonstrating the types of questioning, exploration, and solution generation that novices in this study used in their written reflections.

Because much of the discourse in this study focused on Problems and Dilemmas of teaching, this is where the focus of Think Aloud discourse should be. And as new challenges arise in the pre-service teaching experiences of novices it would be instructive to involve novices in labeling these as either Problems or Dilemmas in order to gain a deeper understanding and develop entry level skills for generation of responses and solutions. Table 6.1 lists specific Problems and Dilemmas that emerged from this research.
Table 6.1

<table>
<thead>
<tr>
<th>Problems in teaching practice</th>
<th>Dilemmas in teaching practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenging behaviors</td>
<td>Avoidance</td>
</tr>
<tr>
<td>Implementing teaching plan</td>
<td>Balancing instruction</td>
</tr>
<tr>
<td>Monitoring learning</td>
<td>Getting more from students</td>
</tr>
<tr>
<td>Strategy implementation</td>
<td>Motivation</td>
</tr>
<tr>
<td>Teacher skill development</td>
<td>Student breakdowns</td>
</tr>
<tr>
<td>Time management</td>
<td>Getting transfer</td>
</tr>
<tr>
<td>Timing and Targeting</td>
<td>Getting flexible use of knowledge</td>
</tr>
<tr>
<td>Identifying student skill deficits</td>
<td></td>
</tr>
</tbody>
</table>

Because many Problems can be addressed through management procedures, engaging in class discourse about Problems can help novices begin to develop their own procedures for management and resolution. Even more importantly, by engaging in discourse about Dilemmas teacher educators can help novices develop an awareness of these ever-present facets of the teaching profession, building novices’ confidence through awareness.
Be Vigilant in Developing and Maintaining Reflective Analytical Practices

Through completion of the written reflections novices were able to develop a reflective cycle of teaching, observing responses and specific learning needs, analysis, and planning for Adaptations. Discourse and personal or shared Locus of Control were significant supports for this process, which exemplifies the reflective analytical practices supported by this research.

Confidence had a significant effect on these reflective analytical practices as well. While novices’ Confidence followed a significant linear trend, rising throughout the course of the term, Adaptation and Discourse followed significant quadratic trends, dropping off as the end of the term neared. The fact that Adaptations and Discourse decreased as Confidence continued to grow is a concern.

It is critical that novices know that disequilibria (indicated by statements of Confidence in this research) is also an integral part of the teaching profession. While disequilibria causes discomfort, if a teacher confronts this discomfort with 1) belief in her abilities to use discourse, in the forms of self analysis and seeking out colleague and mentor support, and 2) a mindset to pursue and implement appropriate adaptations to instruction, then transformative change in practice and successful student learning can be the result.

Thus, disequilibria can be viewed as an avenue for growth, rather than a roadblock. If growing confidence closes off this avenue for inquiry into practice, the result may be decreased reflective analysis and adaptation to teaching and declines in student learning. Therefore, it is the responsibility of teacher educators to continually
emphasize the necessity of bringing reflective analysis to challenging learning
interactions for teachers of all experience levels.

**Concluding Thoughts**

While the most effective methods of emphasizing the importance of reflective
practices may sometimes differ for novices and experienced teachers, the structured
written reflections used in this study were an effective method for both groups to use to
focus on analysis and refinement of instruction. The perspectives on *Locus of Control*
that developed in these written reflections were significantly related to *Adaptations* for
novice teachers and to both *Adaptations* and *Transfer* for experienced teachers. But
developing these personal or shared perceptions of control is especially important for
novices. Through the requirement to write about their experiences, and the mentoring of
the instructors in the reading clinic, novices had opportunities to engage with their
teaching in a way that sharpened their focus on analyzing student responses and planning
for student strengths. This reading clinic experience was a foundational laboratory
experience for the novices in this study; and was critical to their development of
reflective analytical practices.
References


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