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ABSTRACT
        This study analyzed preservice teachers' personal written
reflections in order to better understand their individual perspectives on
their learning and growth during the early phases of the learning to teach
experience. The study investigated students' perceptions of the
transformative process during an introductory course, Classroom Processes and
Instruction, focusing on what could be learned about preservice teachers'
reflective orientations and implications for program development in early
stages of the learning to teach process. At the end of the semester, students
were invited to be a part of the study. Student volunteers completed a
questionnaire asking for biographical information. Study data came from
students' final reflective essay, which highlighted how they changed their
views about teaching during the course. They were asked to include documents
to support their assertions. Researchers assigned the students to a level
depending on the quality of their writing. Results indicated that the
preservice teachers were at very different levels or stages of development,
and they took very different meanings from their educative experiences.
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# Analyzing Early Conceptual Change Processes

# Through Students' Reflective Writing

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Analyzing Early Conceptual Change Processes through Students' Reflective Writing

Preservice teachers wear two masks: the most familiar is the mask of student; the other, and only beginning to take shape is the mask of teacher. Regardless of the mask being worn or the face being addressed, a basic and underlying aspect is that of how we learn: how we learn about life, about teaching, about ourselves, about others. This study enters the discussion of teacher education by studying how college students view their introduction to the world of teaching, how they begin the move from a domain of the student to that of teacher and how they begin the journey of learning about teaching. This builds on the work of Carter (1991), Feiman Nemser (1983, 1989), Grossman (1991) and others who have indicated the complexities of this important transition.

As an instructor of introductory-level teacher preparation courses, I have been curious about the differences in students' analytical approaches in their writings and discussions and what these thinking processes indicate about their learning. I wondered about the significance of the different levels of reflectivity exhibited in students' written work. Puzzles such as these evolved into questions about the learning process as it relates to the complex skills of teaching: How and what are these students learning about teaching? What happens during this transformation from student to teacher? What is the process students go through as they change? How do students develop educative understandings? What is the role of reflectivity in their learning-to-teach process?

This study took place in the College of Education of a large Southwestern university. The teacher education program consisted of a carefully constructed sequence of course work and field experiences designed to integrate current educational theory with real-life teaching practices.

Inherent in its design were exercises to help students make the important connections and transfers necessary to learn and apply what they experienced in both their college courses and in school classrooms. An important course required for all students prior to their methods courses was the introductory course, *Classroom Processes and Instruction*. It was here that the ground work was laid for students' understandings and appreciation of teaching as a complex activity. It was anticipated that during this course preservice teachers would make the transformative shift from a student schema of schooling to a teacher schema for teaching (see Carter, 1991).

**Purpose**

The purpose of this study was to analyze students' personal, written reflections in order to better understand the students' own perspective of their learning and growth during the early phases of the learning-to-teach experience. This naturalistic approach to research on the learning-to-teach process used students' self-reported change statements, their ability to identify their own learning, and their ability to communicate their views in writing as the data sources.

Specifically, the study was undertaken to address this question: What can we learn about the early stages of a formal learning-to-teach process through students' reflections on their own learning experiences? There were three research questions: (1) What are students' perceptions of the transformative process during this introductory course? (2) What can we learn about the reflective orientations in teacher education students? (3) What are the implications of the answers to these questions for program development in early stages of the learning-to-teach process?

**Theoretical Framework**

Calderhead (1992) remarked on how little teacher education programs seem to be influenced by an understanding of how students learn to teach. Carter (1991) reminded us that very little is actually known about the "learning" component of teacher education. Much of the

literature on the learning to teach process is focused on either the structural, programmatic

components or on the student teaching phase. From this, it would be easy to conclude that the

process of learning to teach does not begin until students actually begin to teach. But is that true?

Or does much of the important cognitive schema building actually happen well before this? To

develop a base for understanding conceptual changes that may be taking place during early phases

of the education process, I drew on theories related to the learning process itself: cognition,

constructivism, conceptual change, situated cognition, and reflectivity.

Defining Learning

In this study learning is perceived from a cognitive, constructivist point of view, with its

emphasis on the importance of prior knowledge on learning and performance. In this approach

the learner is viewed as taking an active part in learning, processing information rather than simply

retaining it, making learning a process of inquiry (see Carey, 1986; Duschl and Gitomer, 1991;

Flavell, 1984; Strike and Posner, 1985). Learning, therefore, includes the transforming of prior

knowledge and concepts, as when new information is linked in some way to prior knowledge, and

in doing so, transforms the old. (See Flavell, 1984; Mezirow, 1991; Strike and Posner, 1982.)

Constructivism

Cognitive theory stepped away from behaviorism to a conception of learning that occurs

by interpreting rather than recording information (Resnick, 1989). The study of teaching might

well be considered the study of cognition and communication. As Hegland and Andre (1992)

state, "speech, writing and art are only codes that are attempts by one knower to produce a

construction that may guide another knower into constructing similar knowledge" (pg. 224). This

constructivist view of knowledge and learning is clarified by Hegland and Andre (1992) who state

that "knowledge is a construction of the learner that evolves from and is a joint product of the learner's interactions with the world" (pg. 224).

Conceptual Change

Conceptual change theories are constructivist theories which replace the "tabula rasa" approach to education with beliefs that students come to learning situations with previously held theories of how things work. Understanding how learning takes place means understanding the tenaciousness of old theories and the need to unlearn faulty constructs and restructure knowledge.

Posner, Strike, Hewson, and Gertzog (1982) outline four conditions which must be met if learners are to change their conceptual allegiances: (1) Existing ideas must be found to be unsatisfactory; (2) The new idea must be intelligible, coherent, and internally consistent; (3) The new idea must be plausible; (4) The new idea must be preferable for understanding a variety of situations. This same concept might be generalized to the preconceptions that preservice teachers bring to the learning-to-teach experience and help to explain why teaching practices of new teachers so often resemble those of the past.

Situated Cognition

Fieldwork in teacher education is supported by research in the area of situated cognition as recently summarized by Putnam and Borko (2000). Earlier studies by Brown, Collins, and Duguid (1989) demonstrated the importance of context on learning and questioned assumptions of the transfer and generalizability of decontextualized knowledge. The lack of transfer of mathematics skills from classroom skills to real life shopping was demonstrated by Lave and Wenger (1991) while the lack of skill transference from class to class and grade to grade is a popular topic among classroom teachers. Such examples support the belief that "...knowledge and learning do not easily transfer across contexts" (Wilson, 1993; pg. 73).

Personal Histories: Context in Learning

This theme of preconceptions in learning is continued in research and literature demonstrating the effects that students' prior experiences, their personal histories and preconceptions, have on learning (Diamond, 1991; Feiman-Nemser, 1983; Knowles and Holt-Reynolds, 1991; Lortie, 1975). In his sociological study of the lives of teachers, Lortie (1975) described powerful and subtle influences that shape schooling as we know it. Lortie remarked that "(W)hat students learn about teaching, then, is intuitive and imitative rather than explicit and analytical; it is based on individual personalities rather than pedagogical principles" (pg. 62).

The effects of this extended exposure to the acts of teaching have been studied in preservice teachers (Amarel and Feiman-Nemser, 1988; Kyle, 1993) and affirm the simplistic views that students bring to their learning-to-teach experience. Teaching is viewed through previously derived "meaning perspectives" (Mezirow, 1991), "intuitive screens" (Goodman, 1988), or "filters" (Weinstein, 1989) which limit their ability to see events from different perspectives. Students are likely to not see teaching as a complex process but as a natural activity best learned through participation. Amarel and Feiman-Nemser (1988) found that preservice students were skeptical of the value of formal study and lacked the conceptual frames and the motivation to think analytically about teaching (pg. 20). Grossman (1991) remarked on the tendency of prospective teachers to use themselves as implicit models for the students they will encounter.

Reflectivity

Smyth (1989) provided a general definition for reflection in teacher education, stating that what we are interested in is reflection that is active rather than contemplative. That is, reflection should result in or lead to some action. This supports the work of Donald Schon (1967) who is

interested in the reflecting that takes place in the action of teaching, what Schon calls "reflection-in-action." This moves the concept of reflection out of the arena of planning for action and places it in the reflexive and unconscious actions of the present.

The apparent seminal core for educational theorizing related to reflection is Dewey's (1933) How We Think in which he defined reflective thought as "Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (pg. 9). Dewey's reflective process closely resembles what we are familiar with as problem solving steps; identification of the problem, generation of possible solutions, and thoughtful analysis of those solutions. Reflectivity, then, is the ability to assess situations and to make thoughtful, rational conclusions or decisions. Similarly, Ross (1989) defines reflection as "...a way of thinking about educational matters that involves the ability to make rational choices and to assume responsibility for those choices" (pg. 22).

Writing

Because the basis of this study is in students' writings, it is important to review current theories that describe the writing process as well as the value that writing has in a metacognitive, reflective learning process. It is a tool, a heuristic for learning, an important component in the development of higher cognitive functions such as analysis and synthesis (Emig, 1977). Writing is a process through which we create meaning (Zamel, 1982) and a product which promotes communication with the literate community. In her essay on Writing as a Mode of Learning, Emig (1977) discusses the differences and similarities between oral and written language, expanding the role that writing plays in the development of complex understandings. Writing, she claims, allows us to learn at our own pace and in our own mode, thus "writing can sponsor

learning because it can match its pace" (pg. 126). Furthermore, writing is epigenetic, graphically demonstrating our thinking progress.

Much of the recent qualitative research and case study work on the learning-to-teach process has been done through the medium of writing. Studies of student journals (Bolin,1988), learning logs (Alderman, Klein, Seeley, and Sanders,1993), and student writing (Hoover, 1994) have provided valuable windows into student thinking and learning. Hoover (1994) found that writing helped make the students' cognitive processes more explicit and accessible, stating that "educators can nurture reflective practice more effectively when they are privy to preservice teachers' implicit thought processes" (pg. 92). It is this characteristic that makes writing an important tool for learning and an important source of information on the learning-to-teach processes.

**Methods and Data sources**

This study represents a naturalistic approach to research on the learning-to-teach process using students' self-reported change statements, their ability to identify their own learning, and their ability to communicate their views in writing. Participants were the students in two semesters of the introductory course, *Classroom Processes and Instruction.* It was the intent of this course to introduce students to the complexities of teaching, to begin the journey of understanding teaching as a complex, multi-dimensional process. The course integrated reading and discussion with field observations and laboratory exercises. Assignments and teaching strategies emphasized social interaction and reflection to develop understandings of theory and field experiences.

Students in two different semesters were invited at the end of the course to participate in this study. The students were not aware of this study until the day they turned in their final

projects. On the last day of class, when final portfolios were due, the research project was

described to the students. Every student volunteered to be part of the study and completed a

questionnaire of biographical information and a consent form, thus there was no need to sample

systematically or limit the participation (see Lincoln and Guba, 1985). Table 1 summarizes the

diverse characteristics of the 41 participants.

[Insert Table 1 about here.]

Data came from the students' final reflective essay. This essay reflected how the student

changed in his or her views about teaching during this course. Students were to include

documents to support their assertions. Expectations for the portfolio assignment were clearly

defined during class discussion and each student was provided with a copy of the grading sheet to

be used in evaluation. Copies were made of each portfolio without students' names. A coding

system was designed and implemented that allowed reference to the semester group, the

individual participant, and the specific page number of his/her reflective statement. An analysis of

the written reflections began with multiple readings and an inductive search for patterns. There

were two phases to the analysis process: analysis of the written portfolios to produce manageable

data, and analysis of the derived data to determine themes, patterns, and relationships.

This was a naturalistic and inductive inquiry of information that emerged from the

experiences of the people involved rather than from some premeditated manipulation of events or

outcomes. Although narrow in its focus, the study was qualitative and holistic in that it paid close

attention to the imbeddedness of the data in the total experience (hence, the importance of the

researcher-instructor to the final interpretation of data) and the voices of the participants

themselves. This perspective emphasized the study of how people experience and describe things,

or more specifically, how these students experienced and described their own growth during their

work in this educational course.

The analysis was guided by processes described as grounded theory (Ely, Anzul,

Freidman, Garner, and Steinmetz, 1991; Lincoln and Guba, 1995; Patton, 1990; Strauss and

Corbin, 1990). The content and reflective levels of students' writings, the patterns, themes, and

personal stories that they offered on their behalf were analyzed. During this analysis four

classification systems emerged that helped to characterize the different approaches used by

students in their writing. These four categories, Level, Perspective, Mode, and View, and their

descriptive subcodes are listed in figure 1.

Figure 1
Categories and Subcodes for Reflective Writing

| Level | Perspective |
|---|---|
| I - Narrow, unsupported assertions | C - Course Components |
| IIa - Minimal statements, minimal support | T - Topical/Thematic |
| IIb - Change statements, some support | M - Mixed |
| III - Multiple statements, well supported | |

| Mode | | View |
|---|---|---|
| Impersonal: | Personal: | E - Self |
|   D - Descriptive |   R - Reflective | S - Students |
|   L - Declarative |   N - Narrative | C - Social/cultural |
|   A - Analytical | | |

One stage of data collection was the development of a computer database for all the

information derived from the questionnaires and classification systems. This was invaluable for

arranging and sorting information and generating tables related to these writing categories and

student demographics. Demographics included age, gender, program, personal histories and

cultures; they were included to determine whether or not there were notable relationships between

and among the various components.

**Findings**

As noted, classifications emerged during the analysis phase for the style and quality of composition, or the individual student's personal means of expression. Students were assigned to a <u>Level</u> depending on the quality of their writing according to the following criteria: Level I students did not provide or support broad-based growth statements. There were few "I changed" or "I learned" statements with little or no documentation, explanation, analysis or support, and few connections to coursework. Level II students were those who made "I changed" statements with some supportive description and/or explanation, that is, at least minimal reference to areas of change or components affecting the change. Level III students provided multiple "I changed" statements that were supported with documentation and explanation and that had multiple connections and references to coursework. Level IV students not only made multiple "I changed" statements that were supported with documentation, but expanded upon them and discussed the perceived meanings and significance of the changes. The numbers of students at different levels can be seen in Table 1.

<u>Identification of Exemplars</u>

Following the initial analysis process, four portfolios were chosen from the population. Excerpts from these portfolios helped to demonstrate the differences among the different writing levels relative to perspective, mode, and view of writing. These four portfolios were carefully chosen to (1) represent their respective writing levels and (2) to allow me to raise questions that emerged during this analysis process. These portfolios were representative of the diversity of responses in style, approach, technique, and organization. They represented different use of language and the development of different ideas, concepts, and views of learning. Table 2 provides summary information on each of the exemplar portfolio writers.

Table 2
Comparison of Exemplars

| Num. | Level | Persp. | Mode | View | Ethnic | Gen. | Major | DOB | Deg. |
|------|-------|--------|------|------|--------|------|-------|-----|------|
| 3.05 | I     | C      | D, L | E    | Hisp   | F    | E     | 1971 |     |
| 4.05 | IIa   | T      | R, L | E, S | Anglo  | M    | S     | 1952 | BS  |
| 4.15 | IIb   | C      | D, R | S, E | Hisp   | F    | S     | 1972 |     |
| 4.08 | III   | T      | R, A | S, C | Anglo  | F    | E     | 1971 | MA  |

As Table 12 demonstrates, two of the writers organized their writing around the course

components, two of them around a thematic approach. A number of different modes of

expression were represented, from descriptive and declarative (Level I) to reflective and analytical

(Level III). The views represented in these portfolios changed from a focus on self (Level I) to a

focus on students and sociocultural effects (Level III). Two of these students are Hispanic and

two are Anglo providing opportunities to contrast writing differences and similarities related to

cultural issues. There is one male student in this group which correlates with the percentage of

males in the population. There are two elementary and two secondary majors which provide

opportunities to explore concerns relative to different program majors. The ages of these

students are fairly constant with the one exception of an "older," non-traditional male writer.

Level I is represented by Celia, a young Hispanic woman who was raised and educated

locally. Celia attended a local community college before transferring to the University and

applying to the College of Education. Her entrance GPA was 2.6. Celia's only prior experience

with children was from baby-sitting and volunteering at local day care and community centers.

Level IIa is represented by Bruce, an older student who had recently decided that teaching

was what he wanted to do with the rest of his life. Bruce was a 1970 graduate of an Ohio city

high school who had attended five different colleges following his graduation from high school,

attaining at least one bachelor's degree and considerable experiences in a variety of fields. Bruce

claimed considerable travel experience in the United States, Europe, Spain, Australia. At the time of his coursework, he was coaching a girls' soccer team for a local middle school, had tutored adults for a local literacy organization, and was substitute teaching in the city schools. He entered the College of Education with a 3.7 GPA.

The Level IIb writer, Rena, was another Hispanic woman, similar in age to Celia, but very different in life experiences. Through Rena's family connections, she had been educated in both Mexico and the United States, graduating from a local high school in 1989 and then attending a local community college before transferring to the university. The child of a local professional, Rena had traveled in Europe, Israel, and Central America. She came to the College of Education with experience working with children as a teacher's aide in a local elementary school and a GPA of 3.9.

The last exemplar was another young woman, the only elementary major in Level III, who was chosen partly because of her writing and partly because of the contrast she presents to the other students. Margie was an Anglo woman from a large northeastern city who graduated in 1989 from an inner city high school. She was getting her teaching credentials at the university while completing her master's degree in Language, Reading, and Culture. Margie came to the program with a GPA of 4.0 and some experience volunteering in a local third grade classroom.

Contrasting the Written Expression of Four Exemplars

Viewing the four exemplars in each of the areas - perspective, mode, and view - demonstrates the considerable variation that appeared in the different levels and the progression of sophistication from Level I to Level III.

Perspective described the ways students organized and reviewed their learning experiences, either around the components of the class (C), around thematic topics (T), or by using some unique or mixed approach (M).

**Course Components.** Celia was a Level I writer who organized her portfolio around the pattern and events of the course itself. In her 3-page portfolio she covered four topics: beginning thoughts on entering the class; observing the teacher, the school, and class activities; thoughts on A Memorable Teacher; and case studies. Rena was a Level IIb writer who also organized her portfolio around the various course components but who also provided considerable information in each section. Her eleven single-spaced typewritten pages were organized around seven course components: Class Notes; Field Log; Vocabulary; WREs; Peer Teaching; Homework; and Teaching Ideas. Within each section Rena selected memorable and meaningful events and lessons for comment and discussion. Thus she not only covered more topics, but also thought more deeply about the meaning of each one.

**Thematic.** Bruce, a Level IIa writer, used a more thematic approach to the organization of his portfolio. Although he did discuss individual Well Remembered Events (WREs) as learning experiences, his approach was more about the concept learned than about the assignment itself. In his 6-page portfolio there were 17 different concepts considered. Obviously, there was not a great deal of discussion about each. In fact, Bruce was placed at Level IIa because there was little expansion or documentation of the many topics considered. There were thematic writers at higher levels who were able to generalize their experiences into more inclusive thematic statements and provide more in-depth discussion of the concepts and ideas they identified as most meaningful.

**Mixed.** There were a few people who did not follow either the component or the thematic pattern but who went their own way. Although none of these exemplars was totally "mixed" in his/her approach, Margie, a Level III writer, did provide an example in the beginning of her portfolio. She used her journal entries as the organizing feature, discussing various entries in light of the concept or the meaning they had for her own teaching practices. In her reflections on Journal Responses to this class, Margie covered 12 different topics in 7 pages, each topic expanded and supported with documentation. In her 4-page section on Journal Reflections to field observations she considered her own growth during the semester using her field journal as documentation. The final section of 13 pages, however, was organized in a highly thematic manner as she described her own growth process through the topics of classroom management, diversity, planning, outside readings, and terminology.

Mode was a description of the way students communicated or expressed themselves in writing. It might be considered as the particular form or variety of expression, the manner in which we represent what we know and what it means to us. Five different modes of expression were identified during the analysis of these pieces.

**Descriptive.** Celia's Level I portfolio is an example of the Descriptive mode of expression where the student told about the experience rather than explaining or demonstrating the meaning or significance of what she learned. There was little or no expansion of the statements and very little discussion of the personal meaning or significance of the experience to the student's future teaching practices.

> The teacher I had the opportunity to observe was a great person. She helped me understand different teaching strategies. The teacher also gave me the opportunity to teach two or three small lessons and then go back and observe the children to see if they understood what I had just taught. [3.5.2]

It can be seen that very little was really shared about what this student learned or in what

meaningful ways her thinking about teaching changed. She did not provide information about the

"teaching strategies" that were shared or what was learned about them.

**Declarative.** Bruce's Level IIa portfolio provided an example of a Declarative mode of

expression, another style of telling. Students who communicated in a declarative mode

expounded on topics they had encountered, sharing their new knowledge or foundational beliefs.

> For beginning teachers, classroom management creates anxiety. We are concerned that
> the class will get out of control. We view it as thirty against one. But it really is not
> them against me. If given a chance to expose your caring personality, these kids can be
> won over. But they do need some direction. Classroom rules and procedures can
> provide that structure. The list in my notes will be referred to often as I set up my first
> class. [4.5.6]

In this example, the student had taken on an authoritative, all inclusive voice ("we") that

avoided a personal commitment. Rather than writing about the development of his own personal

beliefs, he relied on third person statements and homilies. The only personal statement was his

projection that he will refer to "his list" as he begins to teach. There was no way to determine

whether these comments represented beliefs that evolved or changed as a result of this class. In

fact, there was strong indication that what he gained during the class was confirmation of and

support for his prior beliefs.

**Reflective.** Rena's (Level IIb) portfolio provided examples of both Descriptive and

Reflective modes of expression. While she did describe events or assignments, she also opened

the door into herself, personalizing the experiences by reflecting on what meaning it held for her

in the learning to teach process.

> I enjoyed reading these case studies in class with the rest of my classmates because we
> were able to collaborate together and look at these studies in different perspectives. "The
> In-School Dropouts" case study made an impression on me because I know that I will
> have to deal with this every day when I become a high school teacher. Starting now, I

have to really think and meditate as how I can avoid this "dropping out" phenomenon from happening in my classroom or at least diminish it to a certain degree. In-school dropouts really concern me and I know that us educators have a lot to do with who students take on this attitude. I'm going to do my best to be open-minded and sensitive to the needs and interests of my students so that my class can be interesting and useful for them. This case study really made me reflect. I appreciate that. [4.15.2]

Although this student was telling us about what she learned, she was expanding on that statement, making it personal, and applying it to her future self-as-teacher.

**Analytical.** Margie's (Level III) portfolio was an example of both Reflective and Analytical modes of expression. There was much less emphasis on describing the event and much more on considering what was learned from carefully studying its component parts. The analytical student was able to look at an event from various perspectives. The reflective student was also able to personalize the findings of their analysis, to reflect on the meanings they held for their own growth in the learning to teach process.

On 9/15/94 I wrote about my personal motivation and then I connected this to that of my future students. For myself, I was always rewarded for all of my successes. My failures were treated as learning experiences, my family helped me to find solutions which would be beneficial. I have always done my best to succeed and achieve. In my journal I continued to consider the fact that many of my future students may have grown up in homes where their successes were ignored and their failures were intensified. I posited that these students may then shy away from challenges for fear of reprisal for failure. As I continued to reflect I realized that it is my job as a teacher to make sure that all of my students get the opportunity to experience success. Therefore, I need to facilitate experiences that are varied. More importantly, I need to communicate to my students about the nature of success. That is that they need to put forth effort in all of their endeavors. As an educator I need to praise their effort and process! [4.8.2]

This student demonstrated an analytical mode in the analysis of her own experiences relative to motivation or personal drive. She considered how the lives and motivations of her future students may be different from her own. She then projected this thinking into her own future teaching in specific ways.

**Narrative** – In this mode the writer anchored his/her writing to lived experience with the use of quotes and stories and a personal voice. This was used by only six of the students (none of the exemplars) and usually in short and very personal references.

View was based on whether the student considered the various course experiences as affecting primarily his/her own self (E for Ego), as being important for or affecting his/her future students (S for Student), or as having broader social/cultural implications (C for Culture).

**Ego/Self.** - Celia (Level I) made very few references to her future students, and provided no indication of how what she learned during the semester would affect the quality of the learning experiences she will provide for children. This was all about Celia and how she remembered the experiences she had in this class. The implications are that this may have been an important learning experience for Celia, but that she was not yet able to project herself into the role of a teacher who learns for the sake of her students.

**Self and Student.** Bruce (Level IIa) began his portfolio with a brief commentary about his decision to change careers that showed a concern for the sociocultural aspects of teaching.

> I decided to change careers and become a teacher because I feared for today's youth. I wish to have an impact on making children's lives safer and better. [4.5.1]

In other places he mentioned his concerns for and attention to society's children:

> Apathy and lethargy runs rampant with today's youth. Peer pressure can be seen as driving this. [4.5.2]

And in others, he put himself in the role of the person who actually touches children's lives:

> Kids are kids. As a teacher I will need to view their actions on many different levels. [4.5.4]

However, although students are noted and mentioned, the main purpose of the learning that took place in this semester's class appeared to be for Bruce rather than for his future students. The

dominant theme throughout his writing was about how these experiences helped him make better sense of his own learning.

**Student.** Rena's (Level IIb) view of the purpose of all this learning was that of herself as a teacher of children. Although her focus was on herself, she saw herself as someone interacting with and affecting children; that is, her identity, her primary interest in learning was to be a better teacher. Elsewhere she states her goals:

> As a teacher, I want to inspire and make an impact on my students. I want to help them become critical thinkers and aware citizens of the world around them through their own eyes. I want to be remembered by my students and be a good role model for them, too. [4.15.10]

Margie's (Level III) writing was entirely focused on the students she would be teaching. Everything she learned was explained and expanded by demonstrating its eventual effect on children, through Margie the teacher. As the passage cited previously in the discussion of Mode demonstrates, her reflections of classroom exercises, assignments, discussions, and experiences were on how this was helping her to better help students. Elsewhere she states:

> [Reflection from motivation discussion/exercise]  I wrote about my personal motivation and then I connected this to that of my future students.  ... As I continued to reflect I realized that it is my job as a teacher to make sure that all of my students get the opportunity to experience success. [4.8.2]

Throughout her writing, Margie is focused on the purpose of her being here and of her future work with children.

**SocioCultural.** The implications of our teaching on the future of society, on the moral and ethical decisions that will be made by our students was not a strong theme in any of these 40 portfolios. Two students were coded "C" because their writing was heavily focused on teaching as affecting the Hispanic community. Both of these students were older Hispanic males, strongly family oriented and affiliated with their community. Although there were subtle implications for

sociocultural considerations in other students' writings (see Bruce, above), the focus of most was on either themselves, their future as teachers, or their future students, not on society as a whole.

Van Manen's levels of deliberative rationality (Van Manen, 1977) suggests that only a few of these students reached the higher levels of reflectivity (see Zeichner and Liston, 1987). However, in light of the directions given for this assignment *(Reflect on your own growth during this course)*, this is a difficult comparison to make. Also, knowing these students as I do, I would venture that they did not achieve that level during this class but that they came to this course already at a particular level and developed their perceptions and views from where they already were. This course was only one piece of a complex and interwoven set of experiences that would assist the students in their process of becoming what they will be and in developing their higher levels of thinking.

Table 3 provides a comparison of two extremes, Levels I and III, and indicates differences in a number of areas. As can be seen with this presentation, the Level III writers were more thematic in their discussions, more reflective, and more externally focused. Their language base was more likely to be English (Anglo) than Spanish, and they were younger, whereas there were more elementary majors and more non-traditional students in the Level I group. The issues that must be carefully considered here are those relating to writing competence for second-language learners and to the lack of recent schooling experiences of our non-traditional ("older") students. It might, however, lead us to consider whether writing expectations at the university are different for elementary and secondary majors. That is, is there less concern for advanced writing skills in elementary majors because they work with children at the beginning stages of writing?

Table 3

Comparing Level I and Level III Writers

| Student Number | Level | Perspective | Mode | View | Ethnic | Gender | Major | Age | Degree |
|---|---|---|---|---|---|---|---|---|---|
| 4.12 | I | C | D | E | Anglo | F | E/S | 43 | AA |
| 4.17 | I | C | D, L | E | Hisp | F | E | 42 | |
| 3.05 | I | C | D, L | E | Hisp | F | E | 23 | |
| 3.01 | I | C/M | D, L | E | Hisp | F | E | 47 | |
| 3.11 | I | M | D, L | E/S | Hisp | F | S | 36 | |
| 3.03 | I | T | D, L | C | Hisp | M | E | 43 | |
| 3.13 | I | T/C | D, L | E/S | Hisp | F | E | 23 | BA |
| | | | | | | | | | |
| 4.21 | III | T | R, A | S | Anglo | F | S | 45 | |
| 3.16 | III | T | N | S/C | Anglo | M | S | 32 | BS |
| 4.08 | III | T | R, A | S/C | Anglo | F | E | 23 | MA |
| 4.22 | III | T | L, D, R | S/C | Anglo | M | S | 20 | |

It was also possible to sort these data according to ages. Table 4 displays the number of students at the different writing levels for the youngest and the oldest age groups. From this it can be seen that the "younger" group contains a greater percentage of the Level II b writers while the "older" group is more evenly balanced but has a greater percentage of writers in Levels I and II a. 71% of Level I writers occurred within the "older" group. This could also lead us to consider the importance of recent writing experiences (college or high school) in helping students write reflectively.

Table 4

Writing Levels Within the Oldest and Youngest Groups

| | | Level I | Level IIa | Level IIb | Level III | Other |
|---|---|---|---|---|---|---|
| Younger Students (-22) | Number | 0 | 3 | 7 | 1 | 1 |
| | Percent | 0% | 25% | 58% | 8% | 8% |
| | | | | | | |
| Older Students (30+) | Number | 5 | 4 | 3 | 2 | 1 |
| | Percent | 33% | 27% | 20% | 13% | 7% |

## Discussion

This information serves to make us more aware of the differences that exist in what we might otherwise believe to be a homogeneous group of students. This information causes us to think about the different ages, personal histories, cultures, and programs of our preservice students. It helps us to be more aware of the different ways people construct meaning from experiences, the perspectives they take, the view they hold of the learning process, the modes they use to express themselves. Three main areas of further consideration evolved out of this phase of the study: the role of developmental stage theory in preservice instruction; the implications for age, ethnicity, and program major on the learning to teach process; and issues related to the place and value of writing as important program components.

Developmental Stage Theories

Although this study produced an interwoven web of levels and stages that at first would appear to support a developmental stage theory of learning, there is no information here to prove or disprove that students progress from their present level to the next higher. There is no way to know from this study whether these students would continue to learn from and respond to their world as they did then or whether they would develop more sophisticated means. What it did confirm was that there are people in our preservice program at very different levels or stages and that they take very different meanings from educative experiences. Perry's (1970) suggestion of the term "position" rather than stage or level may be more appropriate and helpful in understanding the growth patterns of preservice teachers. The variety of different "positions" identified here supports the work of Bird, Anderson, Sullivan, and Swidler (1993) which demonstrated that the results of a course designed to encourage thinking and experimentation

with new knowledge cannot be prescribed by the instructor. We are reminded of the futility of

prescribing specific knowledge or behavioral outcomes for the learning-to-teach process. Not

only does everyone come to the program with very different personal histories, but each learns

something truly unique from experience and communicates what they learned in individual and

disparate ways.

Different levels, stages, or positions might well be considered in the analysis of research

findings that indicate negative effects for field experiences and simulation. Researchers should be

encouraged to consider why such activities are sometimes less than effective and to look more

closely at the individuals within the populations. Korthagen (1985), for example, noted that his

program, which was designed specifically to promote reflectivity in students, was more effective

for those who already had a reflective attitude. This corresponds well with findings presented

here relative to the variations in students' approaches to the learning experience.

Development of reflectivity is also represented in these various levels of written

expression. In the lower level writers of this study there is evidence that supports the Kitchener

and King (1981) model of reflective judgment, including the limited and/or distorted viewpoints

of writers at Levels I and IIa to the more comprehensive and integrative applications of

information and experience in Levels IIb and III. Similarly, these writing levels support assertions

that only students at more mature levels provide evidence for their statements (Harrington, 1995;

King, Wood, & Mines, 1990; Kuhn, 1992).

This analysis indicated that older populations (over 29 years old) contained more of the

lower level writers and the majority of lower level writers were both Hispanic and elementary

majors. It is likely that younger students have been doing more writing than someone who is older

and returning to school after being away to raise a family or otherwise employed in a non-

academic field. It is also possible that these older writers have not had the same educational experience as younger students relative to the teaching of writing and that reflective and critical writing is a very new expectation for them.

Not only age, but the relationships among writing ability, ethnicity, and program major may also be a consequence of the student application and acceptance process of this university. Desiring to increase the number of minority and bilingual teachers in the schools, this program's application process and entrance criteria benefit those with bilingual skills or life experiences with minority cultures. Therefore, it is possible - and likely - that Hispanic students with weaker writing skills are in classes with Anglo students with higher grade point averages and stronger academic skills.

<u>Writing to Learn</u>

Because students' written words are the source of information for this study, consideration must be given to the process of writing. These portfolio pieces are essays and the purpose of an essay is to make a point, or in this case, to convince another person that substantive learning has taken place. Essays are like arguments in that assertions are made and evidence is provided as testimony (see Lytle & Cochran-Smith, 1990). These particular essays were designed to be recollections or reflections on experiences and definitive, supported statements of personal growth. While some students claimed they had changed but didn't substantiate their assertions with evidence, others described extensive reflective considerations of their growth and change during the semester as well as providing explanation and documentation. It is possible that the openendedness of the portfolio assignment may have caused less competent writers to rely on references to concrete issues and specific skills while allowing considerable freedom to advanced writers to explore concepts of their own learning.

The obvious question that arises is whether such personal writing is a valid representation of a student's learning. As Williams (1989) reminds us, it is an error to think that good minds will always produce good writing. We might also question whether students' abilities to write and communicate through writing are representative of their future successes as teachers. Neither of these questions can be answered from this study.

The high incidence of Hispanic writers in the lower writing levels, Level I and Level IIa, generates a number of questions about the cultural and linguistic implications of writing and reflectivity. While data were not collected during this study to support conclusions about the nature of second-language writing, there is warrant for further study into just this issue.

Other Conceptual Issues

Qualitative research involves the researcher in the research process beyond the analysis of deconstructed data. In this study, the researcher played an active role in the generation of the information that was eventually analyzed. Because of the design of the study, this research could only have been done by me. It was my personal knowledge of the assignments, activities, events of the class, my personal familiarity with students, my empathetic understanding of all components and interactions that helped develop a meaningful analysis.

This personal familiarity was particularly important in the awareness of student "impression management" (Perry, 1970) techniques. Not only did I know these students fairly well, but they also knew me. They were very aware of what I valued and therefore, what generated good grades in this course. The propensity of students to offer what the instructor wants, of "studenting" was often an issue (see Feiman-Nemser, McDiarmid, Melnick, and Parker, 1989, pg. 18). I made many marginal notations indicating questions of whether what was being written was truly representative of the student's beliefs or an instance of "studenting." Although

this represents a potential for bias in the research, my personal knowledge of the students and familiarity with their writing helped alleviate its impact.

The enduring question of change continues to exist: Does this study reflect changes in students during this early stage of the learning to teach process? Or, more importantly, can teacher education truly be transformative? Issues preventing a clear answer to these questions include the factors of self-reporting, issues of studenting, and concerns about writing skills. The major concern that remains for me is that in some instances this course experience appeared to solidify and strengthen former beliefs rather than open them to further analysis or consideration. Although not all preconceptions are misconceptions, all prior conceptions about teaching would benefit from critical reflection. In many instances, students related that their beliefs had not changed but had been made stronger. I can only hope that this strengthening was a result of critical analysis rather than a simple accumulation of supporting evidence.

**Importance of study**

This research supports and expands prior research by looking at students' perceptions of their own conceptual change process. It also forms an important bridge between cognitive research and teacher education research that can enrich the literature on how we learn about teaching (see Calderhead, 1992 and Carter, 1991). A qualitative analysis of exemplar students at different stages of development can help us to better understand the development of personal knowledge and conceptual changes in the learning to teach process. Such information and insights relating to the process of learning may ultimately be useful in the development of more effective experiences for students and the refining of teaching practices such as adjusting expectations or addressing specific students' needs (i.e. bilingual students, non-traditional students, etc.).

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Table 1
Participant Demographics

| Gender | Major | Prior Education | Ethnicity | GPA | Marital Status | Children (Ages) | DOB |
|---|---|---|---|---|---|---|---|
| F | Bilingual | | Hisp | 2.8 | S | no | 1971 |
| F | Elem | AA- Pima | Hisp | 3.2 | S | no | 1971 |
| F | Elem | Pima | Hisp | 3 | M | 19, 24,27, 28 | 1947 |
| F | Elem | 5th yr. at UA | Anglo | 2.9 | S | no | 1971 |
| F | Elem | BS - Marketing | Anglo | 4 | M | 24, 22 | 1946 |
| F | Elem | | Anglo | 3.7 | S | No | NA |
| F | Elem | | Greek | 3.2 | S | no | 1973 |
| M | Elem | Pima (1978) | Hisp | 2.8 | M | 2,10,11,14,15,18 | 1951 |
| F | Elem | | Hisp | UK | M | 21, 26, 28 | 1944 |
| F | Elem | BA - Span | Hisp | 2.8 | S | no | 1971 |
| F | Music | 100+ credits | Anglo | 3.1 | D | 7,10,12 | 1958 |
| M | Music | 3 yrs. UA | Anglo | 3.2 | S | no | 1973 |
| F | Sec - Eng | 4 yrs at UA | Other | 3.3 | M | no | 1972 |
| M | Sec - Eng | BA - NYU | Anglo | UK | S | no | 1960 |
| M | Sec - History | BS - BusAdm | Anglo | 3.02 | M | no | 1962 |
| M | Sec - Science | Cochise Col | Hisp | 3.5 | M | 14, 17 | 1951 |
| F | Sec - Spanish | Elem tchr - SA | Hisp | 3.78 | M | 10,13,16,17 | 1958 |
| F | Elem | 5 yrs. Pima | Anglo | 4.0 | S | no | 1970 |
| F | Elem | 4 yrs. UA | Anglo | 3.0 | S | no | 1973 |
| F | Elem | Undergrad, UA | Anglo | 3.3 | S | no | 1968 |
| F | Elem | MA-LRC | Anglo | 4.0 | M | no | 1971 |
| F | Elem | undergrad, UA | Anglo | 3.2 | S | 1 | 1971 |
| M | Elem | AAS - Business | Hisp | 3.1 | S | no | 1969 |
| F | Elem | 4 yrs UA | Hisp | 2.8 | S | no | 1972 |
| F | Elem | 2 yrs comm coll | Hisp | 3.2 | S | no | 1974 |
| F | Elem | Pima - 3 yrs | Hisp | 2.96 | M | 13, 2? | 1963 |
| F | Elem | Pima - 3 yrs | Hisp | 3.0 | S | no | 1972 |
| F | Elem-Biling | Undergrad UA | Hisp | 2.75 | M | 17 | 1952 |
| F | Health | AA - Nursing | Anglo | 3.25 | M | 14, 21, 29, 31 | 1952 |
| F | Health | 4 yrs. UA | Anglo | 2.9 | S | no | 1971 |
| M | Sec - English | BA - Eng | Anglo | 3.7 | S | no | 1971 |
| M | Sec - English | BS | Anglo | 3.18 | M | no | 1966 |
| F | Sec - English | Undergrad UA | Anglo | 4.0 | M | 23, 24, 26 | 1949 |
| F | Sec - English | Pima | Hisp | 3.7 | X | no | 1972 |
| F | Sec - Math | AA - Business | Anglo | 3.28 | S | 2 yr old | 1973 |
| M | Sec - Music | | Anglo | 3.6 | S | no | 1973 |
| F | Sec - Music | Undergrad UA | Anglo | 3.5 | S | no | 1974 |
| F | Sec - Music | Pima | Anglo | 3.1 | S | no | 1968 |
| F | Sec - Science | | Anglo | UK | X | | 1960 |
| M | Sec - Spanish | Undergrad UA | Anglo | 3.25 | S | no | 1974 |
| M | Sec - SocSt | 2 BS degrees | Anglo | 3.2 | S | no | 1952 |

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