Dilemma-based Cases Written by Preservice Elementary Teacher Candidates: an analysis of process and content

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Abstract:
The present paper describes how preservice teachers constructed dilemma-based cases as part of a reflective and inquiry-oriented teacher education program. Twelve elementary education majors wrote dilemma-based cases based on critical incidents experienced during their field placements in Professional Development Schools. Examination of these data reveals that writing cases allowed these teacher candidates to resolve dilemmas they experienced during their internships, which influenced their perceptions of their roles and relationships in elementary classrooms. The process of writing cases also helped these prospective teachers to work through their feelings about these incidents and to understand the value of reflection. Content analyses of these data revealed that all of the cases centered around two typical novice teachers' concerns: (a) the preservice teacher's relationship with their cooperating teachers and students, or (b) classroom management concerns. None of the cases revolved around content or curriculum issues.

Article:
A renewed interest in the use of cases and case methods as a pedagogical tool for teacher education can be traced to suggestions made by the Carnegie Commission Task Force on Teaching as a Profession (Carnegie Forum on Education and the Economy, 1986) and to Lee Shulman's 1985 AERA Presidential Address (Shulman, 1986). Another catalyst for growing interest in case-based pedagogy is the intuitive understanding of many teacher educators about the potential power of cases and case-based teaching methods for educating teachers about the complexity of today's classrooms. Teacher educators are also interested in the development of a case literature that will capture teachers' craft knowledge and potentially serve as part of the knowledge base for teacher education. Others are interested in the ways cases can or should be used as pedagogical tools for preservice teacher education and inservice professional development. In fact, more and more teacher educators are using cases either as a part of their repertoire of teaching strategies (Kleinfeld, 1990; LaBoskey, 1992; Peterson, Clark & Dickson, 1990; Richert, 199 1; Stoiber, 1991) or as the basis of their courses (L. Shulman, 1996; Silverman & Welty, 1996). Scholarly writing and research around the use of the case method in teacher education has also flourished in the past decade as educators study the impact and variety of case-based teaching (for example, Broudy, 1990; Carter, 1989; Florio-Ruane & Clark, 1990; Harrington, 1995; Harrington & Garrison, 1992; Kagan, 1993; Kleinfeld, 1996; Levin, 1995; Lundeberg & Fawver, 1994; Lundeberg, Levin, & Harrington, 1999; Merseth, 1996; Richardson, 1991; Richert, 1992; J.H. Shulman, 1992; L. Shulman, 1992; Stoiber, 1991; Sykes & Bird, 1992).

One important aspect of using case methods is developing good cases and refining their use. However, many teacher educators are also interested in what constitutes case knowledge for teachers. How teachers learn from cases and what they learn are questions that continue to intrigue many researchers who use case-based teaching methods. The present paper focuses on a study of dilemma-based cases written by preservice teachers prior to student teaching. In this paper, I describe the content of these cases, the process used to write them, and the impact of a case writing experience on the thinking of the preservice teachers involved. The research questions that guided this study are: What is the content and nature of cases written by preservice teachers prior to student

teaching? What do preservice teacher candidates perceive as valuable in a case writing experience? and What does writing dilemma-based cases reveal about the nature of preservice teachers' thinking?

Defining Stories, Vignettes, Cases, and Case Methods

Judith H. Shulman (1991, 1992, 1996) described her process of working with teachers to develop cases from their stories and vignettes. She also illustrated the difference between cases and teacher stories by telling how teacher stories can be turned into dilemma-based cases:

> They are crafted into compelling narratives, with a beginning, middle, and end, and situated in a specific event or series of events that unfold over time. They have a plot that is problem-focused with some dramatic tension that must be relieved. They are embedded with many problems that can be framed and analyzed from various perspectives. And they include the thoughts and feelings of the teacher-writers as they describe the accounts. Some case writers describe problems that remain unresolved, and end their stories with a series of questions about what to do. (J.H. Shulman, 1991, pp. 3–4)

Kathy Carter described teachers' vignettes as "... unconnected, but well-remembered events ..." (1991, p. 15). She also wrote that "A detailed description of events is not a case; rather, it is the material cases are made of" (Carter, 1991, p. 15) and that cases should be "... characterized by some of the structures of story, including exposition, narration, and timing" (p. 15).

For the purposes of the present study, cases are defined as richly detailed, contextualized, narrative accounts of teaching and learning that are sufficiently substantive and complex to allow for multiple levels of analysis and interpretation (Levin, 1995). Good cases represent the problems, dilemmas, and complexity of teaching something to someone in some context. Lee Shulman (1986) claims that cases must make a theoretical claim and be "a case of something", representing a principle or pattern of practice, an axiom or maxim about teaching and learning, or an instance of a larger class of experiences.

From my perspective, I would add that good cases should represent more than just one principle or theory of teaching. They should represent the messy, complex, and situated nature of teaching and learning. They should also present us with a way of connecting theory with practice. Case methods include the practice of using cases as a pedagogical tool in fields such as law, business, medicine, and education. Case-based pedagogy is a method of instruction that focuses on the use of cases as either a part of or the central focus of the curriculum.

Research on Case Writing

Anna Richert (1992) and Vicky LaBoskey (1992, 1994), both at Mills College, had their master's level preservice teachers write cases or conduct "case investigations" (LaBoskey, 1992, 1994) based on professional issues and dilemmas. Richert de-scribes her purpose for case writing as:

> ... a way to assist novice teachers in the process of reflective problem solving in areas of professional concern. By writing cases about dilemmas they face in their work, novice teachers develop skills such as establishing collegial relationships, articulating educational problems precisely, and defining problematic issues and potential solutions. All of these skills support the teacher in the short run and enhance the teacher's potential for professional growth in the long run. (1992, p. 155)

As a result of case writing experiences, Richert (1992) found her students were passionate about the topics they selected for their cases, thought it was important to check out the facts and the perceptions of others about the issues in their cases, and came to realize that teaching is neither content nor context free. Richert's students were also able to generate multiple solutions to their dilemmas as a result of writing their cases and discussing them with others.

LaBoskey's (1992) students gained similar insights from the process of writing their case investigations, even though they were not intended to become teaching cases for others to use. Rather, the case investigation

experiences were designed to counter the "apprenticeship of observation" described by Lortie (1975), and to "... foster the intellectual skills needed for tough-minded assessment and imaginative inquiry, including accurate observation, conscientious recording, and the ability to write clearly..." (LaBoskey, 1992, p. 178). LaBoskey's goals for having preservice teachers conduct and write case investigations also included aiding prospective teachers in learning how to think reflectively and developing an orientation toward inquiry about their teaching.

Judy Shulman also found that case writing helped experienced teachers "move from their subjective, internal ordeal to a more objective, external perspective where they could critically examine what could be learned from their experience" (1991, p. 14). She asserted that case writing served as the reflective phase of teachers' experiences, often allowing new understandings to emerge that were not possible during the experience itself.

Judith Kleinfeld (1996) claimed that writing cases may be a powerful way to help prospective teachers make sense of and learn from their student teaching experiences. Her analysis of cases written about student teaching experiences revealed changes in her students' world views that moved from being simplistic, formulaic, and implicit toward becoming more contextualized, conditional, and explicit. She also found the act of "telling" and writing their teaching stories as cases was both therapeutic and educative for student teachers. Kleinfeld wrote that

> ... [t]he discipline of case writing ... provides a valuable structure which helps us reflect on our experience [and] creates an emotional distance from events and encourages us to take an analytic stance [that] encourages us to come to grips with our experiences and ourselves. (1996, p. 93)

Nancy Hutchinson's (1996) analysis of 48 student-authored cases written by post-baccalaureate regular education majors in a course on inclusive education also showed promise for the value of case writing to impact teacher thinking, especially to promote critical reflection (Dewey, 1933; Harrington, Quinn-Leering & Hodson, 1996). Sixty-five percent of the preservice teachers in her study wrote dilemma-based cases as opposed to reporting simple vignettes (Carter, 1991, 1993; Levin, 1995). Furthermore, the majority of her students reached at least the second level of critical reflection described in the Harrington, Quinn-Leering & Hodson (1996) study. Harrington *et al.* (1996) operationalized Dewey's (1933) definition of critical reflection to include the constructs of: (a) open-mindedness, the ability to take multiple perspectives; (b) responsibility, the ability to consider the moral and ethical consequences of choices and actions; and (c) wholeheartedness, the ability to identify and address the limitations in one's assumptions. Not surprisingly, there was great variability in the levels of critical reflection displayed by Hutchinson's students, and she concluded her study by stating that "... case-based pedagogy may contribute to this thinking disposition [i.e., critical thinking], it does not guarantee it" (Hutchinson, 1996, p. 27).

Development of Teachers and Reflective Thinking

Early work by Frances Fuller (1969) and by Fuller and Brown (1975) about the connection between reflection and teacher development predated many other studies about this topic during the past two decades (for example, Henderson, 1996; Hoover, 1994; Huberman, 1993; LaBoskey, 1994; Ross, Johnson & Smith, 1992; Zeichner & Liston, 1987). However, some activities designed to encourage reflection and metacognitive thinking in preservice teachers appear to focus reflection on personal concerns (Hoover, 1994), which Fuller and Brown (1975) called survival concerns. Other kinds of written reflections encourage preservice
teachers to reflect on the teaching context including the curriculum, instructional strategies and, eventually, one's teaching decisions based on the needs of the students. Other scholars (for example, Zeichner & Gore, 1989; Zeichner & Liston, 1987) have written about the importance of not just encouraging reflection *per se*, but about fostering reflection that goes beyond personal concerns and a focus on technical issues to encouraging reflection on educational principles and practices including critical issues in education and the moral, political, and social implications of curriculum and education.

In the study reported in the present paper, a case writing experience provided additional opportunities for critical reflection by preservice teacher candidates who have previously participated in other reflective writing

including dialog journals, peer coaching, action research, and writing case studies of children based on "kid-watching" experiences. Because the focus or level of reflection (personal, technical, or critical) is not inherent in the process of writing cases (Hutchinson, 1996), description and analysis of the content and focus of the cases and teaching notes written by the participants in this study should shed some light on the value of using case writing for enhancing preservice teachers' development as reflective practitioners.

Methods
Participants
Twelve undergraduate elementary education majors participated in the case writing project described in this paper. Among this group, three were white males, two were African American females, and seven were white females. Only two of the participants were non-traditional, second-degree students, while 10 were traditional, college-age undergraduates. The other 15 members of this cohort group did not participate because they had already completed the writing-intensive course requirement. One participant dropped out of the course and one other participant's case was not made available for analysis, so the number of completed cases and accompanying teaching notes totaled 10.

Context of the Study
At the University of North Carolina at Greensboro (UNCG), elementary education majors begin their undergraduate teacher education program as college juniors. They stay together in cohort groups of 25–30 for two years under the guidance of a faculty member who serves as their field supervisor, their academic advisor, and their weekly seminar leader. They take all of their methods courses together and serve as interns in classrooms for 10 hours every week for three semesters prior to full-time student teaching during their fourth semester. Internships are served in two or three designated Professional Development School (PDS) sites, concurrent with coursework at the university required to complete a second major or concentration (24–27 semester hours) and to fulfill all licensure requirements. Interns usually change PDS sites and grade levels each semester before selecting a classroom in which to do their student teaching. One of the many benefits of this PDS program and cohort-group model is that activities and experiences can be planned to span two years, thus building on each other and achieving a well-ordered, developmentally appropriate, and coherent preservice teacher education program (Levin & Ammon, 1992).

The PDS program at UNCG is designed to be activity oriented and inquiry based. That is, we engage prospective teachers in a variety of reflective practices as part of their preparation to become elementary school teachers. For example, in addition to reading, discussing, and writing their own dilemma-based cases, the elementary teacher candidates in this study conducted case studies of individual children; exchanged reflective dialogue journals with peers, keypals, and faculty; engaged in regular peer observations and served as peer coaches; conducted action research as a cohort group and as individuals; and developed teaching and technology portfolios over the course of two years in their teacher preparation program.

The philosophical and theoretical perspective of the teacher education program at UNCG is a constructivist one (Ammon & Levin, 1993; Fosnot, 1989, 1996; Zemelman, Daniels & Hyde, 1993). That is, we believe that prospective teachers construct their own understandings of teaching and learning based on their prior knowledge and beliefs, their current and past experiences related to learning to teach, and on focused reflection on these experiences. In addition, we also believe that providing a variety of inquiry-based and reflection-oriented experiences helps our teacher candidates gain a better understanding of teaching and learning, which we believe will make them better teachers. Toward this end, we use a variety of cases and case methods as pedagogical tools for exploring the complexities of teaching and learning in safe settings, for promoting perspective-taking, and for helping teacher candidates make connections between theory and practice. For example, prior to the case writing experience described in the present paper, all participants had read, written about, and discussed 10 dilemma-based cases (Silverman, Welty & Lyon, 1992). These served as models for the cases they were asked to write during this study.

Participation in a Writers' Workshop

One of the requirements for all undergraduates at UNCG is to take two writing intensive courses. Ideally, at least one of these should be in a student's major. To accommodate our elementary education majors, and to continue to build on the inquiry-oriented and reflective nature of our teacher education program, senior-level teacher candidates were offered writing intensive credit for attending 12 one-hour sessions prior to their regular weekly seminar. The purpose of the writing intensive program at UNCG is to develop students' written communication skills. Toward this end, participants in this study were involved in a Writers' Workshop experience, modeled after the work of Nancy Atwell (1987), Lucy Calkins (1986) and Donald Graves (1983) on ways to teach and use the writing process. That is, they engaged in process writing with the goal of creating a dilemma-based case focusing on a critical incident from their internship experience. They also engaged in extensive peer review, edited drafts of each others' cases, participated in mini-lessons about how to write cases, and shared drafts of works in progress at the end of each class. They were also required to conference regularly with their instructor, conduct self-evaluations and peer evaluations using rubrics, write commentaries for two other cases, and write a facilitator's guide for their own case. The audience for their cases was understood to be future cohort groups of elementary education majors who could learn from discussing their dilemma-based cases.

Class time was devoted to modeling and sharing by the instructor, who was also writing a case at the same time, regular peer review, mini-lessons, and sharing segments or drafts of cases in progress in small and large groups. Printed materials provided to each participant included copies of multiple versions of a dilemma-based case authored by the instructor, rubrics for assessing the importance of context, character development, problem framing, and use of dialog in a case, and examples of several facilitator's guides (also called case teaching notes). Their previous experiences with cases also provided models that aided their learning to write cases. It was assumed that articulating the issues and dilemmas in their cases would serve as a form of reflection for these preservice teachers and help them resolve these problems with the support of members of their cohort group.

Data Sources

The data available for analysis for this paper included: (a) final drafts of 10 cases including the accompanying facilitator's guide, (b) commentaries written about the cases by other participants in the study, (c) and mid-term and final self-report questionnaires completed by 10 participants focusing on the writing process and their own learning from this case writing experience.

Data Analysis Procedures

A specific critical, interpretive analysis that had been used in two other studies of cases written by preservice teachers (Harrington, Quinn-Leering & Hodson, 1996; Hutchinson, 1996) was applied to the data in this study. Following these procedures, each participant's written case and facilitator's guide was analyzed to deter-mine: (a) the content and nature of the cases, (b) whether the cases represented dilemmas (i.e., paradoxes) or vignettes (i.e., well-remembered events), (c) the level of critically reflective thinking represented in the cases, as originally defined by Dewey (1933) and operationalized by Harrington, Quinn-Leering & Hodson (1996) and Hutchinson (1996), and (d) the quantity and quality of the potential solutions generated to their dilemmas. In addition, the two self-report questionnaires were subjected to a content analysis (Merriam, 1998) to determine the participants' thinking about: (a) the perceived value of writing cases, (b) their understanding of process writing and the Writers' Workshop, and (c) their perceptions about their own writing. In combination, these methods were used to interpret what the experience of writing dilemma-based cases shows about the nature of preservice teachers' thinking as revealed in their cases.

Findings

Content and Nature of the Cases

Analysis of the content of the cases revealed that they centered around: (a) preservice teachers' relationships with their cooperating teachers that were problematic, and/or (b) their relations with individual students that were also problematic, and/or (c) around general classroom management concerns. Three cases were about poor

relations between interns and their cooperating teachers, and seven were about relations with individual students and related issues of discipline and classroom management. The context, and perhaps the catalyst, for all but two of the cases focused on individual students and/or classroom management issues that occurred when the intern was left alone with the class.

The cases centering on relationships with their cooperating teachers were focused on poor communication, unresolved conflicts, or lack of rapport with the cooperating teacher. The cases about their cooperating teachers also dealt with the interns' perceptions about the cooperating teachers' lack of skill in mentoring them and in meeting their needs. These cases described the cooperating teachers as being burned out, criticized their relationships with students, and their skills and abilities as teachers. Although the content and context of the cases was ultimately grounded in social, political, economic, and moral issues around teaching, the undergraduate teacher candidates in this study did not make these connections explicit in their cases, and maintained the focus on a personal level (Zeichner & Gore, 1989; Zeichner & Liston, 1987).

In their facilitator guides, the participants who wrote cases about poor intern–co-operating teacher relationships described and categorized the content of their cases with key words such as poor teacher relations, veteran teachers, role of student interns, attitudes about students, job and needs of interns, communication with co-operating teacher, and low teacher expectations. Those who wrote about individual students and classroom management concerns used key words to describe their cases that included handling discipline, lack of student motivation, and students' attitudes reflecting on student behavior to describe the main topics of their cases. None of the cases revolved around specific curriculum issues or explicitly stated concerns about the social, political, economic, or moral issues of teaching.

Stories or Cases? Dilemmas or Vignettes?
Eight of the 10 cases were classified as cases rather than vignettes, as defined by Judy Shulman (1991) and Kathy Carter (1991). That is, all but two of the cases were compelling narrative accounts, problem-focused, ending with real dilemmas, as opposed to being a series of unconnected, although well-remembered, events. All of the cases were highly contextualized, included good character descriptions, and included some dialog and foreshadowing. All cases ended with questions that engaged the reader in problem-solving.

The cases categorized as vignettes did not pose real paradoxes and were not sufficiently complex to allow for multiple levels of analysis or interpretation. The vignettes only described a series of events and actions, leaving the reader little to question, ponder, or connect to theory. The cases were constructed so that the reader was left to consider the consequences of several possible solutions, none of which was simple, clear-cut, or without both advantages and disadvantages. The dilemma-based cases lent themselves to discussing theories about several issues including motivation, teacher expectations, group dynamics, communication skills, classroom management, and student discipline.

Analysis of Critical Reflection in Cases
Based on Dewey's (1933) conception of critical thinking, which is based on being open-minded, responsible, and wholehearted, and using procedures suggested by Harrington, Quinn-Leering and Hodson (1996) and Hutchinson (1996) for how these concepts can be operationalized, analysis of the participants' cases and facilitator's guides revealed the following about these aspects of the participants' thinking.

Open-Mindedness. Eight of the cases were written in the first person and two in the third person. One-half of the cases focused mainly on the author's perspective throughout the case (Level 1 regarding open-mindedness: teacher-focused or author-focused pattern). The other half of the cases did convey more than one point of view and considered the perspectives of the co-operating teacher, the children, or parents, in addition to that of the author (Level 2 of open-mindedness: child-focused or other-focused pattern). None of the cases conveyed a comprehensive pattern regarding open-mindedness where a variety of perspectives was considered, including the cultural context of the setting, views of other professionals, or support from other experiences (Level 3 of open-mindedness: comprehensive pattern that acknowledges the validity of multiple perspectives).

Responsibility. With regard to the aspect of critical reflection that includes responsibility, or the consideration of consequences of one's actions and decisions, five of the cases considered only the consequences for the preservice teacher, the author of the case, and contained few and/or weak solutions to the dilemmas posed by the cases (Level 1 of responsibility: consequences for teacher or author only). However, five of the cases did consider consequences for the children and/or the cooperating teacher in the case in addition to the author's perspective, posed several potential solutions, and considered several perspectives in analyzing these solutions (Level 2 of responsibility: consequences for teacher and children). None of the cases revealed an understanding of the broader social implications and consequences of the issues and dilemmas in the cases, such as for families, or in relation to the school community, and none posed more than a few potential solutions to the dilemmas in the cases (Level 3 of responsibility: consequences in a broader social context).

Wholeheartedness. Assumptions about teacher authority, who is in charge of the classroom, and the level of understanding teachers have about the complexity and ambiguity of their work is the part of critical reflection called wholeheartedness.

With regard to wholeheartedness and these assumptions about the teacher's role in the learning process, five cases were scored at Level 1 (which assumes that learning is only teacher directed). Four other cases indicated an understanding that education is an interactive process and that the roles, actions, and decisions of teachers and students influence each other (Level 2 of wholeheartedness). Only one of the cases conveyed an understanding that education is a complex process and showed that the author was able to question his/her own and others' assumptions about the teacher's role in the learning process (Level 3 of wholeheartedness).

Nature of Potential Problem Solutions
Analysis of the quantity and quality of potential solutions to the dilemmas and paradoxes posed in the cases was disappointing. That is, because of the way the cases were written, very few authors posed potential solutions to the problems they described. This was especially true of the cases about poor relations between interns and their co-operating teachers. However, embedded in the cases about individual children and classroom management were descriptions of things they tried with the child before or during the incident. Unfortunately, there was no evaluation of the relative value of these activities, and no consideration of the advantages and disadvantages of these or other possible actions. Rather, the participants listed things they tried to do without revealing any thoughts about their potential for success of failure. In other words, the level of reflection about potential problem solutions in these cases was restricted.

Perceived Value of Case Writing Experience
Participants in the case writing experience assessed various aspects of the case writing project at the midpoint and again at the end. They expressed their individual reactions to the value of writing cases, their understanding of the writing process and the Writers' Workshop, and assessed their perceptions of their writing by completing the following sentences:

(1) I think that writing cases is ...
(2) At this point I understand that the Writers' Workshop ...
(3) At this point I understand that process writing ...
(4) I think that my own writing is ...

Participants expressed a clear understanding that the purpose of writing cases was to reflect critically on their experiences as interns and to problem-solve by writing cases about their perceived problems and dilemmas. They indicated that they had achieved these goals. For example, they said that writing their case helped them "evaluate and analyze a situation", "look back on a situation from various points of view", "reflect in depth on a situation", and was also "therapeutic". They also wrote that "this was a great way to gather feedback from others about how to handle problems", and that "it will help them in the future when 'cases' arise in their own classrooms". They expressed unanimously that case writing was "a great reflection process" and helped them

"learn a way to approach situations with effective problem-solving techniques". They also felt that the whole process helped them become better writers.

Their understanding of process writing and the Writers' Workshop was mixed and there were some misconceptions about both early on. A few participants felt that both the writing process and the Writers' Workshop involved step-by-step methods. This may be attributed to the structure of the writing intensive course, which asked students to attend separately to the context of their cases, then to focus on their characters, followed by working on dialog, the climax of the case and, finally, the resolution. Each of these parts of the case was the focus of successive classes and a rubric was provided for each of these aspects in their cases.

Having a new rubric each week to use in evaluating various aspects of their cases as they completed multiple drafts may have contributed to participants' attributions that process writing and the Writers' Workshop involves step-by-step procedures. For example, one participant wrote that the process writing "means just what it says. Writing happens as a process with certain steps that must be taken. These include composing, evaluating, and revising a piece of writing". However, others understood that process writing is recursive and "not a step by step plan for how to write—you can move back and forth between the different points of writing".

Despite these early confusions by some, by the end of the project all the participants were very positive about the value of process writing and the Writers' Workshop, indicated a good understanding of the value of this approach, and understood that writing is a process. For example, they wrote that process writing "causes a writer to evaluate his or her own writing", "continually working and revising a piece", "is a continuous process that involves the group as well as the individual", and "a good way to help a person learn to write and improve writing skills".

Self-evaluation of their own writing ability on the questionnaires indicated that the participants felt their writing improved as a result of this project. For example, participants wrote that their writing "has greatly improved—it has been a long process (lots of polishing and rearranging) but I am very proud of my finished product" and "has progressed because I have taken more time writing this. It is easier to get my thoughts down on paper while I am not worrying so much about mechanics", and "works best after rewrites and after receiving feedback from peers". Several participants also expressed that their writing "has improved as a result of this course and writing this case" and "is progressing. This writing intensive course has helped my process writing. I've learned how to use it in my classroom".

Limitations of the Study
The present study is limited by the small number of cases available for analysis and the nature of self-report data from the questionnaires. Also, because these data were aggregated and reported anonymously, they do not reveal individual patterns or profiles of how these preservice teachers' thinking developed during the semester of case writing. There was also no baseline evidence collected about the quality or level of the participants' critical thinking prior to this case writing experience. Therefore, it is not possible to determine whether certain participants began the semester with higher levels of open-mindedness, responsibility, or wholeheartedness, or whether they acquired it as result of this experience. It also is not clear from this study whether the characteristics of open-mindedness, responsibility, and wholeheartedness are independent of each other.

The content, quality, and nature of the cases is also influenced by the timing of this experience—during the semester prior to student teaching. Perhaps having students write cases after student teaching would reveal concerns related to curriculum and instruction rather than early, egocentric concerns about self, relationships with co-operating teachers, and classroom management and discipline issues (Fuller, 1969; Fuller & Brown, 1975; Veenman, 1984).

Another limitation is the lack of generalizability of this kind of study. Analysis of these data is also problematic because it is difficult to replicate and open to multiple interpretations. However, the fact that the methodology

for analyzing critical reflection originated by Harrington, Quinn-Leering and Hodson (1996) and Hutchinson (1996) was successfully applied to original case writing in this study is promising. If the goals of writing cases and of analyzing cases other people have written include promoting critical reflection and inquiry into the teaching and learning process, then Harrington's and Hutchinson's theoretically grounded methods for data analysis show great promise for others interested in doing research on cases and case methods.

Conclusions

Both Judy Kleinfeld (1996) and Judy Shulman (1991, 1996) found the act of turning teaching stories into cases was therapeutic and educative for teachers. The participants' responses to the questionnaires in the present study also revealed that writing cases served the same purpose for them. Engaging teachers in the process of writing cases in a Writers' Workshop format also seems to have merit, despite the limitations of self-report data. In addition, asking preservice teachers to think about the problems and dilemmas faced during internships, and to engage in self-analysis through writing cases, offers a window into how prospective teachers think about their learning to teach experiences.

Although the purposes for having teacher candidates write cases includes fostering critical reflection and developing an inquiry orientation toward learning to teach, only longitudinal study of these prospective teachers will reveal how this activity contributes to these desirable attributes. Nevertheless, analysis of the content and levels of critical reflection conveyed in the cases indicates that case writing has the potential for helping preservice teachers select and define problematic issues they encounter and articulate potential solutions. The fact that the cases written by one-half of the participants were scored at Level 2 for open-mindedness, responsibility, and wholeheartedness is encouraging given relatively brief experiences in their teacher preparation program.

Nevertheless, the nature and quality of the problems and dilemmas selected by the participants in the present study reveal that the level of their concerns is consistent with those of beginning teachers. The fact that the content of their cases revolved around relationships with co-operating teachers and students, and around concerns about handling classroom management and discipline, affirms well-known findings by Frances Fuller (1969), Fuller and Brown (1975), and Veenman (1984) on the early concerns of prospective teachers. Furthermore, the narrow range of critical reflection displayed in these cases also echoes Hutchinson's (1996) conclusions from her study of post-baccalaureate preservice teachers' written responses to cases. Hutchinson wrote that, although "... case-based pedagogy may contribute to this thinking disposition [i.e., critical thinking], it does not guarantee it" (1996, p. 27). Perhaps, the low to medium levels of critical reflection found in this study also mirror the received way of knowing that many female college juniors and seniors reveal (Belenky, Clinchy, Goldberger & Tarule, 1986). Although those who were able to take more than one perspective appreciate that there are consequences for one's actions and begin to see the complexity and ambuiguity of teachers' work, as revealed in their cases, may be moving beyond subjective knowledge to connected knowing (Belenky, Clinchy, Goldberger & Tarule, 1986), not all preservice teachers are at this level of thinking.

Implications for Teacher Education

The use of case-based teaching methods for both preservice and inservice teachers appears to have potential as a pedagogical tool. Some research suggests that preservice teachers prefer learning from cases over other traditional, didactic methods of instruction. We also have research that indicates preservice teachers can learn about classroom management (Stoiber, 1991), motivational issues (Richardson, 1991), cultural diversity (Noordhoff & Kleinfeld, 1991), and teaching mathematics (Barnett, 1991) from reading, writing about, and discussing cases that others have written. From earlier studies, we have evidence that case writing is valuable for helping inservice teachers learn from their experiences (J. Shulman, 1992, 1996), and for helping post-baccalaureate preservice teachers learn how to think critically and reflectively (Hutchinson, 1996; LaBoskey, 1992; Richert, 1992). Finally, we have research that suggests case writing is both educative and therapeutic for student teachers (Kleinfeld, 1996). Based on this study, it appears that case writing can be a valuable pedagogical tool for helping undergraduate preservice teachers identify and process dilemmas and paradoxes they face while learning to teach, although the focus of their reflective thinking may remain on personal issues

(Fuller & Brown, 1975; Hoover, 1994) rather than take a more a critical perspective (Zeichner & Gore, 1989; Zeichner & Liston, 1987).

If the goals of teacher education include encouraging critical reflection on practice and developing an inquiry orientation about the process of teaching and learning, then using cases and case methods has promise. We have research that suggests discussing cases positively affects the quality, form, and content of teachers' thinking about cases, compared with the understanding of those teachers who only read and write about a case (Levin, 1995, 1999). Teachers who discuss cases are able to gain additional perspectives on the issues in the cases, and clarify and/or elaborate their understandings of various topics in the cases they discuss (Levin, 1995). Of course, teachers' previous understandings and experiences, personal background, and their individual interests serve as filters for what they understand and can learn from writing cases (Levin, 1999). Undergraduate preservice teachers need experiences that help them counter their apprenticeship of observation (Lortie, 1975) and their propensity to hold onto prior beliefs (for example, Feiman-Nemser & Buchmann, 1983). The use of cases and case methods that include constructing their own dilemma-based cases appears to provide some help in that direction, and further research is needed in this area.

Note

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References

AMMON, P. & LEVIN, B.B. (1993). Expertise in teaching from a developmental perspective: the Developmental Teacher Education Program at Berkeley. *Journal of Learning and Individual Differences*, *5*, 319–326.

ATWELL, N. (1987). *In the Middle: writing, reading, and learning with adolescents.* Portsmouth, NH: Heinemann.

BARNETT, C. (1991). Building a case-based curriculum to enhance the pedagogical content knowledge of mathematics teachers. *Journal of Teacher Education*, *43*, 263–272.

BELENKY, M.F., CLINCHY, B.MCV., GOLDBERGER, N.R. & TARULE, J.M. (1986). *Women's Ways of Knowing: the development of self, mind, and voice*. New York: Basic Books.

BROUDY, H. (1990). Case studies—why and how. *Teachers College Record*, *91*, 449–459. CALKINS, L. (1986). *The Art of Teaching Writing*. Portsmouth, NH: Heinemann.

CARNEGIE FORUM ON EDUCATION AND THE ECONOMY (198 6). *A Nation Prepared: teachers for the 21st century* (Report of the Task Force on Teaching as a Profession). Hyattsville, MD: Carnegie Forum on Education and the Economy.

CARTER, K. (1989). Using cases to frame mentor-novice conversations about teaching. *Theory into Practice*, *27*, 214–222.

CARTER, K. (199 1). Conveying classroom knowledge through case methods. In H. HARRINGTON. & M. THOMPSON (Eds.), *Student Motivation and Case Study Manual*. Chapel Hill, NC: University of North Carolina.

CARTER, K. (1993). The place of story in the study of teaching and teacher education. *Educational Researcher*, *22*(1), 5–12.

DEWEY, J. (1933). *How We Think: a restatement of the relation of reflective thinking to the educative process*. Boston, MA: D.C. Heath.

FEIMAN-NEMSER, S. & BUCHMANN, M. (1983). Pitfalls of experience in teacher education. In P. TAMIR, A. HOFSTEIN & M. BEN-PERETZ (Eds.), *Preservice and Inservice Education of Science Teachers*. Philadelphia, PA: Balaban International Science Services.

FLORIO-RUANE, S. & CLARK, C.M. (1990). Using case studies to enrich field experiences. *Teacher Education Quarterly*, *17*, 17–28.

FOSNOT, C.T. (1989). *Enquiring Teachers, Enquiring Learners: a constructivist approach to teaching*. New York: Teachers College Press.

FOSNOT, C.T. (199 6). *Constructivism: theory, perspectives, and practice*. New York: Teacher College Press.

FULLER, F.F. (1969). Conceptions of teachers: a developmental conception. *American Educational Research Journal*, 2, 207–226.

FULLER, F.F. & BROWN, O. (197 5). Becoming a teacher. In K. RYAN (Ed.), *Teacher Education (The Seventy-Fourth Yearbook of the National Society for the Study of Education, Part Two)* (pp. 25–52). Chicago, IL: University of Chicago Press.

GRAVES, D. (1983). *Writing: teachers and children at work*. Portsmouth. NH: Heinemann. HARRINGTON, H. (199 5). Fostering reasoned decisions: case-based pedagogy and the professional development of teachers. *Teaching and Teacher Education*, 11, 203–241.

HARRINGTON, H. & GARRISON, G. (1992). Cases as shared inquiry: a dialogic model of teacher preparation. *American Educational Research Journal*, 29, 715–735.

HARRINGTON, H., QUINN-LEERING, K. & HODSON, L. (1996). Written case analyses and critical reflection. *Teaching and Teacher Education*, 12, 25–37.

HENDERSON, J.G. (1996). *Reflective Teaching: the study of constructivist practices.* Englewood Cliffs, NJ: Merrill/Prentice Hall.

HOOVER, L. (1994). Reflective writing as a window on preservice teachers' thought processes. *Teaching and Teacher Education*, 10, 83–93.

HUBERMAN, M. (1993). *Lives of Teachers*. New York: Teachers College Press.

HUTCHINSON, N. (1996). *Student-authored courses and critical reflection in a course on inclusive education*. Paper presented at the Annual Meeting of the American Educational Research Association, New York, April 1993.

KAGAN, D. (1993). Context for the use of classroom cases. *American Educational Research Journal*, 30, 117–129.

KLEINFELD, J. (1990). The special virtues of case method in preparing teachers or minority schools. *Teacher Education Quarterly*, 17, 43–52.

KLEINFELD, J. (1996). Our hero comes of age: what students learn from case writing in student teaching. In J. COLBERT, K. TRIMBLE & P. DESBERG (Eds.), *The Case for Education: contemporary approaches to using case methods.* New York: Allyn & Bacon.

LABOSKEY, V.K. (1992). Case investigations: preservice teacher research as an aid to reflection. In J.H. SHULMAN (Ed.), *Case Methods in Teacher Education.* New York: Teachers College Press.

LABOSKEY, V.K. (1994). *Development of Reflective Practice: a study of preservice teachers*. New York: Teachers College Press.

LEVIN, B.B. (1995). Using the case method in teacher education: the role of discussion and experience in teachers' thinking about cases. *Journal of Teaching and Teacher Education*, 10, 1–14.

LEVIN, B.B. (1999). The role of discussion in learning from case discussions: Who? Learns what? and how? In M. LUNDEBERG, B. LEVIN & H. HARRINGTON (Eds.), *Who Learns What From Cases and How? The research base on teaching with cases* (pp. 139–157). Mahwah, NJ: Lawrence Erlbaum Associates.

LEVIN, B.B. & AMMON, P. (1992). The development of the beginning teachers' pedagogical thinking: a longitudinal analysis of four case studies. *Teacher Education Quarterly*, 19, 19–37. LORTIE, D. (1975). *Schoolteacher: a sociological study*. Chicago, IL: University of Chicago Press. LUNDEBERG, M.A. & FAWVER, J.E. (1994). Thinking like a teacher: encouraging cognitive growth in case analysis. *Journal of Teacher Education*, 45, 289–297.

LUNDEBERG, M.L., LEVIN, B.B. & HARRINGTON, H.L. (Eds.) (1999). *Who Learns What From Cases and How? The research base on teaching with cases.* Mahwah, NJ: Lawrence Erlbaum Associates.

MERRIAM, S.B. (1998). *Qualitative Research and Case Study Applications in Education*. Thousand Oaks, CA: Sage.

MERSETH, K.K. (1996). Cases and case methods in teacher education. In J. SIKULA (Ed.), *Handbook for Research on Teacher Education* (pp. 722–746). New York: Simon and Schuster Macmillan.

NOORDHOFF, K. & KLEINFELD, J. (199 1). *Preparing teachers for multicultural classrooms: a case study in rural Alaska*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, April 1991.

PETERSON, P.L., CLARK, C.M. & DICKSON, W.P. (1990). Educational psychology as a foundation in teacher education: Reforming an old notion. *Teacher's College Record*, 91, 322–346.

RICHARDSON, V. (1991). *The use of cases in considering methods for motivating students*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, April 1991.

RICHERT, A. (199 1). Case methods and teacher education: using cases to teach teacher reflection. In R. TABACHNIK & K. ZEICHNER (Eds.), *Issues and Practice in Inquiry-Oriented Teacher Education* (pp. 130–150). London: Falmer Press.

RICHERT, A.E. (1992). Writing cases: a vehicle for inquiry into the teaching process. In J.H. SHULMAN, (Ed.), *Case Methods in Teacher Education*. New York: Teachers College Press.

ROSS, D.D., JOHNSON, M. & SMITH, W. (1992). Developing a professional teacher at the University of Florida. In L. VALLI (Ed.), *Reflective Teacher Education: cases and critiques* (pp. 24–39). Albany, NY: State University of New York Press.

SHULMAN, J.H. (199 1). *Revealing the mysteries of teacher-written cases: opening the black box*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, April 1991.

SHULMAN, J. H. (1992). Teacher written cases with commentaries: a teacher–researcher collaboration. In J.H. SHULMAN (Ed.), *Case Methods in Teacher Education*. New York: Teachers College Press.

SHULMAN, J.H. (1996). Tender feeling, hidden thoughts: confronting bias, innocence, and racism through case discussions. In J. COLBERT, K. TRIMBLE & P.DESBERG (Eds.), *The Case for Education: contemporary approaches to using case methods* (pp. 137–158). New York: Allyn & Bacon.

SHULMAN, L. (1986). Those who understand: knowledge growth in teaching. *Educational Re-searcher*, *15*, 4–14.

SHULMAN, L. (1992). Toward a pedagogy of cases. In J. SHULMAN (Ed.), *Case Methods in Teacher Education* (pp. 1–30). New York: Teachers College Press.

SHULMAN, L. (1996). Just in case: reflections on learning from experience. In J. COLBERT, K. TRIMBLE & P. DESBERG (Eds.), *The Case for Education: contemporary approaches to using case methods* (pp. 197–217). New York: Allyn & Bacon.

SILVERMAN, R. & WELTY, W.M. (1996). Teaching without a net: using cases in teacher education. In J. COLBERT, K. TRIMBLE & P. DESBERG (Eds.), *The Case for Education: contemporary approaches to using case methods* (pp. 159–172). New York: Allyn & Bacon.

SILVERMAN, R., WELTY, W.M. & LYON, S. (1992). *Case Studies for Teacher Problem Solving*. New York: McGraw-Hill.

STOIBER, K. (199 1). The effect of technical and reflective preservice instruction on pedagogical reasoning and problem solving. *Journal of Teacher Education*, *42*, 131–139.

SYKES, G. & BIRD, T. (1992). Teacher education and the case idea. In G. GRANT (Ed.), *Review of Research in Education* (vol. 18, pp. 457–421). Washington, DC: American Educational Research Association.

VEENMAN, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, *54*, 143–178.

ZEICHNER, K.M. & GORE,J. (1989) Teacher socialization. In W.R. HOUSTON, M. HABERMAN&J. SIKULA (Eds.), *Handbook for Research on Teacher Education.* New York: Macmillan.

ZEICHNER, K. & LISTON, D.P. (1987). Teaching student teachers to reflect. *Harvard Educational Review*, *57*, 23–47.

ZEMELMAN, S., DANIELS, H. & HYDE, A. (1993). *Best Practice: new standards for teaching and learning in America's schools*. Portsmouth, NH: Heinemann.