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VIDEO CASES IN TEACHER EDUCATION: WHAT ROLE DOES TASK STRUCTURE PLAY IN LEARNING FROM VIDEO CASES IN A LITERACY METHODS COURSE?

presented by

AMAN YADAV

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VIDEO CASES IN TEACHER EDUCATION: WHAT ROLE DOES TASK STRUCTURE PLAY IN LEARNING FROM VIDEO CASES IN A LITERACY METHODS COURSE?

Bу

Aman Yadav

A DISSERTATION

Submitted to Michigan State University In partial fulfillment of the requirements For the degree of

DOCTOR OF PHILOSOPHY

Counseling, Educational Psychology, and Special Education

2006

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ABSTRACT

Video cases in teacher education: What role does task structure play in learning from video cases in a literacy methods course?

By

Aman Yadav

The use of video cases in teacher education programs across United State has increased dramatically within the last decade. A number of video-case based systems especially for literacy courses, such as Reading Classroom Explorer (RCE), Case Technologies to Enhance Literacy Learning (CTELL), have been developed. However, there is little empirical research for how video cases are implemented within teacher education and what kinds of video case implementation leads to maximal benefit for preservice teachers. This study investigated the influence of two task structures - morestructured and less-structured – on teacher candidates' learning in a literacy methods course and their perceptions about their own learning from the two task structures. The research followed sixteen preservice teachers from two elementary education literacy classes. Participants' analysis of video vignettes, classroom observations, and artifact reviews formed the main data source. A potential learning benefit existed for the lessstructured task, which allowed preservice teachers to identify a greater number of literacy concepts relevant to the video vignettes being analyzed. However, participants' preferred the more-structured task. Furthermore, results also indicate that participants were not able to generalize their learning to the far transfer task. Implications are offered for teacher preparation and future research.

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This is dedicated to my family:

My parents, Pavitra and Ranbir Yadav, and brother, Ajay whose love, support, and guidance over the years led me to achieve this goal.

My wife Emily for her constant support, encouragement, and love.

Thank you.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank my advisor and mentor Dr. Matthew J. Koehler, who provided assistance on my dissertation as well as my entire doctoral career. I want to thank him for his time, dedication, guidance, and assistance. Additionally, I would like to acknowledge:

- My committee members: Drs. Mary Lundeberg, Ralph Putnam, and Cheryl Rosaen for their support, their suggestions, and overall assistance both during my dissertation and over the course of my doctoral career.
- The other professors whom I have had an opportunity to work with during my doctoral career: Drs. David Pearson, Laura Roehler, Punya Mishra, Jack Smith, Yong Zhao, David Wong, Nell Duke, Rand Spiro, Raven McCrory, Patrick Dickson, Steve Weiland, and Susan Florio-Ruane.
- The instructors and participants who participated in this research project. Thank you for your time and valuable comments.

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CHAPTER 1

Introduction

Teaching, with its dilemmas and uncertainties, is a classic example of a complex and ill-structured domain (Spiro, Coulson, Feltovich, & Anderson, 1988). Kleinfeld (1988) stated that teaching involves "not one well-defined issue but many ill-defined issues, intertwined like the fibers of a thick rope." (p. 9) This presents teacher educators with the difficult task of trying to prepare future teachers to effectively teach in this complex and ill-structured environment. Many prospective teachers feel unprepared to teach during their student teaching experience and into the first year of teaching, pointing out the lack of ample opportunities to observe experienced teachers (Teale, Leu, & Labbo, 2002).

Scholars in the field have suggested that the education of teachers should be more than just a presentation of content and pedagogy, but should involve practical application (see Cohen, 1998). Cohen suggested that it is important for preservice teachers to see teaching in authentic contexts to develop subject matter knowledge and pedagogical knowledge. Clark (1998) argued that there is a pressing need for teacher education programs to have preservice teachers look at crucial aspects of teaching, as well as engage in field experience early in the program. However, exposing preservice teachers to early field experience and presenting opportunities in authentic contexts is easier said than done. Despite the recognized need to engage teachers in reflection and analysis of complex aspects of teaching through provision of field experiences in multiple classrooms, it is a difficult task.

Case-Based Instruction

One possible solution to the challenge of exposing teacher candidates to "inclass" teaching situations with knowledgeable and experienced teachers is utilizing casebased instruction, either through written or video cases. Researchers have argued that case-based instruction can provide preservice teachers with rich and contextual representations of problems and dilemmas that they will encounter in the field of teaching (Shulman, 1992). The power of case-based instruction in teacher education lies not merely in highlighting the practical aspects of teaching, but also in illuminating the practical and theoretical principles (Shulman, 1986). Merseth (1999) suggested that cases offer a promising approach to helping preservice teachers "develop skills of analysis and problem solving, gain repertoires of pedagogical techniques, capitalize on the power of reflection,and help present a realistic picture of the complexities of teaching" (p. xi, xiii).Yet, as with other innovations in teacher education, the support for case-based instruction has been based more on optimism than evidence and has not been carefully documented (Copeland & Decker, 1996; Wang & Hartley, 2003).

Although case-based instruction has been offered as a solution to the challenges of preparing teachers, some in the field have pushed further and argued that written cases alone are insufficient for exposing prospective teachers to the challenges, dilemmas, and complex nature that practicing teachers face on a daily basis (Clarke & Hollingsworth, 2000). Scholars have suggested that video cases may be better situated to bring these facets of teaching to life (Richardson & Kile, 1999; Friel & Carboni, 2000). Video cases present rich and authentic examples of teaching practices, which can provide vivid images of teaching in real classrooms (Koehler, 2002). Video cases have been

hypothesized to portray the complex nature of teaching to teacher candidates, who often tend to have an underdeveloped view of teaching (Richardson & Kile, 1999); yet, similar to written case-based instruction, they are under-researched and their role in teacher preparation is still not understood.

There is much that the field of education does not know about the use of video cases in teacher education, including how video cases are used and which implementation strategies are most beneficial for teacher candidates. Specifically, one issue not well understood is whether guided or unguided exploration of video cases is better suited to develop rich understanding of teaching and learning by teacher candidates. There is a lack of research regarding whether more-structured activities designed to scaffold students' learning, or less-structured activities are better suited for developing a rich understanding of teaching and learning from video cases.

While the literature is lacking with regards to video cases, scholarship in other areas, such as reading (Barr, 1975; Butler & Carter, 2004; Doyle, 1983); second language acquisition (Rosa & Leow, 2004); human-computer interaction (Tractinsky & Meyer, 2001), science (Lodewyk & Winne, 2005), and learning from hypertext (Gall, 2006), has investigated the role of task structure. The findings across these research studies have produced mixed results. Some studies suggested that a more-structured task leads to more learning (Skehan & Foster), while other studies have found that less-structured approach produces greater student achievement (Rosa & Leow). Still other studies have found the structuring of tasks have no influence on learning (Lodewyk & Winne, 2005; Skehan & Foster, 1999).

Despite the scant research on video cases in teacher education programs, the field is not lacking for practical use. The effectiveness of video cases has been hypothesized as being dependent upon how they are used in teacher education programs (Yadav, Knezek, & Roehler, in preparation). Teacher educators use video cases in multiple ways within their teacher education courses. In other words, instructors employ video cases through various task structures in their methods courses. Thus, there are multiple ways to think about the adoption of video cases within teacher education courses. This study explored the role of video cases through two task structures – more-structured and less-structured – with preservice teachers' learning in two literacy methods courses.

The Role of Task Structure

Doyle's (1983) definition of task as being the basic instructional unit in a classroom informs this study. Using Doyle's definition, the use of video cases in a teacher education class can be seen as a task where teacher candidates develop an understanding of the teaching and learning. However, the inherent structure of the task could be constructed that gives the learner different conditions to complete the task. In this perspective, task structure would represent how the teacher educator planned the use of video cases to provide teacher candidates with rich and contextual representations of problems and dilemmas that may be encountered in the field of teaching. Lodewyk and Winne (2005) stated that "tasks can be characterized along a continuum from well-structured to ill-structured" based on Frederiksen's (1984) argument about problems being well-structured and ill-structured. Lodewyk and Winne defined well-structured tasks as those with straightforward operations to create a product. In this study task structure is

operationalized as the implementation of video cases by changing the structure of the task from more-structured (i.e., more well-structured) to less-structured (i.e., more illstructured) for preservice teachers to examine the literacy instruction occurring in the video case(s). To date, there has been little empirical research on the influence of task structure in preservice teachers' learning from video cases.

Research Project

This research project investigates the influence of two task structures - morestructured and less-structured – on teacher candidates' learning in a literacy methods course and their perceptions about their own learning from the two task structures. A more-structured task in this study is operationally defined as scaffolding preservice teachers' use of video cases by providing them with advance organizers (in terms of literacy concepts) that they could use to examine literacy instruction occurring in the video case(s). With this implementation of video cases preservice teachers were also provided with a list of pre-selected video clips from the case from which they could select clip(s) to explore. While for the less-structured task preservice teachers were not provided with any advance organizers or list of clips, but rather just the video case of literacy instruction. The research occurred in two elementary education literacy classes taught by two different instructors at a large mid-western university. Sixteen preservice teachers, eight from each of the two classes, participated in this research. Participants' analysis of video vignettes, classroom observations, written artifact reviews, and survey formed the main data source.

Research Questions

This study explores the impact of task structure (i.e., more-structured vs. lessstructured) on teacher candidates' learning in a literacy methods course and whether teacher candidates transferred teaching principles from their use of video cases to other teaching situations presented via video vignettes. It also examines teacher candidates' perceptions of the role of video case task implementation with respect to a literacy methods course.

The research question addressed in this study is whether task structure had an influence on preservice teachers' learning of literacy instruction from video cases. Specifically, this study examines:

- Does task structure that varies the level of scaffolding influence preservice teachers' learning with video cases as measured by their ability to analyze videos of classroom literacy teaching?
- 2. Does task structure that varies the level of scaffolding influence preservice teachers' ability to generalize their learning from video cases to new exemplars of teaching reading and writing as measured by analysis of video vignettes?
- 3. What are preservice teachers' perceptions on the use of video cases through different task structures?

CHAPTER 2

Literature Review

The Case for Case-Based Instruction

Case-based instruction is over a century old. It dates back to Christopher Columbus Langdell in 1870 (Shulman, 1986; Williams, 1992). Langdell, who was in the law profession, believed that the best way to study law was by examining actual legal situations (cases) and "that understanding, in turn, was best developed via induction from a review of those appellate court decisions in which the principles first took tangible form" (Garvin, 2003, p. 58). Langdell advocated the use of case method in legal education to help students of law develop diagnostic skills in a field that is continuously changing, complex, and ill-structured (Garvin, 2003; Shulman, 1986).

At the time, it was suggested that the use of cases would prepare students for the real world of practice. The case method was viewed as a compromise between the two existing methods of training lawyers – apprenticeship in a private law firm and learning through the lecture method – as it was more consistent than apprenticeship and more focused on practice than the lecture method. Originally a compromise, the case method became a new way of teaching legal education (Williams, 1992). The use of case-based instruction has also been used within other professional fields, such as in medicine and business, to educate or train professionals to work in complex and ill-structured domains (Williams, 1992).

Cases in teacher education. Teaching, with its dilemmas and uncertainties, is a classic example of a complex and ill-structured domain. Kleinfeld (1988) stated that teaching involves "not one well-defined issue but many ill-defined issues, intertwined

like the fibers of a thick rope" (p. 9). Many prospective teachers feel unprepared to teach when they begin their student teaching experience and in their initial years of teaching. They often mention the lack of ample opportunities to observe experienced teachers during their teacher preparation program (Teale, Leu, & Labbo, 2002). Yet, no easy solutions exist to the challenge of teacher candidates spending more time with capable teachers. Cases, however, can provide teacher candidates with opportunities to view authentic teaching dilemmas and practices and wrestle with the decision making that teachers face.

Cases may be a more effective medium than textbooks for illuminating the complex nature of teaching because they provide teacher candidates with realistic contextual information to help them "think like a teacher" (Koehler, 2002; Shulman, 1992). Case-based instruction has been espoused by teacher educators as a way to foster preservice teachers' pedagogical understanding and development of pedagogical content knowledge (Koehler; Lundeberg, 1999; Merseth, 1999). Cases allow preservice teachers to apply their theoretical knowledge to practical situations in a supportive environment without concerns regarding the impact of their actions on students. Cases afford such benefits by allowing for greater opportunities for analysis, reflection, and critical thinking (Lampert & Ball, 1998; Sykes & Bird, 1992). The use of cases can help deepen preservice teachers' understanding of the subject matter, and develop a repertoire of pedagogical practices (Merseth, 1993, Shulman).

The issues related to the use of cases within teacher education program raise many questions for the field: (1) How do teacher educators prepare preservice teachers for the real world of practice?; (2) How do preservice teachers acquire the knowledge of

subject matter, pedagogy, pedagogical content knowledge, knowledge of the learner, and have flexible access to these systems of knowledge?

Video-cases in teacher education. Traditionally, cases in education were written narratives of classroom situations. A more recent form of case-based approach in teacher education entails integrating rich and authentic video cases of teaching practices. Video cases potentially offer more authentic contextual representations of classroom events than do written narrative cases. Video cases capture the events of a classroom as they occur simultaneously, allowing one to feel as if they have entered the classroom (Richardson, 1999). This allows teacher candidates to come closer to reality and enables a sense of being situated within the classroom context. Thus, video cases offer opportunities to engage in a vivid and unfiltered examination of teaching and learning, enabling preservice teachers to "enter" otherwise inaccessible classrooms (Hughes, Packard, & Pearson, 2000; Oliver, Hughes, Norman, Pearson, Roehler, Ferdig, et. al., 2001, Yadav & Koehler, 2005).

Many researchers have suggested that using video cases in teacher education programs is beneficial to students who have an underdeveloped view of teaching and tend to inappropriately link their prior student experiences in their K-12 education with their beliefs of teaching (Lampert & Ball, 1990; Richardson, 1999). Koehler (2002) examined learning afforded by two hypermedia environments for pre-service teachers to help them understand measurement pedagogy in elementary classroom. One hypermedia tool used cases as episodes to highlight big ideas of the domain, whereas in the other hypermedia cases were used as narratives to tell stories of a classroom. The author assessed learning on a computer at three different times: before participants used the hypermedia tool,

within two days after their last use of the hypermedia tool and six weeks after their last use of the hypermedia tool. The learning assessment consisted of two interviews using classroom video to help bring out participant's knowledge of measurement instruction. The results indicated that that the measure of knowledge acquisition about mathematics of measure and teaching norms were not much different between the two conditions. The results, however, suggested that "narrative enhanced hypermedia environment generally afforded greater opportunity for developing orchestrated knowledge and putting knowledge to use" (p. 179).

Video cases have additional benefits of allowing preservice teachers to observe multiple classrooms and provide multiple opportunities for preservice teachers to develop rich understandings of teaching and learning in classrooms (Hughes, Packard, & Pearson, 2000; Wang & Hartley, 2003). Since video cases are situated in the context of particular classroom settings, they have the capability of "transporting students to settings and dilemmas they would be unlikely to experience directly" (Shulman, 1992, p. 27). Within these captured classrooms, preservice teachers can view teaching episodes and then discuss, analyze, and interpret what they see. Video cases also offer a shared experience and common ground around which teacher candidates and teacher educators can center their conversation for deeper understanding of classroom practice. Through use of video cases teacher candidates have opportunities to discuss the teaching approaches used in the cases with teacher educators and get multiple perspectives from other students in the class as well.

The Case for Literacy

A robust domain for studying case-based learning is literacy instruction (Kinzer & Risko, 1998). Literacy is an important content area in K-12 schools in the United States, which increases the importance of studying both its teaching and learning in teacher education programs. Recent federal policy has increased the value of literacy in teaching and learning evident by *No Child Left Behind* (NCLB, 2002) Act that mandated all students in grades 3-8 be tested annually in literacy. NCLB also stipulated that all children are to be reading at grade level by 2014. Given literacy's critical role in K-12 schools making Adequate Yearly Progress (AYP), the examination of literacy teaching in both K-12 schools and institutions of higher education, in terms of preparing teacher candidates, takes on increased importance (NCLB).

Snow, Burns, and Griffin (1998) in the National Academy of Education Commission on the Preventing Reading Difficulties in Young Children highlighted the process of learning to teach reading and writing and describe it as a challenging enterprise. They stated that one of the challenges has been the field of education's inability to teach reading to children. Specifically, a large number of children who have the capability to read, given adequate instruction, are not doing so, highlighting that the instruction available to them is not appropriate (Snow, Burns, & Griffin; see also Lyon, Fletcher, Shaywitz, Shaywitz, Torgesen, Wood, et al., 2001). Snow and colleagues point out that students make adequate progress in classrooms where teachers use effective teaching practices and appropriate materials. Therefore, according to some scholars, the "nature and quality of classroom literacy instruction are a pivotal force in preventing reading difficulties in young children" (Snow, Burns, & Griffin, p. 223). In further

illuminating the critical nature of literacy, Pianta (1990) highlighted that poor instruction in reading during students' early grades may have long term effects. Thus, adequate preparation of teachers in literacy instruction plays a significant role in preventing reading difficulties in young children. This is supported by Ferguson (1991, as cited in Snow, Burns, & Griffin) who found that every dollar spent on preparing teachers resulted in greater achievement gains than any other resource.

Goodlad (1997) indicated that most primary-grade teachers take one or two courses in the teaching of reading, which is only enough to give them a simplistic view of reading instruction. And, this preparation has been argued to be isolated from the context of a classroom, with Kagan (1992) stating, "university courses fail to provide novices a realistic view of teaching in its full classroom/school context" (p. 162). Therefore, there is a pressing need for more and better teaching of literacy to preservice teachers and having them look at crucial aspects of teaching and provide them with opportunities to see teaching in authentic contexts.

Video Cases in Literacy Instruction

Literacy itself provides a rich domain to study preservice teacher learning and there has been an extensive development, as well as use of video cases, within the field of literacy. This is highlighted by a number of video case-based software and hypermedia environments developed at various institutions for use in elementary education courses, such as Case Technologies to Enhance Literacy Learning (CTELL), Reading Classroom Explorer (RCE) and Interactive Video Analysis Neighborhood (IVAN). However, research is lagging behind the practice of using video cases to prepare teacher candidates to teach the process of reading and writing.

There has been limited research on the impact of video cases on preservice teachers' conceptions of literacy instruction. Hughes, Packard, and Pearson (2000) investigated how Reading Classroom Explorer (RCE), a hypermedia literacy video-case system, would enhance preservice teachers' views of reading instruction. The authors examined the extent to which students used RCE as a resource in their learning and analyzed whether RCE became a part of students' reflections about teaching reading. They found that of the 14 participants who used RCE, five utilized opportunities for future advantage, seven used RCE only as a resource for their assignment, and two students did not use RCE even when assigned. This suggested that most preservice teachers used the video cases as an information source like textbooks.

Yadav, Knezek, and Roehler (in preparation) found that when Reading Classroom Explorer (RCE) was used as an integral part of a literacy methods course it influenced preservice teachers' teaching stance. The use of RCE in the experimental classroom led to a statistically significant difference between experimental and control groups in changing preservice teachers' perspective of literacy instruction towards adopting a more constructivist approach. On the other hand, when RCE was used merely as a supplement and was not well-integrated with the course curriculum, it did not impact teacher candidates' approach to teaching literacy. This research suggests merely implementing video cases into teacher education curriculum does not guarantee their effect on preservice teachers' learning. How video cases were used and organized within the literacy course curriculum affected preservice teachers' view of literacy instruction.

In another study, Phillips, Koehler, Yadav, Zhang, and Rosaen (2005) examined the extent to which video-case experiences helped preservice teachers develop knowledge

about literacy instruction in two literacy methods courses. The experimental group used a video case-based software called IVAN (Interactive Video Analysis Neighborhood) to examine teaching practices while the control group did not use video cases in their literacy course. The authors used preservice teachers' analysis of video vignettes of actual classroom situations to measure their knowledge of reading instruction. The experimental group outperformed the control group on the number of literacy instruction strategies mentioned during analysis of the video vignettes. The use of video cases provided preservice teachers with opportunities to observe, analyze, and reflect on actual teaching practices. These results suggest that video cases have the potential to bridge the connection between theory and practice of literacy instruction.

These studies underscore video cases' potential to provide preservice teachers with rich and contextual representations of problems and dilemmas that will be encountered in the field of teaching. The research by Phillips, Koehler, Yadav, Zhang, & Rosaen (2005) highlighted the ability of video cases to illuminate both practical and theoretical principles. The research by Yadav, Knezek, and Roehler (in preparation), on the other hand, demonstrated that well-integrated use of video cases may impact preservice teachers' view of teaching and learning.

The evidence in support of case-based instruction within teacher education has started to grow within various subject matters, including mathematics (see Friel & Carboni, 2000; Koehler, 2002), science (see Abell, Cennamo, Anderson, Bryan, Campbell, & Hug, 1996), and literacy (see Schrader, Leu, Kinzer, Ataya, Teale, Labbo, & Cammack, 2003; Yadav & Koehler, 2005). While the field has begun to investigate the role of video cases in teacher candidates' understanding of teaching and learning, one

component significantly lacking is the exploration of video cases with respect to its implementation. Andrews (2002) highlighted that as the evidence for case-based instruction in teacher education has grown, the focus has shifted from "Will we use cases" to "How will we use cases?" (p. 28).

The Role of Task Structure

Doyle (1983) indicated that the focus of education has moved from general characteristics of teaching, such as the amount of time spent to lecture, praise, and ways of providing feedback, towards cognitive processes of students in academic tasks. Doyle stated that the term "task" focuses on three aspects of students' work:

(a) the products students are to formulate, such as an original essay or answers to a set of questions; (b) the operations that are to be used to generate the product, such as memorizing a list of words or classifying examples of a concept; (c) the "givens" or resources available to students while they are generating a product, such as a model of a finished essay supplied by the teacher or a fellow student (p. 161).

Doyle (1983) conceptualized tasks into four categories: (1) memory tasks that involve students reproducing information previously encountered; (2) procedural or routine tasks, in which students apply a general algorithm to produce answers; (3) comprehension or understanding tasks, which draw attention to conceptual understanding rather than memorizing; and (4) opinion tasks that expect students to state an opinion. Doyle argued that "tasks influence learners by directing their attention to particular aspects of content and by specifying ways of processing information" (p. 161). He emphasized that the impact of task is clear when comparing tasks that entail processing information for surface features versus tasks that require processing information for deeper meaning. A range of studies have researched the role of task in areas including, reading (Barr, 1975; Butler & Carter, 2004; Doyle, 1983); second language acquisition (Rosa & Leow, 2004); human-computer interaction (Tractinsky & Meyer, 2001); and math (Stein, Grover, & Henningsen, 1996).

Rosa and Leow (2004) investigated the impact of individuals' exposure to different computerized task conditions on their ability to recognize and produce target structures for second language acquisition (including already encountered old exemplars and new exemplars not encountered during the experimental phase). They suggested that different tasks have the potential not only to automate already internalized information, but also to help learners focus on formal aspects of second language and maximize information processing. The authors differentiated the tasks in terms of explicitness (i.e., providing explicit feedback, where learners were provided with rules underlying the concept versus only right and wrong feedback); pretask (i.e., giving the learners grammatical information only before and/or during the task); and essentialness (i.e., priming the learners to focus their attention on the target structure). Learning was measured by a recognition task and a production task. The recognition task included forced choice fill-in-the-blank questions, whereas the production task asked the participants to complete sentences by filling in an appropriate verb. The authors reported significant differences between the control condition (task given as sentence-reading activity) and the experimental condition (task given as problem-solving puzzle task) in favor of experimental condition for the learners' ability to recognize and produce old as well as new exemplars. The results from this study suggested that different parameters of a task can be manipulated to promote learning. The more open-ended (i.e., unstructured) puzzle task was better at fostering students' learning in second language acquisition (Rosa & Leow).

In another study, Skehan and Foster (1999) examined the impact of inherent task structure on a narrative retelling task. They had participants from an array of first language backgrounds watch an episode of Mr. Bean, a British television series, and then complete a retelling. The two selected narrative tasks represented a relatively structured task (Mr. Bean's narrative with a predictable basic sequence) and a relatively unstructured task (*Mr. Bean's* narrative with less predictable structure). The participants were randomly assigned to one of the two tasks to be completed under one of four conditions: (a) watch and tell simultaneously; (b) storyline given, watch and tell simultaneously; (c) watch first, then watch and tell simultaneously; (d) watch first and then tell. These four conditions were used to influence the processing load of the task. Results indicated that the fluency of participants' performance was strongly influenced by the degree of inherent structure of the task, with participants' in the "structured task" outperforming those in the "unstructured task." The structured task generated more fluent language with less repetitions, false starts, reformulations, and replacements. However, there was no effect of task structure on accuracy and the complexity of language produced. The inherent structure of the narrative retelling task produced mixed results for second language development with fluency found to be influenced by the task structure, while complexity of language was affected by processing load of the task. Finally, accuracy was dependent on the interaction of task and condition.

Lodewyk and Winne (2005) used well-structured and ill-structured tasks to analyze students' self-efficacy for learning and self-efficacy for performance in a secondary science class. They defined self-efficacy for performance as one's expectancy for success on a given task and self-efficacy for learning as one's ability to accomplish a

particular task. The well-structured task included advance organizers, readily accessible resources, and required straight-forward operations for constructing the products. The illstructured task provided fewer instructional cues from the teacher and required students to answer ambiguous questions with less clear means and ends. The authors found that students' self-efficacy for learning was significantly higher for the well-structured task than for the ill-structured task. The results for self-efficacy for performance also exhibited a similar trend with students in the well-structured task condition scoring higher than those in the ill-structured condition. The authors also measured student performance (achievement in the task) using a composite of students' grade on each task as marked by a scoring rubric (90%) and a 10-item multiple-choice test on main theoretical content of each task (10%). Lodewyk and Winne's findings suggest that high school science students' self-efficacy for learning and self-efficacy for performance benefited from well-structured task for the learning of science concepts. However, the type of task (well-structured vs. ill-structured) did not influence their achievement on the tasks.

Researchers have also studied the impact of tasks in the area of learning to read. For example, Barr (1975, as cited in Doyle, 1983) conducted a study to investigate the role of task in the number of errors that students made when trying to pronounce unfamiliar words in oral reading. The results indicated that the students used reading strategies that were consistent with the task used to teach reading. In addition, there has been research on task in the field of human-computer interaction (see Tractinsky & Meyer, 2001); group negotiation (see Beersma & De Dreu, 2002); and educational measurement (Baker & Herman, 1983).

The sparse literature on task structure has primarily focused on the impact of task structure on information processing and language development in the area of second language acquisition (Rosa & Leow, 2004; Skehan & Foster, 1999), science (Lodewyk & Winne 2005), and reading (Barr, 1975). The findings across these research studies have produced mixed results. Some studies suggested that a well-structured task leads to more learning (Skehan & Foster), while other studies have found that less-structured tasks produce greater student achievement (Rosa & Leow). However, studies also exist for which inherent task structure has not been found to influence learning (Lodewyk & Winne, 2005; Skehan & Foster, 1999).

Across fields there is still much to learn regarding the role of task structure on learning and performance; the impact of task structure may be dependent upon the domain. Research on the relationship between the type of task structure (i.e., wellstructured or ill-structured) and learning/performance is equivocal and needs further investigation. Exploration of role of task structure is warranted in other fields, such as teacher preparation, to investigate its impact on preservice teacher learning how to teach academic content areas. As previously discussed, some research has suggested that wellstructured tasks have a greater impact on student learning, while other research has exhibited that less-structured tasks led to greater achievement; yet, this remains virtually unexplored in teacher preparation.

Advance organizers. The research on learning from advance organizers is directly related to the idea of task, although researchers in this field use different theoretical constructs for talking about the role of advance organizers. For example, Ausubel (1968) defined advance organizers as:

appropriately relevant and inclusive introductory materials that are maximally clear and stable ... the principal function of the organizer is to bridge the gap between what the learner already knows and what he needs to know before he can successfully learn the task at hand. (p.148)

Advance organizers are provided in advance of the actual task/material to be learned to allow "scaffolding for the stable incorporation and retention of the more detailed and differentiate material that follows." (Ausubel, p. 148)

Mayer (1979) proposed three cognitive theories of advance organizers: reception theory, addition theory, and assimilation encoding theory. Reception theory postulates that learning is a function of the amount of information that a learner receives and predicts that providing an advance organizer should have no impact on learning. Addition theory, on the other hand, hypothesizes that learning occurs when the learner has existing knowledge anchors to transfer the new information to long term memory. Thus, the use of advance organizers before the learning experience should facilitate greater learning than not providing the organizers at all or presenting them afterwards. Finally, the assimilation encoding theory assumes that learning happens when the learner actively integrates and assimilates the new information with his/her existing knowledge structures. The assimilation encoding theory predicts that the use of advance organizers will allow for a broader learning outcome, which enables learners to transfer their learning to new situations.

Mayer (1979) stated that a problem existed with research involving advance organizers. He indicated that participants in the experimental and control conditions do not receive identical information; thus, any differences that arise in the post assessment may be due to the content provided by the advance organizers rather than the tool itself. Mayer further highlighted that another problem with advance organizer research has been

the use of recall measures to assess the transfer of learning. The results from these studies measure "amount retained" rather than conceptual understanding.

Mayer (1975) investigated the role of advance organizers in learning a computer programming language. Students with no prior programming experience were either provided a model of a computer as an advance organizer to learning programming language or asked to learn programs without an advance organizer (i.e., no model was provided). The learning of students in the "model instruction" condition differed qualitatively from those in the non-model group. The participants who were given the model as an advance organizer performed better on interpretation of programs and programs that involved loops, while the non-model participants performed better on straightforward generation of programs. Therefore, the model instruction resulted in a better performance on the far transfer task that required application of knowledge to novel situations (i.e., interpretation of programs and looping programs), while the students in the control group performed better on items requiring application of ideas on similar tasks (i.e., generation of similar programs).

Calandra and Barron (2005) examined the use of multimedia advance organizers for a task that involved locating information in a website about the Holocaust. The participants accessed the website without any advance organizers (control) or with one of the two types of advance organizers (i.e., text-only or text + graphic). The text-only advance organizers were worded at a higher level of abstraction than the material presented in the website, while the text + graphic organizers provided text-only organizers along with graphics representing the events described in the abstractions. The authors used a multiple choice test to measure change in knowledge about the Holocaust.

Results indicated that there was no significant difference in growth in knowledge about the Holocaust between the three groups (i.e., control, text-only and text + graphic advance organizers). Thus, while positive results have been found with using advance organizers, it has not always been replicated across contexts.

There has also been research in hypermedia environments along the same lines as the role of advance organizers and task structures in accessing information. Brinkerhoff, Klein, and Koroghlanian (2001) examined the effects of overview mode on achievement, attitude, and instructional time. Brinkerhoff and colleagues developed three versions of the hypertext: structured overview mode (a navigational side bar with topics arranged hierarchically); unstructured overview (a navigational side bar with topics arranged alphabetically); and no overview mode (no navigational side bar). They found that structured and unstructured overview users spent a greater amount of time in the hypertext and had more positive attitudes than the users who had the no overview mode. Their results implied that providing students with structure (i.e., an overview) led to favorable attitudes towards navigating and locating information within hypertext environments.

Research on the use of advance organizers has been mixed, with some research suggesting that advance organizers play a significant role in knowledge acquisition (Ausubel, 1960; Mayer, 1975, 1976) and other research suggesting that advance organizers do not impact learning (Calandra & Barron, 2005; McManus, 2000). The use of advance organizers, however, does lead to favorable attitudes towards completing the task. For example, Brinkerhoff and colleague (2001) found that the use of structured

advance organizers led to favorable student attitudes towards accessing information within hypertext environment.

Context for this Study

The current research base on tasks is equivocal and exists in limited domains. Previous research has shown that inherent structure (more-structured or less-structured) of a task plays a role in student performance in the areas of second language acquisition (Rosa & Leow, 2004; Skehan & Foster, 1999), reading (Barr, 1975), science (Lodewyk & Winne 2005), human-computer interaction (Tractinsky & Meyer, 2001), and educational testing (Baker & Herman, 1983). Yet, the research is unclear whether more-structured or less-structured tasks lead to better performance or greater student achievement. The impact of the task structure on student learning may be dependent upon the domain in which the research is carried out, the nature of tasks assigned to students, and the measures used to assess student performance. These unresolved issues need further examination in different contexts using diverse tasks and measures.

Despite research indicating that when students are working with a particular task structure it gives them access to cognitive processes that are necessary to perform the task (see Doyle, 1983), research is lacking on this issue with regards to video cases in teacher education. With the increasing use of video cases in teacher education, teacher educators need to more fully understand the role of task structure in video cases and how preservice teachers experience video cases within these task structures. To take advantage of the potential of video cases, it is important to determine which instructional strategies and task structures would help teacher candidates learn from video cases. Thus, an analysis of how task structure impacts teacher candidates' learning seems a logical next step to meld

task structure and video case literature and to find ways video cases can be effectively used in the teacher education program.

Since there has been no analysis of how the implementation (i.e., task structure) of using video cases impacts preservice teachers' learning and how teacher candidates experience video cases within task structures, this research project attempts to shed light on these issues. This study explores the impact of task structures (i.e., different ways of using video cases) on teacher candidates' learning in a literacy methods course and whether teacher candidates transfer teaching principles from the study of video cases to other teacher situations presented via video vignettes. It also examines teacher candidates' perceptions of the role of task structure in the use of video cases with respect to a literacy methods course.

The research question addressed in this study is whether task structure influenced preservice teachers' learning of literacy instruction from video cases. Specifically, this study examines:

- Does task structure that varies the level of scaffolding influence preservice teachers' learning with video cases as measured by their ability to analyze videos of classroom literacy teaching?
- 2. Does task structure that varies the level of scaffolding influence preservice teachers' ability to generalize their learning from video cases to new exemplars of teaching reading and writing as measured by analysis of video vignettes?
- 3. What are preservice teachers' perceptions on the use of video cases through different task structures?
CHAPTER 3

Method

Participants

Sixteen preservice teachers were recruited for this study from two elementary education literacy methods courses taught by two different instructors. Participants were volunteers, who signed up to participate in the study after a brief introduction about the research to all students in the two literacy courses. A follow up email was also sent to the two classes as a reminder to sign-up for the study. All the participants were seniors enrolled in a teacher education program at a large mid-western university. All participants were Caucasian and the group consisted of 15 females and one male. The mean age of participants was 23.06, with an age range of 20-49 years (note: excluding the participant of age 49, the mean age was 21.33). Of the sixteen participants, eight were majoring in elementary education, six in special education – learning disability, one in special education – deaf education, and one in child development. The participants were compensated monetarily for their participation.

Setting

All participants were enrolled in one of the two sections of literacy methods course at the university. The participants were enrolled in two sections of the same literacy methods course (8 in each section) – Cynthia's¹ (Literacy Class A) section 27 total students while Mallory's (Literacy Class B) had 25 students The content of each section revolved around teaching and learning in elementary English language arts (i.e., reading, writing, speaking, listening, and literature study). Each class typically occurred

¹ All names throughout the document are pseudonyms to protect the confidentiality of those involved in the research.

in a regular classroom in the College of Education within the mid-western university. The exception to this occurred during the two days of observations in which each class went to a computer lab in the college. In the computer lab, instructor assigned groups gathered around the computer and performed the activity, whereas in the classroom students sat at tables.

A literacy methods course was chosen for this study because a methods course brings together the knowledge of the subject matter and pedagogical knowledge in what Shulman (1986) described as *pedagogical content knowledge*. A methods course weaves "together knowledge about subject matter with knowledge about children and how they learn, about teacher's roles, about classroom life and its role in learning" (Ball, 1989, p. 6). Hence, a literacy methods course is not only about how reading and writing can be taught, but also how children learn to read and write.

Materials

Software. Beyond the course texts, the participants used Interactive Video Analysis Neighborhood (IVAN) as a part of their literacy methods course. IVAN is a tool developed at the mid-western university for faculty interested in using video case-based instruction. A screen shot of IVAN is provided in Appendix A. IVAN enables instructors to create a video case library which can be used to present video clips in an organized format to preservice teachers (Rosaen, Koehler, Phillips, Pardo, Yadav, & Johnson, 2005). IVAN also allows instructors to associate supporting materials, such as student artifacts, teacher commentary, and articles, with individual video clips. This provides preservice teachers with contextual information about the video case. Preservice teachers can view the video clips from the library and easily navigate the clips and other

associated materials. IVAN also enables preservice teachers to create their own cases by selecting appropriate segments of a clip(s) and dropping them on the timeline (i.e., video clip timeline). They can then easily export their work (including any commentary and thoughts they might have written about their newly developed case) as a webpage. Thus, IVAN serves as a tool to help preservice teachers to observe, analyze, and critique the complex interactions occurring in a classroom setting captured by video across a diverse array of contexts and situations.

Literacy concepts. This research project focused on two literacy concepts within the courses that form the foundation of successful literacy instruction: phonemic awareness and guided reading (Tompkins, 2006). Phonemic awareness is the ability of students to "notice and manipulate sounds of the oral language" (Tompkins, p. 115). Phonemically aware students understand that "spoken words are made up of sounds, and they can segment and blend sounds in spoken words" (Tompkins, p. 115). Researchers have indicated that there exists a clear connection between phonemic awareness and learning to read and it is a building block for learning to read (National Reading Panel, 2000). Research with phonemic awareness has shown that children who are explicitly taught to segment and blend sounds are better able to both read and spell (Adams, 1990; Yopp, 1992). Since phonemic awareness is an integral part of effective literacy instruction, it is important to understand how to prepare preservice teachers to teach phonemic awareness in elementary classrooms. And within this understanding comes the need to explore how to effectively use video cases in a preservice literacy methods course. This is imperative so prospective teachers can support children's phonemic awareness, which is suggested as essential to their success in reading and writing.

Guided reading is another essential component of early literacy program as its goal is to help students become fluent and independent readers (Tompkins, 2006). In guided reading the teacher scaffolds the reading process for struggling readers (Tompkins). The teacher acts as a coach, providing and monitoring students' reading strategies. It is important for teacher candidates to develop an understanding of how to scaffold children's reading skills and strategies for them to become independent readers. Video cases allow preservice teachers to see how teachers move through the different stages of the reading process and support student's reading.

Task Structures. In this study two types of task structures were utilized to implement the use of video cases in the literacy methods course: more-structured task and less-structured task (see Appendix B). Both task structures were designed in close consultation with the literacy methods course instructors. For the more-structured task, the teacher candidates were given advance organizers to focus their attention on particular literacy concepts within the video case(s) that were important for understanding the case(s). These advance organizers included secondary literacy ideas that would illustrate the major literacy concept. For example, for the guiding reading more-structured task teacher candidates were given a list of different concepts (e.g., tapping prior knowledge, predicting, monitoring, summarizing, etc.) that the teacher candidates could use to learn about reading skills and strategies to help children become fluent and independent readers. Similarly, in the more-structured task for phonemic awareness the teacher candidates were given different ways (e.g., concepts about print, phonics concepts, skills, generalizations, spelling, etc.) that the teacher was providing children with opportunities to crack the alphabetic code (see Appendix B for detailed list

of advance organizer concepts provided in more-structured task). Thus, in the morestructured task the teacher candidates had a framework of literacy ideas that they could use to learn about the main literacy concept (i.e., Phonemic Awareness or Guided Reading). This task structure asked teacher candidates to apply standard literacy ideas to generate a video clip timeline that illustrated teaching and learning of the main literacy concept (i.e., Phonemic Awareness or Guided Reading).

The second task structure was less-structured; preservice teachers were expected to recognize information they had acquired earlier in class and apply this information to the teaching situations depicted in the video cases(s). The less-structured task did not provide teacher candidates with any advance organizers to guide their learning of literacy concept(s) and the exploration of the video case(s). The less-structured task required teacher candidates to make broader connections and transfer ideas that they encountered in their course and readings to the video case(s).

Both the more-structured and less-structured tasks could be categorized as comprehension tasks as they focused on generalization and transfer across scenarios (Doyle, 1983). In both task structures, preservice teachers were expected to examine beyond the surface features (e.g. issues about classroom management) of a video case and demonstrate understanding of the conceptual structures (i.e., what is the teacher trying to accomplish in terms of student learning). However, the difference between the two task structures was the amount of support provided to the teacher candidates through the use of advance organizers. The advance organizers provided information regarding what was important to view, analyze, and critique in the video case(s). During the tasks the teacher candidates worked in small groups of four, and the instructor remained

removed except answer technical questions. In both task structures the participants had the same video case(s) library to work within IVAN.

Video vignettes. Video vignettes were used during the pre- and post- assessment aspects of the study (see Figure 1 and Table 1 for a depiction of data collection procedure). The preservice participants viewed the same clips both before and after they experienced IVAN with the particular literacy concept (i.e., phonemic awareness and guided reading).

Figure 1: Data Collection Sequence



 Table 1: Data Collection

	Session 1 Phonemic Awareness (1 st Pre)	Session 2 Phonemic Awareness (In-class)	Session3 Phonemic Awareness (1 st Post)	Session 4 Guided Reading (2 nd Pre)	Session 5 Guided Reading (In-class)	Session 6 Guided Reading (2 nd Post)
Class A	Phonemic awareness clips + Video vignette protocol	Using more- structured task	Phonemic awareness clips + Video vignette protocol + Post- interviews + Survey	Guided reading clips + Video vignette protocol	Using less- structured task	Guided reading clips + Video vignette protocol + Post- interviews + Survey
Class B	Phonemic awareness clips + Video vignette protocol	Using less- structured task	Phonemic awareness clips + Video vignette protocol + Post- interviews + Survey	Guided reading clips + Video vignette protocol	Using more- structured task	Guided reading clips + Video vignette protocol + Post- interviews + Survey

A total of six video vignettes were selected for this study in close consultation with the literacy instructors (See Appendix C for a description of the six video vignettes used in this research project). Three of these video vignettes exhibited literacy instruction involving phonemic awareness; the other three depicted guided reading lessons. Four of the video vignettes (two each for phonemic awareness and guided reading) were not a part of the video case(s) that the participants worked in the literacy course, while two vignettes (one for phonemic awareness and one for guided reading) were part of the video case(s) that participants used in their literacy course for exploration of IVAN. For example, the three phonemic awareness video vignettes were chosen so that one video clip was from IVAN library; one video clip was similar to the video clip from IVAN library (i.e., served as near transfer clip); and the third clip exhibited teaching of phonemic awareness occurring in a complex classroom situation (i.e., serving as far transfer clip). A similar situation occurred with the three guided reading vignettes.

These video clips (i.e., IVAN clip, near transfer clip, and far transfer clip) were utilized to examine whether preservice teachers were able to apply their knowledge to an analysis of classroom situation as presented in the video vignettes. Participants had an opportunity to see the IVAN video clip during the in-class activity and were expected to easily apply knowledge to the literacy instruction occurring in the IVAN clip. The near transfer clip presented the same literacy ideas as the IVAN clip but in a different classroom situation and participants were expected to be able to discuss those in the video vignette protocol. The far transfer clip was of a more complex classroom situation than participants had experienced in their in-class activity and included several potential

relevant literacy concepts for them to discuss. The far transfer clip involved the teacher teaching multiple literacy ideas and there was a lot going on in the classroom. *Measures*

This study used interviews, observations, and document review of student work as alternatives to performance data, such as standardized objective tests because these methods allow access to preservice teachers' cognition and understanding of literacy concepts. Thus, the measures go beyond student's ability to remember facts and figures and assess their conceptual understanding and ability to transfer their understanding to different teaching contexts.

Video vignette protocol. During the video vignette protocol, participants were interviewed using a semi-structured protocol (see Appendix D). Participants were interviewed both before and after their work in their literacy methods course with IVAN involving a particular literacy concept (i.e., phonemic awareness or guided reading; see Figure 1). This protocol was used to assess participants' learning by examining their analysis of video vignettes. As previously described, a total of six video vignettes (three each for phonemic awareness and guided reading) were used to elicit teacher candidates' descriptions of the literacy instruction occurring in each clip. The interview questions asked teacher candidates to analyze the video vignettes, summarize aspects of the case that they thought were important to understanding it, and offer alternative ways to teach the lesson occurring in the video vignette. The use of the video vignette protocol in the pre- and post- sessions for each task structure served as a measure of change in preservice teachers' ability to analyze and critique video clips based on the two task structures. This measure assessed whether preservice teachers were able to abstract general principles

from the use of video cases, apply those principles, and then transfer them to other teaching situations. The interview protocol for each participant was audio-taped and later transcribed.

Post-interviews. Each participant also participated in a post-interview. Postinterviews were used to gauge participants' perceptions on the use of video case(s) through different task structures and asked them to compare the two tasks. The postinterviews occurred after each use of video case(s) in the literacy class through morestructured or less-structured task. During these post sessions participants were asked about their thoughts and feelings on the use of video case(s) using that particular task structure (more-structured or less-structured).

Survey. The participants also completed a case perception survey (see Appendix E) to assess their perceptions of the impact of using video cases on their learning of the two literacy concepts and the task structure (i.e., more- or less-structured) used for each IVAN activity. This survey assessed what preservice teachers thought about the use of video cases in the literacy methods course and whether it impacted their participation, learning, and critical thinking skills. Specifically, the case perceptions survey measured teacher candidates' perceptions of their learning, engagement, and frustration.

The survey was adapted from previous research conducted by Miles, Biggs, and Schubert (1986) and from a recent national survey by Yadav, Lundeberg, DeSchryver, Dirkin, Schiller, and Herreid (2006), which investigated how faculty categorize their experiences in using case based science teaching. The survey in the current study contained likert scale items that asked participants to rate themselves on the scale of one to five, with one being strongly agree and five meaning strongly disagree. It was

composed of following categories with sample statements in parenthesis: learning ("The IVAN video clips brought together material I had learned in several other education courses."), engagement ("I took a more active part in the learning process when we used the IVAN video clips in the class."), and frustration ("I was frustrated by ambiguity that followed when using the IVAN video clips."). Internal reliability of the survey (α =0.75) and each factor was assessed using Cronbach's alpha (see Table 2).

 Table 2: Reliability of Survey Items

Factor	Cronbach's Alpha
Overall	0.75
Learning	0.88
Engagement	0.83
Frustration	0.70

Classroom observations. Participants' classroom activity with IVAN was observed. The researcher took field notes to complement the analysis and interpretation of the data gathered from video vignette protocol. Each class was observed twice for an hour by the researcher and an assistant. Each observer took notes recording the conversation among the participants' work groups and their activity on the computer as they worked with IVAN. During the observation only the two groups within each classroom that contained participants were observed.

IVAN artifacts. During the participants' work in groups in their class use of IVAN they created a timeline of video clips. This timeline then served as a data source to inform the research how the task structure influenced use of IVAN. The instructions for creating the video clip timeline for each literacy concept included having the participants create a timeline that exhibited the teacher in the video case(s) teaching the literacy concept (see Appendix B).

Procedure

This study focused on the use of video cases (in this case IVAN) using two different task structures in a literacy methods course. Counter-balancing for the content (i.e., phonemic awareness and guided reading) and use of task structures protected against bias towards a particular content or instructor. The basic design of this study is depicted in Table 3. Cynthia's class (i.e., literacy methods course A) used the morestructured task for phonemic awareness activity and the less-structured task for the guided reading activity. In contrast, Mallory's class (i.e., literacy methods course B) switched task structures for the two contents; with less-structured task being used for phonemic awareness and more-structured task being used for guided reading.

Table 3: Research Design

	Phonemic Awareness (Week 7)	Guided Reading (Week 12)
Cynthia's Class	IVAN using more-structured task	IVAN using less-structured task
Mallory's Class	IVAN using less-structured task	IVAN using more-structured task

To assess teacher candidates' learning, this study used analysis of video vignettes during participant interviews. Based on Copeland and Decker (1996), this study utilized specific interview methods to provoke participants to provide verbal descriptions of meaning they attributed to the video vignettes they observed. The format for data collection was depicted in Figure 1.

Data were collected using semi-structured interviews through pre- and post- test format (see Appendix D for specific interview protocol). The pre- and post-video vignette protocol was structured around the use of IVAN in the literacy course. The interviewer took a non-intrusive stance so as not to give participants any clues regarding what to discuss about the video vignettes and merely asked for clarification and/or elaboration during responses. During the pre- and post-video vignette protocol, participants viewed three video vignettes of reading instruction and described their perspectives of the depicted classroom, teaching methods used by the teacher for reading instruction, and their analyses of its effectiveness given the context. The researcher selected the video vignettes based on their representation of the content covered in the succeeding class activity and in consultation with the instructors for the literacy course. For example, when the video case(s) were used to cover guided reading, the video vignettes in the preand post- video vignette protocol focused on guided reading. Likewise when the class activity covered phonemic awareness, the video clips in the pre- and post- protocol session had an emergent literacy focus.

All participants viewed the same video clips during the pre- and post- sessions (see Table 3 for a depiction of the data collection procedure). For example, participants in the pre- and post-session for phonemic awareness (sessions 1 & 3) viewed the same video clips in both sessions. Similarly, for the guided reading sessions (session 4 & 6) the participants viewed the same clips. During sessions 3 and 6, participants also completed the case perceptions survey (see Appendix D) and the post-interviews to gauge their perceptions of the role of task structure in the use of video cases. In addition, participants compared the two task structures on the survey as to which task structure they thought was better at using video cases.

During the in-class session (sessions 2 and 5), participants were assigned to groups of four as they worked with IVAN. There were a total of four groups of teacher candidates, two each in literacy methods section. Participants were observed during this group activity to gain insight into how they experienced the task structure. The

participants groups in both task structures were instructed to develop a timeline of segment(s) from video clip(s) highlighting aspects of literacy instruction and reflect on why they thought that the segments of clip(s) they selected illustrated important aspects of literacy instruction. This was used as a data source to examine how teacher candidates interpreted the task demands and how that influenced accomplishing the task itself. *Data Analysis*

The data collection mechanisms (video vignette protocol, post-interviews, case perceptions survey, observational notes, group work and timeline) produced a rich data set for analysis. All sources of data were reviewed and analyzed together; however the video vignette protocol was the primary focus of analysis, with other sources of data (observational notes, group work, and timeline) serving a supportive role. Participants' verbal descriptions of the video vignettes (i.e., video vignette protocol) were transcribed and read multiple times to get a holistic view of the content and to identify themes and sub-themes. Participants' pre- and post- verbal descriptions of the video vignettes were examined for changes in the literacy concepts that may have arisen, as a result of the task structure. In particular, the video vignette protocol was used to trace changes in preservice teachers' thinking about the literacy concept that was being taught using video cases through a particular task structure (i.e., more-structured vs. less-structured). Participants' descriptions of the video vignettes were helpful in measuring the change in the conceptual and pedagogical understanding of phonemic awareness and guided reading and the role that task structure might have played in the change (or the lack of a change).

Video vignette protocol analysis. Two types of analyses were conducted with the participants' examination of the video vignettes (i.e., video vignette protocol). The first analysis focused on the literacy concepts participants raised in their descriptions of the teaching and learning occurring in the video vignettes. All participant transcripts from the video vignette protocol were imported as text files in qualitative software called nVivo.

This research utilized a grounded theory approach to analyze and code the video vignette protocol (see Strauss & Corbin, 1998). Grounded theory was used to provide the researcher with objectivity and sensitivity towards the data (Strauss & Corbin). As Patton (2002) stated, "Grounded theory is best understood as fundamentally realist and objectivist in orientation, emphasizing disciplined and procedural ways of getting the researcher's biases out of the way but adding healthy doses of creativity to the analytic process" (p. 128). Strauss and Corbin highlighted the importance of objectivity and sensitivity stating, "Objectivity enables the researcher to have confidence that his or her findings are reasonable, impartial representation of a problem under investigation, whereas sensitivity enables creativity and the discovery of new theory from data" (p. 53).

During the coding care was taken to avoid coding any instances where participants merely mentioned a concept but failed to elaborate on their ideas when asked to do so. Furthermore, any wrong mention of a literacy concept by the participants when analyzing the video vignettes was not included in the analysis. For example, a participant raised the idea of "shared reading" when the teacher was actually conducting a guided reading lesson in the video vignette being analyzed. Thus, the participant's analysis of the guided reading lesson was incorrect and the "shared reading" theme discussed by the participant was excluded from the analysis.

The qualitative coding of the interview data involved a "detailed line-by-line analysis", which was used "at the beginning of a study to generate initial categories and to suggest relationship among categories" (Strauss & Corbin, 1998, p. 57). These initial categories consisted of approximately 200 themes, which were simultaneously narrowed and condensed into five overarching conceptually based categories: (1) Advance Organizer Concepts (actual literacy concepts provided as advance organizers in the structured task for the project; these concepts were also most relevant to the literacy instruction occurring in the video vignettes), (2) Additional Literacy Concepts (either phonemic awareness or guided reading literacy concepts discussed by participants that were not available through their advance organizers, respectively), (3) General Literacy Ideas (literacy ideas not connected to one of the two literacy topics, i.e., phonemic awareness or guided reading), (4) Classroom Management (classroom management issues); and (5) Classroom Learning (ideas about classroom learning). Table 4 provides a detailed description of the five overarching categories (see Appendix F for a list of subthemes). While the large categories were used for data analysis, actual coding of raw data was done at the level of sub-categories or themes.

For the purposes of reliability, a second rater coded one-third of the transcripts for these five larger categories without any knowledge of which conditions participants belonged. Overall, the inter-rater agreement using the above coding scheme for the video clips was 90.72%. When there was a difference in coding, the original rating was used, in order to be consistent with the remainder of the data (which was coded by only the first rater).

Category (Dependent Variable)	Operational Definition	Example	
Advance Organizer Concepts	These are the literacy themes that were provided to participants in the more- structured task as advance organizers.	"[Teacher] showing them how we turn the pages so we read from front to back not back to front and we read from left to right, not right to left." This concept about print was provided in the phonemic awareness structured task.	
Additional Literacy Concepts	These are literacy themes that were relevant to the two literacy concepts used in this study (i.e., phonemic awareness and guided reading), but were not available via the advance organizers.	"I think it would have more challenging not challenging but bigger words for them to rhyme with, like two syllables."	
General Literacy Ideas	There are literacy themes which are not relevant to one of the two literacy concept (i.e., phonemic awareness and guided reading), but are general ideas about the literacy instruction.	"[The teacher] foster an enjoyment for reading, which will helpfully promote them to go home and read a book on their own"	
Classroom Learning Ideas	These are ideas about the culture of learning in the classroom and how the teacher involves students in the learning process.	"I think she was keeping the students engaged, which was important. Allowing them to participate, maybe allow them to feel that they were helping to read the story."	
Classroom Management Issues	These are issues about classroom management and about student behavior in the classroom.	"I thought she was a good model and she had them control [of the class] the whole time and she just had that way that prevent things from getting out of hand the whole time."	

Table 4: Description of Five Categories

As previously discussed, participants viewed three video vignettes during the video vignette protocol for each of the two literacy concepts (phonemic awareness and guided reading). The video vignette protocol data were coded for each participant by the

video clips used for the vignettes (see Table 5). Each cell in Table 5 represents the number of concepts (for each of the five categories: Advance Organizer Concepts, Additional Literacy Concepts, General Literacy Ideas, Classroom Management Issues, Classroom Learning Ideas) that were raised by a participant for a particular video vignette (IVAN clip, near transfer, and far transfer). A similar table was used for each participant for the four sessions to record the number of concepts that they brought up in the video vignette protocol (see Table 5). This analysis was intended to shed light on which task structure was better suited to transfer ideas about literacy instruction to one of the video vignettes.

Table 5: Number of	f concepts durir	ig the video vi	gnette protocol	for one	participant.

	Advance Organizer Concepts	Additional Literacy Concepts	General Literacy Ideas	Classroom Management Issues	Classroom Learning Ideas
Total	10	25	1	5	7
IVAN clip	7	4	1	0	3
Near Transfer	3	11	0	2	0
Far Transfer	0	10	0	3	4

These five descriptive categories were then used to conduct a quantitative analysis. Statistical analyses were performed on the resulting counts of each of the categories to further illuminate any differences between task structure, clip, class, and literacy concept. First, a Multivariate Analysis of Co-Variance (MANCOVA) was performed to examine participants' performance on the number of ideas related to literacy raised in the video vignette protocol using participants' pre-scores as covariates. MANCOVA was conducted to reduce the Type I error rate and acknowledge the relationship that might exist between the dependent variables. Further, as Field (2005) highlighted MANCOVA has "greater power to detect an effect. Because it can detect whether groups differ along a combination of variables" (p. 572). Field (2005) argued that it is not a good idea to put all the dependent variables together in the model unless there is a good theoretical or empirical reason for doing so. Since first three categories (i.e., advance organizer concepts, additional literacy concepts, and general literacy ideas) are about literacy, hence they were used together as dependent variables used in the MANCOVA model. Thus, MANCOVA was used to analyze the effects of the factors, task structure, clip, topic and classroom on the number of advance organizer, additional literacy and general literacy concepts discussed by participants in the video vignette protocol.

Field (2005) highlighted that the traditional statistical approach is to follow a significant multivariate analysis with separate univariate analysis on each of the dependent variables. Based on the statistical effects, post univariate analysis of co-variance (i.e., ANCOVA) was completed on each of three literacy dependent variables (i.e., advance organizer, additional literacy and general literacy concepts). The univariate analysis was conducted using Bonferroni correction to control the family wise error rate. A univariate analysis of covariance was also conducted for the dependent measures of classroom management and classroom learning treating task structure, topic, classroom, and clip as factors.

Participants in the more-structured task were provided with a list of literacy concepts (i.e., advance organizers) they could use to examine literacy instruction occurring in the video case(s). Thus, it was hypothesized that participants who used the more-structured task in the phonemic awareness activity (i.e., Cynthia's class; see Table 1) or the guided reading activity (i.e., Mallory's class; see Table 1) would be better at

identifying the concepts in the video vignettes that were presented to them via advance organizers. Participants engaging in the less-structured task, on the other hand, would be better at eliciting additional literacy concepts and general literacy ideas. It was hypothesized that the less-structured task would result in participants' bringing up more additional literacy concepts and general literacy ideas because the task structure did not provide participants with a list of literacy concepts and potentially influence what issues participants could examine within the video case(s).

It was also hypothesized that the advance organizer concepts provided in the more-structured task would be better identified by participants for the IVAN clip as compared to the far transfer clip. Since participants had experienced the IVAN clip in their in-class activity, they were more likely to identify the advance organizer concepts. On the other hand, participants would discuss a greater number of additional literacy concepts and general literacy ideas for the far transfer clip as compared to the IVAN clip. The far transfer clip demonstrated teaching of phonemic awareness or guided reading in a complex classroom situation. Hence, it was hypothesized that due to the complex nature of literacy instruction occurring in the far transfer clip participants would raise more general literacy and additional literacy concepts.

Survey. The case perceptions survey contained likert scale items that asked participants to rate their experiences on the use of IVAN video cases in the preceding classroom activity. The individual questions were combined to form three larger factors: Learning, Frustration, and Engagement. These categories emerged from a natural association among the questions. These factor were analyzed using a using a four-way ANOVA (analysis of variance) with four factors: Task structure (More-structured vs.

Less-structured) x Classroom (Cynthia's Class vs. Mallory's Class) x Topic (Phonemic Awareness vs. Guided Reading) x Participants.

Classroom observations. The participants' group work during the in-class IVAN activity was observed by the researcher and an assistant. The observers took notes on the computer as the participants worked on the IVAN activity. These anecdotal notes informed the analysis of the video vignette protocol. Specifically, they were used to triangulate the role of task structures on participants' learning from video cases.

IVAN artifacts. The participants' timeline, which they created within groups (i.e., participants in each class were divided across two groups consisting only of participants), was also analyzed for the number of clips they chose to segment (two-way ANOVA), and number of words in their written commentary about the teaching and learning going on within the clips that they chose (two-way ANOVA).

CHAPTER 4

Results

This chapter reports the results of the video vignette protocol analysis and participants' perceptions regarding the use of video cases across the two task structures. Recall that the video vignette protocol was utilized to explore how task structure (i.e., more-structured vs. less-structured) influences preservice teachers' learning of literacy concepts from video cases and whether preservice teachers are able to generalize their learning to new exemplars of literacy teaching. Participants in the video vignette protocol analyzed three video vignettes (IVAN clip, near transfer clip, and far transfer clip) using a semi-structured protocol. The qualitative coding of the video vignette protocol generated five overarching categories (advance organizer concepts, additional literacy concepts, general literacy ideas, classroom learning ideas, and classroom management issues). The quantitative analysis of the five overarching categories was conducted using the number of times participants mentioned each category.

Table 6 provides a descriptive look at how task structure, clip, topic, and classroom may influence participants' ability to apply their knowledge to an analysis of video vignettes. The number of concepts (i.e., raw data) discussed by participants for the five overarching categories is shown in Appendix G. In the following sections, however, these descriptive looks at data are augmented by statistical analyses to help determine which differences merit more attention. The number of literacy concepts was analyzed using a Multivariate Analysis of Covariance (MANCOVA) for the three literacy categories (i.e., advance organizer concepts, additional literacy concepts, and general literacy ideas). The MANCOVA used participants' pre-scores (i.e., the number of

concepts discussed by participants during the first and fourth pre sessions of the video vignette protocol, see Table 1) as covariates in the model. The MANCOVA included four factors: task structure (more-structured vs. less-structured), topic (phonemic awareness vs. guided reading), classroom (Cynthia's vs. Mallory's class), and clip (IVAN clip, near transfer clip, and far transfer clip).

	Advance Organizer Concepts Mean (SD)	Additional Literacy Concepts Mean (SD)	General Literacy Ideas Mean (SD)	Classroom Learning Ideas Mean (SD)	Classroom Management Issues Mean (SD)
Task Structure	e				
More	4.94 (2.99)	6.23 (4.53)	2.00 (2.94)	1.94 (2.37)	0.88 (1.53)
Less	6.40 (3.92)	5.17 (3.30)	2.46 (3.45)	1.48 (1.51)	0.88 (1.55)
Clip		<u></u>			
IVAN	7.06 (3.80)	4.16 (4.09)	0.78 (1.12)	0.75 (1.01)	1.41 (1.94)
Near	5.38 (2.52)	6.63 (2.52)	1.31 (2.91)	2.91 (2.57)	0.56 (1.16)
Far	4.56 (3.40)	6.31 (4.65)	4.59 (3.59)	1.47 (1.43)	0.66 (1.28)
Торіс					
Phonemic	6.65 (4.06)	3.44 (2.87)	3.50 (3.85)	1.94 (2.45)	1.58 (1.84)
Guided	4.69 (2.64)	7.96 (3.65)	0.96 (1.61)	1.48 (1.38)	0.17 (0.59)
Class					
Cynthia	5.17 (3.12)	4.90 (3.19)	1.79 (2.82)	2.17 (2.48)	1.00 (1.57)
Mallory	6.17 (3.89)	6.50 (4.53)	2.67 (3.51)	1.25 (1.19)	0.75 (1.50)

 Table 6: Means and standard deviation of five overarching categories

A univariate analysis of covariance (ANCOVA) was conducted for each dependent measure with the significant MANCOVA factors. A four way ANCOVA (Task x Topic x Clip x Classroom) was conducted separately for each of the three literacy categories (advanced organizer, additional literacy concepts, and general literacy ideas). Participants' pre-scores (i.e., number of concepts discussed by participants during the first and fourth pre sessions of the video vignette protocol, see Table 6) were used as covariates. A univariate analysis of covariance (ANCOVA) was also conducted separately for classroom learning and classroom management as the dependent measures. The same factors (task, topic, clip, and classroom) used for the previous ANCOVAs were included in these analyses. The results of these analyses are presented in Table 7.

Factor		df	F-statistics	p-value
Task Structure	_	3, 69	3.282 ª	0.026
	Advance Organizer	1, 95	9.420	0.003*
	Additional Literacy	1, 95	0.860	0.357
	General Literacy Ideas	1, 95	1.472	0.229
	Classroom Learning	1.95	1.056	0.308
	Classroom Management	1, 95	0.269	0.605
Clip		6, 140	3.223 ª	0.005
	Advance Organizer	2, 95	5.101	0.008*
	Additional Literacy	2, 95	4.388	0.016*
	General Literacy Ideas	2, 95	5.006	0.009*
	Classroom Learning	2, 95	4.702	0.071
	Classroom Management	2, 95	2.320	0.105
Торіс		3, 69	3.379 ª	0.023
	Advance Organizer	1, 95	2.492	0.119
	Additional Literacy	1, 95	13.310	0.000^{*}
	General Literacy Ideas	1, 95	3.978	0.050*
	Classroom Learning	1, 95	2.770	0.208
	Classroom Management	1, 95	15.438	0.000
Classroom		3, 69	3.995 ^a	0.011
	Advance Organizer	1, 89	2.552	0.115 ^b
	Additional Literacy	1, 95	6.259	0.015*
	General Literacy Ideas	1, 95	3.196	0.078
	Classroom Learning	1, 95	2.748	0.102
	Classroom Management	1, 95	0.014	0.905
Task*Clip		6, 140	0.952 ª	0.460
	Advance Organizer	2, 95	0.685	0.508
	Additional Literacy	2, 95	0.339	0.713
	General Literacy Ideas	2, 95	1.464	0.238
	Classroom Learning	2, 95	0.185	0.832
	Classroom Management	2, 95	1.482	0.234

Table 7: Results of MANCOVA and ANCOVA.

^a Indicates MANCOVA statistics; other statistics are from ANCOVA

^b The result presented is after removing one outlier data point. ^{*} Indicates significant values

The data and findings are discussed in the following sections which are organized by factor (i.e., task structure, clip, topic, and classroom) for the five dependent variables (i.e., advance organizer concepts, additional literacy concepts, general literacy ideas, classroom learning ideas, and classroom management issues). Where appropriate results are further supported by data from the survey of participant perceptions, field observations from classroom, and analysis of artifacts produced by participants.

The Role of Task Structure

Recall that each participant experienced one classroom activity that was morestructured followed by one that was less-structured (or vice-versa, depending on the classroom they were in). After each activity, participants completed the video vignette protocol, in order to assess how effective the classroom activity was for helping them to apply knowledge to an analysis of classroom video vignette.

The MANCOVA revealed statistically significant differences for the dependent variable of literacy concepts (i.e., advanced organizers, additional literacy concepts, and general literacy ideas) for all four of the factors (task structure, clip, topic, and classroom). The MANCOVA result for the two task structures (more-structured vs. less-structured) was statistically significant, F(3, 69)=3.28, p=0.026. This suggests that task structure influenced the number of literacy concepts discussed by participants in the video vignette protocol when task, topic, clip and classroom were included in the model.

However, the ANCOVA results of the number of ideas raised in each category of the video vignette protocol (see Table 7) suggests that, by in large, there was not an overarching impact of task structure. For example, task structure was not a significant factor in predicting the number of additional literacy concepts [F(1, 95)=0.860, p>0.05], general

literacy ideas, [F(1, 95)=1.472, p>0.05], classroom learning [F(1, 95)=1.056, p>0.05], or classroom management [F(1, 95)=0.269, p>0.05].

Task structure, however, did prove to have a significant influence on the number of advance organizer ideas participants discussed during the analysis of the classroom video vignettes (F(1, 95)=9.42, p=0.003). Participants using the less-structured activity (mean=6.40, SD=3.92) raised significantly more ideas than their counterparts in the more-structured activity (mean=4.94, SD=2.99). This result does not support the hypothesis, which predicted that the more-structured task would enable preservice teachers to identify more advanced organizer concepts. This is somewhat surprising because the more-structured activity was specifically designed to highlight advance organizer concepts to preservice teachers. There are two potential accounts for this surprising finding. One possible explanation is that since participants brought up more ideas and had more in-depth conversations about the video clips they were analyzing during their in-class less-structured task, they discussed a greater number of advanced organizer concepts in the video vignette protocol. Another possible explanation for this finding is that the less-structured activity was more beneficial for preservice teachers in helping them learn those ideas in a way that allowed them to apply this knowledge to the video vignettes.

Classroom observations support the finding that participants raised a significantly greater number of advance organizer concepts in the less-structured task. Participants in the less-structured task viewed more video clips (mean=3.75 for less-structured task vs. mean=1.75 for more-structured task) within the IVAN tool and engaged in a greater amount of discussion around the video case clips in their groups during this task. For

example, in the phonemic awareness less-structured task participants were asked to search and select video clips depicting the teacher implementing phonemic awareness in her classroom. When one of the groups came across a clip they thought represented the teacher teaching phonemic awareness, they questioned the teacher's actions. Participants in this group debated what teaching and learning strategies could be considered as a part of phonemic awareness. In this particular clip, the teacher was using a song to teach phonemic awareness and participants discussed whether using a song could be an instance of teaching children to recognize sounds and syllables in words. Participants in this group also questioned whether only direct instruction of a literacy concept means that the teacher is teaching that concept, or does a complex literacy lesson in which the teacher intertwines a particular literacy concept (such as phonemic awareness) with additional literacy concepts could also be considered as being about that particular literacy concept [Field Notes, October 13, 2005].

On the other hand, during the more-structured task, participants were provided with a set of literacy concepts that they could use to examine literacy instruction occurring within a given list of video clips. Although it was hypothesized that a provided set of literacy concepts would enable participants to discuss a greater number of advance organizer concepts, it may have kept them from raising more ideas about the particular literacy concept (i.e., phonemic awareness or guided reading). Classroom observations revealed that in the more-structured tasks, preservice teachers engaged in minimal amount of discussion surrounding the choice of video clips, the teaching and learning occurring in the video clip, and about their written response to the video clips when doing their group activity. Observations of the more-structured tasks indicated that participants

focused primarily on the advanced organizer concepts that were presented in the activity. Specifically, participants would choose a few of the advanced organizer concepts and look for instances of those concepts in the list of video case(s) provided with a minimal amount of discussion. Since participants in the more-structured task were provided with a list of video clips there was limited discussion on which clip to choose and whether a particular clip showcased teaching of the particular literacy concept (i.e., phonemic awareness or guided reading) [Field notes].

So far the findings point towards a potential learning advantage for the lessstructured activity. Participants' perceptions of the two types of activity, however, suggest a clear <u>preference</u> for the *more*-structured task. Recall that after all other data collection was over, participants completed a survey that asked them to compare the two activities on several important dimensions. There were a total of nine items on which participants compared the two task structures, such as which task structure helped them learned more, develop a better understanding of the literacy concepts, was more frustrating, engaging, etc (see Appendix H for frequencies of each item).

Participants' preference for each task structure in terms of learning, understanding, and level of frustration are presented in Figure 2. Results are presented by classroom because analyses consistently pointed a difference in ratings by classroom. Note that the majority of the students (12) felt that they learned more using the morestructured task than the less-structured task (see Figure 2). However, all eight participants from Mallory's classroom felt that they learned more from the more-structured task than the less-structured task. ANCOVA results suggest that participants from the two classes significantly differed on the "learned more" scale [F(1, 15)=18.10, p=0.001].

Figure 2: Participant perception for the two task structures







A similar trend was also evident when participants were asked which task helped them develop a better understanding of literacy instruction (see Figure 2). The vast majority of participants reported that they felt the more-structured task was better at helping them understand the literacy concept being presented. Only two participants reported that they understood the literacy concepts better following the less-structured task. However, a one-way ANOVA did not result in a significant difference between the two classes for the type of task structure preservice teachers favored for understanding, F(1, 15)=3.733, p=0.074.

Students also felt more frustrated during the less-structured task (see Figure 2). The less-structured task required participants to find clips within the IVAN system to investigate a particular literacy concept (i.e., phonemic awareness or guided reading). The more-structured task, on the other hand, provided participants with a list of video clips they had to use to examine literacy instruction. Sometimes participants in the less-structured task would start watching a clip they thought was relevant to the literacy topic being examined only to realize midway through the clip that it had nothing to do with the literacy topic at hand. One participant said, "The clips were really long so it was hard to pick a clip because you didn't want to start and change clips because they were so long" [Interview, 11-15-2005]. Thus, participants in the less-structured task reported feeling frustrated when a clip they had selected did not match the search criteria described in the task.

Although quantitative analyses of the video vignette protocol suggest a potential learning advantage for the *less*-structured activity, participants favored a *more*-structured activity. This raises two possible explanations for this difference. First, participants may

clearly feel more comfortable in the more-structured activity, but the discomfort and cognitive dissonance (Aronson, 1997; Festinger, 1957) created by less-structured activity leads to better learning. A second hypothesis is that participants have preferences for levels of structure that influence how they perform in activities that vary on the level of structure.

To help distinguish among these hypothesis participants in Cynthia's class were coded as preferring more-structured (n=4) or less-structured (n=4) activities based upon their responses to the survey items (Note: Participants in Mallory's classroom were not used because there is no variance in their preferences; refer to Figure 2). Responses to the video vignette protocol after the more-structured activity were analyzed only according to the three literacy categories (i.e., advance organizer concepts, additional literacy concepts, general literacy ideas). This analysis was performed to see if participants who preferred a *more-structured* activity, when given a *more-structured* activity would outperform (i.e., raise more literacy concepts) those who preferred a less-structured activity. Likewise, an analysis of the five categories was performed following the *less-structured* activity to see if participants preferring *less-structured* would do better than those preferring more-structured activity.

Analysis shows that matching students' preferences with the classroom activity did not lead to better learning. In both situations (the activity was more-structured or less-structured), participants preferring less-structured activity did as well or better that those preferring more-structured task. For example, following the more-structured task there were no significant differences by task preference for advance organizer concepts [F(1, 23)=2.911, p=0.104]; and general literacy ideas [F(1, 23)=3.977, p=0.061]. However,

task preference was found to significantly influence the number of additional literacy concepts, F(1, 23)=8.231, p=0.01. Participants who preferred the less-structured task discussed a greater number of additional literacy ideas than teacher candidates who preferred the more-structured task, when only more-structured task was analyzed. Differences by Clip

Recall that three video clips (i.e., IVAN clip, near transfer clip, and far transfer clip) were utilized in the video vignette protocol to examine whether preservice teachers were able to apply their knowledge to an analysis of classroom situation as presented in the video vignettes. Participants had an opportunity to see the IVAN video clip during the in-class activity and were expected to easily apply knowledge to the literacy instruction occurring in the IVAN clip. The near transfer clip presented the same literacy ideas as the IVAN clip but in a different classroom situation and participants were expected to be able to discuss those in the video vignette protocol. The far transfer clip was of a more complex classroom situation than participants had experienced in their in-class activity and included several potential relevant literacy concepts for them to discuss.

Bruner (1996) suggested that four models of pedagogy exist today. One of the models views learning as occurring from didactic exposure in which learners are presented with principles and rules of action which are to be learned, remembered, and then applied. This study took this view of learning, where preservice teachers' learning was measured by the knowledge they applied to the three video clips (i.e., IVAN Clip, Near Transfer Clip, and Far Transfer Clip) used in the video vignette protocol. Specifically, the number of literacy concepts discussed by participants during the video vignette protocol is regarded as an indicator of preservice teachers' learning. For

example, data illustrated that the participants discussed more advance organizer concepts for the IVAN clip, which suggests participant were able to generalize their learning to the IVAN clip better than the near transfer and far transfer clips. Table 6 shows the means and standard deviation for the five overarching categories by clip.

Recall that a multi-analysis of covariance (MANCOVA) was conducted for the literacy dependent variables (i.e., advanced organizer, additional literacy concepts, and general literacy ideas). A univariate analysis of covariance (ANCOVA) was also conducted separately for each of the three literacy categories. The MANCOVA results revealed a statistically significant difference between the clips (IVAN, near transfer, and far transfer) for the number of literacy concepts discussed by participants in the video vignette protocol, F(3, 69)=3.22, p=0.005.

The univariate analysis of covariance (ANCOVA) also revealed a significant main effect for clip for advance literacy concept [F(2, 95)=5.101, p=0.008], additional literacy ideas [F(2, 95)=4.388, p=0.016], and general literacy ideas [F(2, 95)=5.006, p=0.009]. However, there was no statistically significant difference by clip for classroom learning [F(2, 95)=2.741, p>0.05], and classroom management [F(1, 95)=2.32, p>0.05]. The estimated cell means for the five categories are graphically depicted in Figure 3.

The ANCOVA model also included an interaction between task structure and video vignettes (Task Structure x Clip) to analyze whether a particular task structure (more-structured versus less-structured) encouraged participants to raise more concepts for a particular clip (i.e., IVAN Clip, Near Transfer Clip, and Far Transfer Clip). ANCOVA results revealed that there was no significant interaction between task structure and clip (Task Structure x Clip) for advance organizer concepts [F(2,

95)=0.685, p>0.05], additional literacy concepts [F(2, 95)=0.339, p>0.05], general literacy ideas [F(2, 95)=1.464, p>0.05], classroom learning [F(2, 95)=0.185, p>0.05] and classroom management [F(1, 95)=1.482, p=0.234].

Figure 3: Graph of the estimated cell means for the five categories by clip



The data illustrated that the number of advance organizer concepts that participants raised differed by the type of clip, with participants discussing more advance organizer concepts for the IVAN clip as compared to the near transfer clip and far transfer clip (see Figure 3). This finding is not surprising as it was hypothesized that the IVAN clip would result in participants discussing a greater number of advance organizer concepts as compared to the near and far transfer clips. Participants also discussed the greatest number of comments involving additional literacy concepts in the far transfer clip (see Figure 3). Finally, results indicated that participants discussed a greater number of general literacy ideas for the far transfer clip as compared to the near transfer clip and the IVAN clip.

It is interesting to note that the IVAN clip resulted in the greatest number of comments about the advanced organizer concepts being discussed by participants and least number for additional literacy concepts. The opposite was true for the far transfer clip, with participants discussing least number of comments about the advanced organizer concept and the greatest number for additional literacy concepts. Participants also discussed a greater number of general literacy ideas for the far transfer clip than the IVAN clip or the near transfer clip; and did so regardless of task structure. This result is perhaps not surprising as participants had experienced the IVAN clip during their in-class IVAN activity. This may be a result of participants' unfamiliarity with the far transfer clip as opposed to the IVAN clip, which participants had experienced in their in-class activity (i.e., Session 2 and Session 5, refer to Table 1). Since participants were familiar with IVAN clip and had opportunities to discuss the literacy instruction occurring in the IVAN clip with their peers, they were likely to discuss more advanced organizer concepts, which provided a more accurate illustration of the literacy instruction occurring in the IVAN clip. On the other hand, the far transfer clip involved participants discussing general ideas surrounding the literacy topic, as compared to bringing specific concepts (i.e., advance organizer concepts).

This result supported the hypothesis that participants would discuss primarily general literacy ideas (e.g., enjoyment for reading, books are a form of reading, etc.) as

opposed to specific literacy instruction ideas (e.g., print directionality, word identification, etc.) in the far transfer clip. It was expected that since the far transfer clip depicted a more complex literacy teaching, participants would indicate a greater number of general literacy ideas as compared to specific literacy concepts. The data also suggested that because participants were unfamiliar with the far transfer clip, they primarily discussed general literacy ideas during the video vignette protocol.

Difference by Topic

The more- and less-structured activities in this study were embedded in two literacy topics. Analyses indicated that the topic was found to be significant factor for all except one of the three literacy dependent variables. The topic students worked with significantly influenced the number of additional literacy [F(1, 95)=13.319, p=0.000], and general literacy ideas [F(1, 95)=3.978, p=0.050] that they raised in the video vignette protocol. However, there was no statistical by topic for advance organizer concepts [F(1,95)=2.492, p=0.119]. Topic was also found to significantly influence the number of classroom management issues [F(1, 95)=15.438, p=0.000], but not classroom learning ideas [F(1, 95)=2.77, p=0.208].

Specifically, data illustrated that participants discussed a greater number of additional literacy ideas in the guided reading task than the phonemic awareness task. Data also suggested that the number of general literacy ideas raised by participants in the phonemic awareness activity was considerably greater that those in the guided reading activity. These findings are not surprising in that it is unlikely that two topics could ever be equal in their opportunities to learn or discuss ideas especially given that each topic required the use of different video clips in the video vignette protocol.

A hypothesis for the finding that participants discussed a greater number of additional literacy ideas in the guided reading task than the phonemic awareness task is that components of guided reading not available through advance organizers in the morestructured task were categorized as additional literacy concept and there were more additional guided reading concepts than there were additional phonemic awareness concepts. Guided reading generally includes reading skills and strategies as well as the five stages of reading (i.e., pre-reading, reading, responding, exploring, and applying). Some components of the five stages of reading (e.g., reinforce phonics skills, text to world connection, text to text connections, etc.) were not available as advance organizers in the more-structured task for guided reading. In the video vignette protocol for the guided reading session, participants mentioned not only ideas beyond those presented in the advance organizer through the more-structured task (i.e., categorized as advance organizer concepts), but also additional components of guided reading (i.e., additional literacy concepts). For example, many participants raised the idea of text-to-self connection and role of the book cover in the reading process. These two concepts, text-toself connection and role of the book cover, were not available as advanced organizers and hence were counted as "additional literacy concepts." The phonemic awareness topic, on the other hand, resulted in a fewer number of "additional literacy concepts" discussed by participants as most of the ideas raised were categorized as "advanced organizer concepts." Thus, it is not surprising that participants discussed more "additional literacy concepts" during the guided reading tasks because greater number guided reading concepts were categorized as "additional literacy concepts" as compared to phonemic awareness task.
Data illustrated that participants discussed more classroom management issues in the phonemic awareness task than in the guided reading task. This finding countered the hypothesis that teacher candidates would raise equal amounts of classroom management issues for both literacy topics, as it was believed that neither literacy topic was better suited for a discussion of classroom management issues.

The finding that participants discussed more classroom management concepts for the phonemic awareness topic is interesting. The IVAN clip used in the video vignette protocol for phonemic awareness task depicted a teacher using a song to teach phonemic awareness through emphasis on certain sounds of the letters and words in the song. The content of the song addressed classroom behavior and rules students should follow within as well outside of a classroom. A majority of the participants focused more on how the teacher used the song for classroom management purpose as opposed to how the song served as an alternate way of teaching phonemic awareness. When asked what the teacher was doing in the video clip, one participant said, "Probably her main goal is reviewing the rules 'cause I thinks she says at the end that they still need to follow them. So it seems like that was more of her goal then the actual reading part of it" [Interview, 10/17/2005]. Even though the task had no significant impact on the number of concepts participants raised about classroom management, the significant effect for phonemic awareness could be an unintended consequence of the IVAN clip selected for phonemic awareness in the video vignette protocol. Another possibility is that the literacy instruction depicted in the IVAN clip for phonemic awareness protocol was highly open-ended with the teacher leading the whole class in singing the song. This might have led the participants to raise

more classroom management issues highlighting that the kids were shouting and not being quiet.

Another finding for the classroom management category was the number of classroom management issues participants raised in the pre-session (mean = 3.81) as compared to the post-session (mean=2.47). A paired sample t-test for the number of classroom management issues raised from pre to the post session was statistically significant, t(31)=3.812, p=0.001, d=0.44. The number of classroom management issues that participants raised also declined across the four sessions and varied for the two topics (see Table 8). As discussed above, this might be due to the unintended impact of the particular IVAN clip used for phonemic awareness, which potentially biased participants to raise a greater number of classroom management issues for this topic.

	Mean	Standard Deviation
Session 1 (pre phonemic awareness video protocol)	5.75	3.022
Session 2 (post phonemic awareness video protocol)	4.44	2.988
Session 3 (pre guided reading video protocol)	1.88	1.668
Session 4 (post guided reading video protocol)	0.50	1.317

Table 8: Means and SD for classroom management concepts by session

Classroom Differences

The video vignette protocol was also analyzed for any classroom differences. Analyses indicated that classroom was not a significant predictor in the number of advance organizer concepts [F(1, 89)=2.552, p>0.05], general literacy ideas [F(1,95)=3.196, p>0.05], classroom learning [F(1, 95)=2.748, p>0.05], and classroom management [F(1, 95)=0.014, p>0.05]. However, classroom was found to be a significant factor in influencing the number of additional literacy discussed by participants in the video vignette protocol [F(1, 95) = 6.259, p = 0.015]. Preservice teachers in Mallory's class raised more additional literacy concepts than those from Cynthia's class.

Participants from Mallory's class also had a large drop in the number of advance organizer concepts they discussed from the less-structured task (mean=7.88, SD=4.34) to the more-structured task (mean=4.46, SD=2.46). On the other hand, Participants from Cynthia's class discussed approximately the same number of advance organizer concepts for the less-structured task (mean=4.92, SD=5.42) and the more-structured task (mean=5.42, SD=3.42). The trend for the number of additional literacy concepts discussed by participants from Mallory's class was reversed, with preservice teachers raising more additional literacy ideas in the more-structured task (mean=9.29, SD=3.96) than the less-structured task (mean=3.71, SD=3.16). It seems that participants from Mallory's class moved away from raising specific literacy themes in the less-structured task to discussing a greater number of additional literacy ideas in the more-structured task (Recall that the advance organizer concepts included specific literacy themes, which were more closely related to the literacy instruction occurring in the video vignettes than the additional literacy concepts). It could be argued that ordering of the task structures might not have been beneficial for preservice teachers from Mallory's class the number of advance organizer concepts raised by Mallory's class declined from less-structured to more-structured task.

It is important to note that all differences by classroom may not be solely attributable to the classroom. For example, classroom differences are confounded by the order of structured activities. Cynthia's classroom had a more-structured activity

followed by less-structured activity, while Mallory's class had less-structured activity followed by a more-structured activity. It is also possible that classroom differences may be attributed to the different structure-topic pairing each classroom received.

Analysis of IVAN artifacts

A two-way ANOVA (Task x Number of Clips) revealed a statistically significant difference between the number of clips participants watched based on the task (i.e., more-structured vs. less-structured), F(1, 7)=6.40, p=0.045. Means indicated that participants in the less-structured task (mean=3.75) watched a significantly greater number of clips than in the more-structured task (mean=1.75). Participants also wrote a greater number of words in their written commentary in the less-structured task (mean=214.75) as compared to the more-structured task (mean=200.00). However, a two-way ANOVA (Task x Number of words) indicated that these differences were not statistically significant, F(1, 7)=0.023, p=0.884.

Other Student Perceptions

Participants also completed a survey to assess their perceptions of the use of video cases through the two task structures (i.e., more-structured vs. less-structured). Overall a majority of the participants had a positive view of the use of video cases regardless of how the video cases were implemented in the literacy methods course. Figure 4 highlights participants' perceived benefits of using video cases in their literacy methods course.

Figure 4: Participant perceptions of instructional benefits of video case



Participants reported that the use of IVAN video cases added a lot of realism to the class (81.2%), allowed for more discussion of course ideas (75%), and helped them develop a deeper understanding of literacy instruction (78.2%). Furthermore, the majority of participants believed that the use of video cases was thought-provoking (84.4%), educational (78.2%), and allowed them to view an issue from multiple perspectives (68.8%). Most of the preservice teachers also agreed that they took a more active part in the learning process when video cases were used (76.1%). (See Appendix I for detailed descriptive statistics of the survey items).

As previously stated, the individual survey items were combined to form three larger factors - Learning, Frustration, and Engagement - which emerged from a natural association among the questions. A four-way Analysis of Variance (Task x Topic x Classroom x Participants) showed no significant difference for learning, engagement, and frustration between the two task structures. Thus, it seems that even though preservice teachers' had a positive experience with video cases their perceptions of their own learning, engagement, and frustration did not differ by task. The ANOVA indicated that teacher candidates from Cynthia's class (Literacy class A) felt that they learned significantly more from the use of video cases than participants from Mallory's classroom (Literacy class B), F(1, 31)=4.807, p=0.046.

CHAPTER 5

Discussion

This chapter presents a discussion of the results highlighted in the previous chapter. It focuses on what was ascertained regarding the role of task structure when using video cases in literacy methods course for teacher candidates. It also provides implications for teacher preparation and future research directions. The chapter ends with limitations of this study.

This study investigated the role of task structure in learning from video cases in two elementary education literacy methods course at a large mid-western university. For the purpose of this study, task structure was defined as a method through which video cases were implemented in the literacy methods course. Two task structures were examined – more-structured and less-structured. These two task structures were used to implement a video-case based software called Interactive Video Access Neighborhood (IVAN) in two sections of a literacy methods course taught by two different instructors. The two task structures were implemented using video cases with two literacy topics (phonemic awareness and guided reading) in two sections of the course. The design of the study was counter-balanced to remove any bias towards the instructor or the content taught by video cases (refer to Table 3).

The data collection mechanisms (video learning protocol, post-interviews, case perceptions survey, observational notes, and video case timeline) produced a rich data set for analysis. All sources of data were reviewed and analyzed together; however the video learning protocol was the primary focus of analysis, with other sources of data (observational notes, and IVAN artifacts) serving a supportive role.

Five major categories emerged from participants' verbal descriptions of the video vignettes (i.e., video vignette protocol): (1) Advance Organizer Concepts (actual literacy concepts provided as advance organizers in the more-structured task for the project; these concepts were also most relevant to the literacy instruction occurring in the video vignettes), (2) Additional Literacy Concepts (either phonemic awareness or guided reading literacy concepts discussed by participants that were not available through their advance organizers, respectively), (3) General Literacy Ideas (literacy ideas not connected to one of the two literacy topics, i.e., phonemic awareness or guided reading), (4) Classroom Management (classroom management issues) ; and (5) Classroom Learning (ideas about classroom learning). These five themes were used to conduct statistical analyses using Multivariate Analysis of Covariate (MANCOVA) and Univariate Analysis of Covariate (ANCOVA).

When focusing on the data analysis on the themes that emerged, which were specific to literacy, Multivariate Analysis of Covariate (MANCOVA) indicated that task structure, topic, clip, and classroom were significant factors for the three literacy dependent variables (i.e., advance organizer concepts, additional literacy concepts, and general literacy ideas). However, when Univariate Analysis of Covariance (ANCOVA) was conducted individually for the three dependent literacy variables, task structure was only found to influence one of the three literacy themes (i.e., the number of advance organizer concept raised by participants). The ANCOVA revealed statistically significant differences by clip for all three dependent literacy variables (i.e., advance organizer concepts, additional literacy concepts, and general literacy ideas). ANCOVA results also

indicated significant differences by topic and classroom for the dependent variable of additional literacy concepts.

The survey of participants' perceptions of video case-based instruction suggested that the majority of participants thought video cases were beneficial in learning about literacy instruction and that they were more engaged when video cases were used. However, when comparing the two task structures (more-structured versus lessstructured) used in this study, most participants felt they learned and understood more from the more-structured task, while reporting that the less-structured task was more frustrating.

In this study, the construct of task structure produced mixed results in participants' learning from video cases. When all three literacy concepts (i.e., advance organizer concepts, additional literacy concepts, and big literacy ideas) were considered simultaneously in the MANCOVA model, results revealed that task structure influenced the number of advance organizer, additional literacy, and general literacy concepts participants discussed in the video learning protocol. MANCOVA results demonstrated that the relationship between the use of video cases and task structure is more complicated than hypothesized. Other factors such as topic, type of clip, and classroom also played a role in participants' learning from video cases. The Univariate Analysis of Covariance (i.e., ANCOVA) conducted separately for each of the three literacy dependent variables showed mixed results. Only the literacy dependent variable of advance organizer concepts discussed by participants was found to be influenced by task structure. The type of video vignette (i.e., IVAN clip, near transfer clip, and far transfer clip) used in the study was also found to influence the number of advance organizer,

additional literacy, and big literacy concepts discussed by participants during the video learning protocol. The following sections present a discussion of the results by highlighting some of the important findings in this research project.

Why might Less-structured Task be Better?

The main purpose of this research was to examine the influence of two task structures – more-structured and less-structured – on preservice teachers' learning from video cases in a literacy methods course. It was hypothesized that the more-structured task would allow participants to discuss more advance organizer concepts as compared to the less-structured task. This was hypothesized as participants in the more-structured task would have access to advance organizer concepts, thus making it easier for them to raise those ideas as opposed to participants in the less-structured task, who were not provided with advance organizers. The less-structured task, on the other hand, was hypothesized to result in participants identifying more "additional literacy concepts" and "general literacy concepts" as compared to the more-structured task. The results supported neither of the hypotheses. Task structure was not found to influence the number of "additional literacy concepts" or number of "general literacy concepts" discussed by participants in the video learning protocol.

The number of advance organizer concepts raised by participants was influenced by the type of task structure (i.e., more-structured versus less-structured) used to implement video cases in the two literacy classes. Participants in the less-structured task raised significantly more advance organizer concepts than participants in the morestructured task. This result was surprising as it was counter to the hypothesis.

A possible conjecture for why the less-structured task resulted in participants broaching more advance organizer concepts is that the less-structured task provided participants with opportunities to view more instances of literacy instruction and discuss specific literacy ideas that were relevant to the video case clips in a supportive learning environment with their peers. Classroom observation and participants' video timeline analysis highlighted that participants viewed a greater number of video case clips during the less-structured task as compared to the more-structured task. Classroom observations also revealed that participants had a greater amount of discussion surrounding the video case clips during the less-structured task.

Participants in the more-structured task, on the other hand, tended to focus on a few literacy concepts, which were provided to them via advance organizers. Specifically, they chose a couple of the advance organizer concepts and merely looked for those in the given set of video clips without any discussion about the concept or how the teacher was implementing literacy instruction in her classroom. This might have limited their ability to raise more advance organizer concepts.

Previous research has suggested that case discussion leads to change in preservice teachers thinking about issues in the case and it is beneficial for preservice teachers (Levin, 1995; Moje & Wade, 1997). Vygotsky (1978) also emphasized the importance of social interactions in the learning process and that interaction plays an important role in the progress of a learner. Vygotsky stated, "learning awakens a variety of internal processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers" (p. 90). From this viewpoint "instruction is most effective when it is in the form of dialogue wherein learners can interact with

peers or mentors who challenge and scaffold their learning" (Zhu, 2003, p. 1853). It could be argued that the amount of discussion during the less-structured task might have influenced the number of advance organizer concepts raised by participants in the video learning protocol, as it provided them with opportunities to discuss relevant literacy ideas with their peers.

What do Preservice Teachers think about the Task Structures?

It is interesting to note that even though findings point to a potential learning benefit for the less-structured task, participants had a clear preference for the morestructured task. When directly comparing the two task structures, majority of the participants favored the more-structured task. Participants reported that the morestructured task helped them learn and understand more, whereas the less-structured task was more frustrating. It was expected that participants would report being more frustrated after the less-structured task as compared to the more-structured task. It did not give them with a set of clips or a list of literacy concepts they could use to examine literacy issues within the video case; instead participants had to identify literacy concepts relevant to the video case they wanted to examine and find appropriate video clips. These findings indicate that the use of video cases through the more-structured task led to favorable student attitudes towards learning from video cases.

Participants preference for the task structure also differed by class (Cynthia's class vs. Mallory's class). The majority of participants from Mallory class preferred the more-structured task and felt that the more-structured task was better at helping them understand the literacy topic being covered. Participants also indicated that they learned more from the more-structured task. These participants reported feeling a greater amount

of frustration following the less-structured task as compared to their peers in Cynthia's class. A possible explanation for this is that the first time participants from Mallory's class used video cases was through the less-structured task for phonemic awareness and then used the more-structured task for guided reading (see Table 3). Participants from Cynthia's class, on the other hand, started the use of video cases with more-structured task and then moved to the less-structured task. Participants in Mallory's class might not have felt prepared to use video cases as they felt being "left on their own" in their first use of video cases.

One participant from Mallory's class indicated that the first use of video case (i.e., less-structured task) was unorganized, which was frustrating and she preferred the second (i.e., the more-structured task). She said, "The first one [less-structured task] I was just frustrated, I didn't know what was going on and the second one [more-structured task] we actually, the guidelines that were provided, we could actually search for things like that. The clips were a lot better I feel because they were so narrowed down and I think all the clips were pretty good so it wasn't just like you'd stumble on a teacher introducing her classroom" [Interview, 11/17/2005]. Another participant said that she like the more-structured task better stating, "The second way [more-structured task] because I knew what to look for and I was just, it was better focused I guess than just watching these clips and trying to figure out literacy instruction" [Interview, 11/22/2005]. This theme was consistent for majority of the participants from Mallory's class.

On the other hand, majority of participants from Cynthia's class did not report feeling frustrated during the less-structured task. One participant stated that even though the less-structured task was more challenging, she liked it better. She said, "I like the

more open ended way, just to find your own......We didn't have to focus so much on finding the things in the clip. We could kind of take the clip in as a whole and think about it later and pay more attention" [Interview, 11/15/2005]. Another participant stated, "I like when it's open ended and it's not so specific because I feel that I can explore more when I do that and yeah just basically gives people the ability to chose what they like instead of one specific" [Interview, 11/16/2005].

It is interesting to note that participant preferences are not aligned with the findings from video vignette protocol, which highlighted a potential learning benefit for the less-structured task. A possible conjecture for this is that even though participants may clearly feel more comfortable in the more-structured activity, the discomfort and cognitive dissonance (Aronson, 1997; Festinger, 1957) created by less-structured activity lead to better learning.

Applying Knowledge to New Exemplars of Teaching

Besides the influence of task structure, the number of literacy concepts raised by participants was also explored relative to the video vignettes (i.e., IVAN, near transfer, and far transfer clip) used during the video learning protocol. The second research question addressed whether preservice teachers would be able to transfer their learning from video cases to new exemplars of literacy instruction presented via video vignettes. It was hypothesized that the number of advance organizer concepts, additional literacy concepts, and general literacy ideas that participants discuss during the video learning protocol would also be influenced by the type of clip (i.e., IVAN clip, near transfer clip, and far transfer clip). Specifically, it was hypothesized that participants would raise more advance organizer concepts for the IVAN clip as compared to the near transfer or the far

transfer clip. It was also hypothesized that participants would raise a greater number of "additional literacy concepts" and "general literacy ideas" for the far transfer clip as compared to the IVAN and near transfer clip.

The results confirm both of these hypotheses. Teacher candidates in this study raised a significantly greater number of advance organizer concepts for the IVAN clip than the far transfer clip. This result is perhaps not surprising since participants had encountered the IVAN clip during their in-class group activity (i.e., Session 2 and 5, see Table 9) and had opportunities to discuss the IVAN clip with their peers during these inclass group activity. Since participants were familiar with the IVAN clip and had discussed the video case(s) they were able to raise more ideas that were closely related to the IVAN clip (i.e., advance organizer concepts) as compared to the far transfer clip, which they were unfamiliar with.

The results reported also provide support for the hypothesis that participants would discuss more "additional literacy concepts" and "general literacy ideas" for the far transfer clip as compared to the IVAN and near transfer clips. The far transfer clip depicted a complex literacy instruction lesson (i.e., the teacher in the clip was using multiple literacy practices). Participants also did not have opportunities to discuss and examine the literacy instruction occurring in the far transfer clip with their peers. It is possible that the complexity exhibited in the far transfer clip as well as the lack of discussion led the participants to raise mostly "additional literacy concepts" and "general literacy concepts" instead of specific literacy concepts.

These findings support the idea that participants had a difficult time transferring their learning from the use of video cases to the far transfer clip. It is possible that

participants were not able to generalize their learning to the far transfer clip as well as they were able to apply their learning to the IVAN clip. As such they did not raise specific literacy concepts; instead merely raised "general literacy ideas" for the literacy instruction occurring in the far transfer clip.

Another possibility for this finding is that since participants had opportunities to discuss the IVAN clip, they were able to raise specific literacy ideas that were closer to literacy instruction occurring in the IVAN clip. Previous research has suggested that preservice teachers tend to benefit from case discussion, which influences teachers' thinking about the issues in the case (Flynn & Klein, 2001; Levin, 1995). Levin advocated for the benefits of case discussion stating, "The social interaction during the discussion of a case among a group of teachers has the potential for providing cognitive conflict, hence trigger change" (p. 65). Levin investigated the role of case discussion and experience in teachers' learning from cases. She found that student teachers and beginning teachers benefited the most from case discussion as it helped them develop a clear and more elaborate understanding of the issues presented in the cases. Therefore, the discussion of the IVAN clip might have influenced the kinds of literacy concepts participants raised during the video learning protocol and might have allowed preservice teachers to bring up more relevant literacy ideas (i.e., advance organizer concepts) for IVAN clip during the video learning protocol.

Differences by Topic

The two topics (i.e., phonemic awareness and guided reading) wee chosen for this project because the instructors highlighted their importance as well as research that shows these two topics are essential component of early literacy instruction and form foundation

of successful literacy program (Adams, 1990; Tompkins, 2006). While the two topics were carefully selected their role was not hypothesized to be an influence on the concepts participants discussed during the video vignette interviews. However, topic was found to be statistically significant factor when analyzing the number of "additional literacy" and "general literacy" concepts discussed by participants in the video learning protocol.

An examination of sub-themes under the category of "additional literacy concepts" revealed that the guided reading topic actually had a greater number of patterns that were classified as "additional literacy concepts" as compared to the phonemic awareness topic. This may be explained by the different amount of advance organizer ideas provided to participants by the topic (guided reading as compared to phonemic awareness). For instance, the guided reading more-structured task provided preservice teachers with a list of guided reading stages (via advance organizers), which they could use to examine how the children were being taught strategies and skills for reading and how the teacher implemented guided reading. In addition to these concepts, participants also discussed other aspects of guided reading (e.g., text to self connection, text to text connections, etc.), which were not available as advance organizer in the more-structured task and hence categorized as "other guided reading concepts". On the other hand, the phonemic awareness more-structured task had fewer number of phonemic awareness concepts that were categorized as "other phonemic awareness concepts" because most of the phonemic awareness concepts that participants raised were classified as "advance organizer concepts". Since participants raised a greater number of "other guided reading concepts" as compared to "other phonemic awareness concepts", which were not available as advance organizers in the more-structured task, it is not surprising that a

significant difference was found between the two topics for the number of "additional literacy concepts" discussed.

Results indicated that the number of classroom management issues raised by participants during the video learning protocol was also influenced by the topic. Specifically, participants discussed more classroom management issues in the phonemic awareness video learning protocol than the guided reading video learning protocol. This finding was surprising as it was not expected classroom management issues to differ by the two topics (phonemic awareness vs. guided reading). An examination of the video vignettes revealed that this difference might have been as a result of the IVAN clip selected for the video learning protocol for phonemic awareness. This video vignette demonstrated a teacher using a song to teach phonemic awareness; however, the content of the song was about classroom and school behavior. The majority of the participants focused on how the teacher was using song as a way to bring in classroom management issues rather than discussing the phonemic aspect of the literacy lesson. Thus, participants' raising more classroom management ideas for phonemic awareness might have been an unintended consequence of the phonemic awareness IVAN clip, and hence a limitation of the study.

Beyond the influence of topic, the number of classroom management participants discussed decreased from the pre (Session 1 & 4, see Table 9) to the post session (Session 3 & 6, see Table 9) regardless of topic.

Table 9: Sessions

Session 1	Session 2	Session 3	Session 4	Session 5	Session 6
Phonemic Awareness (1 st Pre)	Phonemic Awareness (In-class video case activity using more- structured or less- structured task)	Phonemic Awareness (1 st Post)	Guided Reading (2 nd Pre)	Guided Reading (In-class video case activity using more-structured or less-structured task)	Guided Reading (2 nd Post)

This study did not specifically target whether exposure to video cases leads preservice teachers to bring up fewer classroom management issues and focus greater on content, there were indications that preservice teachers benefited from the use of video cases in this regard. Previous research has shown that when examining other teachers' instruction beginning teachers tend of focus on the teacher's role in the instruction, presentation of the lesson, student behavior, and classroom management issues (Bullough, Young, & Draper, 2004; Conway & Clark, 2003; Fuller, 1969; Levin, 1995). It is possible that during the pre-sessions (Session 1 & Session 4, see Table 9) participants focused on classroom management issues and as they saw more instances of literacy instruction, they focused less on the issues related to student behavior and classroom control. This finding that participants focused less of classroom management session from pre to the post session could also be due to other activities (e.g., reading and writing assignment given by the instructor) occurring in the literacy methods course and cannot be truly be attributed to the use of video cases as there was no control classroom. However, it does open up avenues for future research on whether video cases enable preservice teachers to focus more on the teaching and learning of the content areas rather than student behavior and classroom control.

Classroom Differences

The statistical analyses (i.e., MANCOVA and ANCOVA) used in this study included instructor (i.e., classroom) as one of the factors as there was considerable difference in teaching experience for the literacy course between the two instructors. Cynthia had been teaching this particular literacy methods course for the past thirteen years having used video cases for six of those. Mallory, on the other hand, had only been teaching the course for three years and this was only the second year she was using video cases in her teaching. This research tried to remove any instructor bias by counterbalancing the research design. Despite the differences in instructors, the classroom was not hypothesized to influence the number of literacy ideas (i.e., advance organizer concepts, additional literacy concepts, and general literacy ideas) discussed by participants during the video learning protocol as the design of the study was to account for those.

However findings suggest that the classroom factor was significant for one of the three literacy dependent variables – additional literacy concepts. Results show that participants from Mallory's class discussed a significantly greater number of "additional literacy concepts" than those from Cynthia's classroom. As discussed previously, participants discussed greater number of "additional literacy concepts" in the guided reading activity than the phonemic awareness, as well as that participants engaged in more discussion about literacy issues during the in-class activity with video cases when they were working in the less-structured task. Based on these two finding a possible explanation of why participants from Mallory's class raised a greater number of "additional literacy concepts" is that Mallory's class used less-structured task for the

guided reading activity, which might have led them to raise more additional literacy ideas.

Implications

Implications for Teacher Preparation

Findings from this study provide implications for implementing video-cases in teacher education program. Results indicated that participants viewed more instances of literacy instruction and discussed the clips in a supportive learning environment with their peers in the less-structured task. The data revealed that participants focused more on relevant aspects of literacy instruction occurring in the video vignettes during the less-structured task. Participants in the more-structured task, on the other hand, tended to focus on only a few literacy concepts and the clips provided, which limited opportunities for them to fully examine issues presented in the video case(s) so they learned more in less-structured task but liked more-structured task more. Findings also illustrated that when participants had opportunities to discuss issues with their peers, they raised a greater number of specific literacy ideas for the IVAN clip as opposed to the near and far transfer clip where they did not discuss those clips.

These findings support previous research which suggested that case discussion influences teacher thinking about issues in the cases (Flynn & Klein, 2001; Levin, 1995; Moje & Wade, 1997) and highlight the importance and need for teacher educators to facilitate case discussions. Teacher educators need to structure the use of video cases in a way that allows preservice teachers to discuss the issues in the case with their peers in a supportive learning environment. Teacher educators can also use case discussion as a tool

to confront preservice teachers' beliefs about teaching and learning and "confront their ideas in a way that fosters knowledge growth" (Borko & Putnam, 1996, p. 702).

However, it seems that participants need to be eased into using video cases and more-structured task might be better for the initial uses of video cases. The data from this study reveals preservice teachers felt that video cases were more beneficial when their initial use of video cases was more-structured by the instructor. Participants whose initial use of video cases was through the more-structured task reported both tasks being equally beneficial in terms of learning and understanding of the literacy concepts. On the other hand, participants who used less-structured task for their first use of video cases favored the more-structured task and were frustrated during the less-structured task. Thus, teacher educators need to scaffold preservice teachers' use of video cases when they first begin to explore video cases, which would allow teacher educators to guide teacher candidates to aspects of video case that are relevant to the issues being discussed in the course.

Data suggests that even though participants learned more from the less-structured task, they indicated that they liked more-structured task more. The challenge then is how to implement video cases within teacher education, which helps preservice teachers' to deepen their understanding of the subject matter and also engages them in the task. A possible solution that would allow teacher candidates to be more engaged with video cases and also provide maximal benefit is guided discovery. Mayer (2004) argued that guided discovery is more effective than expository learning as it helps students activate appropriate knowledge to make sense of the incoming new information and integrate that information with their existing knowledge. Guided discovery would allow the teacher educator to act as a coach providing support to the preservice teachers while they

examine issues in video cases and allow them to construct their own knowledge by interacting with their peers. Such an implementation of video-based cases would allow preservice teachers to view, re-view, analyze, and reflect upon examples of teaching as often as needed under the guidance of a trained observer (i.e., teacher educator). Thus, guided discovery of video cases would provide preservice teachers with appropriate amount of support to make sense of the teaching taking place in the video classroom, while giving them freedom to be actively engaged in the learning task.

Implications for Future Research

This research did not specifically examine how participants experienced video cases implemented through different task structures and the impact of their experiences on their learning. However, there are some indications that participants who preferred less-structured task tended to discuss more literacy ideas than their counterparts in the more-structured task. This opens up avenues for future research, but also practice within teacher education programs and the use of video cases. Future research should examine how participants' experiences within different task structures as well as their preference for a particular task structure might influence their learning from video cases.

Findings from this study also indicate that participants discussed fewer number of classroom management issues from pre to post session. Future research needs to specifically examine whether the use of video cases allows teacher candidates to move away from concerns about classroom management and focus more on the literacy instruction occurring in the video case. This study was conducted over six sessions focusing on two different topics for three weeks each. The influence of task structures was assessed in the post sessions (i.e., Session 3 and Session 6) during the week

succeeding the in-class video cases activities (i.e., implementing video cases using morestructured or less-structured task). The long term influence of implementing video cases (i.e., task structures) was not evaluated. It might be beneficial to conduct a longitudinal study where the influence of task structure could be evaluated over a semester or a year. The influence of task structures (i.e., implementation of video cases) could be examined into preservice teachers' student teaching as well as their first years of teaching. As Levin (1995) pointed out, "the ultimate question is whether or not the use of case-based teaching has an impact on students' learning "(p. 75), an examination of the influence of task structure in using video cases over a longer period of time is warranted.

Case discussion was found to influence number of relevant literacy ideas participants discussed. This research project did not investigate instructor's role in case discussion and under what circumstances do case discussion lead to maximal benefit for preservice teachers. Future research also needs to specifically examine how teacher educators can facilitate case discussion when video cases are applied through different tasks.

Limitations

This study had several limitations. The limitations included the selection of the instructors, participants, and the video vignettes used in the study. There were also other limitations in data collection process. These limitations highlight that even though the results presented are relevant to the participants in this study, generalizability is limited.

The first limitation of this study was the selection of two instructors. The two instructors who participated in this study taught two different sections of the literacy methods course. One of the instructors, Cynthia, had been teaching the literacy methods

course since 1993, having been a faculty at the university since 1987, and was also very experienced in the use of video cases in her teaching, having them used for the past six years. Cynthia had also recently been awarded Teaching in Excellence award by the College of Education where this research project was conducted. The other instructor, Mallory, had only been teaching the course of past three years and using video cases for two years. In addition, Mallory was a doctoral student within the College of Education, as opposed to a faculty. Even though care was taken to avoid any instructor bias by balancing the research design, complete elimination of any such bias was not guaranteed.

Another limitation of this study is that participants were not randomly selected and neither were they randomly assigned to one of the two instructors. All participants were volunteers and self-selected themselves to participate in the study. The lack of random assignment poses threat to both internal and external validity in a quasiexperimental design and confounding factors (instructor and participants in this study) are difficult to control (Wiersma & Jurs, 2005). This limits generalizability of the study to a larger population.

A third limitation involves the selection of one of the video vignettes, specifically the IVAN clip for the phonemic awareness video learning protocol. As discussed previously, the content of this video vignette was about classroom behavior where the teacher was using a song to teach phonemic awareness. This video vignette biased majority of the participants to focus on the classroom management issues instead of discussing phonemic awareness ideas.

A final limitation of this study was with the data collection. During the video learning protocol some participants were limited in their response. These participants said

a few words and did not elaborate on their response even when prompted by the researcher. Also, when one of the groups in Cynthia's class was using IVAN tool during the guided reading in-class session (Session 5) their computer crashed. This happened when participants in this group had completed the activity and were saving their work. Since they lost the work, they had to go back and complete the activity again. Appendix A: A screen shot of IVAN - Interactive Video Analysis Neighborhood



Appendix B: Task Structures

Scaffolded Task for phonemic awareness for Literacy Class A

- View the clip(s) (select from file #19 30 listed below).
- Find and mark specific excerpts that illustrate how the children have opportunities to engage in one or more of the following to crack the alphabetic code, and/or how the teacher's instruction or preparation of the classroom environment makes it possible (see Tompkins, Chapters 1, 3 & 4):
 - o use of the four cueing systems (pp. 16-20)
 - o concepts about print (p. 86)
 - o concepts about words (p. 87-8)
 - o concepts about the alphabet (pp. 88-89)
 - o emerge into reading and writing (pp. 89-94)
 - o phonemic awareness (pp. 116-124)
 - o phonics concepts, skills, generalizations (pp. 125-130)
 - o spelling (pp. 134-146)
- Create a timeline with commentary that includes at least three excerpts. Write commentary (in the work space) for each clip to explain specifically how it illustrates opportunities to learn to 'crack the alphabetic code' in this classroom, and also share any questions you have or other comments about what you are seeing in the clip.
- Save your work to the <u>desktop</u>. Label: LastNames10.12.04

Share with another group: Share your timeline and explain what you learned about emergent literacy from watching the video clip(s).

File #	Video Clips from a Kindergarten Classroom	Find three examples of opportunities to learn to <i>Crack the Alphabetic Code</i> found in your video clip(s)
16,17	Read to: Little Red Ridinghood (10:15) Post-Read to (4:33)	
18	Read with: The Very Hungry Caterpillar (9:38)	Example: Clip 1: Shared reading Clip 2: Concepts about Print & Cueing Systems Clip 3: Predictable Books
19	Guided Reading: Group 1, Baby Owls (13:29)	
20	Guided Reading: Group 2, <i>Two</i> (8:21)	
21	Independent Reading and Writing (4:11)	
22	Write to: Note to Class (9:05)	
23	Write with: Safety Rule (11:28)	
24	Writing Conferences (6:44)	
25	Author's Chair: <i>Sharing Journals</i> (7:32)	
26	Morning Routines (9:22)	
27	Group Meeting: Field Trip (4:40)	
28	Singing: School Song (3:06)	
29, 30	Literacy Centers (1): Directions (6:58) Literacy Centers (2) (7:12)	
31	Literacy Centers (3): Directions (11:14)	
32	Literacy Centers (4): Directions (5:29)	
33	Literacy Assessment (5:42)	

Open-ended Task for phonemic awareness for Literacy Class B

With your group, decide what clips to view from the Kindergarten to explore what is taught and how the children have opportunities to crack the alphabetic code (see Tompkins, Chapters 1, 3 & 4).

- Learn about how the teacher's instruction or preparation of the classroom environment makes it possible for children to crack the alphabetic code. You also may wish to access the <u>teacher interview</u> video where she discusses her reading curriculum. List the <u>title</u> of all clips that you view.
- Create a mini-case that explains phonemic awareness in this classroom: Create a <u>timeline</u> (a collection of video clips) with <u>commentary</u> (in the work area) that you could use to show parents of students in this classroom to illustrate how the students get opportunities to 'crack the alphabetic code'.
- Share your thoughts about the mini-case: If you were teaching in this classroom, would you approach phonemic awareness in the same way? In a different way? Why?
- Save your work to the <u>desktop</u>. Label: LastNames10.13.05

Scaffolded task for Guided Reading Literacy Class B

View one or more guided reading clips (select from file #1 - 10). Create a <u>timeline</u> that

includes at least three excerpts from the clips you view.

• Find and mark specific examples that illustrate how the children are being

taught strategies and skills for reading in one or more of the following stages

of the guided reading activity and how the teacher implements guided

reading? List the <u>title</u> of all clips that you view.

- tapping prior knowledge
- o predicting
- o organizing ideas
- o figuring out unknown words
- o visualizing
- o making connections
- o applying fix-up strategies
- o revising meaning
- o monitoring
- o playing with language
- o summarizing
- o evaluating
- Create a timeline with commentary that includes at least three excerpts.

Write commentary (in the work space) for each clip to explain specifically

how it illustrates guided reading in this classroom, and also share any

questions you have or other comments about what you are seeing in the clip.

• Save your work to the desktop. File Label: YourLastNames

Share with another group: Share your timeline and explain what you learned about

phonemic awareness from watching the video clip(s)

File #	Video Clips from 1 st and 2 nd grade	
	Classicolli	
	First Grade	
1	Guided Reading (Group 1): The Brave Mouse (10:48)	
2	Guided Reading (Group 2): The Bald Bandit (6:56)	
3	Guided Reading (Group 3): Henry and Mudge and the Wild Wind (13:33)	
	Second Grade	
4	Guided Reading (A-1): Two Crazy Pigs (5:07)	
5	Guided Reading (A-2): Two Crazy Pigs (5:39)	
6	Guided Reading (A-3): Two Crazy Pigs (5:43)	
7	Guided Reading (A-4): Two Crazy Pigs (2:47)	
8	Guided Reading (B-1): Mrs. Wishy Washy (5:15)	
9	Guided Reading (B-1): Mrs. Wishy Washy (5:57)	
10	Guided Reading (C-1,2,3): Arthur's New Puppy (15:22)	

•

Unstructured task for Guided Reading for Literacy Class A

With your group, decide whether you want to view clips from Kindergarten, First or Second grade to explore what is taught and learned at that grade level during guided reading (see Tompkins, pp. 346-349 on Guided Reading).

- Learn about how this teacher implements guided reading: View one or more guided reading clips. You also may wish to access the <u>teacher interview</u> video where she discusses her reading curriculum. List the <u>title</u> of all clips that you view.
- Create a mini-case that explains guided reading in this classroom: Create a timeline (a collection of video clips) with commentary (in the work area) that you could use to show parents of students in this classroom what is taught and learned during guided reading.
- 3. Share your thoughts about the mini-case: If you were teaching in this classroom, would you approach guided reading in the same way? In a different way? Why?
- 4. Save your work to the desktop. File Label: YourLastNames

Appendix C: Description of video vignettes

Phonemic awareness video vignettes.

IVAN Clip. In this video clip, the teacher is using a school song to teach phonemic awareness. She starts out the lesson by pointing out lowercase and uppercase "i" and asks one student to point out the two types of i's in the school song. The children then start singing the song by reading it off a teacher-made chart as the teacher points out every word. The teacher highlights the sounds in the word while she is pointing to the words in the song. For example, when they come to the word "cooperate", the teacher stresses the "o" sound so students can correctly pronounce the word "cooperate". The content of the school song is about how kids should behave in classroom and in school and how they should treat each other. (Length of Clip: 3:06 minutes)

Near Transfer Clip. In this video clip, the teacher is calling on individual students to rhyme words on their own. The teacher has made a chart of objects and their names, which she uses to dismiss children from large group time by asking each child to match a pair of rhyming words. The teacher is using this activity as an informal way to assess each child's rhyming skills while also promoting rhyming skills. The teacher introduces the activity to them by giving a concrete example by pointing and saying two words that rhyme (tree and bee). (Length of Clip: 1:00 minute)

Far Transfer Clip. In this video clip, the teacher reads Green Eggs and Ham by Dr. Seuss to a group of children. Dr. Seuss books are often used by to help children be about phonemically aware and recognize sounds and syllables. The teacher starts the lesson by introducing the cover of the book and getting the students to recognize the title, author and illustrator. She emphasizes the role of the cover in a book and the role of

author and illustrator. The students in this video clip are familiar with the book. They start identifying rhyming words by filling them in as the teacher reads the book. The teacher quickly recognizes that the students are familiar with the book and lets them fill in the rhyming words by telling the children "you can help me" read the book. The teacher in this story points to the words with her finger as she reads the story. (Length of Clip: 2:55 minutes)

Guided reading video vignettes

IVAN Clip. In this video clip, the teacher is working with two students in a guided reading lesson. She asks the students if they needed help with any of the words as they are reading. One of the student points to the word "while", which they read as "white". The teacher works with the students in figuring out the word by writing it on a whiteboard and taking it out of context. She uses phonics techniques to help them identify the word and then having them put it back in the sentence to make sure it made sense. (Length of Clip: 3:51 minutes)

Near Transfer Clip. In this video clip, the teacher is having the children use the cover of the story "The Trip" to make predictions about the story. The children raise their hands to make their predictions and he calls on the students individually. The teacher then repeats what the kid he called to make prediction said before asking another kid to make a prediction. He praises a student for not just shouting out her prediction and raising her hand to be called on. (Length of clip: 1:01 minute)

Far Transfer Clip. In this video clip, the teacher is reading a book to the whole class in a guided reading session. She engages the children in the storybook reading by asking "what" questions (i.e., recall, prediction, and inference). The teacher uses the

storybook pictures and makes connections between the text and the illustrations. She also connects the story to children's prior knowledge and their personal lives (i.e., text to self connections). The teacher reviews the story at the end of the lesson and discusses the author and the illustrator. (Length of clip: 3:53 minutes)
Appendix D: Interview Protocol

Introduction

Thank you for coming here today to help in this research project. This study investigates the learning that happens over the course of the semester on various course topics in TE 401. It is expected that participation in this study would require 4 sessions lasting approximately 45 minutes each. During each session you will viewing several videos, and responding to questions about what you observed in those videos. Additionally you will be asked several questions about literacy teaching, concepts, and your beliefs about good teaching. I will be audio taping your responses. Please be assured that no one except for the researchers will have access to these tapes.

Please read the following consent forms and sign them to indicate your consent. After you have signed the consent please fill out the short background survey attached to the consent form.

Directions for dialogue

For this study you will be watching three videos of literacy practice. After each video we will be discussing your thoughts about the video. I will be asking you a set of questions that I would like you to talk about. Please be aware that there is no right or wrong answer. Please feel free to discuss your thoughts and perspectives.

Researcher, please record the Day, Time and ID of the participant before beginning the session.

Run the first case. Please feel free to prompt the participant for clarification and elaborate an idea. Take notes for each interview question to capture the gist of the idea.

Clarification	 It is okay to intervene and say, could you say that again? As a last resort, restate in your own words and ask if that is what the participant meant. If they refer to another video clip connection be sure to clarify/understand what case they are referring to.
Elaboration	 Could you unpack that? Can you say a little more about that? Talk some more about what you just said.

The following questions will be asked after EACH video clip. Allow for a couple of questions specific to each video clip. For example, ask about a particular action a teacher did.

Video Learning Protocol

Session 1, 3, 4 & 6: Interview questions for the pre- and post- session to analyze the video vignettes.

- 1. What is occurring in this video clip? [Prompt: Summarize aspects of the clip that you think are important to understanding it].
 - a. What specific instructional practices did you see this teacher employing
 - b. Explain why you think she chose those instructional practices?
 - c. What goals do you think the teacher had for this activity?
 - d. What did you notice about literacy teaching and/or learning as you were watching the video?
 - e. What was the teacher doing in the video that highlights important features of literacy instruction?
- 2. Was there anything the teacher did that you thought was problematic? Or was there anything the teacher did that you thought was representative of good teaching?
- 3. Based on your knowledge, what are some other ways to teach this lesson?
 - a. How would you teach this lesson? What materials would you use? What order would you do things in? What examples would you give?
 - b. What else could the teacher do in this example to further develop her students' literacy?
 - c. If you were teaching these kids, what would the next day's instruction look like?
- 4. If you could talk with this teacher, what questions would you ask her?
 - a. What else do you want to know about this clip for understanding it?
 - b. Why?

Post-interview

Session 3: Interview questions to gauge participants' perceptions of the first task structure. In the session 3 the participants were asked the following questions in addition to the interview about the analyses of video vignettes.

- One (specify day) you used IVAN in the class. Can you describe the activity to me on how you used IVAN?
- 2. What was the goal and purpose of doing this activity?
- What are some of your thoughts and feelings on how you used IVAN in the class on (specific day)
 - a. Was the class activity your instructor used helpful to you?
 - i. In what ways? (in terms of literacy and helpful in other ways)
 - ii. What could the instructor do to make the use of video clips more helpful?
 - b. Is there anything you didn't like about the activity? Why?

Session 6: Interview questions to gauge participants' perceptions of the second task structure. The following questions were asked to assess participants' perceptions of the second task structures and which task structure they thought was more beneficial.

- One (specify day) you used IVAN in the class. Can you describe the activity to me on how you used IVAN?
- 2. What was the goal and purpose of doing this activity?
- 3. What are some of your thoughts and feelings on how you used IVAN in the class on (specific day)
 - a. Was the class activity your instructor used helpful to you?
 - i. In what ways? (in terms of literacy and helpful in other ways)
 - ii. What could the instructor do to make the use of video clips more helpful?
 - b. Is there anything you didn't like about the activity? Why?

- 4. The first time you used IVAN, you used it (describe activity). The second time you used IVAN (describe activity). Which way of using IVAN did you like more? Why?
 - i. Which way of using IVAN did you find more helpful to you? Why?
 - ii. Which format did you feel was more beneficial / helpful in terms of learning about literacy concepts? Why?
 - a. Did you feel that one of the two formats challenged you more?
 - iii. Which one?
 - iv. Why?
 - b. If there is a third way of using IVAN which hasn't been used yet and might also be helpful, what do you think it might be? Why would it be helpful?

Appendix E: Case Perceptions Survey

Impact of IVAN video clips

Read through each of the following categories and place an "X" in the box underneath the degree to which you agree with each statement.

1 – Strongly Agree; 2 – Agree; 3 – Neutral; 4 – Disagree; 5 – Strongly Disagree

	1	2	3	4	5
Q1 The IVAN video clips took more time than				1	
they were worth.					
Q2 The IVAN video clips brought together					
material I had learned in several other					
education courses.					
Q3 The IVAN video clips added a lot of					
realism to the class.					
Q4 I felt that the use of IVAN video clips in					
the course was inefficient.					
Q5 The use of IVAN video clips allowed for					
more discussion of course ideas in the class.					
Q6 I was frustrated by ambiguity that followed					
when using the IVAN video clips.					
Q7 The IVAN video clips allowed me to retain					
more from the class.					
Q8 The IVAN video clips allowed for a deeper					
understanding of literacy instruction.					
Q9 Most of the students I know liked IVAN					
video clips.			l		
Q10 I found the use of the IVAN video clips					
format challenging in the class.					
Q11 I thought the use of IVAN video clips in					
the class was thought provoking.			ļ		
Q12 I was more engaged in class when using					
the IVAN video clips.					
Q13 I felt that we covered more content by					
using the IVAN video clips in the class.					
Q14 I felt that what we were learning in using					
the IVAN video clips is not applicable to my					
field of study.					
Q15 I took a more active part in the learning					
process when we used the IVAN video clips in					
the class.	· · · · · · · · · · · · · · · · · · ·				
Q16 The IVAN video clips allowed me to view					
an issue from multiple perspectives.					

Q17 I needed more guidance from the instructor about the use of IVAN video clips in the class.			
Q18 I felt immersed in the activity that involved the use of IVAN video clips.			
Q19 The IVAN video clips were more entertaining than they were educational.			
Q20 It was difficult to work in small groups when using IVAN video clips.			
Q21 I felt the use of IVAN video clips was irrelevant in learning about literacy instruction.			

Comparing the two IVAN activities

Think about the first time you used IVAN and the second time you used IVAN. The following questions ask you to compare the two methods of using IVAN. Please **circle one** * for each statement to indicate how you feel about the two IVAN activities. For example, if you think you learned more using IVAN in the second activity circle the * towards "Second time IVAN use" and if you feel you learned more using IVAN in the first activity circle a number towards "First time IVAN use". The middle * represents that you are neutral towards the two uses of IVAN.

Using IVAN in the two activities, I felt that I:

		Le	arned	More		
First time IVAN use	*	*	*	*	*	Second time IVAN use
]	Needed mo	re gu	idance	from t	he instr	uctor
First time IVAN use	*	*	*	*	*	Second time IVAN use
Develo	oed a bette	r und	erstand	ling of	the lite	racy concept
First time IVAN use	*	*	*	*	*	Second time IVAN use
		W	las cont	fused		
First time IVAN use	*	*	*	*	*	Second time IVAN use
		11	Vacana	agad		
First time IVAN use	*	*	* *	ageu *	*	Second time IVAN use

First time IVAN use	*	*	as chail *	engea *	*	Second time IVAN use
				_		
First time IVAN use	*	• Wa	as moti *	vated *	*	Second time IVAN use
First time IVAN use	*	*	Was ac *	tive *	*	Second time IVAN use
		Wa	as frust	rated		
First time IVAN use	*	*	*	*	*	Second time IVAN use

Appendix F: Coding Themes

The five overarching categories and sub-themes within those categories are described below. When participants raised a particular sub-theme, they were asked to elaborate and if they failed to clarify their response, it was not considered an instance of that particular sub-theme.

Advance Organizer Concepts

Advance Organizer Phonemic Awareness Concepts: These are the concepts that were presented to the participants as advance organizers during the phonemic awareness scaffolded task.

concepts about print

Any mention of print directionality (reading left to right); match voice to print; punctuation marks;

concepts about words

any mention of teacher pointing to words; words are made of letters; vocabulary words; recognizing and identifying words;

concepts about alphabet

upper and lower case; sounds of letter; identifying letters

phonemic awareness concepts

sounds in words; blending sounds to form words; segmenting sounds in words; fill-in-the blanks words that sound alike; identifying and noticing rhyming words; creating rhyming words; sounds of letter

phonics

Introduce rhyme and rhymes

spelling

Any mention of spelling such as Breaking word to spell; show spelling

Advance Organizer Guided Reading Concepts: These are the concepts that were presented to the participants as advance organizers during the guided reading scaffolded task.

word identification

Any techniques used by teacher and/or students to figure out words were coded as word identification. These techniques included putting word back in sentence, sounding out word, taking word out of sentence, identifying and recognizing words.

prior knowledge

Any mention of the teacher activating or using students' prior knowledge

predicting

Any mention of predicting techniques, use of predicting, role of predicting summarizing

Any mention of teacher using summarizing and paraphrasing to help comprehension

Additional Literacy Concepts

Additional Phonemic Awareness Concepts: These are the concepts that were not presented in the scaffolded task, but are relevant to phonemic awareness.

teacher techniques to teach phonemic awareness

any mention of teacher techniques to teach phonemic awareness such as, using song to help recognize words; fill-in-the-blanks not planned; adding inflection while reading; rhyming was not focus;.

teacher using reading material to teach phonemic awareness

Concepts involving mention of book/reading material. Book has rhyming repetitions; using song to help recognize words.

teacher using activities involving rhyming words for phonemic awareness any mention of activities that could be used with rhyming words, such as poetry; rhyming games; flashcards; drawing rhyming words.

Additional Guided Reading Concepts: These are the concepts that were not presented in the scaffolded task, but are relevant to guided reading.

teacher using illustrations

Any mention of the use of pictures that relates to guided reading. Such as,

using pictures to help predict, comprehend story. Making connections between pictures and text.

teacher techniques

Any teacher technique that he/she used to help students read/comprehend, such as asking questions to help predict, reading aloud to students

Book/reading material

Any mention of the book/reading material used for the guided reading lesson, such as maybe use easier book to predict.

Direct Reading Thinking Activity

Any mention of creating story maps or having students/teacher check if predictions were correct

Buddy Reading

Any mention of pairing students to help read

Guided Reading

Any mention of when the teaching is scaffolding student reading, i.e. guided reading

cover of book

any mention of cover of book (i.e., author, illustrator, etc.), role of cover of book.

reading book twice

Any mention of reading book twice either with teacher or independently.

asking questions

Any mention of teacher asking questions. Also asking questions to enhance comprehension, to keep kids attention.

Exploring/reinforce phonics skills

Any mention of the teacher reinforcing phonics skills, such as Silent-e rule, having students identify letters,

Exploring/practice high frequency words

Any mention of teacher using word wall to help kids recognize words

Exploring/review vocabulary words

Any mention of teacher reviewing vocabulary

/Responding/discuss the book

Any mention of teacher discussing the book with students after reading

/Responding/text to self connections

Any mention of student making text to self (i.e., with personal lives) connection

/Responding/text to text connections

Any mention of students making connections with other texts.

/Responding/text to world connections

Any mention of students making connections from text to things in the world, such as knowing what is a mouse, strawberry.

General Literacy Ideas: These are general literacy ideas that are not specific to phonemic awareness or guided reading.

teacher reading with enthusiasm

The teacher reading with enthusiasm to get kids engaged in reading and

teacher using illustration for enjoyment

any mention of using pictures for enjoyment of reading.

use a big book

an mention of book for general literacy purpose such as using a big book, using tape recorder to read.

negative remarks/suggestions

any negative remarks/suggestions about the teacher's teaching techniques, such as teacher asking too many questions, read faster.

teacher reading for enjoyment

any mention of developing interest in reading, such as enjoyment for reading

provide opportunities to read

giving kids opportunities to read and be independent readers.

teacher assessing students' reading abilities

any mention of teacher assessing students' reading ability

Classroom Management. These are classroom management issues that participants discussed during the video vignette protocol.

teacher techniques for classroom management

teacher techniques used for classroom management, such as asking questions for kids attention, keep kids focused, keep kids in control.

students not focused and off task

any mention of kids being not focused, shouting, out of control.

students behaving and following direction

any mention of kids being quiet and following teachers' directions

teacher issues

teacher was too soft on kids.

Classroom Learning. These are ideas participants raised about how the teacher was create a culture of learning in her classroom.

teacher techniques for student learning

any mention of teacher techniques relating to classroom learning such as being patient with students, repeating what students said, teacher using visual aid, teacher using group learning.

active student involvement

any mention of active student involvement in classroom, such as teacher called on students to become actively engaged

Appendix G: Number of concepts discussed by participants by the two topics

	Ad Org	aniz	e er ²	Ad Lit	ditio erac	onal y	Ger Lite	neral eracy	,	Cla Ma	ssro nage	om ement	Clas Lea	sro	om g
IVAN	1	15	7	1	0	0	0	2	2	6	2	1	0	0	2
Clip	10	0	5	1	0	1	3	2	0	3	0	2	1	0	2
	8	9	55	1	2	6	1	1	11	1	5	20	0	0	5
Near Transfer Clip	5	2	5	4	8	5	2	0	1	1	0	0	13	4	2
	6	4	5	7	5	6	0	0	0	3	1	1	5	5	6
	3	4	34	3	7	45	0	5	8	2	0	8	4	6	45
Far	1	11	5	2	3	0	7	5	4	6	3	0	1	0	1
Transfer Clip	3	6	4	1	3	7	13	9	1	0	1	0	5	0	2
	4	7	41	5	4	25	3	10) 52	2	1	13	0	4	13

Phonemic awareness more-structured task (Cynthia's Class)

Phonemic awareness less-structured task (Mallory's Class)

	Adv Org	Advance Additional General Organizer Literacy Literacy			/		Classroom Management				Classroom Learning						
IVAN Clip	11 16	6 2	8 13	3	1 0	0	0	3	2	ŀ	2	5 5	25		0	0	0
	9	7	72	0	2	5	2	3	13	I	4	1	25		2	1	4
Near Transfer Clip	7	19	5	11	5	7	5	16	3	tř	1	5	0	t	4	3	2
	8	3	8	7	9	4	2	1	1	lt	0	0	1		2	2	5
	3	4	57	7	5	55	2	2	32	l	0	0	7	1	2	1	21
Far	10	8	7	3	1	7	3	12	12	Ť	1	0	0	t	0	1	0
Clip	12	5	12	1	4	4	8	4	6	l	0	0	0		0	0	1
enp	2	4	60	2	6	28	6	4	55		2	0	3		2	1	5

² The number in each cell represents the number of concepts discussed by each participant during the video vignette protocol (post session only). So each cell corresponds to a participant. The number in bold in the last cell is the total number of concepts for all participants.

Guided reading	more-structured task	(Mallory	y's Class)	
		· .		-

	Adv Org	vanc	e ver	Ac Li	idi ter	tion acy	al	I	Ger	era	l y	T	Clas Mar	ssro	om ement	Cla Lea	ssro	om
IVAN	6	2	7	1	3	4	5	Ť	0	0	0	Ť	0	0	0	0	2	1
Clip	7	5	8	9	,	8	12		0	0	0		0	0	0	1	1	0
	3	5	43	9	,	11	71		0	0	0	1	0	0	0	0	0	5
Near Transfer Clip	5	7	6	9	,	7	6	t	1	0	0	t	0	0	0	1	1	2
	8	3	8	1	3	4	9		0	1	0	l	0	0	0	2	2	1
	4	4	45		0	5	63		1	0	3		0	0	0	2	0	11
Far	0	2	1		3	6	14	t	3	2	8	t	1	0	0	0	1	0
Transfer Clip	3	3	7		6	5	18	I	3	0	4	l	0	0	0	2	3	3
	2	1	19		2	5	89	l	2	3	25	I	0	0	1	2	3	14
								I				L						

Guided reading less-structured task (Cynthia's Class)

	Advance Organizer	Additional Literacy	General Literacy	Classroom Management	Classroom Learning		
IVAN Clip	8 9 5 10 4 7 2 11 56	5 6 6 4 3 8 8 10 50	0 0 1 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0	2 0 2 0 4 2 0 0 10		
Near Transfer Clip	3 5 6 4 3 7 4 4 36	11 7 8 3 2 5	0 0 1 0 1 0 0 0 2	3 0 0 0 0 0 0 0 3	0 0 2 2 0 5 2 5 16		
Far Transfer Clip	3 6 5 1 1 7 3 0 26	10 5 11 10 4 6 3 11 60	1 0 3 3 3 1 0 4 15	2 0 0 0 0 0 2 0 4	2 1 0 4 1 4 2 1 15		

Appendix H: Descriptive Statistics: Comparing the two tasks

Cynthia's Class

Learned More

	*	*	*	*	*							
Scaffolded Task		50%	12.5%	25%	12.5%	Open-ended Task						
	Needed *	more g	uidance : *	from the *	instruc *	tor						
Scaffolded Task	37.5%	12.5%	37.5%	12.5%		Open-ended Task						
Develo	Developed a better understanding of the literacy concept											
Scaffolded Task	12.5%	37.5%	25%	12.5%	12.5%	Open-ended Task						
		•	¥7									
	*	*	vas coni *	usea *	*							
Scaffolded Task	25%	12.5%	12.5%	12.5%	37.5%	Open-ended Task						
Was engaged												
	*	*	*	*	*							
Scaffolded Task	12.5%	12.5%	37.5%	25%	12.5%	Open-ended Task						
		W	as chall	enged								
	*	*	*	*	*							
Scaffolded Task	12.5%	25%	37.5%	25%		Open-ended Task						
		W	vas moti	vated								
	*	*	*	*	*							
Scaffolded Task		50%	12.5%	37.5%		Open-ended Task						
			Was act	ive								
	*	*	*	*	*							
Scaffolded Task	25%	12.5%	12.5%	12.5%	37.5%	Open-ended Task						
		м	as frust	rated								
	*	*	*	*	*							
Scaffolded Task	12.5%		25%	12.5%	50%	Open-ended Task						

Mallory's Class

Learned More

	*	*	*	*	*							
Scaffolded Task	87.5%	12.5%				Open-ended Task						
	Needed	more gu	uidance f	from the	instruc *	tor						
Scaffolded Task		12.5%	12.5%	50%	25%	Open-ended Task						
Develo	Developed a better understanding of the literacy concept											
Scaffolded Task	37.5%	50%	12.5%			Open-ended Task						
Was confused												
	*	*	*	*	*							
Scaffolded Task		12.5%	37.5%	12.5%	37.5%	Open-ended Task						
	Ŧ	, I	Was enga	aged	•							
Scaffolded Task		+ 12.5%	37.5%	12.5%	•	Open-ended Task						
		W	as chall	enged								
	*	*	*	*	*							
Scaffolded Task	25%	12.5%	50%	12.5%		Open-ended Task						
		W	/as motiv	vated								
	*	*	*	*	*							
Scaffolded Task	25%	25%	37.5%	12.5%		Open-ended Task						
			Was act	ive								
	*	*	*	*	*							
Scaffolded Task	37.5%	25%	25%	12.5%		Open-ended Task						
		W	as frust	rated								
	*	*	*	*	*							
Scaffolded Task		12.5%	50%	12.5%	25%	Open-ended Task						

		1	2	3	4	5
The IVAN video clips took more	Scaffolded		12.5	12.5	50.0	25.0
time than they were worth.	Open-ended	6.3	12.5	25.0	50.0	6.3
	OVERALL	3.1	12.5	18.8	50.0	15.6
The IVAN video clips brought	Scaffolded	18.8	56.3	12.5	6.3	6.3
several other education courses.	Open-ended	12.5	56.3	25.0	6.3	
	OVERALL	15.6	56.3	18.8	6.3	3.1
The IVAN video clips added a lot of	Scaffolded	25	50	18.3		6.3
realism to the class.	Open-ended	31.3	56.3	6.3	6.3	
	OVERALL	28.1	53.1	12.5	3.1	3.1
I felt that the use of IVAN video	Scaffolded	6.3	12.5	12.5	37.5	31.3
clips in the course was inefficient.	Open-ended	6.3		12.5	68.8	12.5
	OVERALL	6.3	6.3	12.5	53.1	21.9
The use of IVAN video clips	Scaffolded	18.8	50.0	18.8	12.5	
course ideas in the class.	Open-ended	25.0	56.3	12.5	6.3	
	OVERALL	21.9	53.1	15.6	9.4	
I was frustrated by ambiguity that	Scaffolded		12.5	50.0	31.3	6.3
video clips.	Open-ended		25.0	31.3	43.8	
	OVERALL		18.8	40.6	37.5	3.1
The IVAN video clips allowed me	Scaffolded	31.3	37.5	18.8	12.5	
to retain more from the class.	Open-ended	25.0	56.3	12.5	6.3	
	OVERALL	28.1	46.9	15.6	9.4	
The IVAN video clips allowed for a	Scaffolded	31.3	50.0	6.3	12.5	
instruction.	Open-ended	31.3	43.8	18.8	6.3	
	OVERALL	31.3	46.9	12.5	9.4	
Most of the students I know liked	Scaffolded	6.3	31.3	43.8	18.8	
TYAN VICE Clips.	Open-ended		31.3	31.3	37.5	
	OVERALL	3.1	31.3	37.5	28.1	

Appendix I: Descriptive Statistics for Survey Items

I found the use of the IVAN video clips format challenging in the class.	Scaffolded		37.5	25.0	25.0	12.5
	Open-ended		12.5	43.8	31.3	12.5
	OVERALL		25.0	34.4	28.1	12.5
I thought the use of IVAN video clips in the class was thought provoking.	Scaffolded	25.0	56.3	12.5	6.3	
	Open-ended	25.0	62.5	6.3	6.3	
	OVERALL	25.0	59.4	9.4	6.3	
I was more engaged in class when using the IVAN video clips.	Scaffolded	37.5	12.5	37.5	12.5	
	Open-ended	25.0	31.3	12.5	31.3	
	OVERALL	31.3	21.9	25.0	21.9	
I felt that we covered more content by using the IVAN video clips in the class.	Scaffolded	18.8	31.3	25.0	25.0	
	Open-ended	12.5	18.8	37.5	31.3	
	OVERALL	15.6	25.0	31.3	28.1	
I felt that what we were learning in using the IVAN video clips is not applicable to my field of study.	Scaffolded		12.5	12.5	25.0	50.0
	Open-ended		12.5	6.3	31.3	50.0
	OVERALL		12.5	9.4	28.1	50.0
I took a more active part in the learning process when we used the IVAN video clips in the class.	Scaffolded	25.0	37.5	18.8	6.3	12.5
	Open-ended	12.5	75.0	12.5		
	OVERALL	18.8	56.3	9.4	9.4	6.3
The IVAN video clips allowed me to view an issue from multiple perspectives.	Scaffolded	25.0	37.5	25.0	12.5	
	Open-ended	25.0	50.0	18.8	6.3	
	OVERALL	25.0	43.8	21.9	6.3	3.1
I needed more guidance from the instructor about the use of IVAN video clips in the class.	Scaffolded	6.3	31.3	18.8	37.5	6.3
	Open-ended	18.8		18.8	56.3	6.3
	OVERALL	12.5	15.6	18.8	46.9	6.3
I felt immersed in the activity that involved the use of IVAN video clips.	Scaffolded	12.5	50.0	18.8	18.8	
	Open-ended	6.3	62.5	18.8	12.5	
	OVERALL	9.4	56.3	18.8	15.6	
The IVAN video clips were more entertaining than they were educational.	Scaffolded		18.8		75.0	6.3
	Open-ended		6.3	18.8	68.8	6.3

	OVERALL		12.5	9.4	71.9	6.3
It was difficult to work in small groups when using IVAN video clips.	Scaffolded	18.8	37.5	12.5	25.0	6.3
	Open-ended	12.5	25.0	31.3	18.8	12.5
	OVERALL	15.6	31.3	21.9	21.9	9.4
I felt the use of IVAN video clips was irrelevant in learning about literacy instruction.	Scaffolded	6.3	6.3		56.3	31.3
	Open-ended				50.0	50.0
	OVERALL	3.1	3.1		53.1	40.6

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