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An Instructional Model for Preparing Teachers for Fieldwork

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Teacher education and the teaching profession are adapting to innovative methods to ensure the professional longevity and effectiveness of those who become educators. This is particularly important because of the early, and sometimes abrupt, exit of beginning teachers from the profession. Clearly, to mitigate such early exodus from the profession, those responsible for teacher education must examine how they prepare student teachers and whether or not they are equipped to face the realities of the classroom when they enter the profession. This paper presents a modality that engages pre-professionals or student teachers in meaningful and productive field experiences that will improve student teachers' learning. The author presents an instructional model that can be applied to prepare student teachers for more effective field experiences that will improve their learning.

Teacher educators are constantly faced with the challenge of providing student teachers with learning opportunities that will "promote effective teaching and that will maximize student learning" (Ostorga & Lopez-Estrada, 2009, p. 18). Educators believe that integrating field experiences into coursework is an effective approach to meeting this challenge (Chiang, 2008) because such experiences modify and enrich student teachers' thinking and conceptual understanding about teaching and learning (Loyens & Gijbels, 2008; Parkison, 2009; Cherubini, 2008; Loyens, Rikers, & Schmidt, 2008). Challenging pre-services teachers thinking is likely to improve their conceptual understanding of teaching and learning theories, increase of transferability of skills, and improve future learning (Renkl, 2009; Wilson, Floden & Ferrini-Mundy, 2001), thus making student teachers more effective in the classroom.

The inference here is that to enhance student teachers' learning and improve their ability to apply the acquired knowledge, learning must take place in an environment that facilitates the desired learning outcomes, particularly as they relate to application of knowledge in different situations (Woolfolk, 2004). In other words, experiences in the learning environment must be replicated in the environment in which student teachers would eventually apply their knowledge, as well as one that presents a wide range of learning opportunities that mirror those likely to be encountered in the future. For example, if the learning is preparing students to become teachers, they should be given learning opportunities in a public school setting and classroom where they can test their acquired knowledge of teaching and learning. (The same case is true of the pre-professional medical student who wants to become a surgeon; he or she must be given learning opportunities in the operating room to hone surgical skills before operating on a patient.) The environment must present opportunities to allow learners to frame their knowledge and understanding of the issues and contexts that are relevant to their discipline. These opportunities can be on-the-job training such as in the case of the medical students who assume an internship at a hospital to hone their skills. Here the medical intern is assigned a resident advisor who provides learning opportunities such as diagnosing a disease or providing feedback, allowing the medical students to reflect on their action (diagnosis) and providing other opportunities for learning that will facilitate understanding. The medical interns learn from the resident advisor as well as from their peers as they seek to refine their understanding of a specific issue. The same approach is used in the teacher preparation process where, at the end of the coursework, student teachers engage in student teaching under the authority of a master teacher and the watchful eye of a university supervisor.

It is important to recognize that respected authorities in the profession suggest that the quality of the time spent in the classrooms and the expertise of those involved (master teacher and field supervisor), as well as the feedback provided, are significant factors in determining the value of field experience (Shantz & Ward, 2000; Tang & Chow, 2007; Whitney, Golez, Nagel & Nieto 2002). Additionally, evidence has shown that teacher preparation activities such as dialogues with colleagues, instructors, and master teachers (Penlington, 2008); cooperative group discourse (Gillies & Boyle, 2008); reflective thinking (Chiang, 2008); and the use of classroom video to encourage discussion and problem-solving (Borko, Jacobs, Eitelgorg, & Pittman, 2008) have proven to be effective in enhancing student teachers' field experience because they allow student teachers to analyze and reflect on their experiences as they relate to theory. Clearly, for fieldwork experiences to serve as productive learning opportunities (Wilson, et al. 2001), an intense emphasis must be placed on the learning that occurs in the field by providing student teachers with the skills necessary to effectively comprehend the

meaning of their observation (Tang, 2004). Basically, student teachers must be trained to analyze their field observations in order to enhance their understanding of teaching and learning.

Although teacher educators agree that fieldwork activities are an effective mechanism to address the theory-practice chasm (Wilson, Floden, & Ferrini-Mundy, 2001), some admit that they find it difficult providing quality field experiences that will facilitate learning (Beck & Kosnick, 2002; Clark, 2002: Laboskey & Richert, 2002). Yet, other educators believe that the fieldwork component of teacher preparation is overly focused on outcomes rather than on the process of learning that occurs during fieldwork (Ward & McCotter, 2004). As a result of the latter, the benefits of fieldwork activities are not fully realized. Despite the important role fieldwork plays in student teacher development and the variety of methods (e.g. analysis of case studies and videos of classroom teaching) used to facilitate student teachers' conceptual understanding of teaching and learning, there is no consensus on how to best prepare teachers to engage in meaningful and productive fieldwork (i.e. how best to interpret and to make sense of what is observed so that it changes teacher practice).

For student teachers to make meaning of their field experiences in a way that their conceptual understanding is improved, they must have some knowledge of the environment and be able to apply that knowledge to the experiences and events in the new environment. More importantly, the pre-service teacher must be able to reflect and analyze his/her experiences and events and integrate this new knowledge within his/her existing knowledge. For example, student teachers who have learned classroom management techniques through coursework and field based activities could effectively apply that knowledge in developing and implementing a classroom management plan in their classroom, create an engaging learning environment for their students, and make necessary adjustments to the plan as the need arises. This is not to suggest the ability to apply the knowledge learned in context specific situations to general situations is easy or automatic. Teachers must first understand the situations they encounter and use their understanding to determine what action to take. To develop this ability, student teachers must not only be given adequate exposure through field experiences to a variety of classroom situations but also must be taught how to use, or make meaning of, their fieldwork experiences to enhance their understanding of the teaching and learning process. It is the process of reflecting on their experiences that will enhance the learning experience of student teachers and increase transferability.

Therefore, for field experiences to be effective, emphasis must be placed on *preparation* for field activities that has as its core the early and consistent training in the techniques and skills of classroom observation. It is to this end that this study proposes a model for preparing student teachers so they can effectively participate in classroom observation and fieldwork.

Theoretical Framework

According to Dewey (1933), 'deliberate thought and deliberate action' do not occur automatically; therefore, teacher educators must train student teachers to think reflectively about their learning experiences. It is this reflective practice that will make learning more meaningful. The process of reflective thought involves "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that supports it and the further conclusions to which it tends" (p. 9). Further study of reflective thinking as defined by Dewey (1933) yields that reflective thinking:

> emancipates us from merely impulsive and merely routine activity. Put in positive terms, thinking enables us to direct our activities with foresight and to plan according to ends-in-view, or purposes of which we are aware. It enables us to act in deliberate and intentional fashion to attain future objects or to come into command of what is now distant and lacking. (Dewey, 1933, p. 17)

Dewey further asserts that reflective thinking is "the kind of thinking that consists in the turning a subject over in the mind and giving it serious and consecutive consideration" (p. 3). It is important to note that reflective thinking "involves (1) a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and (2) an act of searching, hunting, inquiring, to find material that will resolve the doubt, settle and dispose of the perplexity" (Dewey, 1933, p. 12). Training student teachers how to think reflectively, to manage their doubts and lack of understanding through inquiry and the acquisition of information, is one approach teacher educators can use to enhance teacher effectiveness and promoting student learning. Given the value associated with reflective thinking, teacher educators should make explicit attempts to facilitate the development of this skill in their student teachers.

An Instructional Model for Fieldwork Preparation

For student teachers to obtain the maximum benefits of fieldwork, they must be trained to effectively use the knowledge acquired in the program courses in order to understand the teaching and learning situations they will encounter in the field. To accomplish this goal, teacher educators should identify with specificity what they expect student teachers to do when in the field. Once the purpose and goal of fieldwork is clearly established, teacher educators should create authentic learning opportunities for student teachers to apply their knowledge in a wide range of situations, reflect and clarify their application of this knowledge, and integrate the new knowledge within the context of teaching. It is through this process that students will be able to forge links between theory and practice as well as acquire skill sets that would broaden their understanding of the practical complexities of teaching and learning (Boreen, Johnson, Niday & Potts, 2000; Moore, 2003).

The Concept Attainment Model (CAM) by Joyce, Weils & Calhoun (2004) (see Table 1), provides the framework for creating meaningful field experiences because it illuminates the process of conceptual understanding by clearly illustrating how students acquire (analysis and reflection) and apply (integration) the knowledge. Furthermore, this model illustrates the process for framing and reframing teaching concepts with the support of their instructor and peers (Loghran, 2002; Ward & McCotter, 2004).

It is important to note that this model contains three phases (See Table 1): presentation of data and identification of the concept to be learned; testing attainment of the concept; and analysis of thinking strategies (Joyce, et al., 2004). During Phase One, presentation of data and identification of concept, the instructor presents the concept (making content accessible, accessing learning, etc.) to the student teachers with examples to aid in their understanding. The student teachers then engage in identifying the attributes of this concept. Once the student teachers identify the attributes (defining factors) of the concepts, they name and define the concept based on the attributes they have collected. As the training moves to Phase Two, testing attainment of the concept, students add more attributes (defining factors) to clarify their understanding of the concept and reframe the concept with the help of the instructor and peers. The instructor checks for comprehension of the concept by engaging students in reflecting, problem posing, and dialogue activities. In the final phase, or what has been designated here as Phase Three, analysis of thinking strategies, students are asked to reflect on their experiences and thought processes regarding "how" and "why" they formed their hypotheses and to make any necessary changes.

The Concept Attainment Model by Joyce, et al. (2004) was adapted to meet the author's conception of an instructional model for fieldwork. In this adaptation, the title and process in each of three phases has been modified to reflect the author's perspective and perception of an instructional model for fieldwork preparation. For example, Phase One of the original model (Joyce, et al., 2004) was changed to Step One, Identify and define the teaching/learning concept; Phase Two was changed to Step Two, Assessing understanding of concept; and Phase Three was renamed Step Three, Making the connection.

Training for fieldwork. In the program, training for fieldwork begins in a course designated for enhancing observation skills and occurs through a variety of instructional opportunities designed to prepare student teachers to effectively engage the learning environment prior to entering the field to conduct observations. The preparation for field observation should focus on the knowledge and skill sets teachers need in the classroom to effectively make sense of their observation experience. The course curriculum may consist of an introduction to basic observation skills, for example, establishing an observation focus, collecting data relevant to the focus, analyzing the data, and demonstrating conceptual understanding. The course instructor can develop a variety of learning opportunities that allow student teachers to acquire these skills before entering the field. One way to do this is to introduce new teaching/learning concepts through case studies and video illustrations and have the student teachers identify the teaching/learning concepts, identify attributes of the concept, define the concept, gather evidence to support the definition, and refine the definition by discussing their observation with the instructor and classmates. Finally, student teachers may demonstrate their understanding of the concept by developing examples of the concept that demonstrate an integration of the newly formed knowledge.

For clarity, for example, student teachers are enrolled in a methods course where they are learning about motivating students and making content accessible. After a lecture on these topics, the instructor directs the student teacher to go into the field to observe how teachers motivate students or how they make content accessible to students. Before entering the field, student teachers must establish the observation focus (i.e. what to look for in the classroom). For example, the student teacher may decide to focus on how the teacher makes content accessible to English Language Learners (ELLs) by looking for modifications of teaching strategies. (See Table 2). Once the observation focus is established, the student teacher visits a classroom to collect data that is relevant to the focus.

Table 1
Concept Attainment Model

Phase 1 Presentation of Data and Identification of Concepts	Phase 2 Testing Attainment of the Concepts	Phase 3 Analysis of Thinking Strategies
Teacher presents labeled examples	Students identify additional unlabeled examples as appropriate	Students describe thoughts
Students compare attributes on positive and negative examples	Teacher confirms hypotheses, names concepts, and restates definitions according to essential attributes	Students discuss role of hypotheses and attributes
Students generate and test hypotheses	na	na
Students state a definition according to the essential attributes	Students generate examples	Students discuss type and number of hypotheses

Table 2
Example of the Instructional Model for Fieldwork

Step 1 Identify Instructional Practice	Step 2 Provide Evidence of Learning & Teaching Situations	Step 3 Testing Understanding of Concept

Making content accessible to English Language Learners (ELL)
 	
• Identify an example of course concept in school classroom
 	
• Provide evidence of the concept
	In the classroom student teacher records evidence relevant to making content assessable to ELL
	
	What is seen is the classroom?
	• Classroom teacher teaches a Social Studies lesson on how a bill becomes a law
	
	Teacher modifies lesson for ELL as follows:
	• Uses personal or prior knowledge to introduce lesson by asking students "what is a bill? What is a law?"
	• Explains concepts in lesson with illustrations
	• Make visual aid of the lesson
	  • Uses Scaffolding
	  • Chunks content
	  • Checks for understanding by asking questions and/or creating a chart on how a bill becomes a law.
	  • Provides opportunities for students to work in groups
	  • Uses words in the students' language to help them connect points.
	  • Draws on students culture and personal knowledge
	  • Checks for understanding
	  • Restates and reframes lesson for those who do not understand lesson.
		Reflection of observation conducted in the field and its connection to theory taught in their preparatory coursework
		
		After reflection student teachers will:
		
		• Look for examples of how the teacher makes content accessible to all students
		• Seek additional data to reinforce the framing of the concept of making content accessible to learners
		• Validate what is seen in the field through discussion
		• Interprets the evidence gathered and reframe the concept based on discussion (and ongoing reflection) with instructor and peers
		• Connect related factors to concepts
		• Integrates knowledge of what was taught and what was observed
		• Develop a new understanding

For example, the student teacher is placed in a Social Studies classroom to look for evidence of the teacher's adapting the lesson to ELLs. For clarity, for example, the lesson taught might be how a bill becomes a law.

The student teacher observes the teacher using the students' prior knowledge by asking "What is a bill? What is a law?" The teacher may create a chart on how a bill becomes a law and draws on the students' culture and personal knowledge to promote understanding. The student teacher observes the teacher using an illustration of how household rules are established and asks students to identify how rules are made in their home.

In Step Two, the student teacher will use the evidence gathered and her prior knowledge to refine and clarify her observation and perception of the concept in an attempt to enhance her understanding. Additional evidence may be gathered if student teachers are unclear about the activity or believe that they lack sufficient evidence to make sense of how the lesson was accessible to ELLs. A critical component in this step is the ability of student teachers to distinguish between relevant and irrelevant aspects of the activity and focus only on those aspects that are germane to the concept. For example, student teachers may find students' discussion about their household rules and how they were created to be relevant, while discussions about the rules in a game might be irrelevant to the concept being taught.

Using the data collected in their fieldwork, student teachers participate in discussions (inquiry) with their peers and instructor as a way to refine their thoughts and validate their understanding. The defining and refining process leads to Step Three, in which student teachers apply and integrate their knowledge of the concept by framing the concept and generating examples that reflect their understanding, in this case by providing an explanation of how/why the illustration (e.g. chart of how a bill becomes a law) made the content accessible for English Language Learners. The student teacher may, for example, say that the teacher's approach was effective because the students were given opportunities to check their understanding by correctly answering questions about how a bill becomes a law. These activities may serve to validate student teachers' understanding and provide opportunities to reframe their conceptualization through inquiry, discussion, data collection and illustration.

Conclusion

Before teachers enter the profession, they must be trained to be effective observers of classroom interaction so that their learning and understanding of the teaching process can be cultivated and enhanced. To accomplish this, we must create an enabling environment for pre-professional teachers to undergo regular training in observational skills. It is this understanding that will facilitate student teachers' skill sets to enable their overall development and increase the likelihood of a change in their teaching practice.

Similarly, involvement in structured field experiences with an integrated reflective component will enhance the preparation of students as they enter into their teaching experience. Training for fieldwork with specific focus on reflective thinking is a way to bridge that gap between theory and practice. Further, training in classroom observation assists student teachers to organize their thoughts and make sense of teaching and learning concepts. Such reflection and inquiry promote a model of learning that views teaching as an ongoing process of knowledge building and is adaptable to teaching contexts.

As long as teaching remains a dynamic process, teacher educators will continue to face the challenge of how best to prepare teachers for contemporary classrooms. It is not enough to prepare student teachers with theories about teaching or with a knapsack full of "strategies."

It is incumbent upon teacher educators to enhance the experience of student teachers by exposing them to both theoretical development and very real, structured, reflective, on-going field experiences. Furthermore, to fulfill the promise of an effective field placement, the field experience must be accompanied by a clear, systematic approach to the process, goals, and the outcome of the experience.

To contribute to literature in the field, future research should conduct a comparative analysis of how this model operates with ethnic, minority, and predominantly white school settings, urban versus rural settings, and affluent versus not-so-affluent settings. The results of such studies could yield an ingredient for educational policies that would improve teacher training.

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