

Teacher Candidates' Questions within the Context of an Educational Psychology Course

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The belief systems with which teacher candidates enter their preservice programs powerfully shape their perceptions about teaching and learning. Data were gathered from 412 teacher candidates over the course of 5 academic years. Each of the participants posed 2 questions at the beginning of their course that they would like to be answered during their preservice educational psychology course. Independent raters coded questions using the four domains of "Instruction and Assessment," "Students as Learners," "Communication Techniques," and "Profession and Community" (Praxis Series: Principles of Learning and Teaching, 2005). Three quarters of the questions in the "Students as Learners" domain and in particular, over one quarter of all of the teacher candidates posed questions, related to "Classroom Management." These questions were focused on reactive classroom management interventions especially for moderate and serious misbehaviors. An awareness of teacher candidates' questions will assist teacher educators to position classroom management in the context of educational psychology courses.

Research Perspective

The goal of preservice education is to prepare teacher candidates for a career in teaching. In Ontario, Canada, the Ministry of Education holds an accountability framework for teacher education programs within the Education Act, Government of Ontario, R.S.O. (1990, c. E. 2). This legislation explicitly states that a university or college will provide for the professional education of teachers, and boards of education shall permit its schools to be used for observation and practice teaching. Accordingly, the overarching goal of this professional education is to equip prospective teachers to enter the profession and meet the challenges of preparing children to become members of our society (Ontario College of Teachers, 1999). The Ontario College of Teachers accredits preservice programs to deliver professional education. An essential component for all accredited programs is that the course complement "... includes theory, method and foundation courses and makes appropriate provision for the application

of theory in practice" (Ontario College of Teachers Act, 1996). Institutions that offer teacher education determine the necessary courses of study that contribute to professional preparation.

Ideally, the goals of teacher education programs are to provide current theory and research to assist teacher candidates so that they will develop and implement personal conceptions of teaching into practice (Cochran-Smith, 2005; Gitlin, Barlow, Burbank, Kauchak, & Stevens, 1999). Candidates must acquire the necessary knowledge and skills to meet the requirements of a demanding curriculum and diverse students' needs (Langford & Barnett, 2006; Sadker & Sadker, 2005). As part of their initial teacher preparation, teacher candidates must also understand basic concepts of educational psychology so that they can match learning and performance opportunities to the needs of their students. In this way, professional knowledge must exist in recognizing students' strengths and weaknesses and how to differentiate instruction effectively (Darling-

Hammond, 2006; Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005; Liston, Borko, & Whitcomb, 2008).

Teacher educators are well aware that teacher candidates often define the act of teaching for themselves (McMahon, 1997). Ideally, this definition is composed of knowledge from several sources: teacher education courses, practica, and prior knowledge and experiences. Prior knowledge and experience have an overwhelming influence on the learning of new information. At times, it is difficult for teacher candidates to determine when relevant prior knowledge should be applied (Driscoll, 2000). For example, it is well recognized that teacher candidates' prior experiences as students largely determines the teaching philosophies and methodologies they in turn adopt as practitioners (Auger & Rich, 2007; Jensen, 2001; Naested, Potvin, & Waldron, 2004; Parkay, Stanford, Vaillencourt, & Stephens, 2007). However, the beliefs and knowledge developed from past experiences do not always support the theory and pedagogy taught in teacher candidates' preservice courses (Anderson, 2001). As a consequence, teacher candidates may enter preservice education with skewed program expectations and a number of emerging questions—especially within theoretically based courses such as educational psychology.

Belief systems, like other forms of knowledge, are organized around contextual situations (Anderson, 2001). Herein, the context of the classroom is a salient reference for all teacher candidates established from their prior experiences as students. On the basis of this context, the belief systems with

which teacher candidates enter their preservice year are powerful at shaping their perceptions about teaching and subsequent practices. The process of working through teacher candidates' belief systems within teacher education requires cognitive effort (Pajares, 1992). Upon entry into preservice education, it is important for teacher educators to be aware of their teacher candidates' beliefs so that teacher educators may couch these beliefs within the course context.

Purpose

The purpose of this investigation was to explore the types of questions that teacher candidates would like answered in a required preservice educational psychology course. As well, this study sought to analyze the teacher candidates' implied assumptions related to the most frequently cited concepts and issues expressed in these questions. Accordingly, this study was guided by the following research question: Is there a trend in the nature of questions that teacher candidates have that reveals their beliefs about teaching and learning? Given this information, professors of educational psychology may be better able to address teacher candidates' expectations of the discipline of educational psychology. Further, when professors of educational psychology possess an understanding of teacher candidates' rationales for holding these queries, they may address preconceptions and knowledge gaps as a function of their course content and instructional methods.

Study Context and Participants

This research took place in a medium-sized Canadian university in Southern Ontario. In this province, after completion of an undergraduate

bachelor's degree, preservice education is a one-year consecutive degree program, leading to a Bachelor of Education (BEd). Admission requirements at this particular institution require that prospective teacher candidates must hold a minimum B (75%) average as well as experience working with children or youth and students. Typically, acceptance into teacher education is a competitive process in this jurisdiction and consequently, the teacher candidates in this participant sample had a consistent undergraduate degree average of +85%.

At this institution, to obtain a BEd and licensed teaching certification, teacher candidates must complete 13 courses across 20 weeks in addition to 11 weeks of inschool practica. A requirement for all teacher candidates is a 10-session (20 hr) educational psychology course. There are both elementary-level (Grades K–8) and secondary-level (Grades 9–12) offerings of this course. Educational psychology is taught at the beginning of the teacher education program in a seminary format. The teacher-to-student ratio is approximately 1:28.

On an annual basis, the professor who conducted this study teaches three elementary-level sections of this course through both teacher-directed and student-directed methods. The participants for this study were 412 teacher candidates who were enrolled in one of 5 academic years (September 2001 to September 2005). During this period, the professor taught 15 sections of elementary teacher candidates. Their age range was 22–48 years ($M = 25$ years) and the average ratio of females to males was 7:1.

Data Sources

On the first day of class, the professor defines the discipline of educational psychology, describes the reciprocal qualities of teaching and learning, and discusses the characteristics of effective teachers and students. As part of the introductory activities in the first class, the professor invites the teacher candidates to compose and share two questions that they would like addressed in this course along with their rationale for asking the questions. A single sheet of paper is given to each student with two separate sections headed by the following prompts: “Question #1 that I would like addressed in this course (along with my rationale),” and “Question #2 that I would like addressed in this course (along with my rationale).” The professor does not offer any examples to avoid biasing students' responses. At the top of the paper, teacher candidates are asked to note the current date and self-select a pseudonym (e.g., “John D.”). In accordance with institutional protocol, teacher candidates are also asked to provide their endorsement as consent for their questions to be used for research purposes. These questions are submitted and retained by the professor for the duration of the course. The professor refers to these teacher candidates' questions and rationales over the term of the course to ensure that the teacher candidates' queries are being addressed and their misconceptions are being challenged. Over the course of this study, the 412 teacher candidate participants ($n = 412$) each offered two questions for a total of 824 questions. However, not all questions were unique.

Teacher Candidates' Questions: Data Analysis

In many states in the United States, it is common practice for teacher candidates to complete some form of a licensure examination. During the period of data collection, a beta version of a teacher qualifying test was mandated in this Canadian province. This test was a modified version of the *Praxis Series: Principles of Learning and Teaching* examination framework (Educational Testing Service, 2005). Accordingly, this framework was used to code and categorize the participants' questions into one of the following four domains: "Students as Learners," "Instruction and Assessment," "Communication Techniques," and "Profession and Community" of the *Praxis Series: Principles of Learning and Teaching*. Each of these four domains is divided into subcategories and topics. The teacher candidates' questions were sorted into one of the four domains then the questions were coded with one of the 22 subcategories that further delineate the domains. Each question was coded only once based on the central issue or premise of the question. This practice ameliorated for the potential conflict of multiple categories for some questions. To enhance trustworthiness of the

coding process, the question codes were validated by two other individuals (a teacher candidate and a graduate student of education). An intraclass coefficient was used to calculate the degree of reliability between the coders (McGraw & Wong, 1996). There was strong interrater reliability among the three coders ($r = .94, p < .05$). It was therefore concluded that the coders were reliably and consistently using the coding framework (Hurlburt, 2003).

Teacher Candidates' Questions: Results

The following results are based on descriptive data that attempt to categorize and quantify the teacher candidates' questions. Specifically, the teacher candidates' questions were grouped disparately across the four domains identified earlier.

Overwhelmingly, of the 412 candidates, the majority of teacher candidates (75.8%) posed questions related to "Students as Learners," followed by "Profession and Community" (15%), and "Instruction and Assessment" (8.2%). The frequency count for the subcategory, "Communication Techniques," was negligible at <1% of the posed questions. Table 1 presents frequency counts and descriptions for each of the question subcategories by domain

Table 1. Frequency Counts of Question Domains and Subcategories

Domain: "Students as Learners"			Domain: "Instruction and Assessment"		
Subcategory	No. of questions	% of total	Subcategory	No. of questions	% of total
Theory about how learning occurs (knowledge construction, skills acquisition)	83	10.0	Cognitive processes (thinking, problem solving, memory, recall, reasoning)	23	2.5
Human development (in physical, social, cognitive domains)	22	2.6	Uses of instructional strategies/methods associated with instructional strategies	17	2.0
Differences in student learning (gender, culture, MI)	16	1.4	Methods for enhancing student learning (technology, library)	3	0.5
Exceptionalities	72	8.5	Techniques for planning instruction	15	1.6
Legislation relating to exceptional students	3	0.5	Techniques for bridging between curriculum goals and student experiences	10	1.2
Accommodating learning styles	95	11.5	Assessment strategies (types, scoring, interpreting)	0	0.0
Supporting second language acquisition	1	0.2			
Individual experiences (multiculturalism, family)	21	2.5			
Human motivation	76	9.0			
Classroom management & strategies (routines, rules, feedback, problem solving, communication, space)	236	28.6			
Total	625	75.8	Total	68	8.2
Domain: "Communication Techniques"			Domain: "Profession and Community"		
Subcategory	No. of questions	% of total	Subcategory	No. of questions	% of total
Verbal and nonverbal communication techniques	1	0.2	Reflective practitioner (professional development resources, applying research, ongoing personal reflection)	50	6.0
Cultural and gender differences on communication	0	0.0	School as a resource to the community	10	1.2
Communication to stimulate discussion	3	0.5	Environment outside of the school (community, health, family)	16	1.9
			Active partnership among teachers and parents	43	5.2
			Laws on student rights and teacher responsibilities	8	0.9
Total	4	1.0	Total	127	15

The most popular domain, students as learners, included concepts that relate to student development, as well as the learning environment and process. The five subcategories that were the most frequently asked about were classroom management and strategies (28.6%), accommodating learning styles (11.5%), theory about how learning occurs (10.0%), human motivation (9.0%), and exceptionalities (8.5%). These five subcategories were also the most frequently queried topics overall. Within this domain, classroom management and strategies encompasses procedures and routines, rules, consequences, positive guidance, problem solving, parental feedback, class-space arrangements, and lesson pace and structure. Accommodating learning styles examines the different ways in which students learn. Theory about how learning occurs includes how students construct knowledge, acquire skills, and develop habits of mind. Human motivation is an extensive subcategory that consists of the theoretical foundations of motivation and strategies for supporting students' motivation.

Exceptionalities is a topic that summarizes the main areas of exceptionality (e.g., learning disabilities, attention deficit disorder, visual difficulties) in students' learning.

Classroom Management Questions: Data Analysis

For the most frequently cited subcategory (classroom management and strategies), the teacher candidates' questions were further analyzed to understand the classroom management issues that contributed to their queries. The phrases in the teacher candidates' questions indicated what they would like their educational psychology course to teach them about managing students in the classroom.

With reference to current educational psychology texts (Eggen & Kauchak, 2007; Santrock, Woloshyn, DiPetra, & Marini, 2007), the classroom management question phrases were coded by using five categories (see Table 2). The coding of these question phrases was verified by a second professor of educational psychology.

Table 2. *Categorical Codes for Classroom Management Questions*

Categorical codes based on educational psychology texts	Examples of teacher candidates' question phrases
Awareness of preventative strategies	"Establishing rules from the beginning of the school year," "emphasizing a positive classroom environment," "increasing academic learning time," "developing a positive relationship with students," "assigning students classroom responsibilities."
Awareness of ongoing or maintenance strategies	"Managing group activities," "maintaining established rules and routines," "using effective communication," "working with parents and community mentors."
Awareness of minor interventions	"Using nonverbal cues, eye contact, and proximity"; "providing students with choices."
Reactions with moderate	"Withholding a privilege," "isolating or removing

interventions	students,” “time-out,” “writing behavioral contracts,” “disciplining,” “consulting other veteran colleagues.”
Reactions to serious occurrences	“Dealing with swearing/aggression/harassment,” “perpetrating bullying,” “threats against teachers or students,” “suspending students.”

Classroom Management Questions:

Results

The analyses of the issues for the most queried subtopic, classroom management, revealed that the teacher candidates were most often looking for reactive interventions for moderate misbehaviors and serious occurrences. Coupled together, these two categories (reactions with moderate interventions = 39%, and reactions to serious occurrences = 16%) reflected over half of the teacher candidates' classroom management concerns. In particular, the teacher candidates indicated that they hoped that their educational psychology course would provide them with discipline strategies, ways to deal with aggression, and ways to deal with students swearing. The teacher candidates expressed fewer questions that would indicate their awareness of preventative strategies (17%), ongoing or maintenance strategies (17%), or minor interventions (11%).

Discussion

Overall, it is surprising that the most frequently reported queries that these teacher candidates expressed were related to understanding their students as learners. At this institution, these teacher candidates are required to have an extensive experience prerequisite (+100 hours) to gain entry into the teacher education program. It would be a natural assumption that given their experience, these teacher candidates would perceive that they understand students as learners.

The overwhelming proportion (75.8%) of their queries within the students as learners domain was devoted to questions related to classroom management (28.6%). It is generally the case that teacher candidates are more interested in classroom operational issues than issues of learning and development (Patrick & Pintrich, 2001). Teacher candidates tend to have a sense that their teaching efficacy is related to how well they maintain order and discipline (Tabachnik & Zeichner, 1984) or the degree to which their students are motivated (Holt-Reynolds, 1992). Herein, it is difficult to provide an explanation for the infrequency of questions related to motivation. A speculation could be that these particular teacher candidate participants ignorantly posed their questions without authentic classroom teaching experience and, consequently, were unaware of their integral role in student motivation. This anomaly in the findings (in light of preexisting literature) requires further investigation.

It is interesting to note that this participant set of teacher candidates only asked a modest proportion of questions related to motivation (9%). This finding appears to contradict the literature (e.g., Holt-Reynolds, 1992; Weinstein, 1989). Typically, teacher candidates tend to regard student motivation as largely outside of their control, albeit they believe that motivation should be the focus of teachers' attention (Weinstein, 1989). Further, some teacher candidates

believe that they should motivate their students through thought-provoking or interesting activities (Holt-Reynolds, 1992).

Secondary analyses of the teacher candidates' queries related to classroom management revealed their perceptions that the educational psychology course would supply them with reactive interventions for moderate and serious misbehaviors in the classroom. Perhaps this assumption is influenced heavily by teacher candidates' associated concerns with being held accountable for controlling such extreme behaviors. As well, teacher candidates may recall salient memories of their own schooling experiences when they witnessed teachers reacting to moderate and serious misbehaviors. These memories may elicit concerns in the minds of teacher candidates who recognize that soon they will be in similar supervisory roles.

Implications for Educational Psychology Instruction

In general, the conceptions of classroom management that teacher candidates hold are not easily amenable to conceptual change. Conceptual change challenges old ideas and leads to the continual construction and reorganization of knowledge (Lefrancois, 2000). Teacher educators need to understand how to elicit positive change in the knowledge base of teacher candidates, thus contributing to their conceptual development (Patrick & Pintrich, 2001). A critical beginning for teacher educators is to capture the initial questions and conceptions that their teacher candidates possess on entry into preservice education programs.

The conceptions of teacher candidates on preservice entry affect the

nature of what they extract from the preservice experience (Anderson, 2001). Teacher candidates who commence their coursework with their own belief systems about how to manage a class, interpret preservice experiences through these lenses. When these conceptions are consistent with preservice experiences, teacher candidates tend to be receptive to their teacher educators, who are expanding and augmenting these conceptions (Anderson, 2001). Teacher educators are able to facilitate activities that provoke self-examination of ideas about learning and reconstruction of their conceptions. However, there are those teacher candidates who do not experience symbiosis between their conceptions and preservice preparation. These teacher candidates may require alternative instructional approaches in course content to promote meaning and new learning about teaching.

Teacher candidates engaged in course content that they perceive to be useful are likely to be cognitively engaged (Patrick & Pintrich, 2001). Such is the case with topics such as classroom management, as teacher candidates anticipate that educational psychology courses will include this content. When courses are relevant and appropriate, teacher candidates are likely to consider how they can revise their own beliefs about learning in light of the new information. Contextualizing psychological principles and theories in teacher education courses can facilitate this process. This contextualization is just one component that is required to facilitate the acceptance of new knowledge and ensuing conceptual change.

The theoretical construct of prior knowledge needs to be considered by teacher educators, and its influence

needs to be accommodated into teacher education course objectives. With the understanding that their teacher candidates enter preservice education with beliefs about teaching and learning, teacher educators should attempt to take the perspective of their teacher candidates. For example, from the initial stages of the teacher education program, teacher educators should seek to set up situations that allow them to gain an awareness of their teacher candidates' beliefs about classroom management. The teacher educators who are able to identify their teacher candidates' entering beliefs about teaching, learning, and knowledge construction, are able to facilitate the growth of frames for thinking about instruction (Anderson et al., 2005).

Through course discussions, teacher candidates could be encouraged to become aware of their own beliefs, thereby challenging and confronting them. Teacher candidates who are engaged in this type of instruction will feel that their initial beliefs and experiences are valued (Anderson, 2001). Furthermore, throughout the preservice education program, teacher candidates need to be encouraged to question their beliefs in relation to research and theory (Pajares, 1992) and focus on the differences between their own beliefs and the presented new knowledge. When teacher candidates make connections between theory and practice, they will then challenge their understandings in real situations (Roskos & Walker, 1994) and thereby develop as reflective practitioners (Schön, 1983). Teacher educators should equip candidates with dispositions of inquiry so that they may continue to examine

and challenge their understandings throughout their careers (Moss, 2001).

Professors of educational psychology who instruct in teacher education programs often find that in any given class, teacher candidates come to the program with varied experiences and different conceptions with respect to the discipline. Within this particular teacher education program, the educational psychology professor provides teacher candidates with daily opportunities to express their conceptions and beliefs about teaching and learning through discussion. Time to debrief and deconstruct the salient issues embedded in these experiences and conceptions is also set aside during each class. Throughout the course, preexisting conceptions are explicitly challenged and critiqued in light of current theory and teacher candidates' beginning teaching experiences. This is particularly exigent when teacher candidates experience incompatibilities between their conceptions and beliefs and their course-based work, mentor teachers' practice, or both. At times, this leads to a certain discomfort as knowledge is not easily reorganized and conceptions are sometimes impervious to reconstruction. This educational psychology professor finds that teacher candidates are especially responsive to authentic illustrations (i.e., case studies, examples from the field, video segments) that help to contextualize educational psychology theory. Understanding the perspectives of teacher candidates through gathering their initial queries is integral to delivery of an educational psychology course that not only meets their needs but also prepares these future teachers with the foundations of teaching and learning.

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