Current Issues in Education
Mary Lou Fulton Teachers College • Arizona State University
PO Box 37100, Phoenix, AZ 85069, USA

Volume 13, Number 4 ISSN 1099-839X

Perceptions of Teacher Planning Time:

An Epistemological Challenge

M.P. Prytula, L.M. Hellsten, and L.J. McIntyre

University of Saskatchewan

Citation

M.P. Prytula, L.M. Hellsten, and L.J. McIntyre (2010). Perceptions of Teacher Planning Time: And Epistemological Challenge. *Current Issues in Education*, 14(1). Retrieved from http://cie.asu.edu/ojs/index.php/cieatasu/article/view/437

Abstract

The concept of developing teacher collaboration teams continues to be a prevalent problem for teachers and schools. The results of a Saskatchewan study of beginning teachers (Hellsten et al., 2007) was the finding that first and second year teachers perceived *planning and collaboration with other teachers*, as well as *professional development* as the least important support or resource for their induction years. This bears heavy implications for teacher learning and learning improvement in today's schools. This paper examines the perceptions that beginning teachers in Saskatchewan have regarding preparation time and planning time, explores the epistemological basis for these findings and the impact of this basis, and discusses the

significance of this finding and the potential problems and implications that this realization has for continued theory and practice for teacher education and collaboration in schools.

Keywords: Teacher induction, preparation and planning time, collaboration, epistemology, professional development

About the Author(s)

Author: Dr. Laureen McIntyre

Affiliation: University of Saskatchewan

Address: 28 Campus Drive Saskatoon, SK S7N 0X1

Email: laureen.mcintyre@usask.ca

Biographical information: Dr. Laureen McIntyre is an Associate Professor and Director of the Special Education Certificate Program in the College of Education at the University of Saskatchewan. Dr. McIntyre completed a B.Ed. at the University of Saskatchewan, a M.Sc. in Communication Disorders at Minot State University, and a Ph.D. inEducational Psychology (specifically Special Education) at the University of Alberta. As an American and Canadian certified speech-language pathologist, Dr. McIntyre has worked in both community health and school settings.

Author: Dr. Michelle Prytula

Affiliation: University of Saskatchewan

Address: 28 Campus Dr., Saskatoon, SK. S7N 0X1

Email: michelle.prytula@usask.ca

Biographical information: Michelle Prytula is an assistant professor in the Department of Educational Administration, College of Education, at the University of Saskatchewan. Previous to academia, she held teacher, vice-principal and principal positions. Her current faculty teaching areas include leadership, policy studies, organizational theory, and educational finance. Her current research interests include teacher learning, action research, the professional learning community, teacher induction, and school leadership and improvement. Her work recently earned her the McDowell Foundation Award for Research into Teaching in 2010.

Author: Dr. Laurie Hellsten

Affiliation: University of Saskatchewan

Address: 28 Campus Dr., Saskatoon, SK. S7N 0X1

Email: laurie.hellsten@usask.ca

Current Issues in Education

Mary Lou Fulton Teachers College • Arizona State University
PO Box 37100, Phoenix, AZ 85069, USA

Perceptions of Teacher Planning Time: An Epistemological Challenge

"Teacher isolation is the enemy of improvement" (Kanold, Toncheff, & Douglas, 2008, p. 23).

Teacher collaboration remains an integral component of successful teaching and learning. Teachers can make significant improvements to student performance by abandoning the traditional culture of teacher isolation and opting to work in collaborative teams (Leonard & Leonard, 2003). After over a decade of theory and research pertaining to the potential benefits of teacher collaboration (Dufour & Eaker, 1998; Mitchell & Sackney, 2000; Schmoker, 2005), one would not only expect to see this concept to have begun to take hold within the culture of teaching, but to have achieved a stronghold in the behaviours and practices of teacher education and teaching. However, this is not the case. The concept of developing teacher collaboration teams continues to be a prevalent problem for teachers and schools. So prevalent, in fact, that not only is the concept of collaboration not taking shape, but it remains "little more than an aspiration" (Leonard & Leonard, 2003, p. 9).

Developing teacher collaboration teams may be just an aspiration in Saskatchewan. Among the results of a Saskatchewan study of beginning teachers (Hellsten et al., 2007) was the finding that first and second year teachers perceived *planning and collaboration with other teachers*, as well as *professional development* as the least important support or resource for their induction years. This bears heavy implications for teacher learning and learning improvement in today's schools.

Using the findings of the Hellsten et al. (2007) study as the foundation, this paper will: (1) examine the perceptions that beginning teachers in Saskatchewan have regarding preparation time and planning time; (2) explore the epistemological basis for these findings and the impact of this basis; and (3) discuss the significance of this finding and the potential problems and

implications that this realization has for continued theory and practice for teacher education and collaboration in schools.

Background

Professional collaboration, collaborative planning, and school reform initiatives have been at the forefront of school improvement initiatives over the past twenty years. Most commonly referred to as communities of practice (Wenger, 1998), and professional learning communities (Dufour & Eaker, 1998), social learning and planning in collaborative teams of educators is a strategy used in many academic settings to improve student achievement (Schmoker, 2005).

To say that knowledge is constructive and co-created implies that mastering the skills of teaching requires working in community with other professionals, creating interactive learning environments, and sharing with and learning from one another. Distinct from the epistemology that knowledge is accessible and exists beyond the individual, a constructivist epistemology implies that greater knowledge exists within a group of people, rather than in a single individual (Mitchell & Sackney, 2001).

Two main barriers to beneficial collaboration and planning in today's schools have been identified as a lack of time and poor administrative support (Henry, 2005; Leonard & Leonard, 2003). Furthermore, professional development initiatives focused on collaboration have been criticized as one-shot, sporadic, and shallow (Colantonio, 2005). Cherubini (2007) found, from a research study conducted in Ontario into beginning teachers' perceptions of the effects of their induction, that beginning teachers do value those induction programs that included collaborative dialogue between colleagues that served to enhance their skills in improving student achievement, rather than those that provided a "surface approach to addressing generic needs" (p. 9). Despite this, however, the concept of teacher collaboration has been slow to catch on.

A study of the experiences of beginning teachers in Saskatchewan (Hellsten et al., 2007) has revealed a further barrier to the development of collaborative work teams, professional learning communities, or communities of practice. Results showed that beginning teachers entered the profession perceiving collaborative planning and professional development as relatively unimportant as compared to isolated teacher preparation time. Although the sample was restricted to only Saskatchewan beginning teachers, and therefore is not generalizable to teachers in all provinces, this finding suggests that the barriers to collaboration may be situated internally, rather than externally.

Teachers' relative perceptions of the value of supports indicate that a challenge to collaboration may exist within the epistemological beliefs of beginning teachers. Individual epistemological beliefs influence "how individuals make meaning and how this (meaning) in turn affects learning" (Hofer, 2000, p. 379). These beliefs play a role in how future and practicing teachers learn to teach and practice their teaching (Fives & Buehl, 2008, p. 135); therefore, if learning improvement is to be initiated through collaboration, these perceptions must be challenged. This is an epistemological issue, rather than a professional development issue, thus it must be approached as such. This epistemological issue will be discussed in detail following an overview of the Becoming a Teacher study.

The Becoming a Teacher Study

Becoming a Teacher: A Longitudinal study of Saskatchewan Teachers' Early Career Paths ("Author", 2007; "Author", 2008; "Author", "Author", *In Press*) was designed to identify and examine key factors that affect Saskatchewan beginning teachers' early career paths, as well as their commitment to the profession. The context of this study is the province of Saskatchewan where there are two teacher education institutions (University of Saskatchewan and the

University of Regina). Saskatchewan provides an interesting context in which to examine beginning teachers' transition experiences because of the province's diversity and distinctiveness (e.g., rural and urban dimensions[1], a population comprised of a high proportion of Aboriginal persons[2]), a recent structural renewal of the publicly funded K-12 system[3], and a re-culturing of teaching and learning[4]. One of the six main purposes of the study was to describe and analyze the supports new teachers believe are required to assist their transition into the profession.

The survey instrument was developed specifically for this study by the longitudinal research team (Authors, 2007) based on relevant literature. The majority of the survey instrument was comprised of forced choice items many of which were single items (not subscales of items). Although content validity evidence was collected using experts, no other validity or reliability evidence has been collected. Surveys were composed of five sections including: demographics; background information regarding education and training; information about certification and employment; specific information about the teaching position; and reflections about teaching. This paper reports on the section of the survey that asked participants to reflect on their perceptions of the importance of a variety of supports. Although there were minimal slight wording modifications between the 2006-2007 and 2007-2008 first year teacher surveys, essentially all first year teachers were surveyed using an identical instrument. The wording of the second year survey was modified to reflect the second year teaching status of the participants and additional questions only relevant to second year teachers were asked (e.g., perception of

[1] The population of Saskatchewan is approximately one million people, more people in live in rural settings than in any other province in Canada (Tymchak, 2001), and the population in rural schools is declining (Assessment and Evaluation Unit, 2000).
[2] The young Aboriginal population is growing rapidly (Tymchak, 2001); there is a need to ensure that an appropriate number of beginning teachers of Aboriginal ancestry are successfully recruited/ retained to reflect this population.
[3] Such a restructuring process has been shown in other jurisdictions to negatively impact the classroom (Dibbon, 2004).
[4] All schools are expected not only to educate children and youth but to serve as centres at the community level for the delivery of appropriate social, health, recreation, culture, justice and other services for children and families.

workload in second year as compared to first). However, the section of the survey that this paper focuses on was identical to the survey completed by first year teachers.

In the first year of the study (2006-2007), beginning teachers from the University of Saskatchewan were surveyed. In order to ensure that the sample was generalizable to beginning teachers throughout the province of Saskatchewan rather than just beginning teachers from one particular institution, graduates from the University of Regina were added to the sampling frame in the second year (2007-2008). In addition, as the first two years of teaching are commonly referred to as a time of survival (Huberman, 1989) we felt comfortable expanding the sample to include second year teachers from both the University of Regina and the University of Saskatchewan in 2007-2008.

In 2006-2007, all beginning first year teachers who graduated from the University of Saskatchewan with valid alumni addresses were sent a paper and pencil survey. The process was repeated in 2007-2008 for all first and second year teachers from both the University of Saskatchewan and the University of Regina. In order to ensure confidentiality and anonymity, the respective alumni offices at both Universities mailed out the survey packages on behalf of the research team. Two hundred and seventy-five participants completed and returned the first year form of the survey ($n_{2006\text{-}2007} = 125$, $n_{2007\text{-}2008} = 153$), while 151 participants completed the second year form in 2007-2008. Data were entered into SPSS 15.0, double verification was completed, and descriptive statistics were calculated. Demographic data is presented in table 1.

The beginning teachers were asked to rate their perception of the importance of a variety of supports using a scale ranging from one (*not important*) to four (*very important*). Respondents were asked to rate each support independently and were not asked to rank order the supports

listed. For the purposes of this article, only the scores from the *very important* column were included (see Table 2).

Findings

Generally, all supports were considered important by all respondents in the study. Across all three samples (i.e., 2006-2007 and 2007-2008 first year teachers, and 2007-2008 second year teachers), most beginning teachers identified *preparation time during the school day* and *support from family/friends* as very important supports during their first years of teaching. More specifically, *preparation time* was identified as very important for all survey sets, at 81.9%, 69.9% and 66.2% respectively. Similarly, *support of family and friends* was perceived as very important by 81.6%, 62.1% and 62.3% of the respondents in those same three survey sets.

Table 1
Demographic data of the participants

	1st Year Teachers 2006-2007	1st year Teachers 2007-2008	2nd Year Teachers 2007-2008
Gender			
Males	36 (28.8)	25 (16.4)	28 (39.7)
Females	88 (70.4)	115 (75.2)	118 (55.0)
Missing	1 (0.8)	13 (8.5)	5 (3.3)
Age Group			
22-24	50 (40.0)	72 (47.1)	42 (27.8)
25-34	54 (43.2)	59 (38.6)	88 (58.3)
35-44	15 (12.0)	18 (11.8)	14 (9.3)
45 +	5 (4.0)	2 (1.3)	5 (3.3)
Missing	1 (0.8)	2 (1.3)	2 (1.3)
Marital Status			
Single	58 (46.4)	87 (56.9)	60 (39.7)
Married/Common Law	61 (48.8)	61 (39.9)	83 (55.0)
Divorced/Separated	5 (4.0)	2 (1.3)	6 (3.9)
Missing	1 (0.8)	3 (1.9)	2 (1.3)

***Note*. Counts are presented first, with percentages in parentheses.**

Table 2

Numbers and percentages of respondents who selected each factor as a very important support in their first years of teaching

Factors	'Very Important' (1st Year Teachers, Year 1)	'Very Important' (1st year Teachers, Year 2)	'Very Important' (2nd Year Teachers, Year 2)
New staff orientation			
N	56	69	54
Percent	61.5	45.1	35.8
Mentor			
N	53	61	56
Percent	60.9	39.9	37.1
Teacher colleagues			
N	61	95	81
Percent	62.2	62.1	53.6
Principal/Vice Principal			
N	57	83	87
Percent	58.2	54.2	57.6
Professional development			
N	45	44	48
Percent	50	28.8	31.8
Classroom/school resources			
N	69	93	86
Percent	71.9	60.8	57.0
Assistance for students with special			
N	62	88	90
Percent	66	57.5	59.6
Preparation time during the school			
N	77	107	100
Percent	81.9	69.9	66.2
Planning time during the school day			
N	39	65	53
Percent	42.4	42.5	35.1
Support of students' parents/families			
N	60	72	87
Percent	63.2	47.1	57.6
Support of my family/friends			
N	80	95	94
Percent	81.6	62.1	62.3

Note. For the purposes of this article, only the scores from the ***very important*** column were included. Low sample sizes per item reflect low numbers endorsing the item at the ***very important*** *category.*

Although even the items that were least likely to be endorsed received a good deal of support, there were relative differences in how many beginning teachers endorsed two of the survey items as being very important. Both *planning time during the school day* and *professional development opportunities* were consistently identified as very important by the smallest number of beginning teachers. *Planning time during the school day* was identified by only 42.4%, 42.5%, and 35.1% of the beginning teachers and *professional development opportunities* was identified by 50.0%, 28.8%, and 31.8% of the beginning teachers. In 2007-2008, planning time was identified as very important by the smallest number of beginning teachers, while professional development took this position for both forms of the surveys conducted in the 2007-2008.

The lack of endorsement for *planning time during the school day* was recognized during an interim data analysis at the conclusion of the first year of the study. Due to this surprising result, and in an effort to ensure that the wording was not responsible for the lack of endorsement, the research team modified the wording of the planning time item from *planning time during the school day* to *planning time during the school day with teacher colleagues, staff*. Results from both forms of the 2007-2008 surveys (i.e., both first and second year teacher responses) showed that the frequency with which the planning time item was endorsed stayed relatively stable, with planning time being the second least frequent item endorsed as very important and professional development being the least frequently endorsed item.

As the purpose of the question was to determine the supports new teachers believe are required to assist their transition into the profession, the discovery that some items were perceived as relatively unimportant was unintentional. However, now that we recognize that beginning teachers perceive isolated preparation time as relatively more important than either

professional development opportunities or planning time with teacher colleagues and staff, we must examine this finding in terms of its potential implications for theory, research and practice.

Discussion

The remainder of this article is a discussion to further explore the findings from the question of perceived importance of supports. Specifically, we intend to present the low perception of importance of collaboration and group planning in a context of recent educational movements toward professional development through collaboration and professional learning communities. We will also discuss the role of epistemology and the potential necessity to explicitly teach for epistemological change at the teacher training level, and how epistemology and our adherence to epistemological ideas impacts the approaches of instructional leadership at the school level.

The Development of the Professional: Research and Practice

Professional development through communities of practice, professional learning communities, or collaborating and planning with teachers in the same school, department, or grade level have proven to be not only sound approaches to education, rather they have proven themselves as having the potential to transform education (Dufour & Eaker, 1998; Fullan, 2005; Schon, 1995). In schools where these approaches have taken hold, reports of success and higher student learning have followed (Dufour & Eaker, 1998; Prytula, Makahonuk, Syrota, & Pesenti, 2009; Schmoker, 2005; Vescio, Ross, & Adams, 2008). Despite many articles, books, and studies on this effective phenomenon, the collaborative approach is very slow to be adopted in the majority of schools. Historically blamed on teacher complacency, DuFour (1998) recognized that approaches to professional development have been flawed through bringing in experts with little regard for the major determinant of professional development success. That is, what is

flawed is the "context of the school in which it is presented… the beliefs, expectations, behaviours and norms that constitute the culture of a given school" (DuFour, 1998, p. 24). What is of primary importance then, is not the content of the message, but the context in which it is being delivered. This context includes the epistemological beliefs and backgrounds of the professionals within the school.

Too often, schools are left with the substantial work of creating the change needed in teacher thinking and learning. Being products of about a dozen years of elementary and high school education, and another few years of university certification, teachers tend to teach in the ways that they were taught (Ball, 1990; Lortie, 1975; Vrasidas & McIsaac, 2001); therefore, it is a substantial challenge to develop collaborative teams, encourage teacher planning, and erode the traditional norms of working in isolation. Schools, working within their own means, have only achieved marginal success with this type of reform to date. This is likely because this task of reform has less to do with explicit behaviours and habits of teachers (which can be modified through expectations and guidelines), and more to do with internal beliefs and understandings (which have been created through past experiences and knowledge).

Pockets of success have been found, however, in schools where professional learning communities have been established. Vescio et al. (2008) found that in the schools they studied, the establishment of professional learning communities contributed to a "fundamental shift in the habits of mind that teachers bring to their daily work in the classroom" (p. 84), and that a change in professional culture had occurred. They noted, however, that these successes are not the result of a prescriptive model, but rather based on context, experience, and the creation of new knowledge.

One major limitation to the widespread success of teacher collaboration and planning through structures such as the professional learning community is that they require leadership as

a catalyst. The problem is that unless a leader exhibits this initiative and has an understanding of this kind of teacher learning, school leaders, working within a continuum of eclecticism, have neither the time nor the training regarding the epistemological beliefs that underpin teachers' understanding of their work.

This understanding, then, must be rooted in the foundations of education. Dufour (1998) implied that school reform must begin much earlier, and achieve a much deeper effect in order to erode the norms of teacher isolation in school systems, and bring about the effects of collaboration. The perspectives and understandings of the epistemological constructivist nature of learning must come to the surface through first the foundations of teacher training, and later, through the foundations of professional development. That means if we are to take on this reform, then we must first consider a modification to pre-service teacher education.

The Epistemological Foundations of Teaching

In education, "continuing learning, both structured and self-directed, is critical to professional practice" (Graham & Phelps, 2003, p. 2). The epistemology of teaching and learning in education has traditionally been known as the process of transmitting knowledge from the teacher to the student (Schon, 1995). Tyack and Cuban (1996) claimed that teaching has always been traditional. This traditional approach is how society expects teachers to teach, and this is how students have always learned. For the most part, teachers have learned this way, so it is almost expected that they teach this way. Hatala and Hatala (2004) indicated that teaching and learning in this way no longer suits today's knowledge paradigm. What is required includes cooperation, collaboration, wisdom, and dialogue. This brings to the surface the idea that the traditional epistemology of teaching and learning may be incomplete or insufficient.

Schon (1995) identified two ways of conceptualizing teaching and learning. He termed the first conception as *institutional epistemology* of teaching, the traditional idea that students learn through the transmission of knowledge from the teacher to the student. Students learn what they are told and do what they are shown, and knowledge is transmitted to students through curriculum and blocks of time. Schon (1995) argued that there is a second and new epistemology of teaching and learning, termed *scholarship epistemology*, which highlights the potential of greater learning through thinking.

Scholarship epistemology includes reflection-in-action, reflection-on-knowing, and reflection-on-practice, whereby a teacher takes the opportunity to reflect deeply on what he does while he is doing it, what he knows, and what he has done after doing it (Schon, 1995). Contrasted with institutional epistemology, where knowledge is simply becoming familiar with a model or theory and using it in practice, scholarship epistemology involves a constructive approach through the discovery of knowledge. Epistemologically, if a teacher wants to convey a certain knowing, he first has to understand what it is, and how it is that he knows something, and then re-create that learning opportunity for students. "If we want to teach about our 'doing', then we need to observe ourselves in the doing, reflect on what we observe, describe it, and reflect on our description" (Schon, 1995, p. 33).

Richardson (2002) emphasized that discourse in teacher planning results in meaningful, reflective practice. He said that," (i)f practitioners engage with discourse thinking, and develop their critical awareness...played out in the day-to-day micro-level practices of planning, they are likely to gain some very useful perspectives and insights which will strengthen their reflexive practice" (p. 353). The practice of reflection and discourse, or dialogue, becomes a central activity which allows professionals to make sense of their actions and work. Not limiting reflection to pure discourse, Bolton (2006) recognized a similar approach for reflective practice

through writing and sharing with colleagues. She highlighted that reflective practice "critically recognizes and challenges the prevailing discourse and dominant paradigm, denying any innocence of those which structure and force us culturally" (p. 205) and that this dialogue and reflection helps to develop clarity, insight and understanding for the work that they themselves do.

Key to reflection and dialogue is that they employ internal critical thinking and external discourse to learn, evaluate ideas, share strategies, and create change in practice and outcomes. Important to note at this point, is that reflection, done alone, is not enough to improve practice beyond the technical day-to-day aspects of the job. What is required to take reflection to a form of scholarship is bringing it into relationship with others, either through dialogue, discussion, and debate. Taken this way, this elevates the teaching profession to, as Kelchtermans (2009) described "a *risky* endeavor" (p. 270) (emphasis in original) as through these experiences, a teacher may be confronted with ideas, practices, approaches and experiences that differ from their own, and, true to the processes of collaborative planning and learning communities, experience discomfort and work at reducing the discomfort either by modifying their own practice or influencing others to change theirs. This discomfort, however, is necessary, for as Kelchermans stated, "without deep reflection, one's scholarship cannot be developed, nor the scholarship of teaching in general" (p. 270).

Done regularly, collaboration results in a new epistemic understanding of what it means to teach and learn, and results in a break from traditional paradigms. Schon (1995) noted, however, that the majority of the time teachers do not do this, so ultimately, they may have a very shallow understanding of their own teaching. This illustrates a gap that exists between

policy and practice. Institutional epistemology can be achieved in isolation. Scholarship epistemology cannot.

Teaching Teachers

Much of the work in the development of teachers' epistemological beliefs or understandings must begin to happen at the pre-service stage. It could be said that operating, as a knowledge society, universities and schools can no longer teach the way they have always taught in the hopes of developing teachers who can work and teach differently. "In order to achieve this, teacher education as well as in-service training need to provide spaces to engage in discomforting dialogues" (Kelchtermans, 2009, p. 370) (emphasis in original). Schon (2005) said that teaching cannot solely be bound by the application of knowledge, but must be entrenched in the generation of knowledge. Bolton (2006) went further to state that this reflective practice is vital to teaching and learning, so much so that it must be considered a pedagogical approach infused throughout the curriculum. She implied that if teachers were taught this way through their own education programs, that they would be more inclined to teach this way.

Recent research has revealed strong positive connections between the deprivatization practices of teachers through collaboration and planning with not only enhanced teacher learning and student centered practices, but also with improvements in student achievement (Vescio, et al., 2008). Finding few studies that linked epistemological beliefs with conceptions of teaching and learning, Wong, Chan and Lai (2009), believing that "epistemological beliefs could bring impacts and solutions to problems encountered in the educational arena" (p. 2), conducted an examination into the epistemological beliefs and conceptions of teaching of pre-service teachers. Although conducted in Hong Kong, they found that students largely held a constructivist epistemological orientation over the traditional orientation, and that this was contrary to previous findings since schools of education had introduced more collaborative instructional strategies

and approaches. This exploration, however, was limited to the students' epistemological understandings of teaching and learning in the classroom, and not specifically related to teacher learning beyond certification.

Through another study conducted by Cheng, Chan, Tang and Cheng (2009), it was discovered that about half of the beginning teachers had tendencies towards constructivist orientations to teaching and that "when the student-teachers get used to this way of believing and thinking in their learning, they are more likely to believe in a constructivist view in their classroom teaching" (p. 325). The other half had more naïve constructivist conceptions of teaching. They noted that this caused inconsistencies in practice, but explained this with the notion that these beginning teachers were still in a state of transition and that their epistemological beliefs were still developing due to inconsistencies between their pre-service experiences and new information to be learned as they began their careers.

Hashweh (1996) investigated science teachers' epistemological beliefs in teaching. They tested two groups of teachers with different epistemological beliefs to determine the effects of these beliefs on their teaching. They found that teachers with constructivist orientations had a more diverse set of teaching strategies and accepted alternative responses from students. They also used effective strategies more frequently than their positivist colleagues. Hashweh indicated that these results conformed to similar studies that he conducted, indicating that constructivist teachers are better able to help students arrive at new conceptions to problems and facilitate cognitive restructuring.

These studies, although helpful in determining the teachers' tendencies toward constructivism in their future or current teaching practice in the classroom, provide little

information regarding their perspectives or orientations toward teacher professional learning. Further work is needed in this area, which will be discussed at the conclusion of this paper.

The Role of Instructional Leaders at the Pre-Service Stage

There is a growing body of research on the types of instruction and leadership that create a change in epistemology (Hofer, 2000; Hofer & Pintrich, 1997; Valanides & Charoula, 2005). As an instructor, knowing that students' epistemological beliefs affect their learning and motivation, a teacher can orient student work so that students' epistemological beliefs are challenged, so that students may discover the value of creating knowledge in a similar way. "If teacher educators can identify areas of teaching knowledge [that] teachers and pre-service [teachers] do not particularly value, they can more explicitly address issues related to the importance of that knowledge in class" (Fives & Buehl, 2008, p. 172). Valanides and Charoula (2005) demonstrated that by structuring education students' work in ways that require them to make their beliefs about knowledge explicit, they become better educated. Valanides and Charoula added that,

> (c)ritical thinking instruction combined with a process where students are encouraged to reflect, debate, and evaluate their thinking based in explicitly stated principles, in the context of an ill-defined and controversial issue, can have a significant effect on learners' epistemological beliefs. (p. 328)

In turn, better-educated students are more epistemologically advanced, meaning that they are capable of reflection and rational inquiry, leading to an appreciation and desire for collaboration. "When applied to the teacher education context, student-teachers beliefs and hence their classroom practices is a concern in teacher education" (Cheng et al., 2009, p. 320). Cheng et al. suggested, from their study, that teacher educators must assist in developing education students' epistemological beliefs from naïve to sophisticated

through modeling teaching/learning environments that are consistent with a constructivist orientation, and refrain from education through transmission. Although increasingly complex, this recommendation includes working closely in partnership with placement schools in providing mentorship experiences that include similar orientations.

This holds implications for what it is that instructors are asking pre-service teachers to do when they are in the field. Sometimes, prescribing assignments for the sake of consistency between students robs them of the authentic learning experiences that they could encounter. For example, in their study on field experiences, Whitehead and Fitzgerald (2006) noted that prescribing teacher mentorship requirements through defined practices reduced teacher candidates' abilities to develop their own knowledge and limited their ability to learn through collaboration with teachers in the field. This type of top-down approach served the university rather than the profession. From this, Whitehead and Fitzgerald suggested a more generative approach for teacher experiences that involved collaboration, allowed for "the formation and reformation of knowledge" (p. 40), and created the opportunity for a "new epistemological base for professional learning" (p. 37).

This also has implications for how pre-service educators are taught. "If a student believes that knowledge is certain and simple, then he or she may have different preferences about desirable learning environments than the student who believes that knowledge is complex and interrelated" (Hofer, 2001, pp. 361-362). Opportunities for higher learning and epistemological development that could potentially transform education are created when instructors take advantage of situations where teacher candidates can be engaged in the real problems of education in the field, interrelated with theory, while still enrolled as students. The opportunity for students to internalize how learning takes place and how they cognitively

experience a change in knowledge must also be integral to these experiences. It is through providing direct experiences with creating knowledge, and then having conversations about how this knowledge was created, that educational institutions can cultivate educators who will enter the professional with an already developed sense of what it means to work in a community of practice. Here, knowledge transmission is replaced with knowledge creation (Schon, 1995). If university educators want teachers to know how to work in collaborative learning communities where knowledge is created, then these students cannot be taught in environments where knowledge is transmitted. This just makes sense.

The University of Saskatchewan, like many other universities, has partnered with school divisions to create teacher cohorts that are deployed into schools to increase their opportunities to work with teachers and students. Research into specific teacher cohort experiences has found that those cohorts in which teacher candidates are invited to engage in professional learning communities, collaboration, and discussion with teachers have proven to bring about increased professional learning for the teacher candidate (Prytula, et al., 2009). Engagement with professional learning communities also increases the likelihood that teacher candidates achieve the type of scholarship epistemology required for sustained collaboration in their careers. Unfortunately, not all schools operate as professional learning communities; therefore, these experiences have so far been trial studies in the field, and the opportunities have not yet been provided for all students.

Through the creation of instruction that accesses pre-service teachers' epistemological beliefs, it is possible to advance their own understandings of their epistemological assumptions and to make changes to those assumptions. "Understanding future teachers' beliefs as well as how their beliefs are related to teaching practices and motivation may allow teacher educators to plan instruction that will best support the development of teachers" (Fives & Buehl, 2008, p.

172). Having experienced an education where epistemological beliefs are accessed and challenged, beginning teachers have the opportunity to enter the profession prepared for the collaborative work that will be required of them.

The Role of Instructional Leaders at the In-Service Stage

Instructional leadership at the school level is also a key factor in the role of professional development and teacher learning. Once beginning teachers enter the teaching profession, they face a further challenge to their epistemological development and appreciation for the necessity of collaboration. Rogoff, Goodman Turkanis, and Bartlett (2001) contended that current school organization is still a reflection of the early 1900s when considerable efforts were made to "treat school instruction as an efficient factory" (p. 6). Deep thinking does not emerge in a factory model. Instead, by its very nature, education itself is holistic and continuously evolving. Therefore, a traditional system of education that presents the world in chopped, linear pieces does not fit. Rogoff et al. (2001) suggested that a new approach is to take on a community perspective, where "teachers and students are connected rather than isolated" (p. 4). Mitchell and Sackney (2001) explained that successful professional learning communities can only be sustained when the leadership is skilled in approaching knowledge and learning in non-traditional ways:

> (S)aying that a learning community must be thus and so does not automatically make it so. The creation of a learning community is not an easy endeavor because it entails fundamentally different ways of thinking about teaching and learning and fundamentally different ways of being teachers and administrators. (p. 12)

Learning communities thrive within environments of learning, trust, and improvement (Fullan, 2002; Mitchell & Sackney, 2001; Sparks, 2005). Colantonio (2005) stated that creating such environments requires not only expertise on teacher supervision, but expertise on the contexts for and the development of knowledge. The principal must be one who "facilitates growth of teachers' knowledge and skill in a constructivist manner" (p. 31). Not to be considered in a cursory manner, having an awareness of how knowledge is created, how it develops, and how its creation can be sustained is key to achieving the type of improvement needed in today's schools.

There is the implication that a school leader must understand what teacher collaboration and group planning means prior to embarking on a school improvement initiative through the process of instructional leadership. "Often confused with departmental meetings…teacher collaboration is not discussions of student behaviour, purchasing of textbooks, and distributing supplies" (Henry, 2005, p. 31). Collaboration and planning for student success entails a pure focus on student learning, and in-depth scholarly and academic discussion and deliberation (sometimes heated, and sometimes not) on how to engage, improve, and enhance teaching and learning. Dufour (1998) argued that even in the right context, flawed professional development initiatives can have a positive effect on teacher learning. Inversely, in the wrong school context, "even well-conceived and delivered activities are likely to be ineffective" (p. 25). The context that is required is one with expectations of collaboration, team planning, and collective inquiry.

Wenger (1998) explained a similar understanding in his theory of communities of practice. It is the participation aspect of the communities that creates the learning, and that learning must be reshaped and redefined into three categories: individual, where individuals engage and contribute to practice; community, where learning is refined and sustained for future

members; and organizational, where learning is sustained and where knowing exists to transform the organization into one that is effective and valuable.

Instructional leaders must be able to adopt this new approach and become comfortable with knowledge creation that is no longer linear, but rather murky and dialogical, conflicting, and at times disordered. Such a leader must also be able to tackle the issues of resistance to professional collaboration and planning, and not succumb to them, knowing that overcoming the barriers to change will be worth the effort. Instructional leaders must be the proponents of the change, as they know their contexts the best. Confirmed by Dufour (1999), "(t)hose who look to consultants to solve the problems of a school that continues to operate under the traditional model of fragmentation and teacher isolation are almost certain to be disappointed in the results" (p. 26).

Creating the proper context for collaboration, as previously mentioned, is highly dependent on the context and mindsets of the people within the school. An effective school context will be much more laborious to create, if its creation is even possible. If educators enter the profession with the understanding that teaching is done in isolation, isolated preparation time will be highly important to them; while professional development and collaborative planning time will continue to be low in terms of importance to their success as teachers.

Conclusion

From this study, there is evidence that beginning teachers in Saskatchewan value isolated teacher preparation time more than they value collaborative teacher planning time and professional development, despite the fact that research and practice indicate that learning communities and communities of practice ultimately improve student learning. This knowledge suggests that the task of challenging these perceptions requires not only challenging teacher

practices but also challenging teacher beliefs, which must be done at the pre-service and in-service stages. This issue must be addressed systemically - from the time students enter the universities which will prepare them for their profession (or sooner), as well as through the professional development initiatives in which they are part of within their school divisions.

Research and practice has revealed that establishing effective collaborative school teams is necessary to generate improvements to student learning, whether these collaborative teams are termed professional learning communities or communities of practice. However, the incorporation of these teams has been slow despite the knowledge that collaborative teams positively affect student learning. Previously identified barriers to establishing effective collaboration in schools include time constraints, as well as lack of instructional leadership (Henry, 2005; Leonard & Leonard, 2003). This means that instructional leadership (both at the pre-service and in-service stages) requires an understanding of collaboration, as well as knowledge and the creation of knowledge, so that contexts appropriate to collaborative teams can be created. Central to the barriers, however, are the epistemological beliefs of teachers and beginning teachers in the province. Perhaps through directly experiencing instruction aimed at accessing epistemological beliefs, pre-service teachers would enter the teaching profession predisposed to valuing collaboration. This would reduce the school's burden to not only attempt create a collaborative culture, but to first change the epistemological beliefs of teachers within the school in order to sustain such a culture.

Given that this finding is derived from a study aimed at understanding beginning teachers' experiences as they transition from pre-service to professional employment, more research is needed to determine why there is a difference in the perceived importance between teacher preparation time and teacher planning time. More research must also be conducted as to the differences in epistemological beliefs of those teachers who have not experienced the

learning community and collaboration construct with those that have had such an experience. As Kincheloe (2004) stated, "(t)he ultimate justification for such reflective research activity is practitioner and student empowerment" (p. 64). Perhaps through a deeper understanding of the epistemological foundations of beginning teachers, and how these foundations can be influenced, we can achieve such empowerment.

This paper focused on the coming to know, which has implications for instructors and leaders of students in education. It is the role of both universities and school leadership to ensure that students of education have the opportunity to possess the epistemological viewpoint that knowledge is complex and interrelated.

References

American Psychological Association. (2001). Publication Manual of the American Psychological Association (5th ed.). Washington, DC: Author

Ball, D. (1990). Breaking with experience in learning to teach mathematics: The role of a preservice methods course. *For the Learning of Mathematics, 10*(2), 10-16.

Bolton, G. (2006). Narrative writing: reflective enquiry into professional practice. *Educational Action Research, 14*(2), 203-218.

Cheng, M. M. H., Chan, K. W., Tang, S. Y. F., & Cheng, A. Y. N. (2009). Pre-service teacher education students' epistemological beliefs and their conceptions of teaching. *Teaching and Teacher Education, 25*(2), 319-327.

Cherubini, L. (2007). Speaking up and speaking freely: Beginning teachers' critical perceptions of their professional induction. *The Professional Educator, 29*(1).

Colantonio, J. N. (2005). On target: Combined instructional supervision and staff development. *Principal Leadership, 5*(9), 30-34.

DuFour, R. (1998). Why look elsewhere?: Improving schools from within. *School Administrator, 55*(2), 24-27.

Dufour, R., & Eaker, R. (1998). *Professional learning communities at work: Best practices for enhancing student achievement*. Bloomington, IN: National Education Service.

Fives, H., & Buehl, M. M. (2008). What do teachers believe? Developing a framework for examining beliefs about teachers' knowledge and ability. *Contemporary Educational Psychology, 33*, 134-176.

Fullan, M. (2002, March 18-19, 2002). *The role of leadership in the promotion of knowledge management in schools.* Paper presented at the Knowledge management in education and learning, Oxford, UK.

Fullan, M. (2005). *Leadership and sustainability: System thinkers in action*. Thousand Oaks, CA: Corwin Press.

Graham, A., & Phelps, R. (2003). 'Being a teacher': Developing teacher identity and enhancing practice through metacognitive and reflective learning processes. *Australian Journal of Teacher Education, 27*(2), 1-14.

Hashweh, M. Z. (1996). Effects of science teachers' epistemological beliefs in teaching. *Journal of Research in Science Teaching, 33*(1), 47-63.

Hatala, R. J., & Hatala, L. M. (2004). *Integrative leadership*. Calgary, AB, Canada: Last Impression Publishing Service.

Hellsten, L. M., Prytula, M., Dueck, G., Martin, S., McVittie, J., Reynolds, C., et al. (2007). *Becoming a teacher: What supports and resources do beginning teachers value?* Paper presented at the Canadian Society for the Study of Education, Saskatoon, SK.

Henry, B. (2005). Combating the four wall syndrome. *Principal Leadership, 5*(9), 30-34.

Hofer, B. K. (2000). Dimensionality and disciplinary differences in personal epistemology. *Contemporary Educational Psychology, 25*, 378-405.

Hofer, B. K. (2001). Personal epistemology research: Implications for learning and teaching. *Journal of Educational Psychology Review, 13*(4), 353 - 383.

Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research, 67*(1), 88-140.

Kanold, T. D., Toncheff, M., & Douglas, C. (2008). Two high school districts recite the ABCs of professional learning communities. *Journal of Staff Development, 29*(3), 22-27.

Kelchtermans, G. (2009). Who I am in how I teach is the message: Self-understanding, vulnerability and reflection. *Teachers and Teaching, 15*(2), 257-272.

Kincheloe, J. L. (2004). The knowledges of teacher education. *Teacher Education Quarterly, 31*(1), 49-66.

Leonard, L., & Leonard, P. (2003). The continuing trouble with collaboration: Teachers talk. *Current Issues in Education, 6*(15).

Lortie, D. C. (1975). *Schoolteacher: A Sociological Study*. Chicago: University Press.

Mitchell, C., & Sackney, L. (2000). *Profound improvement: Building capacity for a learning community*. Lisse, The Netherlands: Swets & Zeitlinger.

Mitchell, C., & Sackney, L. (2001). Building capacity for a learning community. *Canadian Journal of Educational Administration and Policy*(19), 1-15.

Prytula, M., Makahonuk, C., Syrota, N., & Pesenti, M. (2009). *Successful teacher induction through communities of practice*. Saskatoon, SK, Canada: Dr. Stirling McDowell Foundation for Research into Teaching.

Richardson, T. (2002). Freedom and control in planning: using discourse in the pursuit of reflexive practice. *Planning Theory & Practice, 3*(3), 353-361.

Rogoff, B., Goodman Turkanis, C., & Bartlett, L. (Eds.). (2001). *Learning together: Children and adults in a school community*. New York: Oxford University Press.

Schmoker, M. (2005). No turning back: The ironclad case for professional learning communities. In R. Dufour, R. Eaker & R. Dufour (Eds.), *On common ground: The power of professional learning communities* (pp. 135-153). Bloomington: Solution Tree.

Schon, D. A. (1995). The new scholarship requires a new epistemology. *Change, 27*(6), 1-9.

Sparks, D. (2005). Leading for transformation in teaching, learning and relationships. In R. Dufour, R. Eaker & R. Dufour (Eds.), *On common ground: The power of professional learning communities* (pp. 155-175). Bloomington: Solution Tree.

Tyack, D., & Cuban, L. (1996). *Tinkering toward utopia*. Cambridge: Harvard University Press.

Valanides, N., & Charoula, A. (2005). Effects of instruction on changes in epistemological beliefs. *Contemporary Educational Psychology, 30*, 314-330.

Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education, 24*(1), 80-91.

Vrasidas, C., & McIsaac, M. (2001). Integrating technology in teaching and teacher education: Implications for policy and curriculum reform. *Educational Media International, 38*(2), 127-132.

Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems Thinker*(June 1998), n/a.

Whitehead, J., & Fitzgerald, B. (2006). Professional learning through a generative approach to mentoring: Lessons from a training school partnership and their wider implications. *Journal of Education for Teaching, 32*(1), 37-52.

Wong, A. K., Chan, K., & Lai, P. (2009). Revisiting the relationships of epistemological beliefs and conceptions about teaching and learning of pre-service teachers in Hong Kong. *The Asia-Pacific Education Researcher, 18*(1), 1-19.

Current Issues in Education

http://cie.asu.edu

Volume 13, Number 4 ISSN 1099-839X

Authors hold the copyright to articles published in *Current Issues in Education*. Requests to reprint CIE articles in other journals should be addressed to the author. Reprints should credit CIE as the original publisher and include the URL of the CIE publication. Permission is hereby granted to copy any article, provided CIE is credited and copies are not sold.

ASU Mary Lou Fulton Teachers College
ARIZONA STATE UNIVERSITY

Editorial Team

Executive Editors
Jeffery Johnson
Lori Ellingford
Katy Hirsch

Section Editors
Krista Adams
Hillary Andrelchik
Miriam Emran
Tracy Geiger
Sarah Heaslip
Melinda Hollis
Amber Johnston
Seong Hee Kim
Lindsay Richerson
Rory Schmitt
Tapati Sen
Jennifer Wojtulewicz
Lucinda Watson

Faculty Advisers
Gustavo E. Fischman
Jeanne M. Powers
Debby Zambo