CASTL Technical Report No. 7-06

Do Pre-Service and In-service Teachers Differ During the Process of Challenging Their Beliefs and Assumptions about Motivation?

Sarah E. Peterson and Connie M. Moss
Center for Advancing the Study of Teaching and Learning
Department of Foundations and Leadership
School of Education
Duquesne University
About CASTL

The Center for Advancing the Study of Teaching and Learning (CASTL) was established in 1998 in the Department of Foundations and Leadership at Duquesne University School of Education. CASTL engages in research programs dedicated to understanding, advancing and disseminating evidence-based study of the teaching-learning process.

Mission and Goals
The Center for Advancing the Study of Teaching and Learning promotes systematic and intentional inquiry into the teaching-learning process and, through careful and collegial study of learning-centered environments, seeks to advance the understanding and dissemination of evidence-based study of the teaching-learning process in service of all learners.

To promote its mission, CASTL intentionally pursues the following goals:

- Promote socially just, learning-centered environments that bring excellence and equity to all learners;

- Foster systematic and intentional inquiry into the beliefs that educators hold about educational theory and research and effective practice;

- Honor research, theory, and practice as legitimate and complementary sources of knowledge regarding the teaching-learning process;

- Elevate professional learning and educational practice to the level of scholarship;

- Advance the conceptual framework of leadership as learning;

- Develop a knowledge network fueled by researchers, theorists and practitioners who contribute to advancing the study of the teaching-learning process;

- Establish and perpetuate an international community of teacher-scholars representing a variety of teaching and learning environments;

- Promote and coordinate communication within a network of educational institutions and organizations that collaborate in the recruitment and education of teacher-scholars;

- Create a culture of professional learning based on research situated in schools and in other learning environments;

- Examine and develop methodologies by which the teaching-learning process is studied;

- Advocate for the enhancement of the teaching-learning process in service of all learners; and

- Share what is learned about the teaching-learning process.
This report is one of a series from our ongoing research effort to advance the study of teaching and learning. If you have any questions or comments on this report, or if you would like to find out more about the activities of CASTL, contact:

The Center for Advancing the Study of Teaching and Learning
406 Canevin Hall
School of Education
Duquesne University
Pittsburgh, PA 15282

(412) 396-4778
info@castl.duq.edu
http://www.castl.duq.edu
Abstract

This study examines how a graduate level course on theories of teaching and learning helps pre-service and in-service teachers engage in a process of systematic and intentional inquiry focused on revealing, examining, and challenging the validity of their beliefs about student motivation. Specifically, we investigate how teachers’ beliefs about motivation change, how these changes influence their decisions of teaching practice, and how the process differs for pre-service and in-service teachers.
In the past several decades our understanding of student motivation has increased considerably as researchers have realized the important and inextricable role of motivation in student learning. This research, emanating from a variety of theoretical perspectives (e.g. self-efficacy, self-determination, goal orientation) has provided important implications for the crucial role that teachers play in fostering positive motivation. At the same, there has been a large body of research on pre-service and in-service teachers’ beliefs about teaching. Surprisingly, however, there has been little research examining pre-service or in-service teachers' beliefs about student motivation (Patrick & Pintrich, 2001).

Understanding teachers' beliefs is important since they have been shown to influence teaching practice (Pajares, 1992; Patrick & Pintrich, 2001; Richardson, 1996). By the same token, research has shown that beliefs are often implicit and difficult to articulate (Clark, 1988; Nespor, 1987; Trumbull, 1990), as well as resistant to change, for both pre-service and in-service teachers (Borko & Putnam, 1996; Kagan, 1992; Pajares, 1992; Richardson & Placier, 2001; Rust, 1994; Wideen, Mayer-Smith, & Moon, 1998). Teacher educators have struggled to develop ways to facilitate belief change, since tenaciously held beliefs, if unsupported by theory and research, can prevent teachers from best facilitating their students’ learning and motivation. Even when pre-service teachers hold beliefs that are well supported and result in effective teaching practice, we have found that they still benefit from the opportunity to reveal and challenge those beliefs. When given the opportunity and support to reveal and challenge beliefs, their beliefs become more sophisticated and well-grounded in theory and research, and as a result, they make more effective decisions of teaching practice to positively impact student motivation (Peterson & Moss, 2006).

In the current study, we aim to extend our research by examining how a course on theories of teaching and learning helps both pre-service and in-service teachers engage in a process of revealing and challenging their beliefs about motivation. The course is designed to help teachers make their beliefs explicit (Argyris & Schon, 1974), as well as to build on their previous knowledge and experiences (Nolen & Nichols, 1994; Wideen et al., 1998). In doing so, our goal is not to teach students what to believe or even necessarily to convince them they must change their beliefs; rather we ask them to uncover and challenge their beliefs through the lenses of theory and research. In doing so, we intentionally foster both an appreciation for the role that beliefs play in their decisions of practice and a disposition toward systematic and intentional inquiry.

Methods, techniques, or modes of inquiry

This qualitative study examines the learning of students enrolled in a Masters level 6-week online course titled “Theories of the Teaching-Learning Process.” One of the researchers had successfully used a systematic and intentional learning process called the Teaching as Intentional Learning Process (Cunningham, Schreiber & Moss, 2005; Moss, 1997; Moss, 2002; Moss & Shreiber, 2004) in her graduate courses for over ten years. This process engages pre-service and in-service teachers in recognizing, revealing, and challenging their underlying assumptions through the lenses of theory and research. The major learning objective of the course was to develop an understanding of relevant theory operating in effective teaching practice. Specifically, we wanted students to: (a) understand theories of human learning and motivation as lenses through which to consider practice; (b) reveal
and challenge assumptions about teaching and learning; and (c) use theory and research to evaluate, defend, and or modify their decisions of teaching practice.

The authors co-taught this course, which included 10 students with widely varying backgrounds who were taking the course for different reasons: four had undergraduate degrees in different fields and were returning to obtain initial teaching certification; four were novice or experienced K-12 teachers seeking a graduate degree; one was a university business professor completing doctoral work in curriculum and instruction, and one was an adult education administrator in allied health.

Each student began the course by proposing a learning project to serve as the basis for investigating relevant educational theory and research that supports effective teaching. Learning projects consisted of a unit or program students intended to teach in their anticipated professional positions or had already taught in their current positions. Students began by writing an overview of the learning project that was due at the end of the first week. These overviews included a description of the targeted learners, intended learning goals, major learning activities, products or performances used to assess achievement of the learning goals, and a list of assumptions about the teaching-learning process on which the project is based.

During the second through fifth weeks students used theories and research to analyze and refine their projects, filing a progress report at the end of each week. In order to assist their learning, we developed a set of key theoretical principles that were broad, integrative statements designed to help students synthesize the large amount of theoretical concepts and research into a few "big" ideas. In each progress report, they were asked to use theoretical concepts and research underlying the key principles to analyze decisions of practice in their learning project. They were also asked to reveal and examine their implicit and explicit assumptions that came to light as a result of their new learning, to consider the validity of these assumptions, and to use theory and research to discuss how they could make their project more theoretically sound. In the 4th progress report they used motivation theory to analyze their projects, reveal and examine their assumptions about motivation, and make motivation-related refinements to their projects. During the final week students prepared a reflective summary report highlighting their areas of most significant learning, along with a list of theoretically supported beliefs about the teaching-learning process they had developed or refined.

Data sources/evidence

The data source for this study consisted of three papers written by students: their project overview, written at the beginning of the course; their fourth and final progress report written during the fifth week, in which they considered theories and research on motivation; and their reflective summary report, written during the final week.

Our qualitative analysis proceeded in several stages allowing us to engage in systematic empirical inquiry into meaning (Shank, 1994; 2002). We first became familiar with our students’ papers by adopting a “close reading,” highlighting relevant thoughts and writing notes in the margins. This approach allowed us to use key turning points and the words of our own students to anchor themes, discover embedded patterns, and not miss “infrequent but embedded significant instances of insight” (Gibbs, Friese, & Mangabeira, 2002). Second, we developed themes to reflect our students’ initial beliefs about motivation, paying particular attention to themes that were reflected across participants.
as well as those that appeared to be unique. In this phase, a constant comparative technique was employed to analyze the data with categories emerging naturally (Miles & Huberman, 1994). Third, we tracked the papers for the evolution of these beliefs as students revealed them and held them up to the scrutiny of theory and research, highlighting specific patterns within and across cases. Finally, we developed themes to reflect the ways in which our students used their insight from examining their assumptions about motivation to improve their instructional decisions. These processes were used to address the following questions: (a) How did pre-service and in-service teachers’ beliefs about motivation change as a result of taking this course? (b) How did pre-service and in-service teachers’ changes in belief influence their decisions of teaching practice? (c) What were the similarities and differences between pre-service and in-service teachers when provided with this opportunity to reveal and examine their beliefs about student motivation?

Results/conclusions

Results in the full paper will be reported as themes and patterns, with descriptions of specific cases to illustrate. Our students’ initial beliefs about motivation reflected the following themes: need for variety in instructional activities (e.g. “students will benefit from a variety of activities”); a priori assumptions about students’ motivation (e.g. “students do not enjoy writing,” “students are college bound and therefore intrinsically motivated”); relevance (e.g. “students are more motivated when they see a connection to real life”); the role of the social setting, both positive (e.g. “students will feel more responsible when they need to discuss topics with a partner”) and negative (“students will not participate because they will feel embarrassed”); choice (e.g. “Students will be more motivated when projects are differentiated by allowing them choices”; and instructor support (e.g. “Students need support both in and outside of the classroom.”) There were no discernible differences between pre-service and in-service teachers in terms of these themes; however, the in-service teachers’ beliefs were more thoroughly articulated, and their a priori assumptions about students were based more thoroughly in their current experience with students, whereas the pre-service teachers made these assumptions based on their own prior experiences as a student.

Both pre-service and in-service teachers held onto some of their initial beliefs. In doing so, however, they were able to articulate them more clearly, expand on them, and most importantly, support them with theory and research. All of our students also modified or refined their beliefs based on their new learning. A few of our students experienced a significant change in one or more of their beliefs. One such example occurred in students who initially thought that grades were the best way to motivate students, and subsequently learned the value of using strategies to emphasize intrinsic motivation. Most of the students added new beliefs to their initial list based on learning about aspects of motivation that they simply had not considered. For example, a novice teacher initially assumed that all of his students were intrinsically motivated because they were college bound. By the end of the course he had developed the belief that self-efficacy plays a critical role in learning and motivation. There were few detectable patterns of differences between pre-service and in-service teachers; however, in-service teachers maintained a more balanced view of intrinsic and extrinsic motivation, as well as the ultimate determining factor of motivation as residing in students.

Finally, all of our students were able and willing to translate their belief transformations into improved decisions of teaching practice. Examples of these included: adding opportunities to develop self-regulation skills in order to enhance self-efficacy, using constructive feedback and revisions to...
foster positive attributions and emphasize mastery goals, using coping models to enhance self-efficacy; creating authentic tasks to enhance relevance and social interaction; and adding a variety of assessment methods in addition to tests. In the full-length paper all of our results will be discussed in light of existing research on teacher beliefs.

Importance of the study

This study is significant in several respects. First, it extends the research on both motivation and teacher education by examining the effectiveness of a course that provides students with the opportunity to reveal and challenge their beliefs about motivation. Second, this study provides evidence that transforming teacher beliefs is a complex process that can build on existing beliefs and improve instructional decisions even in the absence of a major change in those beliefs. Given that the course lasted only 6 weeks with one week dedicated to motivation theory, we believe these results offer promising evidence of the importance of pre-service and in-service teachers’ beliefs in making a positive impact on their students’ motivation. This is especially true given that research has shown that the process of change in teachers’ beliefs can be time-consuming (Pajares, 1992; Richardson, 1996; Wideen et al., 1998). Of course, future research will be required to follow up on these students to determine if changes are lasting. Finally, this study extends research on pre-service and in-service teachers’ beliefs about motivation, an area that has received scant attention in the research literature.
References


