Building confident teachers: Preservice physical education teachers' efficacy beliefs

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ABSTRACT

Understanding teachers' perceptions of their abilities across a variety of teaching strategies can provide insight for understanding teaching effectiveness and program review. Teaching efficacy reflects the degrees of confidence individuals have in their ability to successfully perform specific teaching proficiencies (Bandura, 1986). Additional insight can also be gleaned by examining the factors that influence a person's rating of his/her efficacy beliefs across a variety of pedagogical skills and core competencies. Objectives: This investigation examined the strength (1-5 likert-scale) and source of teaching efficacy across six national standards for physical education. Methods: Self-efficacy measures served to examine efficacy beliefs across the following NASPE (2008) competency areas of (Scientific knowledge, skill and fitness based competence, planning and implementation, instructional delivery and management, impact on student learning, and professionalism). Additionally, sources of influence on the teachers' efficacy ratings were also examined. Participants: Participants consisted of 120 pre-service physical educators who were enrolled in an accredited physical education teacher preparation program at a suburban research-intensive university. Participants were participating in either a clinical experience or student teaching. Results: Student teachers reported the highest level of overall teaching efficacy with their highest ratings being for professional dispositions and content knowledge. The student teachers lowest scores were ability to enhance student engagement and utilize assessment to foster student learning. Clinical students had a lower overall teaching efficacy rating with the lowest rating being for planning and implementation followed by assessment. Recommendations for potential program improvement and meeting accreditation standards can be drawn from the results.

Keywords: teaching efficacy, pre-service physical education, teacher preparation, standards based competencies

INTRODUCTION

Investigations of beginning teachers' efficacy judgments have helped to predict teacher retention, teacher performance and effectiveness, as well as, early career teacher development. Self-efficacy judgments reflect individual's belief about competencies that require meeting specific performance outcomes (Bandura, 1991). Teaching efficacy judgments start to form early in pre-service teachers' programs as they attempt to learn new content, new skill competencies required by accreditation, and new expectations for certification. Although teaching efficacy has been linked to important aspects of teaching effectiveness, little work has been done to understand the initial phase of efficacy development that begins while completing one's teacher preparation program.

Teachers' efficacy beliefs are thought to affect both their general orientation toward the educational process as well as their ability to meet specific instructional activities (Bandura, 1986, 1991). Bandura (1986, 1991) contended that there are several consequences of the development, or lack of development, of high efficacy judgments in relation to one's teaching. Teachers with low efficacy are more likely to give up in the face of difficulties, experience more anxiety during their pre-service experiences, are less effective in using problem solving strategies, and have lower teaching aspirations (Bandura, 1991). In contrast, high efficacy is believed to predict more commitment to teaching, and setting of more challenging goals (Woolfolk-Hoy & Burke-Spero, 2005). Further, teachers with a strong sense of efficacy engage in detailed planning, demonstrate greater enthusiasm for teaching, and spend more time teaching in higher efficacy competency tasks (Riggs & Enochs, 1990).

In addition to understanding the strength of teachers' efficacy judgments, Bandura (1986, 1991) also underscored the importance of measuring the sources that influence the individual's efficacy judgments. Bandura's work consistently identified several sources that are proven to consistently influence efficacy judgments. For this study, the researchers investigated three of those sources: 1) mastery experiences; 2) verbal encouragement/discouragement; and 3) modeling. Specifically, mastery experiences in teaching can take the form of teacher knowledge that includes pedagogical and instructional knowledge as well as successful teaching experiences. This knowledge forms the basis of planning, implementation and instructional strategies utilized by the novice teacher (Griffey & Housner, (1991). Framed within a pre-service teacher's program, low teaching efficacy would be predicted to result from a lack of mastery teaching experiences during this time whereas higher teaching efficacy would result from mastery experiences throughout both their program and pre-service teaching opportunities. Low efficacy may very well begin in the pre-service experiences in which the young educator does not have sufficient opportunity for mastery experiences across the various required competency areas (Martin & Hodges-Kulinna, 2003; Woolfolk-Hoy & Burke-Spero, 2005). Contrary, well-designed standards based curriculum with significant opportunities for mastery teaching experiences should positively influence one's perceptions of teaching efficacy. It is plausible that positive pre-service mastery experiences would reinforce one's perceptions of ability in her/his early teaching career.

The second source of efficacy, modeling or observational learning, is also believed to affect one's perceptions of teaching efficacy during pre-service experience. More specifically, the quality and type of model available is also an important aspect of how influential modeling and observational learning can be for a pre-service teacher (Onafowora, 2005). A variety of observational models such as the cooperating teacher, peers, or mastery models, can provide both

positive, negative, or little influence on the pre-service teacher's own teaching efficacy judgments. In order to act as a source of influence the pre-service teacher must have access to an observational learning model (Darling-Hammond, Berry, Haselkorn, & Fideler, 1999; Feiman-Nemser, 2001).

The third source of efficacy is feedback from significant socializing agents, such as the cooperating teacher or academic professor. Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998) suggested that teachers' efficacy is determined in part, by assessing the feedback from important others such as cooperating teachers and professors. In light of the fact that pre-service physical education teaching opportunities can be limited and occur in isolated settings (in terms of both physical location and content compared to other content areas) with few, if any, pre-service peers teaching in the same location, there may be a lack of access to various forms of verbal encouragement from significant others regarding specific competencies. Importantly feedback can also take the form of negative feedback and discouragement acting as a de-motivator for the novice teacher.

In order to develop pre-service teacher efficacy students need to have opportunities to progress in the various standards based competencies. In physical education (PE), the competencies required by the national governing body of NASPE (2008) are as follows: 1) Scientific and theoretical knowledge; 2) Fitness and skill based competence; 3) Planning and implementation; 4) Instructional delivery and management; 5) Impact on student learning; and 6) Professionalism. Physical education teacher preparation programs have been actively involved in preparing for national accreditation visits, meeting standards based competencies, developing curricular revisions, revising instructional strategies, and preparing their students for numerous proficiency based tests. To this end, educational researchers have found the importance of understanding the unique and similar sources that may influence the development of self-efficacy among pre-service physical education teachers (PSTs) as they navigate through their program and engage in their field based teaching experiences.

Teaching efficacy among physical educators has been shown to be weaker compared to other content areas, due in part, to excessive role demands, low status of the subject matter, lack of recognition in a core curriculum, professional isolation, and alienation within a school facility (Tschannen-Moran et al., 1998). Contrary some researchers have found that teacher self-efficacy tends to increase during one's teacher education programs (Woolfolk, Rosoff & Hoy, 1990; Wenner, 2001) but decrease after graduation, continuing to decline to the end of the first year of teaching (Moseley, Reinke & Bookour, 2003; Woolfolk Hoy, 2000). Although to date there is some understanding of the strength of teaching efficacy beliefs among early career educators, very little is known about the efficacy needed to meet the current and growing standards based competency demands required in a physical education accreditation process. Additionally little if any data exists about the sources, which influence teaching efficacy ratings. Providing this next level of data will help to develop strategies guidelines and enhanced assessment techniques to develop teacher effectiveness across a program of study.

Thus, the purpose of this study was to investigate the strength of self-efficacy judgments and the sources of influence on the self-efficacy ratings among physical education pre-service enrolled in a university accredited teacher preparation program.

PARTICIPANTS and PROCEDURES

The participants (N=149) included all students enrolled in clinical (n=70) and student teaching (79) field experiences across three academic semesters at a Division I research intensive university. Both male (n=91) and female (n=58) pre-service (k-12) physical education teachers enrolled in an accredited program within a suburban setting located in a Midwestern state. The participants all signed informed consent forms as their consent to participate in completing two pencil and paper questionnaires that measured both the level of teaching efficacy as well as their sources of influence on their efficacy ratings of teaching proficiencies.

For this study a physical education teaching efficacy scale was developed to measure the pre-service teachers perceptions of abilities to meet the physical education teaching competencies set out by the standards as outlined by NASPE (2008). Specifically, Standard 1 measured the PST's knowledge and ability to apply discipline-specific scientific and theoretical concepts critical to the development of physically educated individuals. Standard 2 - PST's ability to be a physically educated individual with the knowledge and skills necessary to demonstrate competent movement performance and health enhancing fitness. Standard 3 measured the PST's perceptions of efficacy in terms of their ability to plan and implement developmentally appropriate learning experiences aligned with local, state, and national standards to address the diverse needs of all students. Standard 4 questions measured the PST's efficacy to use effective communication and pedagogical skills and strategies to enhance student engagement and learning. Standard 5 measured the PST's ability to utilize assessments and reflection to foster student learning and inform instructional decisions. Finally, Standard 6 measured the PST's efficacy in their ability to demonstrate dispositions essential to becoming effective professionals (NASPE Standards 2008). The NASPE Standards address expectations related to prospective teachers' knowledge base, broad areas of teaching (such as planning, management and motivation, communication, and student assessment), and professionalism. Standards are further linked to outcomes/elements illustrating more specific expectations.

The efficacy items were written using a likert-scale response items anchored by (1) "Not at all confident," to (5) "Completely confident," with a midpoint of (3) "Somewhat confident" reflecting consistency with the measurement recommendations of Bandura (1997). The second instrument measured the sources that the students believed to influence efficacy ratings. For each of the six standards, the respondents were asked to provide, "the factors which most influenced your rating of confidence in the previous group of questions." The sources data were quantified as to the most frequently reported source while the level of efficacy was calculated using descriptive statistics.

RESULTS

Descriptive statistics revealed differences for teaching efficacy means across field experience as well as proficiency standard. Mean efficacy scores were calculated for each of the standards across two settings; 1) clinical and 2) student teaching. Significant differences across teaching experience were revealed. More specifically, the clinical students reported lower mean overall efficacy (m=3.1) than student teachers (m=4.3). Following the calculation of the overall mean efficacy ratings across all standards, efficacy ratings were calculated for each standard in order to find the range of scores. For student teachers the highest mean efficacy score was for professional dispositions and content knowledge (m=4.5), while the lowest rating was in their

perceived ability to enhance student engagement and utilize assessment (m=3.6) to foster student learning. Clinical students had the lowest rating for planning and implementation (2.9) followed by assessment (2.7) indicating judgments that were just below feeling "moderately confident".

The most common sources of self-efficacy reflect the experiences that participants identified as most strongly influencing their efficacy ratings for each of the standards and the corresponding elements. Sources were analyzed by themes under, "enhancing efficacy" or "decreasing efficacy." The three most common themes that students reported as enhancing their teaching efficacy were:

- *Teaching Practice,*
- *Opportunities to Implement Feedback,*
- *Observing Master Teachers*

The *Teaching Practice* theme reflected teaching experiences across the curriculum in which the participants felt they had opportunities to practice their teaching skills. Specifically, they shared that having an adapted physical education clinic provided them the opportunities to practice their planning and implementation skills across diverse student needs. Having what they perceived as "lessons that went well" reflects what Bandura (1986) termed mastery experiences. Other participants shared that their confidence was enhanced because of their teaching environment. For example, "our clinical structure lets us take over the entire class and not feel like we are trying to fit into what the cooperating teacher is doing. I gained confidence each day I taught and since we were their everyday it got better and better."

Under the enhanced efficacy sources, the *Opportunities to Implement Feedback* reflected the value teacher candidates placed on having a good cooperating teacher who provided specific and immediate feedback that would enhance their teaching and their students' learning experiences. Teacher candidates appreciated this feedback immediately following their lessons. For example, one teacher candidate stated, "Great ideas from coop to make immediate changes to lessons and made next lesson better." The more concrete the feedback, the better for candidates' efficacy.

For the enhanced efficacy sources of *Observing Master Teachers*, the teacher candidates had the opportunity to observe master teachers in both physical education and other content areas. In some of their experiences, teacher candidates were fortunate to have a master teacher as their cooperating teacher. For others they were given the opportunity to go to other content areas (i.e. math or science) and observe master teachers in a classroom setting. The most helpful experiences were with master teachers in physical education as teacher candidates expressed challenges with the transfer of information from a classroom setting to a gym or playing field setting. For example, one teacher candidate stated, "master teacher was helpful but would have liked to see a master teacher in PE." Most participants felt that observing a master teacher was a positive to see how teachers manage their lessons and student behavior.

Several themes were identified as sources that lowered the pre-service teachers' feelings of efficacy to meet the standard based competencies. The three most common themes for decreasing efficacy were:

- *Lack of Teaching Practice,*
- *Lack of Access to Current Technology in Schools,*
- *Lack of Effective Role Model in Cooperating Teacher*

One of the lowest efficacy scores occurred within the standards of *Planning and Implementation*. When asked what factors influenced their efficacy ratings the most common responses surrounded a *Lack of Teaching Practice.* More specifically, the clinical students

reported feeling unprepared for the full time teaching in the clinical setting because up to that point, "we had only taught our peers in our classes and that's not real teaching." In addition, they reported struggling with the *Lack of Access to Current Technology*. To this point, students were disappointed with the lack of equipment and technology aids available to conduct the lessons that they had planned for students. Students reported having practiced at the University with Technology and then did not have access to it during both clinical and student teaching experiences. One student wrote, "I had a great lesson with heart rate monitors planned and ready to go and my school didn't have any heart rate monitors." Another, student shared, all the equipment with technology was broken and no one seemed to care that it could help the kids better understand their fitness scores."

The third theme to emerge among the lowest efficacy scores was the *Lack of Effective Role Model in a Cooperating Teacher*. Pre-service teachers reported they did not learn anything from their cooperating teacher and felt they were lacking as effective role model for good teaching. Other specific responses had to do with the cooperating teacher being absent during any of the class periods as well as lacking a positive understanding of best practices. Some of the pre-service teachers' responses were as follows, "My coop was never around." "Coop didn't understand my questions about teaching." "Didn't give me any feedback I could use…like they didn't know either." The pre-service teachers shared comments of disappointment or disillusionment over not having a cooperating teacher that they believed modeled good teaching practices and at times even felt like they were teaching the cooperating teacher about how to teach more effectively. This experience lowered their overall teaching efficacy and belief that they would be successful in their first teaching positions.

CONCLUSION

The examination of the teaching efficacy among pre-service physical education teachers in this study focused on their competency beliefs to meet the teaching proficiencies set out by the national accreditation body for physical education programs. The theoretical framework of self-efficacy provided insight into the perceptions of pre-service teachers' beliefs in their own abilities to effectively meet the standards based competencies. Researchers have investigated general education teachers regarding the issues novice teachers face in connection with their level of self-confidence during their beginning teaching years following graduation (Darling-Hammond et.al, 1999; Feiman-Nemser, 2001,).

Woolfolk Hoy and Burke-Spero (2003) contended that pre-service teachers bring with them their previous set of experiences from high school that often offer an unstable set of individual and contextual influences to explain their efficacy judgments. To this point, the impact of new coursework, new expectations, and a new learning environment can make for very dynamic changes in perceptions of ability. Tschannen- Moran and Woolfolk Hoy (2001) suggest that supporting the development of teachers' self-efficacy is essential for producing effective, committed and enthusiastic teachers. These results confirm that pre-service teachers gain confidence over the transition from clinical teaching where they get less teaching experience to the end of student teaching.

Previous research has provided evidence that pre-service teachers may benefit from regular teaching opportunities in the k-12 setting rather than only at the end of their academic program. Teacher attrition can actually begin during pre-service teaching opportunities, especially if the student has few if any opportunities that increase teaching efficacy.

The work of Pedergast, Garvis, & Keogh (2011) also confirms that further investigation into pre-service teacher efficacy is warranted regarding the influences on sources of efficacy in teacher preparation programs in order to prepare students across all competency areas. To this end, this data will help in the process of meeting the standards in the accreditation process for teacher education programs.

Several results can be used for program improvement. In order to help students build areas of lower efficacy the following suggestions can be made:

- Prepare students to be able to teach with very little equipment and technology
- Provide as many teaching experiences with k-12 students throughout their program
- Educate students on the political and social networking environment of a school setting
- Encourage students to seek a mentor if one is not provided

The participants also identified the important role of opportunities to observe a master teacher. To this point, those who had this opportunity, drew confidence from those observations whereas those who did not have a master teacher to observe during clinical or student teaching described either no enhancement to their own efficacy or a slight uncertainty. Suggestions for program improvement would include assisting students in teaching with little to no equipment in order to better prepare them for the school settings where little equipment is available. This reflects a unique challenge for the physical educator and one in which the student must practice creativity and problem solving.

The results may not be generalized across other programs or universities. In addition, this study was conducted in a suburban setting and should be reproduced within an urban setting to help identify other sources, which may influence teacher development. There are several individual sources that aligned with the work of Bandura (1986, 1997) such as the importance of teachers gaining mastery experiences in order to enhance efficacy and the debilitating effect that a lack of success can have on a pre-service teacher in terms of the efficacy needed to enter the profession of teaching.

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