How Active-Learning Strategies Can Improve Efficacy and Critical Thinking Skills in a Service-Learning Course

Larry P. Nelson
University of Texas at Arlington

Mary Lynn Crow
University of Texas at Arlington

Kathleen C. Tice
University of Texas at Arlington

Abstract

Improving preservice teachers' ability to recognize work-related problems and apply effective strategies and solutions to fundamental challenges in the field is at the crux of an effective college preparation. Although there is evidence that service-learning experiences within a teacher education course can have powerful outcomes on student learning, what is being done in the lecture part of a service-learning course to improve the impact of community-based practice largely goes undiscovered. This study investigates whether a contextually developed set of active-learning strategies in the lecture part of a service-learning course improves preservice teachers' efficacy. Findings showed significant improvement within personal teaching efficacy constructs as a result of experiencing the active-learning sequence. Academic tracking of students showed those pursuing a B.A. degree in teacher education benefitted significantly more from an active-learning experience than those pursuing a B.S. degree in health-related sciences. The paper also describes how the active-learning sequence was a preferred method of instruction by instructors and students, as well as how these strategies were purposeful with problematizing teaching situations and engaging students with course content.

Key Words: service-learning, teacher efficacy, active-learning, physical education teacher education

In 2008, The Council for Industry and Higher Education created the International Employer Barometer that surveyed 233 large multinational and small companies across a range of social and technical skill areas (Archer & Davison, 2008). Results showed that college graduate skills such as communication and the ability to work in teams were the most important and sought after aptitudes by employers. Furthermore, three out of four organizations ranked thoughtful analysis and decision-making skills as most important for the future. Employers, university centers, and the National Research Council (2012) have called on college professors to adopt more active methods of instruction that engage students directly with course content and provide strategies that help students develop the critical thinking skills necessary to solve everyday problems. Even though the practice and development of these skills have received overwhelming support, studies have shown that 65% to 80% of university instructors spend class time lecturing to a passive student audience with little or no focus on group development, active-learning, and cultivating problem-solving skills (Blackburn, Pellino, Boberg, & O'Connell, 1980; Chickering & Gamson, 1991; Panek, 2005; Smith & Van Doren, 2004).

Incorporating service-learning into university coursework has the potential to address some of the shortcomings in higher education by providing students opportunities to collaborate with partners in the community (Nelson, Tice, & Theriot, 2008; Tice & Nelson, 2015, 2013). Nevertheless, how much of the lecture time is truly dedicated to overcoming

the most anticipated obstacles associated with that particular service-learning experience, and thus developing the critical thinking skills necessary for experiential success? For university students who are going to be working as teachers in schools, a critical part of their development is to ensure that they feel like they can engage in teaching situations effectively and be successful. This study examines whether the addition of an active-learning sequence directly related to a service-learning experience can enhance the gains in teacher efficacyexperiencedbystudents.

Review of Literature

Service-Learning in Teacher Education

In 1996, the National Commission on Teaching and America's Future issued a call to strengthen teacher preparation programs through a variety of reforms, including deeper candidate participation in clinical experiences. Since that time, teacher education programs throughout the country have made "significant headway" in incorporating the reforms, "creating stronger clinical practice, strengthening coursework around critical areas. . .and connecting this coursework directly to practice in much more extensive practice settings" (Darling-Hammond, 2010, p. 36). Many teacher preparation programs now require clinical experiences that are directly tied to coursework and engage preservice teachers with authentic teaching and learning collaborations, partnerships, and mentoring programs (Huang, 2006; Darling-Hammond, 2000).

Service-learning provides a way to link field experiences with coursework. Furco (2001) defines service-learning as "a teaching strategy that enhances students' learning of academic content by engaging them in authentic activities in which they apply the content of the course to address identified needs in the local and broader community." (p. 67). Teacher education experts have argued that service-learning can expose preservice teachers to new situations that could occur on the job, uncover obscure assumptions that might interfere with their ability to effectively teach all students, and engage them in solving real-world problems with professional and experienced consultants (Baldwin, Buchanan, & Rudisill, 2007). In effect, service-learning creates an opportunity for students and faculty to question, analyze, and process timely challenges occurring in the field in a collaborative setting that supports personal, social, and academic growth.

Although the practice of service-learning in teacher education is widespread, the number of faculty who understand how to use the pedagogy skillfully is relatively small (Anderson & Erickson, 2003; Furco & Ammon, 2000; Potthoff, Dinsmore, Stirtz, Walsh, Ziebarth, & Eifler 2000). This deficit is in part due to the limited empirical basis for best practices as well as having to overcome obstacles that may preclude its implementation. For example, one of the most common hurdles university faculty face is a lack of time to plan and implement service-learning experiences that require wide-ranging leadership and detailed coordination with community partners (Butin, 2003; Hondagneu-Sotelo & Raskoff, 1994).

Teacher Efficacy

Bandura (1977) defined self-efficacy as "beliefs in one's capability to organize and execute the course of action required to produce given attainments" (p. 3). He argued that four external experiences or self-perceptions contribute to the development of self-efficacy: mastery experiences, modeling or vicarious experiences, social persuasion, and emotions or physiological factors such as fatigue, fear, and pain. Teaching efficacy refers to the teacher's belief in his or her ability to influence learning, even among students "who may be difficult or unmotivated" (Guskey & Passaro, 1994, p. 4). Researchers typically distinguish between two dimensions of teaching efficacy: personal teaching efficacy, the belief that teachers themselves can be effective in reaching personal teaching goals and outcomes regardless of educational obstacles; and general teacher efficacy, the belief that teachers as a whole (and the education system in general) can be effective in accomplishing student learning and reaching educational outcomes (Armor, Conroy-Oseguera, Cox, King, McDonnell, Pascal, Pauly, & Zellman (1976).

Henson, Kogan, and Vacha-Haase (2001) conclude that a strong sense of efficacy is perhaps "one of the best documented attributes of effective teaching" (p. 404). Highly efficacious teachers have students who learn more and are more motivated

(Ashton, 1984; Shahid & Thompson, 2001; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998), have higher levels of enthusiasm and are more apt to implement instructional innovations (Ghaith & Yaghi, 1997; Woolfolk-Hoy & Davis, 2006;). Highly efficacious teachers also are more likely to remain in the profession (Henson, 2001). Schwarzer and Hallum (2008) found that low general self-efficacy led to job stress and burnout, especially for teachers under the age of 40. Based upon their findings, Schwarzer and Hallum recommend that "strengthening teachers' optimistic self-beliefs along with improved teaching skills should be a preventative measure to avoid this downward spiral" (p. 169).

Service-Learning and Teacher Efficacy Research

A number of studies have shown positive effects for participating in service-learning on preservice teachers' sense of efficacy. For example, teaching candidates in a literacy course with a service-learning component in which students applied literacy teaching skills at an elementary school for low performing and diverse students made greater gains in self-efficacy and were more apt to implement course content than their counterparts in the same course (Wasserman, 2009). Drawing on Bandura (1977), Wasserman attributed these differences to the greater mastery learning experienced by service-learning students. Cone (2009) conducted a similar study in which teacher candidates in one course participated in service-learning (leading inquiry-based science lessons for low-income minority elementary students in a community center), which candidates in a parallel course implement-ed inquiry-based science lessons with their peers. Candidates who participated in the service-learning experience made significantly greater gains in their sense of efficacy to provide equitable science teaching. Kirtman (2008) found similar increases in self-efficacy in teacher candidates centered on their understanding and confidence to teach mathematics, and Todd & Brinkman (2008) reported the same type of self-efficacy gains in teacher candidates teaching of social studies.

While service-learning is associated with increased teaching efficacy among preservice teachers, contextual variables surrounding the experience have been found to moderate its effects. For example, in a study of preservice teachers from nine teacher education programs, Root, Callahan, and Sepanski (2002) found gains in teaching efficacy only among candidates who reported support for their efforts, including adequate training for tasks and assistance from an instructor or a placement supervisor in adjusting to the service-learning experience. Increased teaching efficacy was also linked to receiving instruction in service-learning as a teaching method and having responsibility for implementing service-learning during a practicum or student teaching.

There is little doubt that service-learning is a promising pedagogy for effective field experiences in teacher education. However, poorly designed and/or inappropriately managed service-learning experiences characterized by a lack of planning and preparation, insufficient guidance and direction from faculty, or working with non-supportive community partners can all undermine candidates' feelings of efficacy (Tice & Nelson, 2015). These issues point to the importance of preparing preservice teachers before they engage in service-learning projects so that they are more apt to be successful and make gains in efficacy beliefs (Abrami, Bernard, Borokhovski, Wade, Surkes, Tamim, & Zhang, 2008).

In this study, we hypothesized that an active-learning sequence focused on engaging preservice teachers with problem-based learning linked to a required service-learning component would more effectively cultivate a sense of teacher efficacy than traditional classroom instruction. We expected that the experience of addressing discernible problems, while receiving strategies and solutions on how to address them, would develop the higher order thinking skills necessary to interpret, analyze, and address similar problems in the classroom later in the service-related experience and their career. Concurrently, we expected that the active-learning sequence would foster efficacy beliefs as preservice teacher gained expertise. Research questions include: 1) Does a strategically developed active-learning sequence improve preservice teachers' sense of efficacy when they engage in service-learning; and 2) Does an active-learning sequence differentially affect gains in efficacy of students who vary in their academic major?

Methods

Participants

Participants of this study (N = 100) were student teachers from a large diverse urban research university who were enrolled in a secondary physical education teaching methods course. These students were either pursuing a Bachelor of Arts degree in physical education teacher education (N = 77) or a Bachelor of Science degree in a health-related field (e.g., athletic training) also leading to teacher certification (N = 23). The non-core coursework in each of the two programs were notably different. Specifically, teacher education students spend numerous hours observing and teaching in the public schools and have multiple opportunities to gain experience with public speaking prior to entering the course. In contrast, the students studying a health-related gain more experience in diagnosing problems and designing actions for success.

Course Attributes

The methods courses during a fall and spring semester were "lecture-style" courses that relied on presentation of material using PowerPoint slides and multiple-choice exams based on a popular methods textbook. In the experimental courses of the following year fall and spring semesters, the slides, exams, and lecture format were largely replaced by an active-learning intervention comprising nine 50-minute experiences including role-play, case study, and small group discussion designed to promote problem-solving and critical thinking skills that related/applied to students' service-learning. The effectiveness of all three active-learning strategies in leading to the development of higher order thinking is documented heavily in the literature (Bain, 2004; Barclay, Cross, & Major, 2005; Barnes, Christensen, & Hansen, 1994; Bean, 2011; Brookfield, 1987; Dewey, 1916; Honan & Rule, 2002; Mitchell, 2004; Moore, 2014; Paul & Elder, 2009; and Youngblood & Beitz, 2001). In each active-learning experience, students were placed in small groups, provided with case studies with problematic situations, directed to analyze and discuss the cases, and then role-play possible solutions. The case studies were based on scenarios the students might realistically encounter during the service-learning experience (and in future teaching), and as such conform to Bean's (2011) definition of a good case: "Good cases generally tell a real or believable story, raise thought-provoking issues based on conflict, lack of obvious or clear-cut answer, and demand a decision reached through critical thinking and analysis" (p. 159). Cases were not contrived, but were based upon actual challenging situations that had taken place during previous semesters of the service-learning projects.

After reading and discussing the original cases, students were asked to write (individually and as a group) what they wanted to accomplish in the role-plays, including the exact words and techniques to be used. Moore (2014) argued that, "Role-playing unfamiliar or disorienting perspectives or imaging 'what if' situations makes an excellent critical thinking exercise" (p. 156). Role-plays were repeated so that multiple preservice teachers could try out their own solutions and other students could see different approaches to solving problems. The post-role-play discussions were preplanned, detailed, in-depth, and explored how their classmates and professors reacted to the differing solutions to the challenges presented (see Appendix for an example role-play used in the study).

In conjunction with the methods course, all students participated in the same service-learning experience each semester. The majority of students (67%) either coached or co-coached in an after-school soccer program that required 60-70 hours of directly instructing and managing middle school students at practices (after-school) and games on Saturdays. The remaining students (33%) designed, implemented, and instructed a volunteer service-learning project with secondary level students in the public schools (e.g., athletic training events, fitness hiking competitions, and fitness testing events).

Instruments

To measure sense of efficacy, preservice teachers in this study responded to the Teacher Efficacy Scale (Tschannen-Moran & Woolfolk-Hoy, 2001; Woolfolk & Hoy, 1990) at the beginning and end of each semester of the course. This scale is designed to measure personal teaching efficacy and general teacher efficacy. Example questions in the personal teaching efficacy scale included: (1) When a student does bet-

ter than usual, many times it is because I exert a little extra effort; (2) If one of my students couldn't do a class assignment, I would be able to accurately assess whether the assignment was at the correct level of difficulty; and (3) My teacher training program and/or experience has given me the necessary skills to be an effective teacher. Example questions in the general teach efficacy scale included: (1) The hours in my class have little influence on students compared to the influence of their home environment; (2) Teachers are not a very powerful influence on student achievement when all factors are considered; and (3) Even a teacher with good teaching abilities may not reach many students (all reverse scored).

A confirmatory factor analysis (using squared multiple correlations on the diagonal and the PA2 extraction option in SPSS) was computed to substantiate the two dimensions of the teacher efficacy instrument. The two factors were uncorrelated ($r = .017$) and accounted for 37% of the total variance. These findings are similar to other validity investigations of the Teacher Efficacy Scale (Denzine, Cooney, & McKenzie, 2005). A Cronbach's α coefficient of .79 was computed for scores on twelve personal teacher efficacy items, while Cronbach's α coefficient of .72 was computed for eight general teacher efficacy items indicating high internal reliability for both dimensions of efficacy. Two items did not load at .40 or higher on either scale and were discarded for analysis.

A quasi-experimental nonequivalent groups design was applied using a repeated measures multivariate analysis to test for differences in personal teaching efficacy and general teaching efficacy due to time (pre-survey vs. post-survey); experimental (active-learning) vs. control (traditional) condition; type of service-learning experience associated with the course; and students' academic track. In order to partial out the effects of differences between scores on the pretest, an ANCOVA statistic was applied to the analysis when testing for between group variances (i.e., using pretest scores as a covariate).

A naturalistic approach (Lincoln & Guba, 1985) was also used to collect data in the form of student-centered focus groups, individual student journal reflections, and a culminating written self-evaluation. Focus groups with a representative sample of students each semester were conducted by an independent representative from the Provost's office at three separate times spaced evenly throughout the semester. Questions concerned the extent to which students were actively engaged in the learning process. Individual journals were used to record students' personal feelings about their experiences during both coursework and the service-learning component. The self-evaluation was an open-ended culminating reflection about what students liked or disliked in the course, how they changed as a result of the course, and how they would assess their own performance and the extent to which they took advantage of teaching and learning opportunities.

Findings

Results showed a significant main effect for time, with the posttest scores being higher than the pretest scores in both personal teaching efficacy and general teacher efficacy measures for both control and experimental groups (Table 1). In the case of general teaching efficacy, there were no significant differences [$F (1, 98) = .000$, $p = .985$] between control and experimental group scores (Figure 1). However, in the case of personal teaching efficacy, there was a significant difference [$F (1, 98) = 8.741$, $p = .004$] between conditions where the experimental group reported significantly higher mean scores than the control group (Figure 2). Moreover, when we ran a two-way analysis (removing the variable for condition [i.e., control vs. experimental]), we found that the academic track of students (physical education teacher education students vs. athletic training students) had significant effects [$F (1, 98) = 6.373$, $p = .013$] within the personal teaching efficacy construct (Table 2). Both academic groups made significant gains in personal teaching efficacy, however, physical education majors (who began with lower pretest scores) benefited significantly more from the experience than the athletic training education majors (Figure 3). Results showed no significant differences in personal teaching efficacy or general teacher efficacy due to the type of service-learning experience.

Table 1. Teacher Efficacy Scores by Time and Condition

			Pre-Test		*Post-Test*		*Time (Pre-Post) (F)*	*Time * Condition (F)*
Scale	*Condition*	N	*Mean*	*SD*	*Mean*	*SD*		
PTE	Control	49	51.43	6.63	52.94	6.72		
	Experiment	51	53.14	6.03	57.35	5.70		
	Total	100	52.30	6.36	55.19	6.58	39.151*	8.741*
GTE	Control	49	30.88	4.89	32.35	4.40		
	Experiment	51	32.43	6.04	33.92	7.70		
	Total	100	31.67	5.54	33.15	6.33	7.653*	.000

* Significant at the $p < .05$ level

Figure 1. General Teacher Efficacy Gains by Condition

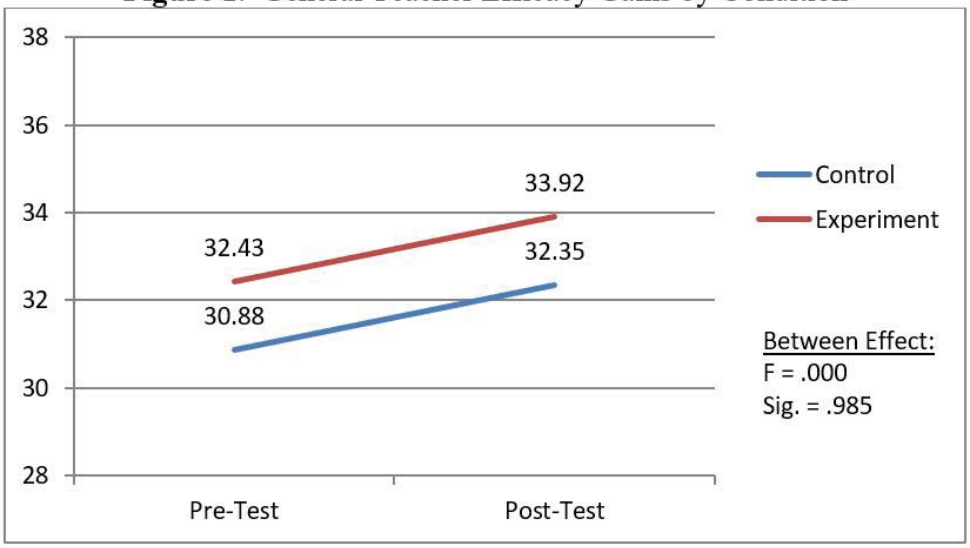


Figure 2. Personal Teaching Efficacy Gains by Condition

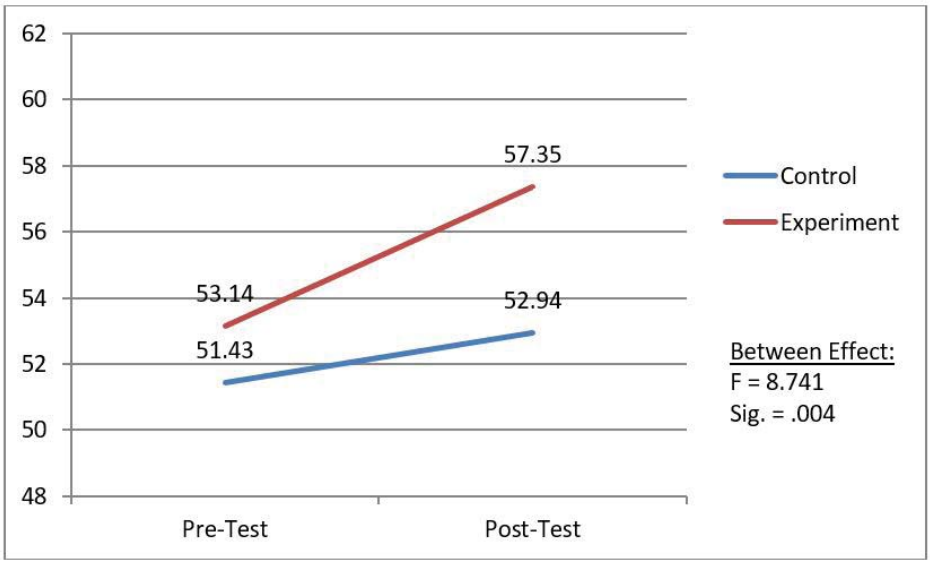
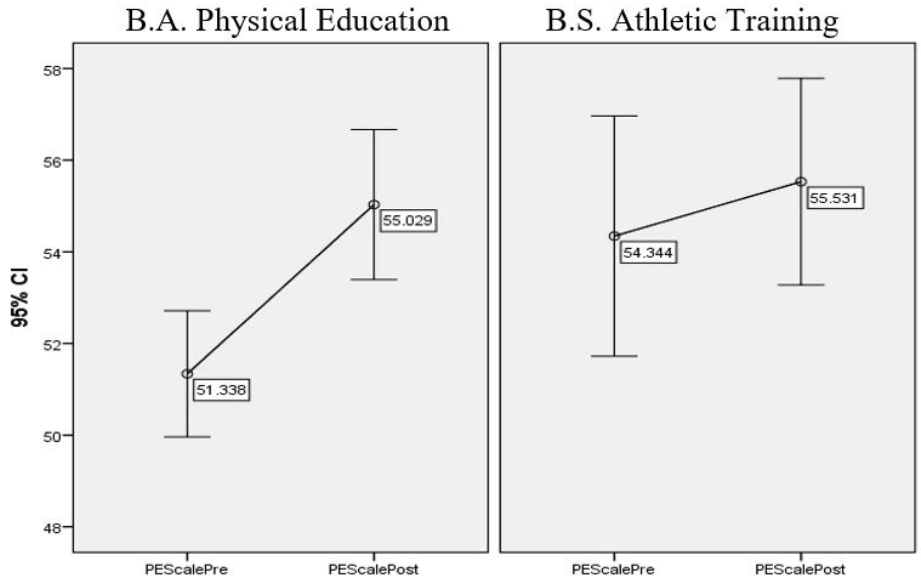


Table 2. Teacher Efficacy Scores by Academic Track

			Pre-Test		*Post-Test*		*Time (Pre-Post)*	*Time * Track*
Scale	*Track*	N	*Mean*	*SD*	*Mean*	*SD*	*(F)*	*(F)*
PTE	B.A. PE	77	51.34	5.68	55.03	6.76		
	B.S. AT	23	54.34	7.27	55.53	6.25		
	Total	100	52.30	6.36	55.19	6.58	24.20*	6.37*
GTE	B.A. PE	77	31.87	5.24	33.03	5.70		
	B.S. AT	23	31.25	6.18	33.41	7.57		
	Total	100	31.67	5.54	33.15	6.33	8.441*	.758

Note. B.A. PE = Bachelor of Arts in Physical Education Teacher Education; B.S. AT= Bachelor of Science in Athletic Training
* Significant at the p < .05 level

Figure 3. Personal Teaching Efficacy Gains by Kinesiology Degree Program



Each source of qualitative data was recorded, transcribed, and analyzed, noting all salient and recurring units of meaning relevant to the quantitative findings on the active-learning intervention. Qualitative findings yielded support for the active-learning strategies used in the study, while delineating more clearly ways the active-learning experiences fostered gains in efficacy. One emergent theme concerned the ways in which the active-learning scenarios fostered self-assessment and the generation of alternative solutions for handling challenging situations:

> At first I was a little apprehensive about the role-play vignettes but they did make me think about how I would react to those kinds of circumstances and if my first instincts would have been the right thing to do. I have realized I have a weakness with unfairness, wrong behavior, and confrontation.

One preservice teacher described the ways in which the active-learning scenarios offered insights into the varying responses to challenging classroom problems and the opportunity to practice responding in a safe setting:

> The class discussions really opened my eyes to different ways of handling tough situations that can occur in a school setting. I realize there are many ways of addressing students and that I have a huge weakness with dealing with hostile students. It was nice to get a chance to run through these scenarios in a lab-like setting because I have a much better idea how to manage students who have little to lose.

A second theme that surfaced in the qualitative data involved the degree to which preservice teachers gained feedback from class members:

> The group activities showed me that I need to do a better job pausing for a moment and really think through how I go about reaching my goal. Typically, I would just command a behavior and tell my players what to do. I realize now that I need to focus more on the goal and see the situation as an opportunity to teach a lesson and not allow my knee jerk emotions and frustrations to overtake the goal along the way.

Another preservice teacher found that watching class members to be the most beneficial aspect of the active-learning scenarios:

> Watching others handle tough situations was the most useful part. I remember several of us saying to ourselves, Oh, I would have never thought to say that or handle things that way. . . or that was handled well. I remember complimenting ____ after class one day, telling him I enjoyed the way he handled that situation, how professional he was about it, and how it got me thinking about how I might do things differently.

A third theme explicitly focused on the link between the experience of participating in the active-learning scenarios and self-efficacy:

> The role-play activities were similar to some of the issues I encountered during coaching. Figuring out solutions to likely problems and learning new tips for dealing with these kinds of issues really improved my ability to handle these types of situations when they happened. I have more confidence that I can handle difficult situations when they arise.

Comments of other preservice teachers concerned the benefits of experiencing situations that were similar to those they would encounter in the field:

> Role-play gets you closer to the real deal rather than just listening to someone tell you how to do it. It was never boring; I was always eager to see how different people would respond. I looked forward to seeing all the different techniques. I feel like it forces you to respond quickly while thinking critically, so you have to be on your toes in class. You know you are going to have to respond so you can't just sit back in class, watch others, and act like you are paying attention.

Discussion

The purpose of this study was to explore the the impact of active-learning strategies in a teaching methods course that included service-learning on preservice teachers' sense of efficacy. As stated previously, results showed that both control and experimental groups experienced substantial gains in personal teaching efficacy and general teacher efficacy over time. The gains in efficacy beliefs for teaching physical education in combination with service-learning contributed to preservice teachers' confidence in their ability and teachers in general to positively impact student learning.

These findings can be interpreted in light of the sources of efficacy beliefs identified by Bandura. It seems likely that the course and service-learning component provided preservice teachers with mastery experiences, which Bandura notes is the most influential source of efficacy beliefs. It can be argued that preservice teachers were unsure of their ability to positively impact service-learning, but as they participated in the course and engaged in projects, they received support from teams of class members,

as well as the instructors of the course who work closely with community partners. The instructors also provided support by presenting content during class meetings and by providing opportunities for reflection and discussion once projects were underway. Finally, preservice teachers were consistently able to see their classmates engage in teaching on a regular basis and experience success, which provided vicarious experiences as a source of efficacy beliefs.

The results showed that the active-learning strategies used in the experimental condition helped preservice teachers feel personally more confident in their own ability to promote student learning than did traditional teaching strategies. By planning how to handle very specific situations, role-playing these techniques, and getting feedback from peers and professors afterward, students may have learned that they could individually and effectively face school and classroom challenges. Rarely do beginning teachers get a trial "run-through" experience that encourages mistakes without any real consequences for students. Opportunities afforded by the role-plays included the ability to take a timeout from action, consider multiple angles and solutions, and rethink how to approach a particular situation.

The failure to find greater gains in general teacher efficacy may have occurred because the focus of the case studies, role-plays and discussions was built more on individual solutions and accomplishments as opposed to solutions that could be used by the physical education profession as a whole. The lower level of gains in GTE (as compared to the greater personal teaching efficacy gains) might be attributed to the negative perception of what teachers in general are able to achieve. Crow and Pant (2015) found that 2,014 graduate education students, who were currently teaching full-time in the public schools, viewed the profession as a whole much more negatively than did graduate education students in 1988 at the same university.

The course under study was a secondary physical education teaching methods course in which the service-learning component was primarily linked to physical education and coaching field experiences. Therefore, it is not surprising that the findings showed that the physical education majors benefited more from the course than athletic training majors. For example, the intensity of the assigned field experiences (in relation to course content) was typically very different for both sets of students. This has significant curricular and degree program implications. These findings suggest two solutions: (1) the course instructor needs to create a more equivalent and relevant active-learning sequence akin to "athletic training" service-learning projects, or (2) the course needs to be designed for physical education teacher education majors only.

Limitations of the Study

A primary limitation of the study was the absence of a true experimental or quasi-experimental design in which the independent variable of the active-learning varied between sections of the same course, during the same semester with the same instructor. Additionally, the study did not allow us to separately examine the effects of the active-learning sequence and service-learning.

Conclusions

This study sought to measure the effects of substituting active-learning for traditional instruction in a teaching methods course with a service-learning component on preservice teachers' sense of efficacy. Results showed that the methods coursework and the opportunity to apply it through service-learning were associated with significant gains over time in both personal teaching efficacy and general teacher efficacy regardless of condition. However, preservice teachers who experienced the active-learning sequence expressed greater confidence in their ability to face challenging teaching situations and find effective solutions (i.e., personal teaching efficacy) than those receiving traditional instruction, results which the qualitative findings suggest are attributable to opportunities to engage in problem-solving and to observe and receive feedback from others.

As concerns about producing effective teachers continue to grow, teacher education programs need to be acutely aware of how coursework, instruction, and training contribute to the development of preservice teachers' confidence in their ability to help students learn. The instructors in this study tried to do this by incorporating active-learning strategies into a teaching methods course in conjunction with an already well-established service-learning component. While the combination of service-learning and

methods coursework yielded increased confidence about teaching, it was the connection between class-based preparation for responding to dilemmas that might be encountered in service-learning (and the opportunity to apply that learning in service-learning) that led to the greatest gains in personal teaching effi cacy.

Communications regarding this article should be directed to Larry Nelson at lnelson@uta.edu, Mary Lynn Crow at mlcrow@uta.edu, or Kathleen Tice at ktice@uta.edu.

References

Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M. A., Tamim, R., & Zhang, D. (2008). Instructional interventions affecting critical thinking skills and dispositions: A stage 1 meta-analysis. *Review of Educational Research, 78*(4), p. 1102-1134. http://rer.sagepub.com/content/78/4/1102.short

Anderson, J., & Erickson, J. (2003). Service-learning in teacher education. *Academic Exchange Quarterly, 7*(2), 111-115.

Archer, W., & Davison, J. (2008). Graduate employability. *The council for industry and Higher Education*. http://www.empscompacts.org.uk/resources/LincsandRutland/Grademployability.pdf

Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E., & Zellman, G. (1976). *Analysis of the school preferred reading programs in selected Los Angeles minority schools* (Rep. No. R-2007-LAUSD). Santa Monica, CA: RAND. (ERIC Document Reproduction Service No. 130 243.)

Ashton, P. (1984). Teacher efficacy: A motivational paradigm for effective teacher education. *Journal of Teacher Education, 35*(5), 28-32. http://jte.sagepub.com/content/35/5/28.short

Bain, K. (2004). *What the best college teachers do*. Cambridge: Harvard University Press.

Baldwin, S., Buchanan, A., & Rudisill, M. (2007). What teacher candidates learned about diversity, social justice, and themselves from service-learning experiences. *Journal of Teacher Education 58*(4), 315-327. http://jte.sagepub.com/content/58/4/315.short

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215. http://psycnet.apa.org/journals/rev/84/2/191/

Barclay, E. F., Cross, K. P., & Major, C. H. (2005). *Collaborative learning techniques: A handbook for college faculty*. San Francisco, CA: Jossey-Bass.

Barnes, L. B., Christensen, C. R., & Hansen, A. J. (1994). *Teaching and the case method: Text, cases, and readings*. (3rd ed.). Boston, MA: Harvard Business School Press.

Bean, J. C. (2011). *Engaging ideas: The professor's guide to integrating writing critical thinking and active-learning in the classroom* (2nd ed.). San Francisco, CA: Jossey-Bass.

Blackburn, R. T., Pellino, G. R., Boberg, A., & O'Connell, C. (1980). Are instruction improvement programs off target? *Current Issues in Higher Education, 2*(1), 32-48.

Brookfield, S. D. (1987). *Developing critical thinkers: Challenging adults to explore alternative ways of thinking and acting*. San Francisco, CA: Jossey-Bass. ftp://202.83.110.129/Volume_1/from%202TB/FAC%20FOUND%20STUDIES/FYLHR9~3/Others/International%20Conference%20on%20Learning%20and%20Teaching/Stephen%20Brookfield/Workshop%20Materials/Critical_Thinking_materials.pdf

Butin, D. (2003). Of what use is it? Multiple conceptualizations of service learning within education. *The Teachers College Record, 105*(9), 1674-1692.

Chickering, A. W., & Gamson, Z. F. (1991). Seven principles for good practice in undergraduate education. *The Wingspread Journal, 9(*2), 3-7. http://onlinelibrary.wiley.com/doi/10.1002/tl.37219914708/abstract

Cone, N. (2009). A bridge to developing efficacious science teachers of all students: Community-based service-learning supplemented with explicit discussions and activities about diversity. *Journal of Science Teacher Education, 20*, 365-383.

Crow, M. L., & Pant, M. (2015). *Twenty-Six years of changes in education students' attitudes*. Unpublished manuscript.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives, 8*(1), 1-44.

Darling-Hammond, L. (2010). Teacher education and the American future. *Journal of Teacher Education, 61*(2), 35-47.

Denzine, G., Cooney, J., & McKenzie, R. (2005). Confirmatory factor analysis of the Teacher Efficacy Scale for prospective teachers. *British Journal of Educational Psychology, 75*, 689-708. http://onlinelibrary.wiley.com/doi/10.1348/000709905X37253/abstract?deniedAccessCustomisedMessage=&userIsAuthenticated=false

Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York: Macmillan.

Furco, A. (2001). Advancing service-learning at research universities. *New Directions for Higher Education, 114*, 67-78. http://onlinelibrary.wiley.com/doi/10.1002/he.15/abstract

Furco, A., & Ammon, M. (2000). *Service-learning in California's teacher education programs*. Berkeley, CA: University of California.

Ghaith, G., & Yaghi, H. (1997). Relationships among experience, teacher efficacy, and attitudes toward the implication of instructional innovation. *Teaching and Teacher Education, 13*, 451-458. http://www.sciencedirect.com/science/article/pii/S0742051X96000455

Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*(3), 627-643.

Henson, R. (2001). The effects of participation in teacher research on teacher efficacy. *Teaching and Teacher Education, 17*, 819-836.

Henson, R., Kogan, L., & Vacha-Haase, T. (2001). A reliability generalization study of the teacher efficacy scale and related instruments. *Educational and Psychological Measurement, 61*(3), 404-420. http://epm.sagepub.com/content/61/3/404.short

Honan, J. P., & Rule, C. S. (2002). *Using cases in higher education: A guide for faculty and administrators*. San Francisco, CA: Jossey-Bass.

Hondagneu-Sotelo, P., & Raskoff, S. (1994). Community service-learning: Promises and problems. *Teaching Sociology, 22*(3), 248-254.

Huang, G. H. (2006). Fostering active-learning in a teacher preparation program. *Education, 127*(1), 31-38.

Kirtman, L. (2008). Preservice teachers and mathematics: The impact of service-learning on teacher preparation. *School Science and Math, 108*(3), 94-102.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Mitchell, R. C. (2004). Combining cases and computer simulations in strategic management courses. *Journal of Education for Business, 79*(4), 198-204. http://www.tandfonline.com/doi/abs/10.3200/JOEB.79.4.198-204#.U-QNTPldXmQ

Moore, K. D. (2014). *Effective instructional strategies: From theory to practice*. Beverly Hills, CA: Sage.

National Research Council (2012). *Education for life and work: Developing transferable knowledge and skills in the 21st century*. Washington D.C.: National Academies Press.

Nelson, L. P., Tice, K. C., & Theriot, S. (2008). Impact of service-learning on teachers' efficacy. *Academic Exchange Quarterly, 12*(3), 102-107.

Panek, R. (2005). *101 Redefined: Colleges rethink the large lecture course*. New York Times, Education Life.

Paul, R., & Elder, L. (2009). *Miniature guide to critical thinking concepts and tools*. Dillon Beach, CA: Foundation for Critical Thinking.

Potthoff, D., Dinsmore, J., Stirtz, G., Walsh, T., Ziebarth, J., & Eifler, K. (2000). Preparing for democracy and diversity: The impact of a community-based field experience on preservice teachers' knowledge, skills, and attitudes. *Action in Teacher Education, 22*(1), 79-92.

Root, S., Callahan, J., & Sepanski, J. (2002). Building teaching dispositions and service-learning practice: A multi-site study. *Michigan Journal of Community Service Learning, 8*(2), 50-60.

Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology, 57*(s1), 152-171. http://onlinelibrary.wiley.com/doi/10.1111/j.1464-0597.2008.00359.x/pdf

Shahid, J., & Thompson, D. (2001). *Teacher efficacy: A research synthesis*. Paper presented at the Annual Meeting of the American Educational Research Association. Seattle, WA, April 10-14. http://files.eric.ed.gov/fulltext/ED453170.pdf

Smith, L. W., & Van Doren, D. C. (2004). The reality-based learning method: A simple method for keeping teaching activities relevant and effective. *Journal of Marketing Education, 26*(1), 66-74.

Tice, K. C., & Nelson, L. P. (2013). Towards understanding effective community field experiences. In V. M. Jagla, J. A. Erickson, & A. S. Tinkler (Eds.), *Advances in service-learning: Transforming teacher education through service-learning* (pp. 240-252). Charlotte, NC: Information Age Publishing.

Tice, K. C., & Nelson, L. P. (2015). Promises and pitfalls of service-learning in teacher preparation: Lessons from longitudinal research. In V.M. Jagla, A. Furco, & J.R. Strait (Eds.), *Service-Learning pedgogy: How does it measure up?* Charlotte, NC: Information Age Publishing.

Todd, R., & Brinkman, S. (2008). Service learning in a social studies methods course: Experience and place-based curriculum. *The Educational Forum, 72*, 79-91.

Tschannen-Moran, M., & Woolfolk-Hoy (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783-805. http://www.sciencedirect.com/science/article/pii/S0742051X01000361

Tschannen-Moran, M., Woolfolk-Hoy, A., & Hoy, W. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248. http://www.sciencedirect.com/science/article/pii/S0742051X01000361

Wasserman, K. B. (2009). The role of service-learning in transforming teacher candidates' teaching of reading. *Teaching and Teacher Education 25*(8), 1043-1050.

Woolfolk-Hoy, A., & Davis, H. (2006). Teacher self-efficacy and its influence on the achievement of adolescents. In F. Pajares & T. Urdan, (Eds.,) *Self-Efficacy beliefs of adolescents*. (pp. 117-138). Charlotte, NC: Information Age Publishing.

Woolfolk, A., & Hoy, W. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology, 82(*1), 81-91. http://psycnet.apa.org/journals/edu/82/1/81/

Youngblood, N., & Beitz, J. M. (2001). Developing critical thinking with active-learning strategies. *Nurse Educator, 26*(1), January/February 2001, 39-42. http://journals.lww.com/nurseeducatoronline/Abstract/2001/01000/Developing_Critical_Thinking_with_Active_Learning.16.aspx

Appendix

Directions: Students read vignette and take a few minutes to write down key points about how to handle the situation and accomplish a reasonable outcome. Students are then paired up so that each takes a role and works through each key point (Note. instructor can stop in the middle of this phase to check in with how student or teacher now feels in that role). Facilitator then calls up two people from the class to play the role of the student and the teacher (Note. the teacher role can have 1 or 2 helpers behind them to consult with if they need help or get stuck – i.e., whisper ideas into their ear. . .). Once this process has been worked through adequately, the facilitator leads a discussion of what worked well and what didn't work so well, and calls up new students to play each role again. Students take notes on what worked well and examine how different approaches and styles might work best for their particular temperament, and if they need to

develop any traits to become more successful in the future handling these types of situations. Finally, the instructor summarizes, reemphasizes, and shares the talking points brought up throughout the process.

Example Role-Play "Bullying"

You are a substitute teacher and have been called in this morning to cover Mr. Daniels PE classes for the rest of the semester (about 3 weeks) at Eagle Lake High School. There were no lesson plans left for you. Fifth period rolls around where juniors and seniors enter the gym for a class called "Team-Sports". They tell you they have been playing a flag-football unit and a few students immediately enter the equipment closet and pull out the necessary equipment. A senior named Dominick divides up teams and runs the class very efficiently leaving you very little time and opportunity to manage and/or control anything. The game begins and Dominick exhibits extremely aggressive behavior towards the opposing team - hitting students hard and tripping and tackling them to the ground violently. He is also abusive to his own teammates yelling at them when they make a mistake and blame them for anything that goes wrong on their team. It is obvious the students are afraid of him and will do anything to try and just appease him and/or stay out of his way. You ask Dominick to speak with you in the office. What is your next move?

Results:

- STAY CALM ALWAYS! Have confidence & use good eye-contact (and even ask for eye-contact back if necessary to emphasize the seriousness of the situation). Acknowledge his motivation level and skilled level of play (being punitive may make matters worse. . . at least until you get to know him better). Don't engage him emotionally/confrontationally, but be assertive using "I" statements like "Here's what I think. . . Here's what I want you to do. . .".

-Show respect and empathy by asking questions and trying to understand his perspective and situation. Students need to see that you care and have passion for them and their education. If necessary try to get "buy in" by asking what he would like to do and negotiate alternative roles/responsibilities. . . Have him do another task (i.e. referee, assistant coach, statistician, etc.). Constant caring on a consistent basis.

- Video the behavior and have him watch it with you in conference. . . Help him understand that the consequences of his actions could lead to injury of others (physical and/or psychological). This could also lead to bigger problems (civil/legal action by other students' parents, suspension from school, etc.).

-Remind him of the Golden Rule- "Do unto others as you would have them do unto you."

Set expectations and get agreement. Give him simple goals to work on with 1 or 2 outcomes/cues. Also, go over these expectations routinely (with him and the class) and post these social responsibility rules around the classroom/gym (See Don Hellison's work on promoting social responsibility through physical activity): http://davidpetersoneportfolio.weebly.com/uploads/1/0/5/4/10549140/pe_workshop.pdf

http://www.pecentral.org/climate/january99article.html

-Make it about fun for everyone. . . Team-work! Try to make health connections for improving his behavior.

-Modify the flag-football rules/equipment of the game to minimize opportunities for inappropriate behavior and harm.

-If need be, buy some time to ask other teachers/colleagues' advice in order to be confident in your approach/strategy/goals. Present alternative (better fitting) opportunities (e.g., Football Team). . . Perhaps you can request he get moved to athletics instead of PE as a "better fit" for him.