Synergy the Soaring Saturdays Tutoring Program:

Are Teacher Candidates' Perceptions about their Self-efficacy Impacted by an Experiential Learning Project as Part of a Graduate Special Education Course?

By Audra Cerruto, Ph.D., and Rickey Moroney, M.S.

Abstract

Master's-level teacher candidates enrolled in a private Catholic college in the suburbs of New York City participated in a 10-week tutoring program that brought to campus parochial elementary school students with diverse learning abilities. The purpose of the program was twofold: to improve the teaching and learning of the graduate students. Teacher candidates completed the Teachers' Sense of Efficacy Scale at the beginning and again at the completion of the tutoring program and generated reflective entries into their journal after each session. Through a mixed-methods approach, quantitative and qualitative results indicate that the teacher candidates' hands-on experiences affected their teaching approach by motivating students, implementing alternative instructional strategies, and utilizing a variety of assessment methods.

Introduction

Teacher-training programs have been encouraged to offer "clinically rich" programs to foster the development of effective teaching practices (Chamblin, Cerruto, Moroney, & Mason, 2018; National Council for Accreditation of Teacher Education, 2010; New York State Department of Education, 2011; U.S. Department of Education, 2009, 2011). The traditional student-teaching model is the most widely implemented opportunity for teacher candidates to develop and hone the art and skill of teaching. However, this model has some limits, as it is typically the final step in a training program and may not be as clinically rich as needed in this demanding field (National Council for Accreditation of Teacher Education, 2010). Student teaching emphasizes classroom management and knowledge of the curriculum (Chalies, Ria, Bertone, Trohel, & Durand, 2005; Graham, 2006; Valencia, Martin, Place, & Grossman, 2009). Clearly, there is much more to teaching, such as building relationships, motivating reluctant learners, and implementing formative and summative assessment results that affect teaching and learning.

Hands-on, experiential-learning opportunities embedded within coursework help prepare pre-service teachers by offering them a structured teaching experience with a limited number of students; direct faculty supervision; and other co-teachers to support one another in preparation, execution, methodology, and assessment. The inclusion of experiential learning during teacher candidates' enrollment in coursework in teacher-training programs may provide a variety of "clinically rich" opportunities to develop skills, professional habits, and attitudes that are essential to become effective teachers (Chamblin et al., 2018). Through the mentoring process, pre-service teachers engage in the teaching and learning process with the guidance of a mentor teacher who can focus on the developmental progress of the pre-service teacher rather than a preset expectation of student teaching (Chamblin et al., 2018). Kolb (1984) describes experiential learning as concrete experiences outside the classroom that are processed and applied to future experiences. This learning experience includes opportunities to plan, assess, and reflect on successes and failures over a period of time. Inherent in the experience is the opportunity to develop confidence and competency in one's ability as a teacher, otherwise known as teacher self-efficacy.

In response to the need to fill a gap between coursework and theory on one hand and the student-teaching experience and practical applications of theory on the other hand, a service-learning project was developed that brought elementary school students with diverse abilities to a college campus to receive tutoring services. A 10-week tutoring program was established that identified each elementary-age student's learner profile, including academic strengths and weaknesses as measured by NWEA MAP testing and archival data presented by the school district, multiple intelligence profile and learning preferences as measured by online surveys, and parent/student concerns and requests. The teacher candidates developed personalized educational materials, educational videos, and prototype manipulatives and implemented apps, teacher tools, and instructional videos available on the internet into activity plans. They were guided to utilize formative assessment tools to measure the effectiveness of the teaching/learning process and to adjust their approach to maximize learning. Kolb's (1984) experiential model was applied using specific tools to elicit planning, assessing, and reflecting on successes and failures of each session, specifically through the use of activity plans, formative assessments, and reflec-

tive journals. The measurement of the teacher candidates' perceptions of their experiences and development of their skills was monitored through a self-efficacy tool.

Programs utilizing mentors to address the specific needs of pre-service teachers have demonstrated through service learning projects that authentic opportunities to apply educational research and theory into best practices facilitates meaningful relationships between teacher candidates and professors. These opportunities to engage in reflection impacts dispositions, skill level, and teaching competency. To measure competency, self-efficacy principles are applicable. To monitor shifts in dispositions and the impact of an experience, reflective journals have been utilized in research. In the following section, the research on self-efficacy and reflective journals are presented.

Self-Efficacy

An important contributing factor in success is self-efficacy, a person's perceptions of individual competencies to complete an activity on any topic (Bandura, 1997). Through the lens of social learning theory, competency may be affected by guided performance, modeling, and appraisal of one's performance (Bandura, 1977, 1982). Early in the development of self-efficacy theory, Bandura (1977) postulated four major sources of information that affect success: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. Taking these sources into account, teacher candidates can evaluate and ultimately rely on their sense of self to build on their teaching skills and will become realistic, but positive, in their self-assessments. If individuals judged themselves as capable and successful, this thought positively affected performance (Bandura, 1982).

As social learning theory took its shape, self-efficacy, the impact of modeling behavior, and the belief in oneself as competent made an impression on the classroom experience. Teacher efficacy is explained as a teacher's judgment as to the knowledge and skills one possesses and applying those beliefs about his or her capabilities and capacities to affect students' success (Bandura, 1993; Brouwers & Tomic, 2003; Tasgin & Kucukogl, 2016; Tschannen-Moran & Woolfolk Hoy, 2001; Zundans-Fraser & Lancaster, 2012).

Teacher self-efficacy is based on outcomes such as persistence, enthusiasm, commitment, and instructional behavior, as well as student outcomes such as engagement, learning achievement, motivation, and self-belief. Teachers' efforts in the classroom, attitudes toward students, planning, organization, persistence, resilience, goals, and level of aspiration are strongly influenced by their self-efficacy (Tschannen-Moran & Hoy, 2001). Tasgin and Kucukoglu (2016) postulated that to translate theory into practice, teacher candidates must examine their student-teaching experience and the preparation they received in their teacher education program using the following categories of self-efficacy: student engagement, teaching strategies, classroom management, and cooperation among all involved stakeholders (e.g., the candidate, cooperating teacher, school administrators, and higher education faculty). Tschannen-Moran and Hoy (2001) advocated for a clinical practice modeled after medical and clinical psychology student preparation programs that strongly promote cooperation and a shared experience for all stakeholders. They also used the Teachers' Self-Efficacy Scale developed by Tschannen-Moran and Woolfolk-Hoy (2001) as a tool to measure efficacy. Furthermore, Derosier and Soslau (2013) suggested placing the emphasis on supporting teacher candidates and adding rigor to teacher-training programs to facilitate the development of confidence in their abilities. Moreover, Tschannen-Moran, Woolfollk-Hoy, and Hoy (1998) emphasized that theoretical classes create self-efficacy in teacher candidates through indirect experiences; however, practice classes grow self-efficacy through direct experiences. Experiential learning environments that mirror classroom settings affect teacher candidates' self-efficacy positively by qualifying teacher candidates with professional skills in this context. Teacher candidates learn through hands-on teaching, guidance from experienced faculty, support from fellow candidates in a co-teaching model, the use of teaching strategies to engage and motivate their students, and formative assessments to monitor and measure progress. Therefore, what is considered important in research is the effect of teacher candidates' performance in light of their self-efficacy perceptions, which are defined as their beliefs of each individual's motivations, feelings, thoughts, acts, as well as qualities of effective behaviors that can be developed in an individual (Bandura, 1997; Zimmermann, 1995). Indeed, measuring self-efficacy periodically during teacher candidates' classroom experiences should show measured progress.

Cayci's (2011) and Fallon's (2007) studies highlighted the positive and meaningful relationships between the elementary teacher candidates' teacher efficacy and their attitudes toward the profession of teaching. Cayci postulated that four sources contribute to efficacy: direct experiences (one's own successes), indirect experiences (observation of others), oral persuasion (encouraging the individual), and the individual's physiological and psychological conditions (emotions about an action). Fallon (2007) believed that teachers should focus most importantly on the relationship they develop with their students because they become the catalyst for students' curiosity and learning experiences.

Evans and Tribble (1986) examined the personal relationship between teachers (teacher candidates) and their students. They believed this to be the most important component ("significant others"), defining it as collective efficacy. It supports the development of student resiliency, rigorous and relevant learning environments, and intellectual curiosity and mastery in students. They further believed that many problems experienced by pre-service teachers such as classroom discipline, student motivation, and meaningful differentiation can be mitigated by establishing personal relationships with students, especially when they have a positive sense of self-efficacy. In other words, they believe they have the power to influence their students' classroom behavior, motivate their students, and differentiate instruction.

Reflective Journals

The reflective journal as utilized by a teacher candidate in a teacher-training program is a written response to a teaching/learning experience that fosters the examination of one's role as a teacher, the perceived effectiveness of one's delivery of instruction, his or her awareness and sensitivity to the needs of students, and one's beliefs and ideologies of teaching and learning (Brown, Cheddie, Horry, & Monk, 2017; Clarke, 2004; Ragawanti, 2015). Using the journal as a method of self-reflection and self-exploration, teacher candidates can engage in professional growth in an unstructured or semi-structured activity (Ragawanti, 2015). Clarke (2004) had student teachers engage in reflective journal writing during an internship to investigate the use of reflective journals in the teaching/learning experience. The journal entries revealed trends that coincided with specific phases according to the Dietz model of professional learning. Ragawanti (2015) implemented the reflective journal to facilitate the development of classroom management skills, which is a concern among pre-service teachers. Brown et al. (2017) implemented journal writing with early childhood teacher candidates and reported that journal writing promoted self-awareness about the knowledge and skills necessary to be an effective early childhood professional. To determine students' perspectives about a teaching strategy, Cupita (2016) utilized Lankskkhear and Knobel's definition of journals as "data that participants are asked to write in order to collect their personal insights and reflections on an event, practice, concept, phenomenon" (p. 94).

Baleghizadeh and Mortazavi (2014) implemented reflective journaling to determine if it had any significant effect on students' performance on the General Self-Efficacy Scale by Sherer et al. (1982). Results showed that learners who utilized a reflective journal gained higher self-efficacy scores than those who did not use journaling techniques. The act of creating a written record of performance accomplishments and documenting how the students achieved their goals has been identified by Bandura as potentially increasing self-efficacy (Baleghizadeh & Mortazavi, 2014). The usefulness of reflective journals to qualitatively measure teacher candidates' thoughts and reactions to the tutoring experiences to encourage professional growth through the process of self-reflection and self-exploration is implemented in this study to provide evidence of growth in a student teacher's self-efficacy.

The purpose of this study is to research the impact that the introduction of this clinically rich teacher-education methods class has had, particularly on the teacher candidates' self-efficacy perceptions as teachers-in-training. In this context, the research question is as follows: Does an experiential learning project influence teacher candidates' perception about self-efficacy?

To create a clinically rich learning environment for teacher candidates, a tutoring program was established within a graduate-level teaching methods course. The program provides opportunities for teacher candidates to interact with elementary school students, teachers, families, and brings to life the elementary school curriculum to develop effective teaching and learning strategies for diverse learners.

Method

Program

A 14-week graduate-level special education methods course met 2.5 hours once a week on Saturday mornings. Over ten sessions, a tutoring program was embedded into the class. The first hour of the class consisted of the tutoring session and the remainder of time was devoted to lectures/discussions of educational and psychological theories and the application of educational technology, special education strategies, assessment methods for best practices, and small- and large-group discussions that addressed issues and concerns about the tutoring sessions, as well as debriefing sessions.

Participants

Twenty-eight teacher candidates were enrolled in the special education methods course. These candidates had a variety of experiences interacting with students in an academic setting. Some were working in schools as head or assistant teachers, while others had never worked in a school setting.

There were 11 students in the tutoring program, ranging in ages from 5 to 13, enrolled in kindergarten through sixth grade. The participants were recruited from a local parochial school. They were invited to participate in the program based on recommendations from the administration and special education teachers at their school. Some of the students had IEPs, 504s, and others may have been considered at-risk students.

Procedures

The tutoring program took place at the college in a variety of classrooms and common spaces. Technology was available for the sessions, which included SMART Boards, iPads, desktop computers, laptops, and smartphones. Activity plans were uploaded to a learning-management system prior to the session to enable reviews and comments by the teaching faculty. The tutoring sessions included one tutee and between 1 to 3 tutors. Tutors collaboratively designed hands-on, interactive activities in the areas of math and English language arts to address the individual needs of the tutees based on data such as report cards, IEPs, 504, NWEA results, and teacher reports. Parent conferences were held with the teaching faculty and teacher candidates to better understand each child's learning needs.

Design

To assess the impact of the experiential learning experience on the teacher candidates' perceptions, a self-efficacy survey was administered. The survey selected was utilized by the London School Excellence Fund (2015) that investigated perceptions of self-effectiveness in the use of pedagogic strategies and the development of student relationships in classroom settings. The survey, adapted from Tschannen-Moran and Hoy (2001), explored aspects of efficacy in student engagement and instructional strategies. For each survey, a mean was calculated for the individual scores at baseline, which was administered after the second tutoring session and at the end of the course. If there was a difference between the mean scores of each survey, this might be due to a shift in the teachers' perspective on their effectiveness in general pedagogical skills and their relationships with students.

A reflective journal is an additional tool utilized to explore changes in teachers' perceptions of their effectiveness in pedagogical skills and relationship building with students. The reflective journal was completed after each tutoring session for a total of 10 entries. It included contemplation on the effectiveness of the activities produced and executed through the application of theory into practice. Teacher candidates were encouraged to deliberate about their strategies, methods, and assessments, including levels of engagement and instructional approaches to facilitate teaching and learning.

Results

A paired t-test was utilized to evaluate the teacher candidates' ratings on the Self-Efficacy Scale. The Scale was administered after the second tutoring session and at the end of the tutoring program. The 16 survey items were examined. Based on the paired t-test, the data are

Table 1 Paired T-Test to Evaluate the Teacher Candidates' Ratings on the Self-Efficacy Scale

Paired Samples Test

		Paired Differences					*t*	*df*	Significance (2-tailed)
					95% Confidence Interval of the Difference				
		M	*SD*	Std. Error Mean	Lower	Upper			
Pair 1	SpringPost1 - SpringPre1	.172	1.104	.205	-.248	.592	0.841	28	0.408
Pair 2	SpringPost2 - SpringPre2	.276	1.556	.289	-.316	.868	0.955	28	0.348
Pair 3	SpringPost3 - SpringPre3	.138	1.432	.266	-.407	.683	0.519	28	0.608
Pair 4	SpringPost4 - SpringPre4	.310	1.391	.258	-.219	.840	1.201	28	0.240
Pair 5	SpringPost5 - SpringPre5	.172	1.256	.233	-.305	.650	0.740	28	0.466
Pair 6	SpringPost6 - SpringPre6	.172	1.627	.302	-.447	.791	0.571	28	0.573
Pair 7	SpringPost7 - SpringPre7	.310	1.466	.272	-.247	.868	1.140	28	0.264
Pair 8	SpringPost8 - SpringPre8	.276	1.509	.280	-.298	.850	0.984	28	0.333
Pair 9	SpringPost9 - SpringPre9	.345	1.289	.239	-.146	.835	1.440	28	0.161
Pair 10	SpringPost10 - SpringPre10	.000	1.069	.199	-.407	.407	0.000	28	1.000
Pair 11	SpringPost11 - SpringPre11	.172	0.966	.179	-.195	.540	0.961	28	0.345
Pair 12	SpringPost12 - SpringPre12	.276	1.437	.267	-.271	.822	1.034	28	0.310
Pair 13	SpringPost13 - SpringPre13	.172	1.466	.272	-.385	.730	0.634	28	0.532
Pair 14	SpringPost14 - SpringPre14	.034	1.658	.308	-.596	.665	0.112	28	0.912
Pair 15	SpringPost15 - SpringPre15	.138	1.575	.292	-.461	.737	0.472	28	0.641
Pair 16	SpringPost16 - SpringPre16	.379	1.545	.287	-.208	.967	1.322	28	0.197

Note: $n = 29$; the data are not statistically significant for any question ($p < .05$), so you must accept the null hypothesis.

not statistically significant for any of the 16 questions ($p < .05$) on the Teacher Candidates' Self-Efficacy Scale (see **Table 1**). The overall average score on the pre-test was 7.319 and the post-test was 7.554, demonstrating insignificant increases in scores.

Four items on the Teacher Candidates' Self-Efficacy Scale were identified as most meaningful to the tutoring program. An item analysis of these four items was conducted. For each of the items, 3, 4, 11, and 12, there was an increase in average scores, albeit statistically insignificant. For Question 3 (How much can you do to motivate students who show low interest in schoolwork?), the pre-test average was 7.52 and the post-test average was 7.66. For Question 4 (How much can you do to get students to believe they can do well in schoolwork?), the pre-test average was 7.69 and the post-test average was 8.0. For Question 11 (How much can you do to adapt your lesson to the proper level for individual students?), the pre-test average was 7.52 and the post-test was 7.69. For Question 12 (How much can you use a variety of assessment strategies?), the pre-test average was 7.59 and the post-test was 7.86.

To further analyze the four critical items on the Self-Efficacy Scale (Items 3, 4, 11, and 12), the data were put in Dedoose, a qualitative data analysis software that facilitates the analysis of mixed-methods research. Doing this helped examine the key items of the Teacher Candidates' Self-Efficacy Scale and the frequency of those concepts in the teacher candidates' reflective journals. Each teacher candidate's reflective log was reviewed by two readers to identify specific elements classified as promoting engagement and utilizing instructional strategies. Elements were coded into seven categories for engagement and eight categories for instructional strategies (see **Table 2**). The purpose of the analysis was to determine if these two major elements were evident in the tutoring program.

Table 2 Pre and Post Mean for Each Question of Candidates Ratings on the Self-Efficacy Scale

Paired Samples Statistics					
		M	*N*	*SD*	Std. Error Mean
Pair 1	SpringPre1	7.24	29	1.327	.246
	SpringPost1	7.41	29	1.240	.230
Pair 2	SpringPre2	7.10	29	1.081	.201
	SpringPost2	7.38	29	1.178	.219
Pair 3	SpringPre3	7.52	29	1.271	.236
	SpringPost3	7.66	29	0.897	.167
Pair 4	SpringPre4	7.69	29	1.391	.258
	SpringPost4	8.00	29	0.802	.149
Pair 5	SpringPre5	6.90	29	1.205	.224
	SpringPost5	7.07	29	1.132	.210
Pair 6	SpringPre6	7.52	29	1.214	.225
	SpringPost6	7.69	29	1.168	.217
Pair 7	SpringPre7	7.31	29	1.198	.223
	SpringPost7	7.62	29	0.942	.175
Pair 8	SpringPre8	7.14	29	1.302	.242
	SpringPost8	7.41	29	1.086	.202
Pair 9	SpringPre9	7.59	29	1.268	.236
	SpringPost9	7.93	29	0.923	.171
Pair 10	SpringPre10	7.31	29	1.228	.228
	SpringPost10	7.31	29	1.004	.186
Pair 11	SpringPre11	7.52	29	0.949	.176
	SpringPost11	7.69	29	0.761	.141
Pair 12	SpringPre12	7.59	29	1.053	.195
	SpringPost12	7.86	29	0.915	.170
Pair 13	SpringPre13	7.21	29	1.292	.240
	SpringPost13	7.38	29	0.820	.152
Pair 14	SpringPre14	7.14	29	1.274	.237
	SpringPost14	7.17	29	1.002	.186
Pair 15	SpringPre15	7.45	29	1.325	.246
	SpringPost15	7.59	29	0.825	.153
Pair 16	SpringPre16	7.31	29	1.312	.244
	SpringPost16	7.69	29	0.891	.165

Item 3 on the Teacher Candidates' Self-Efficacy Scale addressed the impact of the teacher candidate to motivate students who show low interest in schoolwork. In the journal entries dated February 4, 2017, "motivation" was mentioned 76 times; on April 1, 2017, it was mentioned 99 times. Item 4 on the Teacher Candidates' Self-Efficacy Scale addressed the impact of the teacher candidate to get students to believe they can do well in schoolwork. In the journal entries dated February 4, 2017, "instilling belief" was mentioned 0 times; on April 1, 2017, it was mentioned 6 times. Item 11 on the Teacher Candidates' Self-Efficacy Scale addressed the teacher candidates' adjustment of the lesson to the proper level of students' functioning. In the journal entries dated February 4, 2017, "adjusting lesson" was mentioned 5 times; on April 1, 2017, it was mentioned 65 times. Item 12 on the Teacher Candidates' Self-Efficacy Scale addressed the teacher candidates' use of a variety of assessment strategies. In the journal entries dated February 4, 2017, "use of a variety of assessment strategies" was mentioned 0 times; on April 1, 2017, it was mentioned 109 times.

Based on the journal entries, there appeared to be a shift in the teacher candidates' attention to pedagogical skills and their relationships with their tutees. Based on the frequency in which the teacher candidates mentioned key skills, it appears that they demonstrated taking more time to engage their tutees in the thinking and learning process and utilizing instructional strategies to teach and assess learning.

Discussion

Summary

The purpose of this study was to research the impact that the introduction of a clinically rich teacher education methods class has had on the effects of teacher candidates' self-efficacy perceptions as teachers-in-training. In this context, the research question was, "Does an experiential learning project influence teacher candidates' perception about self-efficacy?" To create a clinically rich learning environment for teacher candidates, a tutoring program was established within a graduate-level teaching methods course. The program provided opportunities for the teacher candidates to interact with elementary school students, teachers, and families, and bring to life the elementary school curriculum to develop effective teaching and learning strategies for diverse learners.

Teacher candidates completed a survey from the London Schools Excellence Fund (2015) that investigated perceptions of self-effectiveness in the use of pedagogic strategies and the development of relationships with students in classroom settings. The survey, adapted from Tschannen-Moran and Hoy (2001), explored aspects of efficacy in student engagement and instructional strategies. A paired t-test analysis did not demonstrate a significant difference in pre-test and post-test results on the self-efficacy survey. The mean scores on the pre-tests items were lower than post-test means, suggesting a shift in teachers' perspective on their effectiveness in general pedagogical skills and relationships with students. A limitation of this survey is teacher candidates' concern that their survey scores may affect their course grade despite assurances from the instructors that this would not be the case. In addition, teacher candidates completed the post-test survey at the end of the semester when many teacher candidates are under pressure and stress to complete coursework and prepare for final exams.

Teacher candidates completed a reflective journal to document the effectiveness of the activities produced and executed through the application of theory into practice. They

Table 3: Tutors' Reflections as Analyzed on Dedoose: Qualitative Analysis for Tutoring Sessions

Strategies, Methods & Assessments	Feb. 4, 2017	April 1, 2017	Total
Engagement			
Think critically	**3**	**22**	**25**
Motivate	**76**	**99**	**175**
Instill belief	**0**	**6**	**6**
Value learning	**0**	**33**	**33**
Foster creativity	**34**	**28**	**62**
Improve understanding	**64**	**75**	**139**
Assist families	**1**	**0**	**1**
Total Engagement	***178***	***263***	***441***
Strategies, Methods & Assessments	**Feb. 4, 2017**	**April 1, 2017**	**Total**
Instructional Strategies			
Respond to difficult questions	**0**	**11**	**11**
Monitor student understanding	**9**	**136**	**145**
Craft good questions	**2**	**12**	**14**
Adjust lessons	**5**	**65**	**70**
Use a variety of assessments	**0**	**109**	**109**
Alternative explanations	**0**	**51**	**51**
Alternative strategies	**22**	**202**	**224**
Appropriate challenges	**12**	**112**	**124**
Total Instructional Strategies	***50***	***698***	***748***
Total Engagement & Instructional Strategies	**228**	**961**	**1189**

Directions for Scoring the Teachers' Sense of Efficacy Scale [1]

Adapted from Megan Tschannen-Moran, College of William and Mary Anita Wollfolk Hoy, the Ohio State University.

Construct Validity
For information on the construct validity of the Teachers' Sense of Teacher Efficacy Scale, see:
Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. Teaching and Teacher Education, 17, 783-805.

Subscale Scores
To determine Efficacy in Student Engagement and Efficacy in instructional Practices subscale scores, compute unweighted means of the items that load on each factor. Generally, these groupings are:

Efficacy in Student Engagement: Items 1, 2, 3, 4, 6, 9, 10, 14
Efficacy in Instructional Strategies: Items 5, 7, 8, 11, 12, 13, 15, 16

Using this survey
This survey should be conducted at least twice, once prior to the intervention and once after the intervention.[1] You may wish to create an online version of the survey (i.e. using survey monkey) to avoid manually collecting survey results. However, if you do so please make sure the questions and rating scale are accurately replicated. All collection and analysis of survey responses will need to be conducted by program staff or their evaluators. Project Oracle will not be able to support direct evaluation activities.

Analyzing Results
Mean scores should be collected across all respondents for each question to demonstrate the average 'sense of efficacy' each time the survey is conducted. The mean scores from the first and the second time the survey was conducted can then be compared to show distance travelled.

Where the numbers of teachers completing surveys are particularly large, evaluators may wish to calculate the reliability (Cronbach's alpha) across the set of responses for each category of questions. If reliability scores are high (i.e. 0.8 or above) they may then wish to calculate the mean from a sample of questions, rather than analyzing the data for all 16 questions. Evaluators should be able to calculate the alpha from the survey data collected.

were also encouraged to deliberate about their strategies, methods, and assessments, including levels of engagement and instructional approaches to facilitate teaching and learning. Journal entries were analyzed for specific themes related to the self-efficacy survey and analyzed in Dedoose. The shift in the frequency that the teacher candidates mentioned specific levels of engagement and instructional strategies suggested that they were increasingly thinking about pedagogical skills and relationships with their tutees during the semester.

This clinically rich experience was a valuable opportunity for the teacher candidates to interact with a student under the direct supervision and guidance of a faculty member. Through coursework and mentoring, teacher candidates began to develop activities and implement strategies to facilitate teaching and learning. While this experience represents only the beginning stage of the teacher candidates' journey to becoming a certified teacher, it seems to be a positive step toward this goal.

References

Baleghizadeh, S., & Mortazavi, M. (2014). The impact of different types of journaling techniques on EFL learners' self-efficacy. *PROFILE Issues in Teachers' Professional Development*, 16(1), 77-88.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review,* 84(2), 191-215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147. doi:10.1037/0003-066X.37.2.122

Figure 2: Tutor's Weekly Reflective Log

REFLECTIVE LOG

Name: _____

Current Course: EDU 572

Date of this session_____ Time: 9 AM to 10 AM

Grade level: _____

Use the following questions to guide a reflection paper about each session. Please save each reflective dated entry into a one-word document.

Here are some questions to guide your reflection…

How receptive were the students to the activities? Did you feel the session was successful? What would you do differently if you repeated the activity? Did the students value the lesson? What kind of questions did the students ask? What kind of questions did you ask? Were you able to differentiate on the fly? Do you think you challenged your students? What was your biggest challenge during the session? Were you able to gauge student comprehension? If so, how did you do this (what tools did you implement)? If not, what could you implement in the future to facilitate your understanding of your students' comprehension?

Additionally, …
Please include a statement as to how your instructional activities or session links with the theories of education presented in your coursework at this college. Please be specific; when referring to an educational, developmental, or psychological theory and theorists. Name the theory or theorist and explain the connection between the activity and theory.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist,* 28(2), 117-148.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), Encyclopedia of human behavior (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).

Brouwers, A. & Tomic, W. (2003). A test of the factorial validity of the Teacher Efficacy Scale. *Research in Education* 69, 67-79.

Brown, C. S., Cheddie, T. N., Horry, L. F., & Monk, J. E. (2017). Training to be an early childhood professional: Teacher candidates' perceptions about their education and training. *Journal of Education and Training Studies*, 5(6), 177-186.

Cayci, B. (2011). The relationship between the elementary teacher candidates' teacher efficacy and their attitudes towards the profession of teaching. *Education,* 132, 402-418.

Chalies, S., Ria, L., Bertone, S., Trohel, J., & Durand, M. (2005). Interactions between preservice and cooperating teachers and knowledge construction during postlesson interviews. *Teaching and Teacher Education*, 20, 765-781.

Chamblin, M., Cerruto, A., Moroney, R., & Mason, P. (2018). Mentoring dispositions for pre-service and early career special educators through service learning. In K. Dikilitas (Ed.) *Mentorship Strategies in Teacher Education,* (pp. 37-76). Hershey, Pennsylvania: IGI Global.

Clarke, M. (2004). Reflection: Journals and reflective questions: A strategy for professional learning. A*ustralian Journal of Teacher Education,* 29(2), 1-13.

Comer, J. (1995). Lecture given at Education Service Center, Region IV. Houston, TX.

Comer, J. P. (2001). Schools that develop children. *The American Prospect* 12(7): 30-35.

Cupita, L. A. (2016). Just in time teaching: A strategy to encourage students' engagement. *HOW*, 23(2), 89-105.

Derosier, S. & Soslau, E. (2013). Teacher candidates speak out: exploring concerns related to pupil learning and efficacy when learning to teach. *Education*, 134, 488-496.

Evans, E. D. & Tribble, M. (1986). Perceived teacher problems, self-efficacy, and commitment to teaching among preservice teachers. *Journal of Educational Research*, 80(2), 81-85.

Fallon, P. D. (2007). Nexus aliquis: In pursuit of efficacy, resilience, and full potential. *Adolescence*, 42(165), 73-101.

Graham, I., Logan, J., Harrison, M., Straus, S., Tetroe, J., & Caswell, W. (2006). Lost in knowledge translation: time for a map? *Journal of Continuing Education in the Health Professions*, 26(1), 13-24.

Kolb, D. A. (1984). *Experiential Learning: Experience as the source of learning and development*. Englewood Cliffs, N.J.: Prentice-Hall.

London School Excellence Fund. (2015). *Teacher sense of self-efficacy survey*. Retrieved from https://www.london.gov.uk/sites/default/files/teacher_efficacy_scale.pdf

National Council for Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers*. Washington, DC: Author.

New York State Department of Education. (2011). *Graduate level clinically rich teacher preparation pilot program: 2011-2016.* Retrieved from http://www.p12.nysed.gov/compcontracts/rttt/teacherprep/

Ragawanti, D. T. (2015). Cultivating pre-service teachers' classroom management skills through teaching practicum: A reflective practice. *TEFLIN Journal*, 25(1), 117-128.

Sherer, M., Maddux, J. M., Mercandante, B., Prentice-Dunn, S., Jacobs, B., Rogers, R. W. (1982). The self-efficacy scale: construction and validation. Psychological Reports, 51(2), 663-671.

Tasgin, A., & Kucukoglu, A. (2016). The effect of clinical practice on teacher candidates' self-efficacy perceptions. *Cukurova Universitesi Egitim Fakuitesi Dergisi*, 45(2), 265-286.

Tschannen-Moran, M., Woolfolk-Hoy, A., and Hoy, W. K. (1998), Teacher efficacy: its meaning and measure, *Review of Educational Research*, 68(2), 202-48.

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.

U.S. Department of Education. (2009). *Teacher quality partnership grant program*. Retrieved from http://www2.ed.gov/programs/tqpartnership/index.html

U.S. Department of Education. (2011). *Our future, our teachers: The Obama administration's plan for teacher education reform and improvement.* Washington, DC: Author. Retrieved from http://www.ed.gov/sites/default/files/our-future-our-teachers-accesible.pdf

Valencia, S. W., Place, N. A., Martin, S. D. & Grossman, P. L. (2006). Curriculum materials for elementary reading: Shackles and scaffolds for beginning teachers. *Elementary School Journal*, 107, 93-120.

Zundans-Fraser, L., & Lancaster, J. (2012). Enhancing the inclusive self-efficacy of preservice teachers through embedded course design. *Education Research International*, 1-8.

Zimmerman, B. J. (1995). Self-efficacy and educational development. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 202-231). New York: Cambridge Univ. Press.

Audra Cerruto, Ph.D. is Associate Dean and Director of Graduate Education Programs in the School of Education and Human Services at Molloy College, Rockville Centre, NY. She has been a faculty member since 2001 teaching special education courses that focus on building the connection between theory and practice in authentic settings.

Rickey Moroney, M.S., has worked at Molloy College since 2002 in the School of Education and Human Services as a computer lab associate and adjunct faculty member teaching courses that integrate technology into education for both graduate and undergraduate students preparing teacher candidates in the fields of special, elementary, secondary, and technology specialist education.