

Completers self-efficacy perception regarding teaching effectiveness and P-12 student's impact: An action research study

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Abstract

Teachers' self-efficacy play a key role in influencing students' academics outcoming in school. The purpose of this action research was to explore in since candidates' self-efficacy perception as an indicator of teaching effectiveness. The conceptual framework of the study was based on Tschannen-Moran and Woolfolk Model of Cyclical Nature of Teacher Efficacy. The research questions concerned how candidates perceived their self-efficacy, what experiences help develop teacher self-efficacy, and how they perceived their teaching effectiveness.

Participant were selected using a Homogenous Purposive Sampling. Data were collected from Completers' Visit to the Classroom Instrument, Teachers' Sense of Self Efficacy Scale, Completers' Interview of Teaching Effectiveness and P12 Impact, Completers' Artifacts, and Principals' Evaluations. Data were coded and then categorized by theme. The finding of the study demonstrated that completers have the knowledge, skills, disposition, and commitment required to be considered effective teachers.

Key words: Action Research, Self-Efficacy, P – 12 Student's impact, Teaching Effectiveness.

Resumen

La autoeficacia de los profesores juega un papel clave a la hora de influir en el rendimiento académico de los estudiantes en la escuela. El propósito de esta investigación en acción fue explorar la percepción de autoeficacia de los candidatos como indicador de la eficacia de la enseñanza. El marco conceptual del estudio se basó en el modelo de Tschannen-Moran y *Woolfolk Cyclical Nature of Teacher Efficacy*.

Las preguntas de investigación se referían a cómo los candidatos percibían su autoeficacia, qué experiencias ayudan a desarrollar la autoeficacia de los docentes y cómo perciben su eficacia docente.

Los participantes fueron seleccionados mediante un muestreo intencional homogéneo. Los datos se recopilaron de la visita a los egresados mediante entrevista con el instrumento de la escala de autoeficacia de los profesores acerca de la eficacia de la enseñanza y el impacto del P-12, y las evaluaciones de los directores. Los datos se codificaron y luego se categorizaron por tema. El hallazgo del estudio demostró que los que completan tienen el

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conocimiento, las habilidades, la disposición y el compromiso necesarios para ser considerados maestros eficaces.

Palabras claves: *investigación en acción, autoeficacia, impacto en los estudiantes de P – 12, enseñanza efectiva.*

Introduction

Self-efficacy represents an individual's belief in his or her capacity to execute behaviors necessary to produce specific and productive outcomes (Bandura, 1977, 1997). Self-efficacy distinctively focused on doing something. It is related to self-control and the ability to reach goals (Ackerman, 2020). Teacher efficacy is defined as the teacher's belief on his or her ability to facilitate students engagement in learning processes (Guskey & Passaro, 1994). Teacher efficacy has been found to be associated with teaching performance and students learning achievements (Cantrell, Almansi, Carter & Rintamaa, 2013).

In this pilot action research, the EPP will explore in-service self-efficacy perception as an indicator of teaching effectiveness. Teacher effectiveness refers to a teacher's ability to improve student learning as measured by value-added models of standardized testing. However, the National Comprehensive Center for Teacher Quality (2009) established that this definition presents several problems:

- 1- Teachers are not exclusively responsible for students' learning.
- 2- Test scores are limited in the information they can provide.
- 3- Learning is more than average achievement gains.

Goe et al. (2008) presented a five-point definition of teacher effectiveness that consists of:

- a) Effective teachers have high expectations for all students and help students to learn.
- b) Effective teachers contribute to positive academic, attitudinal, and social outcomes for students.
- c) Effective teachers use diverse resources to plan and structure learning opportunities, monitor student progress, adapt instruction, and evaluate learning with multiple sources of evidence.
- d) Effective teachers contribute to the development of classrooms and schools that value diversity.

e) Effective teachers collaborate with other teachers, administrators, parents, and other professionals to ensure student success (p.8).

The EPP has noticed that, in many instances, employers want to retain pre-service candidates in their schools because they exceeded expectations and have certain distinctive characteristics. It was determined that these pre-service candidates who were hired at the schools where they had their clinical experiences could provide valuable information to the EPP, from both pre-service and completer perspectives. The research questions that will guide the study are:

- 1- What EPP preparatory experiences help develop teacher self-efficacy?
- 2- How do completers perceive their self-efficacy?
- 3- How do completers perceive their teaching effectiveness?

EPP recruited three completers that are currently working as teachers in the same schools that they did the preservice experience. The EPP used various instruments for data collection. In *Approaches to Evaluating Teacher Effectiveness: A Research Synthesis*, Goe et al. (2008) discussed research findings for various methods that are valid and useful to establish teacher's effectiveness. Some of these methods are classroom observations, principals' evaluations, artifacts, and teachers' interviews. Classroom observations are the most common form of teacher evaluation. Observations can provide useful information about a teachers practice. Principals' evaluation is considered a special type of observation. Completers' artifacts are teachers' created materials that have been used with students to assess learning. Teachers' interviews, considered a self-report practice, gather information on perceptions and opinions that describe the "why's" and "how's" of teacher performance and its impact on students (Ball & Rowan, 2004). In addition, the EPP used The Teachers' Sense of Self-Efficacy Scale to learn about completers perceived self-efficacy and teaching competence.

Completer's interviews were analyzed using holistic coding for the first cycle a generate category of coding generate categories. The Teachers' Sense of Self-Efficacy Scale was scored using the developers' directions (Tschannen-Moran & Woolfolk, 2001). This scale is used to determine Efficacy in Student Engagement, Efficacy in Instructional Strategies, and Efficacy in Classroom Management. The Completers' Visit to the Classroom Assessment instrument is a rubric aligned to InTASC, CAEP, and Department of Education standards with a descending scale from 4(distinguished)

to 1 (underdeveloped) that measures teachers' content and pedagogical knowledge, teaching strategies, technological skills, and differentiated teaching skills.

Review of Literature

Self-efficacy is an important skill that can help boost academic achievement (Transforming Education, 2017). Self-efficacy is informed by five sources: performance experience, vicarious experience, social persuasion, imaginal experience, and physical and emotional states (Maddux & Gosselin, 2003). Performance experiences refer to the experiences we gain when we take on a new challenge and succeed. Vicarious experiences are related to having a model to observe and emulate. Social or verbal persuasion is the positive impact that our words can have on someone's self-efficacy. Imaginal experiences are positive visualizations of desired outcomes. Physical and emotional states refer to how one experiences sensation when facing a challenge (Ackerman, 2020).

The IAU Metro Campus completers graduated from a four-year Teacher Preparation Program that provides two field experiences and two clinical experiences that exposed candidates to real education scenarios and develop their sense of efficacy. It has been evidenced (Transforming Education, 2017) that students with high self-efficacy:

- 1- Have better self-regulation.
- 2- Are more resilient in the face of obstacles.
- 3- Demonstrate stronger academic performance.
- 4- Are more motivated in school.
- 5- Set more challenging and higher academic goals.
- 6- Are better prepared to adapt and succeed.
- 7- Are happier all around.

Candidates are put through performance experiences in their core and specialization courses. In these courses they acquire content and pedagogical knowledge, teaching skills, and dispositions. They have vicarious experiences as they enter field and clinical experiences in high-quality schools that have been partners and stakeholders of the EPP. The field experiences give candidates several opportunities to observe high-skilled and effective teachers performing in private and public settings. In addition, the clinical experiences provide opportunities to apply what they have learned with a group through an entire semester. Candidates are supervised by a group of

professionals that are aware of the positive impact of words regarding motivation and the development of a sense of self-efficacy. Moreover, EPP faculty closely monitor candidates' development and personal situations to assist them timely.

The EPP recognizes that teachers' self-efficacy plays a key role in influencing students' academic outcomes in school. Klassen, Tze, Betts, & Gordon (2011) argued that "teacher efficacy—the confidence teachers hold about their individual and collective capability to influence student learning—is considered one of the key motivation beliefs influencing teachers' professional behaviors and student learning" (p.21). This means that teacher self-efficacy is a relevant factor as it drives teachers to put more effort in the teaching endeavor. Chingos and Peterson (2011) posited that holding a college major in education does not correlate with teaching effectiveness. However, the authors recognized that teachers generally become more effective with a few years of experience because they are more motivated and challenged than more experienced teachers that might seem less effective (Chingos & Peterson, 2011).

Coady, Harper, and De Jong (2011) studied the relationship between pre-service candidate's perceived preparedness and teaching effectiveness and found a positive association among both. They found that teacher graduates considered direct and vicarious experiences to be the most helpful components of their preparation (Coady et al., 2011). This reaffirmed that the EPP Field and Clinical experiences are crucial for developing completers' confidence in their teaching capabilities and effectiveness. Coladarci (1992 cited in González et al., 2017) stated that teachers' self-efficacy is a strong and positive predictor of commitment to teaching. In addition, Kunter et al. (2013) argued that professional competence, which is a factor that influences teaching effectiveness and is defined as a set of individual characteristics that include knowledge, abilities, and beliefs, is needed for effective teaching. Tschannen- Moran and Woolfolk (1998) have hypothesized that the assessment of personal teaching competence is influenced by experiences in the classroom, which determine teacher efficacy, which affects effort and persistence. These authors developed a Model of the Cyclical Nature of Teacher Efficacy, in which competence (knowledge, skills, and dispositions), self-efficacy (strategies, classroom management, engagement), and commitment (satisfaction, planned persistence, and planned effort) are intertwined (Tschannen-Moran & Woolfolk, 1998). This model is like what candidates experience as they advance in their university preparation. Some courses

emphasize knowledge, skills, and dispositions, while others deal with teaching strategies, classroom management, planning and school community engagement.

In addition, studies (Darling-Hammond, 2000) have supported that a whole range of personal and professional qualities of teachers are associated with higher levels of student achievement. Stronge (2002) listed key qualities of effective teachers:

1. Have formal teacher preparation training.
2. Hold certification of some kind (standard, alternative, or provisional) and are certified within their fields.
3. Have taught for at least three years.
4. Are caring, fair, and respectful.
5. Hold high expectations for themselves and their students.
6. Dedicate extra time to instructional preparation and reflection.
7. Maximize instructional time via effective classroom management and organization.
8. Enhance instruction by varying instructional strategies, activities, and assignments.
9. Present content to students in a meaningful way that fosters understanding.
10. Monitor students' learning by utilizing pre- and post-assessments, providing timely and informative feedback, and re teaching material to students who did not achieve mastery.
11. Demonstrate effectiveness with the full range of student abilities in their classrooms, regardless of the academic diversity of the students.

Most of the qualities listed for effective teachers require a higher sense of self-efficacy. Fenyvesiová and Kollárová (2013) posited that a teacher's self-efficacy can be understood as the teacher's responsibility for the results of the educational process but not completely because it is a subjective variable. Nevertheless, it is a very strong and important subjective variable in the teacher's profession, since the level at which the teacher perceives their competencies is significantly reflected in the results of their activities (Fenyvesiová & Kollárová, 2013). Teachers' self-efficacy expresses the confidence they have in their knowledge and skills to teach effectively. Lukáčová, Fenyvesiová, Tirpáková, and Malá (2018) found that the higher the level of teachers self-efficacy, the better the teacher in their tendency to adopt an active attitude to the teaching process (p.667). Moreover, teacher efficacy is related to the positive use of teaching strategies which results in improvements in students' outcomes. Fernández

Arata (2008) explained that teachers who possess high self-efficacy tend to have higher expectations of their students and are more competency and student oriented.

The EPP is confident that their completers have been equipped with the knowledge, skills, attitudes, and the confidence needed to develop a strong sense of self-efficacy and to become effective teachers who can positively impact P-12 students. The EPP acknowledges that teachers' competencies are not innate, but are learnable and thus, teachable (Kunter et al., 2013).

Description of the Research Context

The action research study was conducted at three different schools. The first school was a PK-12 private institution with a population of 500 students with an inclusive program for functionally diverse students. The second school was a K-6 bilingual private school with a small enrollment of 124 students. The third school was a Head Start Center in a suburban area with a one-room capacity of twenty children and administered by the Municipality of Guaynabo. Each school used a different curriculum and not necessarily related to the state core standards. It is important to mention, that the EPP is required by Law to teach the curriculum adopted by the Department of Education of Puerto Rico.

The participants of this study were IAU Metro Campus EPP completers from three different programs: Preschool Education Level, English as a Second Language at the Elementary Level, and K-3 Elementary Level. All participants did their pre-service experiences virtually due to the COVID-19 pandemic and school system reorganization and were recruited as teachers at their pre-service center after graduation.

Participants were selected using a Homogenous Purposive Sampling. The EPP was looking for specific characteristics of a population. In this case, the specific characteristic was that participants did their pre-service in the same school that recruited them as employees during the virtual schools reorganization due to the pandemic. The EPP recognized that this type of sampling limits the ability to generalize from a sample to a population (Johnson & Christensen, 2008). However, this was a pilot study and the EPP will continue its efforts to add more participants as part of the continuous improvement process.

Participants were two females and a male, all in the 25-35 years old range. All participants had basic and intermediate computer and technological skills by the time

they started their virtual pre-service experiences. All participants were EPP completers. CAEP (2019) defined completers as EPP graduates that are working as teachers. For this pilot study, sample size was established as 20 percent (3) of the 2019-2020 population of completers (n=16). Qualitative sample size is contingent on several factors related to methodological and practical issues (Baker & Edwards, 2018). Sandelowski (1995 cited in Vasileiou, Barnett, Thorpe, & Young 2018) recommends that qualitative sample sizes should allow the unfolding of new and richly textured understanding of the phenomena through deep case-oriented analysis. In this matter, there have been debates regarding sample size sufficiency. Lincoln & Guba (1985) proposed the criterion of informational redundancy to terminate sampling.

Participants were asked to sign an informed consent to participate in the study and for classroom observation and administration of the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). The EPP requested Institutional Review Board (IRB) permission to administer the scale to participants, and detailed protective measures to safeguard the collected data.

Data Collection and Analysis

This is a pilot mixed methods action research study. The EPP chose this approach because the purpose of action research is to use the information to make continuous improvement and to comply with the Council for the Accreditation of Educator Preparation (CAEP) Standard 4 components regarding completers Teaching Effectiveness and P-12 Impact on Learning. The action research study is one of the options that CAEP provides to EPPs that cannot access value-added data from the State educational system about P-12 students' growth.

The EPP collected data from Completers' Visit to the Classroom instrument, Teachers' Sense of Self-Efficacy Scale, Completers' Interview on Teaching Effectiveness and P-12 Impact, Completers' artifacts, and Principal's Evaluation. Table 1.0 shows how data are aligned to research questions for triangulation purposes. Creswell (2007) posits that the use of multiple and different sources of data provides validation to qualitative research.

Table 1.0 Data Triangulation

Research Questions-	Completers' Interview on Teaching Effectiveness and P-12 Impact	Teachers' Sense of Self-Efficacy Scale	Principal's Evaluation	Completers' Visit to the Classroom	Completers' artifacts
1- What EPP preparations experiences help develop teacher self-efficacy	X	X		X	X
2-How do completers perceive their self-efficacy?	X	X		X	
3-How do completers perceive their teaching effectiveness?	X	X	X		X

The instruments used for data collection complied with CAEPS Sufficiency Rubric (CAEP, 2019). Table 1.1 shows validity and reliability indexes for EPP created instruments and for the Teachers' Sense of Self-Efficacy Scale. See Appendix A for instruments validation procedures.

Table 1.1 Validity and Reliability Indexes

	Completers' Interview on Teaching Effectiveness	Teachers' Sense of Self-Efficacy Scale				Completers' Visit to the Classroom
Validity	Content validity established by experts.					.89
Reliability			Mean	SD	Alpha	
		Engagement	7.3	1.1	.87	
		Instruction	7.3	1.1	.91	
		Management	6.7	1.1	.90	

Teacher's interview content validity was established by two reviewers, Dr. Rafael Aragunde, Distinguished Professor at the Graduate School of Education and former Puerto Rico Secretary of Education, and Dr. Elizaida Ayala, Associate Dean of

Academic Affairs at the Interamerican University. Lincoln and Guba (as cited in Creswell, 2017) argued that peer reviewers provide an external check that serves as a validation strategy. On the other hand, the same faculty members used the Completers Visit to the Classroom Assessment instrument and there was no need for training others on its administration for reliability purposes. The completers observations occurred virtually in three different platforms. The Preschool Level participant used ZOOM platform, the K-3 Level participant used Google Classroom, and the ESL Elementary Level used Microsoft Teams platform. The faculty member asked for authorization to access each school to observe possible participants interacting virtually with a group of students during a class period. The Completers' Interview on Teaching Effectiveness and the Teachers' Sense of Self-Efficacy Scale were completed through telephone calls. The EPP has tried using electronic mail in the past but it did not work, as completers did not return the documents. Completers' artifacts (students' assessments), and Principals' evaluations were returned by email.

Ethical Considerations

The EPP asked for the consent of participants prior to the study and participants were informed of their right to withdraw from the study at any time. Their participation was free and voluntary. In addition, researchers will maintain privacy and anonymity to protect the identity of participants and to protect collected data. Participants were assigned a number and data were collected solely by the researchers and stored in a portable device with a secured password. Researchers were conscious of the minor risks involved and arranged with *Clinica de Servicios Psicológicos* (Psychological Services Clinic) the provision of clinical services to participants; in the case it was needed.

Benefits

Teachers are social change agents because they oversee the development of the critical minds of the future. The EPP acknowledges its responsibility preparing effective teachers that, not only master content and pedagogical knowledge, but are confident in their skills and passionate about their capability to transform lives. This study will guide EPP efforts for continuous improvement to advance quality education in Puerto Rico.

Data Analysis

Participants were assigned numbers to preserve their anonymity and confidentiality as established in the informed consent. Table 1.2 shows participant assigned numbers and characteristics.

Table 1.2 Participants Characteristics

Teacher Number	Gender	Teaching program	Teaching System of Education
001	Female	Preschool Level	Public
002	Male	English as a Second Language Elementary Level	Private
003	Female	K-3 Level	Private

Data analysis, for the qualitative semi structure interview, was performed through a coding process to find categories and themes. The EPP used holistic coding looking for similarities for each interview question answered by the teachers. Tallying the repetition frequency of codes for each interview question derived categories. Saldaña (2016) argued that a pattern is a repetitive or consistent occurrence of data that appear more than twice. They help confirm participant routines, roles, relationships, and rules. Categories are the result of consolidated meaning of codes. Table 1.3 shows the research questions and the Completers' Interview questions. Table 1.4 shows completer's answers grouped by similarities.

Table 1.3 Research Questions and Interview Answers by Item Number

Research Questions	Answers to Interview Questions by Items
Research question #1 What EPP preparations experiences help develop teacher self-efficacy?	Answers to items # 1, 2, and 11.
Research question #2 How do completers perceive their self-efficacy?	Answers to items # 3, 4, and 5.
Research question #3 How do completers perceive their teaching effectiveness?	Answers to items # 6, 7, 8, 9, and 10

Table 1.4 Categories from Completers' Interview Answers

Completers' Interview Questions	Categories
1- What courses, in your teacher preparation program, were most beneficial?	"Practical courses" "The field and clinical experiences courses" "Real life scenarios"
2- What courses were less beneficial to your preparation?	"All courses have been equally important." "Some courses could be redesigned as units within another course."
3- Tell me about your successful experiences as a teacher?	"Help students' development." "Exceeded teacher responsibilities." "Gained confidence and respect."
4- Tell me about your frustrations as a teacher?	"Lack of parents commitment." "Bureaucratic processes."
5- How did your teacher preparation equip you with classroom management skills?	"Practical experiences courses" "Real life scenarios" "Problem solving skills."
6- How long have you been teaching at this school?	"Started before graduation." "Just started."
7- How do you work with children that are not advancing at the same rate as the group?	"Individualized interventions." "Adapt materials and resources." "Multidisciplinary teams."
8- How do you measure learning with your students?	"Anecdotal observations." "Diagnostic assessment." "Daily assessments." "Student portfolios."
9- How do you use the assessment cycle for lesson planning?	"Use daily assessment to modify lessons." "Use various strategies to check understanding."
10- What other strategies do you use to monitor students' progress?	"Parents interviews." "Drawings." "Free writing exercises."
11- Do you want to share something else about your teacher preparation at Interamerican University?	"Grateful." "Practical courses are a must."

Table 1.5 Themes derived from Completers' Interviews.

Themes
Practical courses Real-life educational scenarios Parents disengagement Individualized education Curriculum adaptations Authentic assessment

The EPP scored the Teachers' Sense of Self-Efficacy Scale using the scoring sheet provided by Tschannen-Moran and Woolfolk (2001). The scale measures *Efficacy in Student Engagement, Efficacy in Instructional Strategies and Efficacy in Classroom Management*. Table 1.6 shows the factorial analysis of the scale.. Table 1.7 summarized participants unweight means by measures where 9 is the highest score for each factor.

Table 1.6 Teachers' Sense of Self-Efficacy Scale Factorial Analysis

	Mean	SD	alpha
Teachers' Sense of Efficacy Scale	7.38	5.51	.824
Student Engagement (Items 1, 2, 4, 6, 9, 12, 14, 22)	7.62	2.31	.365
Instructional Strategies (Items 7, 10, 11, 17, 18, 20, 23, 24)	7.33	1.53	.571
Classroom Management (3, 5, 8, 13, 15, 16, 19, 21)	7.00	1.73	.444

Table 1.7 Participants unweight means by measure of the Teachers' Sense of Self-Efficacy Scale

Measures	Participant 001	Participant 002	Participant 003
Efficacy in Students Engagement	7.5	7.8	7.3
Efficacy in Instructional Strategies	7.6	7.7	7.3
Efficacy in Classroom Management	7.0	7.0	6.7

Completer's classroom observations were performed by a trained faculty member using the Completers' Classroom Observation Assessment Instrument. The instrument has 21 items aligned to the 10 InTASC Standards for Effective Teaching.

The instrument scale is divided in four stages: Distinguished (4); Proficient (3); Emerging (2); and Underdeveloped (1). In addition, it has three in between stages: Partial success at rating Distinguished (3.5); Partial success at rating Proficient (2.5); and Partial success at rating Emerging (1.5). Table 1.8 shows participant's scores on their performance interacting with their students in a virtual classroom.

Table 1.7
Completers Classroom Observations Scores

Completer	Score by InTASC Standard and Item Number																				
	InTASC St 1		InTASC St 2		InTASC St 3			InTASC St 4		InTASC St 5			InTASC St 6		InTASC St 7		InTASC St 8		InTASC St 9		InTASC St 10
N=3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
001	4	4	4	4	3.5	3.5	3.5	4	3.5	3.5	3.5	3.5	4	4	4	4	3.5	4	4	4	4
002	4	4	4	4	4	3.5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
003	4	4	4	4	3.5	3.5	3	3	3.5	4	3.5	4	4	4	3.5	4	4	3	3.5	3.5	3.5

The EPP used Completers' Artifacts as a measure of students' growth. For this study, completers were asked to submit students' assessments to evidence growth. Completer 001 submitted Teaching Strategies Student Portfolios. These portfolios are a compilation of, at least, three verification points of all the Creative Curriculum Objectives through the year. Completer 001 submitted four students' portfolios as evidence for students' growth. Table 1.8 shows mean results in Developmental Objectives and in Learning Objectives for preschool students for the first verification point and Table 1.9 shows results for the third verification point.

Table 1.8
Completer 001 students' growth means scores by objectives first verification point

Creative Curriculum Objectives	Students' General Expectancy for Age or Class						
	Not yet	1	2	3	4	5	6
Social-Emotional							
Physical							
Language							
Cognitive							
Literacy							
Mathematics							
Science and Technology	<p>There is no general expectancy for age or class for these learning objectives. The scales used are No Evidence Yet, Emerging, and Meets Program Expectations. All the children assessed were in the Emerging category.</p>						
Social Studies							
Arts							

Table 1.9
Completer 001 students' growth means scores by objectives third verification point

Creative Curriculum Objectives	Students' General Expectancy for Age or Class						
	Not yet	1	2	3	4	5	6
Social-Emotional							
Physical							
Language							
Cognitive							
Literacy							
Mathematics							
Science and Technology	There is no general expectancy for age or class for these learning objectives. The scales used are No Evidence Yet, Emerging, and Meets Program Expectations. All the children assessed were in the Emerging category.						
Social Studies							
Arts							

Completer 002 submitted a rubric used for English Oral Communication Skills. Completer 002 is an ESL teacher for children with learning disabilities at a private school. The school's main concern is that children are afraid to speak a second language and have been working on developing oral communication skills. Table 1.10 shows the pre and post results of a rubric that has been developed to assess English language oral communication skills for ten 7th graders.

Table 1.10
Completers 002 7th Graders' English Oral Communication Skills Mean Results for Pre and Post Test

Criteria	Scale							
	Needs Improvement (1 point)		Satisfactory (2 points)		Good (3 points)		Excellent (4 points)	
N=10	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Grammar	8	2	2	6		2		
Pronunciation	2		5	7	3	3		
Vocabulary	6		3	7	1	3		
Comprehension	4		5	3	1	7		
Background Knowledge	3	1	4	6	3	3		
Fluency	7	1	2	7	1	2		

Completer 002 submitted Kindergarten academic progress results of 12 students. Table 1.11 shows the pre and post results of the diagnostic test.

Table 1.11
Completer 003 Kindergarten Academic Progress Mean Results

Criteria	First Assessment Cycle				%	Post-test				%
	Accomplished	In Progress	Accomplished Not	Not evaluated	Percent accomplished	Accomplished	In Progress	Accomplished Not	Not evaluated	Percent accomplished
Spanish: Linguistic Development		8	4		67%	5	5	2		83%
Mathematics: Logical-Mathematical Thinking		6	6		50%	5	6	1		92%
Scientific Development		6	6		50%	6	5	1		92%
Social Studies		7	5		58%	6	6			100%
English as a Second Language		4	8		34%	2	6	4		67%
Attendance				12					12	
Observations										

*Percent accomplished is based on individuals that “Accomplished” or that are “In Progress.”

The EPP used Principal’s Evaluations of Completers because these are considered a special type of evaluation that provides information for decision-making concerning teacher effectiveness and P-12 students’ impact. Each school has their own instrument and criteria for the Principal’s evaluation. Table 2.0 through 2.2 shows scores for Principal’s evaluation items for each school.

Table 2.0
Completer 001 Principal Evaluation Scores

Assessed Areas	Evaluation Criteria			
	Excellent	Superior	Average	Below Average
Productivity	X			
Knowledge of the profession	X			
Dispositions to Learn	X			
Timely Assistance	X			
Reliability	X			
Compliance with Laws	X			
Sociability	X			
Cooperation	X			
Creativity and Initiative	X			

Table 2.1
Completer 002 Principal Evaluation Scores

Assessed Areas	Evaluation Criteria			
	Excellent	Very Good	Satisfactory	Needs Improvement
Planning and Teaching Process	X			
Development of Learning Environments	X			
Communication Skills	X			
Professional Skills	X			
Administrative Skills	X			
Observations	AIM's is fortunate to have such a skillful teacher in our team. Since he came on board, children are enjoying learning English and gaining confidence in speaking the language.			

Table 2.2
Completer 003 Principal Evaluation Scores

Area Assessed	Evaluation Criteria		
	Excellent	In Progress	Needs Improvement
The weekly agenda is turned in on time		X	
The activities are indicated in the homework agenda for each day	X		
The activities relate to the specific objectives for the lesson	X		
The platform work is indicated in the homework schedule	X		
The teacher is in time for the virtual meeting		X	
During the meeting, all the students participate	X		
		X	
The new vocabulary is explained	X		
Assessment tactics are used	X		
Different cognitive level is used to facilitate the learning		X	
The class is conducted in English	X		

Discussion

This section is organized by research questions. The EPP will discuss findings for each question from the corresponding data sources.

RQ1. What EPP preparations experiences help develop teachers' self-efficacy?

Completers' Interview on Teaching Effectiveness and P-12 Impact

All participants expressed the importance of practical courses and real-life scenarios to develop a sense of self-efficacy. It seems that completers felt more confident and capable when they had experienced teaching simulations and problem-based learning. In accordance, Cody et al. (2011) argued that teacher graduates considered direct and vicarious experiences to be the most helpful components of their preparation. In addition, completers expressed that although all courses are important, some could be redesigned as units within another courses. In this way, there could be more opportunities to add other courses that include vicarious experiences.

Teachers' Sense of Self-Efficacy Scale

Completers obtain means of 7.0 and above out of a possible score of 9 in the three factors used to measure Sense of Self-Efficacy. Only one of the completers scored 6.7 in the *Efficacy in Classroom Management* factor, which represents 74% or an average score. The three factors measured were: Efficacy in Student Management, Efficacy in Instructional Strategies, and Efficacy in Classroom Management. Klassen et al. (2011) posited that teachers' sense of self-efficacy is considered a critical belief that influences student learning. Moreover, teachers' self-efficacy has been related to the positive use of teaching strategies that result in improvements to students' outcomes (Lukáčová et al., 2018). Most EPP Teacher Preparation courses integrate the use of diverse teaching strategies and students seem more confident in the factors related to Student Management and Instructional Strategies.

Completers' Visit to the Classroom Assessment

This instrument finding demonstrated that completers were well prepared in the EPP Teacher Preparation Program and consequently feel confident about their skills. All completers had scores above 3 (Proficient), even though they are inexperienced teachers. It seems that changes in academic scenarios due to the pandemic had influenced, in a positive way, the preparedness of completers. Chingos and Peterson (2011) recognized that inexperienced teachers tend to be more motivated and self-challenged.

Completers Artifacts (classroom assessments)

Completers provided evidence of classroom artifacts that have been used to evidence student's growth. Completer 001 provided a Teaching Strategies Creative Curriculum Class Report for three-year old students. This report is used to assess Developmental and Learning Objective along with the corresponding dimensions. The report included two of the three verification periods that Head Start used to monitor

students' growth throughout a year. Completer 001 teaches in a marginalized community. Her students improved significantly from verification period one to two. Only two (50%) of her students are below general developmental expectancy for Mathematics, Literacy, and Physical development but, in all other domains, are performing on what is expected and above. Completer 002 submitted a rubric that is used to assess English Oral Communication Skills in a group of functionally diverse 7th graders. Completer 002 used the rubric to pre, and post assess oral communication skills. He understood that his students needed communication skills and gained their confidence and respect by introducing oral presentations about students' interests to motivate them to speak. The strategies used by completer 002 resulted in 80% of students' improvement in the areas assessed. Completers 003 provided a pre and post report for a Kindergarten group. The report, which was approved and used by the Department of Education in Puerto Rico, has a scale of Accomplished, In Progress, Not Accomplished, and Not Evaluated. All students had gains in performance from 16% to 42%. It seems that logical-mathematical thinking was one of the areas where students' gains were noticeable.

RQ2: How do completers perceive their self-efficacy?

Completers' Interview on Teaching Effectiveness and P-12 Learning

Completers perceived their self-efficacy in terms of their willingness to help students succeed. They also expressed that they felt well prepared and that gave them additional confidence to teach. Completers emphasized the importance of practical experiences, real life scenarios, and problem-solving skill that the EPP provided during their preparation as teachers.

Teachers' Sense of Self-Efficacy Scale

Completers 001 and 002 felt very confident on their efficacy to engage students, efficacy in instructional strategies, and efficacy in classroom management. Completer 003 was not as confident regarding the efficacy in classroom management where she obtained a 6.7 mean score out of 9. In general, completers perceived that they have the knowledge and skills to teach and were confident on their effectiveness as teachers.

Completers' Visit to the Classroom Observation Assessment

Completers' scores demonstrated that they are performing above what is expected for inexperienced teachers and that might be explained by how they perceive their teacher efficacy. The lower scores on the observation assessment were related to

InTASCs 3, 4 and 5. Completers are teaching in a virtual environment new to everybody that requires learning new skills and trial and error processes. Completer 003 had the lower scores (3.5 Proficient) in the InTASC standards and corresponding items of the instrument.

RQ3: How do completers perceive their teaching effectiveness?

Completers' Interview on Teaching Effectiveness and P-12 Impact

Completers perceived themselves as effective teachers. Completer 001 used individual interventions and multidisciplinary teams to advance students learning. Completer's 002 and 003, adapt materials and resources to facilitate learning to all students. These completers have a collective wrong word that all students must be advancing but, at the same time, they differentiate instruction to give students the same opportunities to be successful. Completers agreed on using the assessment cycle to modify their planning and to assess students using a variety of techniques. They are aware of the concepts of diversity, equity, and inclusion regarding instruction and social interactions in and out of the classroom. In addition, completers sought parents, and other professionals' support to provide students with resources.

Teachers' Sense of Self-Efficacy Scale

Completer's self-efficacy scores are strongly related to their effectiveness as teachers. The Transforming Education Report (2017) indicated that self-efficacy is a skill that can improve academic achievement. In addition, it mentioned that candidates with high self- efficacy set more challenging and higher goals, are better prepared to adapt and succeed, are more resilient, and demonstrate stronger academic performance. These attributes are similar to Strong (2002) qualities of effective teachers: hold high expectations to themselves and their students, dedicate extra time to prepare, monitor student learning, and so forth. Candidates' self-efficacy expresses the confidence they have in their knowledge and skills to teach effectively.

Principals' Evaluations

Completers' Principal submitted the evaluations that assessed completers teaching effectiveness. Each evaluation used different criteria as each completer is employed in different schools. Nevertheless, the evaluations were excellent. Completer 003 had a few "In Progress" criteria. Principal's evaluations are direct observations that are used as criteria for employment retention and promotions and that are related to students' performance. These evaluations support the fact that EPP completers are effective teachers that can positively impact P-12 students learning.

Completers' Artifacts

Completers provided evidence of students' performance using different assessments. Completer 001 submitted the Teaching Strategies Creative Curriculum Class Report. This instrument compiled students' performance in Creative Curriculum developmental and learning objectives, including dimensions. Completer 001 was satisfied sharing her impact on students learning. All her students were performing at the general expectancy for age or class, and some were above what is expected for a three-year-old. Two of her students perform below in Mathematics and Literacy; she explained that children come from marginalized communities and have not been exposed to rich experiences or to learning environments. Completer 002 submitted evidence of a rubric that is used to assess English Oral Communication Skills. He is an ESL teacher and was impacting a functionally diverse group of students. The goal of the program is to motivate students to express verbally using the English language. He did an excellent job with achievements of over 80% in all the areas assessed. Completer 003 used a pre and post instrument designed by the Puerto Rico Department of Education to assess mastery of basic skill in Kindergarten children. Completer 003 students had gains in all areas (17% to 42%). In general, completers perceived themselves as committed and effective teachers.

Interpretation

The findings for RQ1 suggested that completers were satisfied with the preparation experiences received at the EPP. The findings suggested that having four practical experiences: Field Experiences I, Field Experiences II, Clinical Experiences I, and Clinical Experiences II were critical in their development of teacher self-efficacy. The findings are in accordance with what Maddux and Gosselin (2013) mentioned about self-efficacy development and performance and vicarious experiences. The EPP provide candidates with performance experiences in their core and specialization courses. In these courses they acquire content and pedagogical knowledge, teaching skills, and dispositions that give them self- confident in their capabilities. In addition, EPP school stakeholders provide opportunities for candidates to observe highly effective teachers as they interact with P-12 students. These observations are valuable examples that become part of the completers teaching repertoire.

The findings of RQ2 suggested that completers perceived themselves as having high self-efficacy. Self-efficacy represents an individual's belief in his/her ability to

execute behaviors necessary to produce specific and productive outcomes (Bandura, 1977, 1997). Completers demonstrated that they have that confidence and self-control necessary to produce gains in students learning. On the other hand, individuals high in self-efficacy are known to be self-driven and motivate others to engage in productive behaviors. Tschannen-Moran and Woolfolk (1998) argued that competence, self-efficacy, and commitment are intertwined. Competence and commitment are also characteristics of effective teachers. Moreover, Lukáčová et al. (2018) found that the higher the level of teachers' self-efficacy, the better the teacher's are in their tendency to adopt an active attitude to the teaching process. Teacher efficacy is also related to the positive use of teaching strategies and to be more students oriented.

The findings of RQ3 suggested that completers perceived themselves as effective teachers. Completer concept of effective teaching goes beyond grades as they seek the social and emotional wellness of their students and the development of a sense of competence. These perceptions are in accordance with Goe et al. (2008) findings that effective teachers have high expectations for all students and help students learn. In addition, effective teachers contribute to positive academic, attitudinal, and social outcomes for students. Completers also included parents and other professionals to individually planned and intervene for students. Goe et al. (2008) pointed that effective teachers collaborate with other teachers, parents, and professionals to ensure students success. EPP completers demonstrated, through multiple sources of evidence, that they are effective teachers.

Recommendations

The EPP recommends the continuity of this study and the possible addition of P-12 students' evaluations of teachers and teachers' self- evaluations. In addition, the EPP recommends establishing a uniform Principal evaluation that could be used in partner schools to be able to compare completer evaluations using the same criteria. The EPP also recommends adding more practical experiences to specialization courses and the intentional development of self-efficacy skills throughout candidate's preparation.

Conclusion

The literature supports the influence of self-efficacy on teacher effectiveness and P-12 student's impact. Moreover, teacher efficacy has been thought of as parallel to teaching effectiveness. EPP completers belong to a new breed of teachers. Teachers that have been exposed to multiple scenarios and experiences that are trained to look

for resources and to adapt strategies and methodologies to satisfy student needs. These teachers have clear goals and are committed to impact P-12 students in a positive way because they know that the world's future depends on their work.

This action research study demonstrated that EPP completers have the knowledge, skills, dispositions, and commitment required to be considered effective teachers. In addition, the evidence presented supports how students have improved their academic performance and their own sense of self-efficacy. This outcome is the most valuable as the EPP is convinced that P-12 students' success is the main goal. Throughout this research, the EPP learned that every step towards continuous improvement is important and necessary to achieve the mission of preparing effective teachers that positively impact P-12 students learning and development.

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