



Teacher Educator Perceptions of Characteristics of Self-Efficacy

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Abstract

This study seeks to clarify teacher educator definitions of self-efficacy, how it is manifested in students, and ways it is taught in preparation programs. Data was collected through an electronic survey administered to teacher educators from three universities in the Midwest, Mid-South, and Northeast. Five key characteristics of Confidence/Self-Empowerment, Commitment, Ability to Meet Challenges, Innovative Thinking, and Facilitation emerged. The characteristics of Commitment and Confidence/Self-Empowerment surface as highly valued by teacher educators when describing self-efficacy. Modeling, individual and class discussions, and reflections on real-life teaching are the most common methods employed to develop self-efficacy in teacher candidates.

Key Words: *self-efficacy, teacher characteristics, educator preparation*

Introduction

Zimbardo (1985) discusses the idea of locus of control where a person either has an internal locus of control and believes outcomes are related to their actions or has an external locus of control and believes outcomes are based on events outside their control. Those with an internal locus of control take responsibility for their actions, feel confident when facing challenges, and tend to be less influenced by outside opinions. They have a belief in their own ability to exercise control over life circumstances. Those with an external locus of control often blame others for their circumstances, frequently feel powerless in difficult situations, and credit luck for successes. This idea of locus of control can be related to the ideas put forth by Bandura (1977, 1994) that perceive self-efficacy as an individual's belief in their ability to reach a desired level of performance to accomplish a task or reach a goal. Individuals with a strong sense of efficacy possess characteristics of resiliency, perseverance, and motivation. They demonstrate creativity and curiosity when faced with challenges and believe failure can be surmounted by skill-acquisition or further investigation to increase their knowledge base. In contrast, individuals lacking a strong sense of efficacy tend to avoid tasks or goals they perceive as challenging. Failure is perceived as personal weakness with a focus on what they cannot accomplish (Bandura, 1994). This idea of holding the belief that skill acquisition or knowledge is inherent in self-efficacy is reinforced by Hattie (2012) who describes self-efficacy as having confidence, or a belief in yourself, that you can make things happen.

Findings from the above works (Bandura, 1977, 1994; Hattie, 2012; Zimbardo, 1985) form the basis for the conceptual framework of this study. Individuals, and in the case of this study, specifically teachers, who are able to thrive on challenges and contribute to the success of students and colleagues are highly successful and self-efficacious (Polka, 2010). As a teacher's self-efficacy increases, their belief in their students' abilities and confidence in their own teaching practices also increases. Highly efficacious teachers can create learning environments where they help students and colleagues succeed and, in turn, enable efficacy in others (Ergun & Avci, 2018). Teachers with high self-efficacy are more willing to try new instructional methods and engage in professional dialogue with colleagues regarding curriculum in order to best meet the needs of their students (Fullan, 2014). The characteristics of self-efficacy are factors that contribute to documented successes associated with innovations in organizational contexts, including schools (Ying-Kai, Wann-Yih, Rivas, & Ju, 2017).

Additional research postulates a connection between teachers' self-efficacy and their belief in their ability to influence student achievement (Bandura, 1986, 1997; Dragunic & Zvizdic, 2017; Perera, Granziera & McIlveen, 2018; Schwarzer & Hallum, 2008; Woolfolk-Hoy & Hoy, 2004). Hattie (2012) relays that self-efficacy accounts for an effect size of .63 in operative teaching, well above the .40 effect size threshold for measuring impact of teaching on student learning. Moreover, a teacher's belief in their ability to make an impact in their classroom and positively control the learning context must stay strong in light of rapid-fire changes in mandated standards and assessments, increased accountability for differentiation, and discussions on who bears responsibility for the widening achievement gap (Marzano & Toth, 2014; Minjong, 2016; Voltz, Sims & Nelson, 2010)

According to the National Commission on Teaching and America's Future (2014), the annual attrition rate for first-year teachers has increased over 40% in the past twenty years. Factors such as "poor working conditions, lack of support and autonomy, isolation, and lack of collective teacher influence" (p. 1) are cited. Because K-12 classroom teachers face multiple challenges daily, the need for a strong sense of self-efficacy seems to be evident. In this era of accountability, educator preparation programs face a barrage of criticism, especially the accusation that teacher candidates graduate from programs under-prepared to face the challenges inherent in 21st century classrooms including content knowledge, classroom management, and cultural sensitivity. These are all factors inherent in a person's beliefs regarding their ability to be successful, or self-efficacious, in the classroom (Crowe, 2010).

Purpose of the Study

There is a need to focus research on defining self-efficacy for education preparation providers so they can better identify and support teacher candidates in developing a strong sense of efficacy. Currently, a large body of research exists regarding teacher efficacy, defined by Zeichner and Conklin (2005) as "the degree to which students can be taught given such factors as family background, school conditions, and so on" (p. 660) and how teacher self-efficacy influences teacher confidence in the use of effective, innovative teaching practices and the value teachers place on their own beliefs about teaching (Hattie, 2012; Makhalemele & Payne-van Staden, 2018; Scherer, Jansen, Nilsen, Areepattamannil, & Marsh, 2016; Uibu, Salo, Ugaste, & Rasku-Puttonen, 2017; Zee, Koomen, & Jellesma, 2016;). However, limited research exists regarding how teacher educators, as a collective body, define self-efficacy and, most importantly, how they identify and support self-efficacy in teacher candidates.

The Association of Teacher Educators formed a national commission to investigate research related to self-efficacy in teaching, learning, and schooling to determine its impact on teacher candidates as they develop their own sense of professionalism and confidence in their beliefs about teaching. During planning of this investigation, discussion among commission members unveiled varying definitions of self-efficacy. Members wondered if other teacher educators had considered self-efficacy in sufficient depth to formulate a definition and if their definition aligned with concepts relayed in the literature. The researchers, with input from other commission members, decided to investigate self-efficacy components from a teacher educator perspective. The purpose of this study is three-fold: (a) to explore how teacher educators define self-efficacy, (b) to determine the characteristics of teacher self-efficacy according to teacher educators, and (c) to ascertain how teacher educators perceive they develop self-efficacy in their candidates.

Method

This qualitative study utilizes survey research in order to measure the attitudes and opinions of a group of teacher educators with regard to their perceptions on the definition and teaching of teacher self-efficacy. An electronic survey instrument was developed by the researchers to determine definitions and practices of self-efficacy as reflected in contemporary educator preparation programs. Face validity was established by the containment of questions relevant and meaningful for the purpose of the study such as determining the definition, characteristics, and methods of developing self-efficacy as viewed by teacher educators. Two variables influencing face validity of a survey were met, namely, (a) the topic was of interest to the participants and they were knowledgeable on the topic, and (b) the survey protected the participants' anonymity (Ayr, Jacobs, Sorenson, & Razavieh, 2012). Researchers decided face validity was sufficient as questions were designed in a manner to solicit the desired information and to give optimum free expression in open response questions. Purposive sampling of teacher educators at three universities in the Midwest, Mid-South, and Northeast was used as these were home universities for the primary researchers and all had nationally accredited educator preparation programs. In addition, purposive sampling met the needs of this study, as it is a sampling technique in which researchers use their own judgment to obtain a representative sample of a population to participate in a study (Research Methodology, 2011). The survey response rate was 63% reflecting 114 responses from 180 surveys distributed.

Participants

Participants were 114 faculty at three universities located in three states consisting of 26 full professors, 28 associate professors, 15 assistant professors, 11 other full time teachers, 23 part-time adjuncts or lecturers, 6 supervisors, and 5 administrators (see Table 1). Teaching experience among the participants varied. Seventeen respondents reported teaching from one to five years, 19 reported teaching 6 to 10 years, 14 reported teaching 11 to 15 years, 14 reported teaching 16 to 20 years, 14 reported teaching 21 to 25 years, and 36 reported teaching over 25 years. All were currently teaching in educator preparation programs (see Table 2).

Data Collection

The survey was comprised of four questions intended to gather demographic data and seven open response items designed to elicit participant perceptions of self-efficacy (see Appendix). Data was reported in the aggregate by institution and was further aggregated by combining responses from all three institutions to develop the total data set used for this study. All researchers reviewed this data.

Frequencies and percentages were calculated for the first four survey questions that recorded demographic data of the participants (see Tables 1 and 2). All three researchers read responses to the seven open response items to establish the content of the responses and to get a better understanding of what the research data meant, language common across responses, and characteristics mentioned. Following the reading, researchers met to organize their individual notes on the open response statements and their subsequent categories based on the frequency and commonality of language used to describe self-efficacy. These categories were then discussed and compared by the three researchers in order to determine reliability on interpretation of the data and categories selected. This constant comparative method was instrumental in the analysis and refinement of the open response statements into categories (Patton, 2015). Upon thorough examination and discussion among the researchers, five personal characteristics for self-efficacy emerged: Confidence/Self-Empowerment, Commitment, Ability to Meet Challenges, Innovative Thinking, and Facilitation.

The characteristic of Confidence/Self-Empowerment includes confidence, decision-making, and internal motivation coupled with the belief he/she can make an impact on student learning. Comments leading to the characteristic of Commitment include a sense of responsibility to students and a continuous striving to improve education. Ability to Meet Challenges is having confidence in his/her own ability to overcome difficult situations and to meet challenging goals. The characteristic of Innovative Thinking is comprised of creativity, the ability to apply knowledge, and use new approaches, while Facilitation is a willingness to help others succeed.

Results

The purpose of the study is to determine if teacher educators had considered self-efficacy in their candidates with sufficient depth to formulate a definition relatively common across the participants, to determine the characteristics of teacher self-efficacy according to teacher educators, and to ascertain how teacher educators perceive they develop self-efficacy in their candidates. However, survey results show teacher educators define self-efficacy by identifying characteristics they observe in candidates and teachers, and by what they feel is valuable to include in their own courses. Therefore, a formal definition was not derived. The results that follow share the characteristics of self-efficacy communicated by teacher educators. Direct quotes from participants are in quotation marks.

Definition and Key Characteristics of Self-Efficacy

Illustrative comments from the first two open-response questions on the administered survey are categorized according to the identified characteristics of Confidence/Self-Empowerment, Commitment, Ability to Meet Challenges, Innovative Thinking, and Facilitation (see Table 3). Question 1 asks participants to define teacher self-efficacy, and Question 2 asks for input on key

characteristics of teacher self-efficacy. Comments from questions 1 and 2 are combined since participants often interwove their responses.

Confidence/Self-Empowerment

Self-efficacious teachers are described as having a strong knowledge base in their content, the ability to apply pedagogical knowledge in their classrooms, and the ability to engage in professional decision making regarding student needs, learning needs, and classroom management. One participant responds, “Self-efficacious teachers have the confidence to make instructional decisions in their classrooms without the constant use of basals based on their own professional knowledge.” Another remarks, “These types of teachers have the ability to control their classrooms without indecision.”

Not only are self-efficacious teachers described as having the ability to make professional decisions, but also they do so with confidence and a belief they can impact student learning. They engage in consistent professional development and reflect on their practice in order to meet goals they have set for the learning outcomes of their students. They are described as “reflective learners” and “able to monitor their own progress.” These teachers are viewed as confident, resourceful, and “intrinsically motivated to improve themselves both personally and professionally.” These characteristics are in accordance with Zimbardo’s (1985) discussions on locus of control, mentioned earlier.

Participants, to describe characteristics of self-efficacy in teachers, use words such as empathetic, genuine, hard working, team player, and lifelong learner. Comments also include the view that self-efficacious teachers see themselves as professionals and hold the belief they can contribute to their profession. As one participant shares they “feel they are instrumental in the learning process.” Another participant describes self-efficacy as “self-confidence but not boastfulness, and self-assurance but not superiority. It is being calm and measured with behavior ruled by careful thought.”

Self-Empowerment, in the form of confidence, is the ability to make decisions, successfully work within or change the environment, and positively affect outcomes through behaviors and attitudes and is highly cited by participants. A participant notes “within the classroom, a self-efficacious teacher feels empowered to determine the learning environment” and another responded, “Self-efficacious teachers have a can-do attitude.” One participant describes teacher self-efficacy as “the state of monitoring and mediating one’s competence as a teacher. It manifests itself as teachers see the positive effects of their teaching and sense that their professional work counts for success.” The concept of Confidence/Self-Empowerment appears as a characteristic in 111 of 114 comments.

Commitment

Teachers with high commitment are described as having a sense of responsibility and a continuous striving to improve education. It is apparent that participants believe a commitment to the field of education and success of students is paramount in teacher self-efficacy. One participant relays “Commitment is a continuing dedication to the field of education and to student success.”

Responsibility is mentioned in participant comments such as, “sense of responsibility to students”, “shows a high degree of responsibility to their profession”, and “responsibility to sup-

port educational goals.” Highly self-efficacious teachers have a “determination to guide their students to success.” They are described as “having an internal locus of control, intrinsically motivated, and driven to succeed.” An additional comment shares the belief that self-efficacious teachers are “continuously striving to improve themselves both personally and professionally.” Willingness to grow as a professional, along with professional development is also mentioned. “Consistent professional development, working on mastery, and self-evaluation on their practice” is reflected in participant comments. Another comment puts forth the view that self-efficacious teachers have a “general drive toward meeting and exceeding goals in instruction.”

Participants also mention active involvement in education. Self-efficacious teachers are described as, “Someone who is an active participant in the subject they are teaching,” and “A teacher who is open to constructive criticism for the sake of growth in their teaching. They take personal fulfillment in the success of their students.” One participant portrays teachers with high self-efficacy as willing to “seek consistent professional development, work to mastery, and engage in reflective practices. They have a general drive to not just meet but to exceed goals in instruction.” The concept of Commitment appears as a characteristic in 109 of 114 comments.

Ability to Meet Challenges

The characteristic of Ability to Meet Challenges communicates the confidence of teachers in their ability to observe difficulties as opportunities to accomplish goals. It describes a teacher’s belief in his/her own ability to overcome difficult situations and see them as prospects to change, grow, or improve their practice rather than as problems. One participant describes self-efficacious teachers as “Confident in his/her own ability to overcome adverse situations.” This is mirrored in the comment, “Difficult situations are approached as challenging opportunities – not problems.” This ability to positively meet challenges describes teachers who feel they have a considerable degree of control over the quality of the teaching-learning process. Another participant describes teachers in this category as “A teacher who believes in his/her own capabilities to achieve goals/outcomes/success. They are confident in his/her own ability to overcome adverse situations.” One participant relates comments directly to teaching. “Teacher self-efficacy is the ability to engage in reflective practice and consistently evaluate one’s efficacy in relationship to identified goals. They exhibit an ability to meet defined goals related to teaching, including best practices in the field.” The concept of Ability to Meet Challenges appears as a characteristic in 102 of 114 comments.

Innovative Thinking

The ability to view difficulties as growth opportunities is also connected to the characteristic of Innovate Thinking. One participant describes this as “envisioning optimal experiences and new approaches to situations, regardless of the difficulty.” Teachers in this category are viewed as critical thinkers and problem solvers. They utilize creativity in their ability to apply knowledge and make professional decisions. One participant relays that self-efficacious teachers are “Independent thinkers who are engaged in planning, initiating, and evaluation in their classrooms.” Another participant describes the characteristic of Innovative Thinking in self-efficacious teachers as, “They hold the belief they can impact student learning through effective planning, delivering, and assessing instruction. They have a belief they make a difference in the lives of students.” The concept of Innovative Thinking appears as a characteristic in 89 of 114 comments.

Facilitation

The characteristic of Facilitation is found in teachers who care about both co-workers and students and exhibit the willingness to help others succeed. Teachers possessing this characteristic are likely to volunteer for committees, organize school and classroom functions, and epitomize team spirit. Participants classify them as often the ones “who embrace and implement new processes the most quickly.” One participant describes facilitating teachers as “having strong self-esteem and a willingness to help others succeed.” They are also described as “honest with themselves and others.” Another participant suggests several adjectives to relay the essence of facilitation such as “empathetic, genuine, patient, resourceful, hopeful, hard-working, smart, team player, and lifelong learner.” The concept of Facilitation appears as a characteristic in 70 of 114 comments.

Teaching Self-Efficacy

Open-response Question 3 asks how instructors in educator preparation programs develop the characteristics associated with self-efficacy. Related to this, Question 4 asks what method or strategy works best to develop these characteristics in teacher candidates. Identifying the characteristics of self-efficacy is beneficial, but the practical application of how to foster and develop these characteristics in teacher candidates is equally as important.

In participant responses, field based experiences emerge as a primary environment for developing self-efficacy, especially when there is a collaboration with university faculty, cooperating teachers, field supervisors, and school principals. This is in support of a study conducted by Yost (2006) of 10 second-year teachers from the same educator preparation program that revealed “successful field and student teaching experiences connected to coursework built teachers’ confidence and self-efficacy, thus encouraging a higher level of competence in the first year of teaching” (p. 65). As teacher candidates face real-life classroom situations, they are asked to reflect on various responses and outcomes. One participant remarks that candidates in their program “are guided as they learn to model being supportive and relating to individual students. This guidance helps them develop confidence in their decisions. Reflections help us see this process of growth.” Engaging in reflection helps teacher candidates develop self-efficacy as they take responsibility for their choices and their subsequent consequences. Increasing exposure to diverse and unique experiences while being cautious and reflective allows teachers to face future challenges by referring to previous successes and building upon them (Bravena & Stara, 2018; Groschner, Schindler, Holzberger, Alles, & Seidel, 2018).

Furthermore, participants share that in their teacher educator preparation programs, teacher candidates are also encouraged to evaluate themselves on organization, lesson plan development, and classroom management. In addition, journals and discussion boards emerge as tools to develop, and in some cases, evaluate self-efficacy. Teacher educators respond that reflective journals documenting lesson successes, attendance at professional development activities, and self-determined areas of growth are means of developing and fostering self-efficacy in teacher candidates. Discussion boards are used to provide teacher candidates with scenarios that “required them to generate solutions to share with their classmates in order to build background and confidence in addressing situations which may arise in their future classrooms.” Less frequently mentioned is the idea that timely submission of assignments in accordance with a rubric provides documentation that a teacher candidate is self-regulated and organized. Ninety-six of 114 respondents feel the

opportunity for teacher candidates to discuss personal events provides insight into the reciprocal causation of teacher behavior and the circumstances in which teaching occurs. One participant notes reflective journals often reveal a “candidate’s developing belief about his/her own ability to impact student learning.” Participants feel these insights foster the growth of self-efficacy as candidates think beyond their normal boundaries.

Several ideas are common to the majority of comments on how educator preparation programs introduce teacher candidates to the characteristics related to self-efficacy and to the methods and strategies used to help candidates acquire these characteristics. Modeling and discussion are key components along with reflection on actual teaching during field experiences. The use of scenarios and examples of teaching situations, which may be faced by candidates in the classroom, are also prevalent. Modeling, reflection and discussion on field experiences, and the use of scenarios to give candidates exposure to situations they may face in the future are threaded through 85 of the 114 responses received.

Additional Comments

In Open Response Question 5, researchers provide the opportunity for participants to share comments on issues, concerns, philosophies, or thoughts on teacher or candidate self-efficacy whose content may not fit within the prescribed questions. Specifically, Open-response Question 5 gave participants an opportunity to add any additional comments. Fifty-three participants shared comments containing a range of reiterations of previous question answers and personal and political perspectives.

The value of quality field experiences is again emphasized in responses to Question 5. Participants feel practicums, field experiences, student teaching, and internships are the application opportunities for teacher candidates. Participants believe supervisors need to develop “reflection in candidates on the effects they can have on student learning and how teacher actions have positive or negative effects on student performance and behavior.” Several respondents feel university professors need to model self-efficacy to a higher degree so students see it simulated in their college courses. As one participant put it, “Professors should model do as I do, not as I say.”

Some comments express dissatisfaction with teacher candidates’ performance with regard to handing in assignments on time and cheating on assignments. One participant remarks on their “disappointment that teacher education students would rather receive a poor grade than take their time to produce quality work.” This sentiment is reflected in 20 additional comments. Other comments share the viewpoint that participants feel they saw many more followers than leaders and feel students are hesitant to trust their own knowledge base or show initiative. The phrase spoon-fed, as opposed to self-directed, is found in 17 of 53 comments.

Ten participants raise the issue of whether self-efficacy is present in some people to at least some degree before they begin their education courses. Self-efficacy was considered as personal elements of motivation, effort, and persistence that can be enhanced in college coursework “only if the candidate has energy and passion for their content area.” Others describe self-efficacy, like teaching, as an innate talent enhanced by knowledge. One participant voices this sentiment as, “It can be improved upon, but not taught.”

Comments regarding the American education system also surfaced. Four respondents feel politicians and state officials do not believe teachers are capable of independent decision-making, nor do they want them to be. One respondent comments, “If we groom them (teacher candidates) for the existing system, we might as well throw worries about self-efficacy out the door. States

only want robotic, easily controlled teachers.” Two participants wonder how a “single behaviorally difficult child would impact a new teacher’s self-efficacy” and whether the “support systems offered for such situations is relevant to the perception of being able to exert any control or make any difference in the learning environment.”

As mentioned above, the request for additional comments netted insights, ideas, and perceptions from teacher educators on varying topics such as best practices, politics, and views regarding candidate behaviors. In addition, the question of whether the characteristics associated with self-efficacy can be taught, whether they are innate, or whether teacher educators can only nurture the characteristics already present in their students is raised.

Participant Concerns

Open-response Question 6 invites participants to share concerns or additional ideas regarding teacher self-efficacy. This question received several comments addressing views on the evolution of self-efficacy and views on teaching.

Teacher educator participants describe self-efficacy as one of the most important components in a teacher. As one participant relays, “It keeps speed bumps from being seen as mountains or every set-back as monumental.” Self-efficacy gives the ability to solve problems because there is belief that a solution can be found. However, self-efficacy is not a final state of mind that is reached, but rather a dynamic characteristic that changes over time and includes continuing development over a professional career accompanied by a relative uncertainty or questioning about effective practices and experiences with students and learning environments. One respondent shares a belief that was reflective of several comments.

“Self-efficacy usually increases toward the end of a teacher preparation program as evidenced by pre-service teachers who feel they ‘know a lot.’ It then often dips during the first semester of the first year of teaching as they learn they really know so little compared to what they want to know to be a successful and experienced teacher. Experience is the key word because they want to teach like a veteran when they are a novice. Mentoring programs are key to addressing this issue. Pre-service teacher self-efficacy is important but, more important, is accurate self-efficacy to avoid the first year teacher dip. Emphasis on accurate and normal self-efficacy should be the goal. It’s normal to go through these stages of self-efficacy, and it is hard to realize how much more there is to learn.”

Limitations and Future Directions

This study should be interpreted within its limitations. Data was collected from a relatively small sample size of 114 participants in the educator preparation field from 3 university sites encompassing 3 states. A larger sample from additional states may have netted different responses. In addition, data was gathered via an electronic survey with several open response questions. Information provided may have been expanded upon if focus group interviews of a sampling of the participants had been included and may have provided information for Open Response Question 7, asking for exemplary models of teacher self-efficacy.

While this study has attempted to define self-efficacy within a common framework for teacher educator discussions and to identify necessary characteristics in teacher candidates, it does not answer the question raised by participants of whether characteristics can be taught or whether

they are innate personality characteristics. If it is possible to teach these characteristics, then it stands to reason a curriculum or set of strategies can be developed to facilitate their mastery. Logically following this line of reasoning, an assessment tool could be developed to measure how often and in what manner candidates display these learned characteristics in their practice teaching. If it is true these characteristics are innate, then developing curriculum and assessments would provide teacher educators with a framework for nurturing their growth.

Discussion and Conclusion

Teacher educators from 3 institutions in the Mid-West, Mid-South, and Northeast were asked to define self-efficacy, determine the characteristics in teachers, and share perceptions on how it is developed in educator preparation programs. Analysis of participant comments identified five personal characteristics necessary for self-efficacy in teachers as Confidence/Self-Empowerment, Commitment, Ability to Meet Challenges, Innovative Thinking, and Facilitation. Of these five characteristics, two emerged as crucial for a teacher to possess in order to feel competent in their classroom. In the eyes of teacher educators, the characteristics of Commitment and Confidence/Self-Empowerment are key in the development of self-efficacy. A commitment to students and the field of education is necessary to give teachers persistence in achieving learning goals, often in rapidly changing classroom environments. They strive to make the education system the best it can be for students. Not only do self-efficacious teachers strive to improve the education system, but they must also have a sense of Self-Empowerment. Self-Empowerment, in this instance, means teachers hold the belief their decisions and actions can positively affect outcomes. They believe they can make a difference through the decisions they make and enact. Confidence/Self-Empowerment also helps teachers cope with challenging and changing situations, whether the change lies in new school district policies, adapting curriculum to meet student needs, classroom management, or meeting ever evolving state and federal guidelines.

It is not enough to simply identify the characteristics found in self-efficacious teachers. Ways to develop these characteristics in teacher candidates must also be a discussion among teacher educators. Field experiences, modeling, class and individual discussions, and reflections on real-life teaching are the most common methods employed by study participants to foster the development of self-efficacy in their teacher candidates. Also of benefit is the use of scenarios that expose candidates to situations that may arise in their future classrooms. Allowing candidates to discuss different viewpoints, decision options, and actions provide them exposure to situations they have not yet had a chance to encounter. These comments by study participants are in line with research by Rabey (2014) on the benefits of mentoring, collaboration with colleagues, reflecting on observations and debriefing role-plays to facilitate the development of self-efficacy. According to Bandura (2012), mastery and vicarious learning can be accomplished through training programs and observation of effective veteran teachers and helps promote resilience as teachers overcome obstacles.

Identifying characteristics of self-efficacy, developing curriculum allowing candidates engagement in learning experiences related to teaching situations, and designing quality field experiences with discussion and reflection enables teacher educators to nurture self-efficacy in their candidates by cultivating the characteristics of Confidence/Self-Empowerment, Commitment, Ability to Meet Challenges, Innovative Thinking and Facilitation.

References

- Ayr, D., Jacobs, L. C., Sorenson, C., & Razavieh, A. (2012). *Introduction to research in education* (9th ed.). Belmont, CA:Wadsworth Publishing.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychology Review*, 84, 191–215.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71–81). New York, NY: Academic Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman.
- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38(1), 9-44.
- Bravena, N., & Stara, J. (2018). The themes of global development as a challenge for contemporary education in the reflection of future teachers. *Komunikacie*, 20(1A), 101-108.
- Crowe, E. (2010) *Measuring what matters: A stronger accountability model for teacher education*. Center for American Progress. Retrieved from http://www.americanprogress.org/issues/2010/07/pdf/teacher_accountability.pdf
- Dragunic, E., & Zvizdic, S. (2017). Teachers' sense of self-efficacy and autocratic style of classroom management. *Conference Proceedings for the Biannual Congress of Psychologists of Bosnia & Herzegovina*, 24-41. Accession #122021668.
- Ergun, E., & Avci, U. (2018). Knowledge sharing self-efficacy, motivation and sense of community as predictors of knowledge receiving and giving behaviors. *Journal of Educational Technology & Society*, 21(3), 60-73.
- Fullan, M. (2014). *The principal: Three keys to maximizing impact*. San Francisco, CA: Josey Bass.
- Groschner, A., Schindler, A-K., Holzberger, D., Alles, M., & Seidel, T. (2018). How systematic video reflection in teacher professional development regarding classroom discourse contributes to teacher and student self-efficacy. *International Journal of Educational Research*, 90, 223-233. doi: 10.1016/j.ijer.2018.02.003
- Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. London; New York: Routledge.
- Makhalemele, T., & Payne-van Staden, I. (2018). Enhancing teachers' self-efficacy within full-service schools: A disregarded aspect by the district-based support team. *International Journal of Inclusive Education*, 22(9), 983-996. doi: 10.1080/13603116.2017.141.3687
- Marzano, R. J., & Toth, M. D. (2014). *Teaching for rigor: A call for a critical instructional shift*. Learning Science Marzano Center. Retrieved August 21, 2018 from <https://www.learning-science.com/wp/wp-content/uploads/2018/05/Teaching-for-Rigor-A-Call-for-a-Critical-Instructional-Shift.pdf>
- Minjong, Y. (2016). Inequality from the first day of school: The role of teachers' academic intensity and sense of responsibility in moderating the learning growth gap. *Journal of Educational Research*, 109(1), 50-67. doi: 10.1080/00220671.2014.918529
- National Commission on Teaching and America's Future. (2014). *It's time to solve the teacher turnover problem*. Retrieved from <http://nctaf.org/featured-home/teacher-turnover-a-chronic-problem/>

- Patton, M. Q. (2015). *Qualitative evaluation and research methods* (4th ed.). Thousand Oaks, CA: Sage Publications.
- Perera, H. N., Granziera, H., & McIlveen, P. (2018). Profiles of teacher personality and relations with teacher self-efficacy, work engagement, and job satisfaction. *Personality & Individual Differences, 120*, 171-178. doi: 10.1016/j.paid.2017.08.034
- Polka, W. (2010). The art and science of constructivist supervision: Transforming schools by applying needs-based research. *Journal for the Practical Application of Constructivist Theory in Education, 5*(1), 1-28.
- Rabey, J. (2014). *The self-efficacy of New York State superintendents of schools and their self-reflective practices: A mixed-method analysis*. Unpublished Doctoral Dissertation, Niagara University.
- Research Methodology. (2011). Retrieved from <https://research-methodology.net/sampling-in-primary-data-collection/purposive-sampling>
- Scherer, R., Jansen, M., Nilson, T., Areepattamannil, S., & Marsh, H. W. (2016). The quest for comparability: Studying the invariance of the teachers' sense of self-efficacy (TSES) measure across countries. *PLoS ONE, 11*(3), 1-29. doi: 10.1371/journal.pone.0150829
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analysis. *Applied Psychology, 57*(S1), 152-171. doi: 10.1111/j.1464-0597.2008.00359
- Uibu, K., Salo, A., Ugaste, A., & Rasku-Puttonen, H. (2017). Beliefs about teaching held by student teachers and school-based teacher educators. *Education, 63*, 396-404. doi: 10.1016/j.tate.2017.01.016
- Voltz, D. L., Sims, M. J., & Nelson, B. (2010). *Connecting teachers, students and standards*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Woolfolk-Hoy, A. E., & Hoy, W. K. (2004). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology, 82*, 81-91.
- Ying-Kai, L., Wann-Yih, W., Rivas, A. A. A., Ju, T. L. (2017). Cognitive, experiential, and marketing factors mediate the effect of brand personality on brand equity. *Social Behavior & Personality, 45*(1), 1-18, doi: 10.2224/sbp.5621
- Yost, D. (2006). Reflection and self-efficacy: Enhancing the retention of qualified teachers from a teacher education perspective. *Teacher Education Quarterly, Fall Issue*, 59-76.
- Zeichner, K.M., & Conklin, H. G. (2005). Teacher education programs. In M. Cochran-Smith and K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (p. 660). Mahwah, NJ: Lawrence Erlbaum Associates.
- Zee, M., Koomen, H. M. Y., & Jellesma, F. C. (2016). Inter- and intra-individual differences in teachers' self-efficacy: A multilevel factor exploration. *Journal of School Psychology, 55*, 39-56. doi: 10.1016/j.jsp.2015.12.003
- Zimbardo, P. G. (1985). *Psychology and life*. Glenview, IL: Scott Foresman.

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Table 1

Academic Positions of Participants

Rank	Number	Valid %
1. Professor	26	22.81
2. Associate Professor	28	24.56
3. Assistant Professor	15	13.16
4. Other Full Time Teacher	11	9.65
5. Part Time Adjunct, Lecturer	23	20.18
6. Supervisor	6	5.26
7. Administration	5	4.39
Total	114	100.01

Table 2*Teaching Experience of Participants*

Years	Number	Valid %
1-5	17	14.91
6-10	19	16.67
11-15	14	12.28
16-20	14	12.28
21-25	14	12.28
Over 25	36	31.78
Total	114	100.02

Table 3

Synopsis of Survey Comments on Characteristics of Teacher Self-Efficacy

Characteristic	Survey Comments
<p>Confidence/Self-Empowerment is confidence, decision-making, and internal motivation coupled with the belief he/she can make an impact on student learning.</p>	<ul style="list-style-type: none"> • Teacher self-efficacy is the state of monitoring and mediating one's competence as a teacher; It manifests itself as teachers see the positive effects of their teaching and sense that their professional work counts for success • Self-regulation and confidence in the classroom • A teacher's beliefs about his/her ability to impact student learning; Visible in reflections candidates provide following their assignments and field experiences • Teacher self-efficacy encompasses one's perception of him or herself as an effective educator; as someone who will/won't be able to handle whatever challenge arises in the classroom and his/her career • Belief in self; Resourceful; Reflective • Belief they can impact student learning • Belief they are effective in planning, delivering and assessing instruction • Belief they make a difference in the lives of students • Self-confidence but not boastfulness; self-assurance but not superiority; calm and measured; Behavior ruled by careful thought
<p>Commitment is a sense of responsibility to students and a continuous striving to improve education.</p>	<ul style="list-style-type: none"> • Teacher that is able to drive self • Teacher that is able to determine direction of self and students • Teacher self-efficacy is the ability to engage in reflective practice and consistently evaluate one's efficacy in relationship to identified goals • Ability to meet defined goals related to teaching, including best practices in the field • Sense of responsibility to students • Openness to constructive criticism for sake of growth • Someone who is an active participant in the subject they are teaching • Consistent professional development, working to mastery, self-evaluation/reflection and practice

	<ul style="list-style-type: none"> • A general drive toward meeting and exceeding goals in instruction • Internal locus of control, intrinsically motivated, driven to succeed • Continuously striving to improve themselves both personally and professionally • Motivated to work at continuing professional development
<p>Ability to Meet Challenges is the confidence to believe in his/her own ability to overcome difficult situations and to meet challenging goals.</p>	<ul style="list-style-type: none"> • Difficult situations are approached as challenging opportunities - not problems • Confidence in his/her own capabilities to achieve goals/outcomes/success • They are confident in their ability to overcome adverse situations • Teacher self-efficacy is the ability to engage in reflective practice and consistently evaluate one's efficacy in relationship to identified goals • They exhibit an ability to meet defined goals related to teaching, including best practices in the field • Difficulties are opportunities and challenges to accomplish goals and grow in the profession
<p>Innovative Thinking is creativity, the ability to apply knowledge, and use new approaches.</p>	<ul style="list-style-type: none"> • Independence; Creativity • Planning; Initiating; Evaluating • Strong knowledge base; Ability to apply pedagogical knowledge • Professional decision making regarding student needs, learning needs, curriculum; classroom management • Develop effective time management skills and create ways to carve out time • Ability to view oneself as a professional; Make contributions to the profession • Reflective, self-monitoring thinking style
<p>Facilitation is a willingness to help others succeed.</p>	<ul style="list-style-type: none"> • Confidence; Willingness to help others succeed • Strong self-esteem • Honesty with self and others • Empathetic, genuine, patient, resourceful, hopeful, hard-working, smart, team-player, life-long learner • Someone who motivates others

Appendix

Teacher Self-Efficacy Survey

Part I: Demographic Data

The following data will help us identify relationships between the background of teacher educators and their perceptions about teacher self-efficacy.

Directions: Please select the appropriate response related to your specific demographics:

1. Current Academic Rank:

- 1) Professor
- 2) Associate Professor
- 3) Assistant Professor
- 4) Instructor, Clinical, Visiting, etc.,-full time
- 5) Adjunct, Lecturer, etc.,-part time

2. Total Years of Experience as a Teacher Educator (including the current academic year):

- 1) 1-5 years
- 2) 6-10 years
- 3) 11-15 years
- 4) 16-20 years
- 5) 21-25 years
- 6) more than 25 years

3. Average Number of Students (teacher candidates and classroom teachers) Taught Annually:

- 1) 50 or fewer
- 2) 51-100
- 3) 101 - 150
- 4) 151 - 200
- 5) more than 200

4. Estimated Percentage of Students Taught Annually Who you Believe Currently Demonstrate or Will Eventually Demonstrate Teacher Self-efficacy:

- 1) fewer than 15%
- 2) 16-30%
- 3) 31-45%
- 4) 46-60%
- 5) 61-75%
- 6) 76-90%
- 7) 91% or more

