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Understanding Teacher Perceptions of Their Role in the Development of Student Academic Self-Efficacy

Rachel Farinelli Holloway
Research and Advocacy, edIDEA, Inc.

Nara Martirosyan
Sam Houston State University

Abstract

Using an instrumental case study approach, we explored faculty perceptions of their role in developing student academic self-efficacy. Interviews were conducted with faculty who taught developmental education courses at a community college in southeast Texas. When asked what they see their roles to be in building self-efficacy in their students, the selected faculty responses revealed themes that included building confidence and motivation in their students, helping their students to reframe failures as challenges, fostering relationships with their students to build trust and open dialogue, and helping students to recognize their own potential. They also felt strongly that their job was to teach student success skills. When asked about the tools and techniques they use to develop student self-efficacy, the themes that emerged included utilizing academic support resources, providing non-academic assistance for issues unrelated to the subject area that still presented barriers to education, and developing mindset. Additionally, study participants emphasized the importance of helping students with pre-planning and reflection skills. Implications for practice are discussed, and recommendations for future research are made according to the findings.

Keywords: self-efficacy, academic self-efficacy, teacher self-efficacy, instructor views on student self-efficacy, academic success, academic achievement

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Self-efficacy is a person's belief in their own ability to succeed in achieving an outcome or reaching a goal (Bandura, 1977). Psychological and educational researchers have recognized for decades that a student's belief in their academic abilities plays a vital role in that student's ability to succeed (van Dinther et al., 2010). Bandura (2000) stated that "Unless people believe that they can produce desired effects and forestall undesired ones by their actions, they have little incentive to act" (p. 75). An individual must believe in their ability to do something before they can even conceive of how to do it. Likewise, no matter what a teacher might want a student to accomplish, the teacher must first believe it is possible or have a high sense of teaching self-efficacy (Madya et al., 2018; Shakeel et al., 2022). Then they must help students to believe that learning is possible (Madya et al., 2018; Morris et al., 2017). This should happen before teaching the behavior, content, and skills necessary to accomplish a task (Kang, 2005). However, a substantial percentage of the college student population in the United States comes to higher education with doubts about whether they have what it takes to be academically successful (St. Amour, 2020).

More than one-third of students entering college are considered underprepared in one or more subjects (National Association for College Admission Counseling, 2024). Educational and psychological researchers (van Dinther et al., 2010) have tried to find what exactly a student needs to be successful in an academic setting. A plethora of explanations have been proposed regarding why students succeed or fail, including innate ability, learning environment, motivation, persistence, confidence, self-esteem, and many others (Afari et al., 2012). Moreover, researchers across multiple disciplines who have conducted studies on self-efficacy have shown that an individual's belief in their ability to utilize skills and resources to overcome a challenge affects that individual's success when faced with that challenge (Nasir & Iqbal, 2019). Therefore, teachers must understand how they positively and negatively affect students' self-belief. Teachers should also be provided with the training and tools necessary to understand what can be done in the learning environment to foster student self-efficacy.

Teacher self-efficacy affects student success (Hassan, 2019; Yough, 2019). Teacher beliefs, shaped by past experiences, along with pre-service training and professional development, influence teacher classroom practices, teacher self-efficacy, and motivation (Ferguson & Brownlee, 2021). Classroom practices influence students' beliefs, which in turn affect their success (Turda et al., 2021). Teachers and their classroom practices play a crucial role in either enhancing or undermining student self-efficacy (van Dinther et al., 2010). Moreover, teacher training often lacks guidance on how to develop self-efficacy (Mwageni, 2019). Even more surprising is that no standard has been established to ensure that teachers receive training on student self-efficacy, nor has an evaluative process been created to measure teacher success in this area (Hawe & Dixon, 2017).

To successfully develop training programs on student self-efficacy and how teachers can best foster it, it is necessary to understand what teachers perceive about the current research on how self-efficacy influences student behaviors and academic success. The purpose of this qualitative case study was to understand the perspectives of the developmental education faculty at one community college in southeast Texas on their role in developing positive academic self-efficacy in their students.

Review of Literature

This review provides an overview of the extensive literature on the relationship between student self-efficacy and academic success, as well as the importance of the teacher's role in developing student self-efficacy within the educational environment. Self-efficacy is recognized as one of the leading predictors of student success (Bandura, 2000; Dunbar et al., 2016; Nasir & Iqbal, 2019). Self-efficacy is defined in the literature as subjective judgments of one's ability to organize and execute actions to attain a specific goal (Bandura, 1977, 1997). Academic self-efficacy is defined as a student's belief in their ability to overcome obstacles in learning (Zimmerman et al., 1992).

Self-Efficacy

Bandura (1977) developed the theory of self-efficacy as it relates to patients in a mental health setting. He studied patients' beliefs in their ability to heal and how and to what degree their beliefs shaped their willingness to persist through challenges and overcome obstacles to success in treatment (1977). Self-efficacy refers to the conviction that one can successfully execute a behavior (Bandura, 1977). According to Bandura, individuals receive self-efficacy information from four sources, including vicarious experience, verbal persuasion, emotional arousal, and their own performance accomplishments. He also discussed how self-efficacy can mitigate patient motivation, persistence in treatment programs, and overall patient success. Bandura stated that personal performance accomplishments were by far the most effective source of information on self-efficacy. Accomplishing a goal was most effective in improving a patient's belief that they could persist and succeed in similar situations in the future (Bandura, 1977).

Pajares (1997) provided a general overview of the preceding two decades of research and understanding of self-efficacy in education at the time, offering insight into the then-current directions the research was taking. Pajares wrote that in the two decades since Bandura (1977), self-efficacy had been assessed and confirmed in diverse fields and settings (Pajares, 1997). The review described Bandura's two decades of research in psychology settings and the contributions he made to the shift from cognitivism to his social cognitive theory of human behavior. The review also related self-efficacy to personal and collective agency, how it relates to other socio-cognitive factors, and how it specifically relates to well-being and goal attainment. Student self-efficacy also correlated with motivation, academic performance, and achievement.

Measuring self-efficacy can be complicated due to its close and overlapping relationship to other areas mentioned above. Several instruments exist to measure self-efficacy, and the accuracy of these measurements has been routinely evaluated and improved. Self-efficacy has been measured through self-report questionnaires (Pruski et al., 2013), which leads to the question of the reliability of such measures (Maddux & Kleiman, 2021). Researchers distinguish between two types of self-report measures, those that measure general self-efficacy (Chen et al., 2001) and those that measure task-specific self-efficacy (Maddux & Kleiman, 2021). From the earliest literature on self-efficacy, it has been confirmed that a relationship exists between self-efficacy and educational attainment. The next aspects of self-efficacy identified in the research include the relationship between self-efficacy and academic performance, as well as best practices for increasing self-efficacy in an educational setting.

Self-Efficacy and Academic Performance

Self-efficacy affects every aspect of academic achievement (Maddux & Kleiman, 2021). Students' self-efficacy influences motivation (Schunk, 1991). It affects what level of challenges a student is willing to undertake (Schunk, 1990; Zimmerman et al., 1992). Self-efficacy influences a student's willingness to study and persist through challenges (Bandura, 1997; Maddux & Kleiman, 2021). It can also determine which courses and college majors students choose to pursue (Maddux & Kleiman, 2021).

After Bandura's work on self-efficacy as it related to psychology and mental health, Schunk (1984) examined the effect of self-efficacy on achievement behavior. Perception of their own ability, the difficulty of the task, the effort required to complete it, the performance aids available to them, and patterns of outcomes from previous experiences all affected task motivation and skill acquisition (Schunk & Meece, 2005). According to Dogan (2015), in addition to academic self-efficacy and academic motivation, a sense of the student's own capability, as well as a sense of purpose for their learning, were all significant variables affecting academic success. As many researchers have stated, the development of student academic self-efficacy is of paramount importance in developing successful students (Foulstone & Kelly, 2019; Maddux & Kleiman, 2021).

Research and Best Practices in Developing Self-Efficacy in Education

As self-efficacy is more fully understood and measured in research environments and its relationship to academic achievement is more fully understood, development of strategies in the educational environment can be accomplished. Wlodkowski (2008) stated that research shows teachers who motivate students have a set of skills and demeanors that can be learned, controlled, and planned by other instructors. These characteristics include expertise, empathy, enthusiasm, clarity, and cultural responsiveness (Wlodkowski, 2008). Just as these aspects of motivational instruction are skills that can be improved, so are the sources of self-efficacy able to be utilized to improve self-efficacy in an educational setting.

Studies have identified multiple factors in educational environments influencing student self-efficacy across different subjects or domains (Koh & Frick, 2009; van Dinther et al., 2010). These domains included how teachers' judgements influence their classroom practices, including teachers' beliefs about how well they can perform in accomplishing their goals, and teachers' beliefs about how well they perform the actions needed to do so (Lopez-Garrido, 2020). Researchers suggested that teachers should focus as much on students' perceptions of competence as they do on actual competence (Bartimote-Aufflick et al., 2016; Maddux & Gosselin, 2012).

Lopez-Garrido (2020) explained that an important means of building an individual's self-efficacy is through practice, as the act of practicing and improving at a new skill helps convince individuals that they can learn new skills. Bartimote-Aufflick et al. (2016) suggested strategies such as modeling, identifying, and remedying student misconceptions, guided use of multimedia, interaction between students, peer tutoring, and concept maps to assist e-learning. Problem-Based Learning (PBL) was recommended by Syarafina et al. (2018) to develop thinking skills and problem-solving skills, prepare for adulthood, and become self-sufficient learners to improve self-efficacy.

Self-Efficacy and Teachers

Self-efficacy beliefs influence every individual. Teachers are susceptible to the same factors that influence the development of positive and negative self-efficacy in their students (Madya et al., 2018; Morris et al., 2017). Over the years, researchers (Klusmann et al., 2008) have attempted to define teaching self-efficacy, which refers to teachers' beliefs in their ability to effectively handle the tasks, obligations, and challenges related to their professional activity (Barni et al., 2019). It was found that teachers with high teacher self-efficacy believed they could influence student academic achievement (Shahzad & Naureen, 2017). Findings from more recent research by Madya et al. (2018) and Shakeel et al. (2022) have shown that the effectiveness of teachers is influenced by their self-efficacy beliefs. Teacher stress can negatively impact student self-efficacy and success (Klassen & Chiu, 2010).

Yough (2019) recommended that developing teacher self-efficacy should start during teacher education due to research that retraining teachers is less efficient than training in the first place. Because the teacher is the person most responsible for creating the learning environment, self-efficacy training should be present from the beginning of teacher preparation so teachers understand their own self-efficacy and the importance of their role in developing positive self-efficacy in their students (Madya et al., 2018).

Sources of self-efficacy and interpretation of that information are cyclical—the interpretation of information informs self-efficacy, which in turn influences the quality of teaching (Bandura, 1997; Morris et al., 2017). Several researchers (McDonnough & Matkins, 2010; Morris et al., 2017) have concluded that teacher education, professional development programs, teacher skill and knowledge development are best practices in improving teacher self-efficacy, especially when opportunities to apply these skills are provided. Teacher self-efficacy is important not only for student success but also for the continued success of teachers in the field (Capone & Petrillo, 2016; Shakeel et al., 2022).

Self-efficacy has decades of research supporting it as an important predictor of student success, as outlined above. Copious research exists to show how a person's behavior and persistence through difficult situations is affected by their self-efficacy, and copious research studies are available that describe how self-efficacy relates to student success, persistence, and self-regulation (Bandura, 1997; Jiang et al., 2014; Pajares & Urdan 2006; van Dinther et al., 2010). However, information is missing on what teachers perceive about the concept of student academic self-efficacy and the current research on how self-efficacy shapes student behaviors and academic success (Rudenstine et al., 2018). Therefore, this study was undertaken to understand perspectives of instructors on their role in developing positive academic self-efficacy in their students.

Theoretical/Conceptual Framework

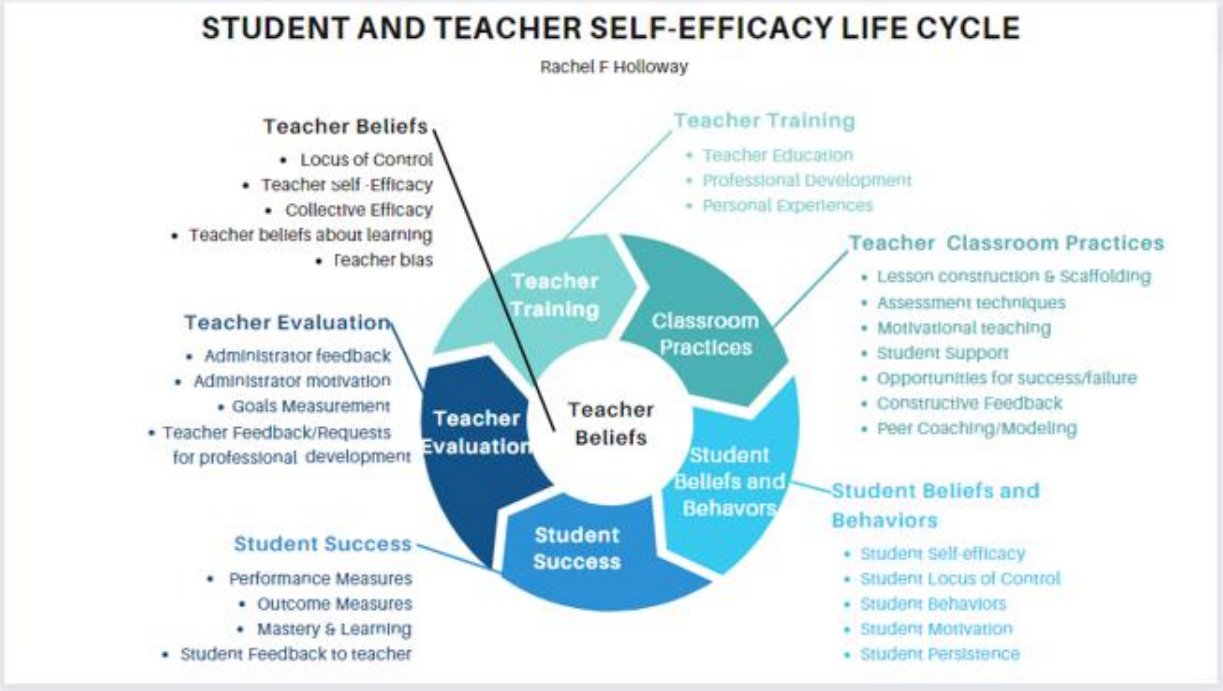
The theoretical framework for this study begins with the work of Bandura's Self-Efficacy Theory (1977) and subsequent Social Cognitive Theory (1986). These theories were first applied to the area of psychological healing and self-regulated behaviors, then later applied to education and student academic self-efficacy. Students' belief that they can use behaviors to affect their successful completion of a task increases student self-efficacy and further strengthens their willingness to set higher goals and measure their own success in achieving them (Kang, 2005).

Utilizing these theories, one can visualize how each aspect of the learning process and environment affects participant self-efficacy.

The Student and Teacher Self-Efficacy Life Cycle developed for this study (Figure 1) comprises aspects of teacher beliefs from their past experiences and teacher training from either teacher education courses or teacher professional development (Ferguson & Brownlee, 2021; Van Haneghan et al., 2015), which influence teacher classroom practices, teacher self-efficacy, and teacher motivation (Hoy, 2000). These classroom practices influence student beliefs, including self-efficacy, locus of control, persistence, and motivation, which subsequently affect student success (Hassan, 2019; Turda et al., 2021).

Figure 1

Student and Teacher Self-Efficacy Cycle



Note. Cycle of issues relevant to student and teacher self-efficacy.

Social Cognitive Theory

Social cognitive theory is a learning theory that identifies attributes that affect thought, motivation, and human action (Bandura, 1997). It views individuals as agents proactive in their own development, who make things happen through their own actions (Bandura, 1986). Bandura (1986, 1997) articulated his Social Cognitive Theory, which presented the idea that human functioning is affected by cognitive, affective, biological, and environmental factors.

Kang (2005) described social cognitive theory's focus on goals as a main component of self-efficacy. He assumed that, without benchmarks or goals to measure their performance improvement, it is impossible to determine student capacity. By comparing a goal to actual performance, self-efficacy is formed (Kang, 2005).

Self-Efficacy Theory

Bandura (1977) defined self-efficacy as an individual's belief that one can choose correct behaviors to achieve a goal. In his initial research and writing, he discussed four sources of self-efficacy as they related to patients in a mental health setting, including vicarious experience, verbal persuasion, emotional arousal, and their own performance accomplishments. Vicarious experiences are those that one has by live and symbolic modeling. An individual sees someone accomplish something, improving their belief that they can also achieve a similar goal. Verbal persuasion refers to suggestions that one receives from another person. A trusted person suggests that an individual can do something, and that individual's belief in their own ability improves. Emotional arousal describes the idea that one's own physical and emotional reactions to situations can affect how much one believes that one can endure or cope, therefore inducing avoidance behaviors. Bandura also discussed the degree to which each of the sources of self-efficacy information determined patient motivation, persistence in treatment programs, and patient success. According to Bandura (1997), the role of self-efficacy in student cognition is ever more important in an informational world where lifelong learning is a necessity.

Due to the connection between teacher beliefs, teacher self-efficacy, and teaching practices, and given the profound impact of teaching practices on student self-efficacy and performance, self-efficacy theory is a suitable theoretical framework for this study. This study aimed to gain an understanding of teachers' beliefs about the impact of their teaching practices on students' academic self-efficacy.

Method

The purpose of this qualitative case study was to understand the perspectives of developmental education faculty at one community college in southeast Texas about their role in developing positive academic self-efficacy in their students. The following research questions were used to guide this study: (1) How do select developmental education faculty at one community college in southeast Texas perceive their roles in improving the academic self-efficacy of the students in their developmental education courses? (2) What tools and techniques do select college developmental education faculty at the institution report using specifically to develop a student's sense of academic self-efficacy? IRB approval was obtained before conducting the research.

Research Design

The current study employed a qualitative case study design. The goal of case study research is to explain how or why a phenomenon works, rather than simply observing it (Yin, 2018). According to Stake (1995), the case study researcher is interested in both the participants' uniqueness and their commonality to other cases. The intent is to set aside presumptions and listen to those involved in the case study to understand the participants in their unique situation. A case study is typically observational with little intervention into the methods of the participants. This study used an instrumental case study model.

According to Stake (1995), qualitative case study emphasizes interpretation. The researcher is an interpreter in the field who objectively observes and records what is happening,

while examining meaning in those observations (Stake, 1995). Much like experimental research that becomes more generalizable to theory, not necessarily populations, a case study can be replicated, and one can draw conclusions based on multiple iterations that are found similarly in different circumstances (Yin, 2018). Case studies are also not only limited to exploration, but also description and explanation. This study utilized an exploratory mode, because the researchers had no reason to expect certain answers to the questions asked from the participant population.

In this qualitative study, the case study approach was used to explore the perceptions of developmental education faculty on their role in developing student academic self-efficacy. The case study approach was appropriate due to the case study method being well suited to exploration, description, and explanation (Yin, 2018). The researchers attempted to understand to what degree developmental education faculty understand and utilize self-efficacy knowledge in their classroom, for the specific purpose of developing training for faculty who do not share the same understanding and knowledge. Studying and understanding one group in detail can help to gain insight into the research questions (Stake, 2006).

Research Setting

The study was conducted at a community college in southeast Texas. All developmental education faculty with at least one year of teaching experience were asked to participate in this study. Subjects available in the developmental education department include mathematics, integrated reading and writing, English Speakers of Other Languages (ESOL), and an introductory college strategies course. Courses are offered at three campus locations within a lower-income, urban, public school district in Southeast Texas.

The institution is a Hispanic-serving institution. In Fall 2022, the institution's enrollment was 64.3% Hispanic or Latino origin, 16.8% White, 9.7% Black or African American, 5.7% Asian, and 3.5% Native American, Alaska Native, Native Hawaiian or Other Pacific Islander, or unknown/not reported. Their student population consisted of 46% aged 18-21, 21.7% aged 17 and under, 13.8% aged 25-34, 11.7% aged 22-24, and 1.1% over 50 years old. Students were 59.1% female and 40.9% male. The institution's 2,368 faculty members comprised 122 administrators, 1,522 faculty, and 724 full-time administrative support staff. The average class size was 20.9 students, and the student to faculty ratio was 27:1.

Participants

This study employed a criterion-based sampling process, as described by Creswell and Poth (2018), which involves selecting participants who meet a predetermined criterion. The researchers identified faculty members who had at least one year of experience teaching developmental education courses at the community college in southeast Texas. This gave the opportunity for participants to include aspects of both teacher training and teaching experience.

A total of seven participants who were all full-time faculty at a community college in southeast Texas were interviewed. All participants taught in the developmental education program at the community college being studied. Participation was limited to instructors who had taught at the same community college for over one year. This ensured that all participants had awareness of the training and professional development offered to faculty and services

offered to teachers and students in their developmental education program. Table 1 displays demographic information about participants. They were given fictitious names for anonymity.

Table 1

Demographics, Teacher Training and Experience of Participants

Participant	Subject Taught	Years Teaching at Current Position	Total Years Teaching	Education
Sarah	INRW	5-10	10+	Ed. D., M.Ed.,K-12 Cert
Reese	INRW	3-5	10+	Ed.D., M.Ed.
John	Dev Math	1-2	5-10	Master in non-education field
Fran	Dev Math	3-5	3-5	Master in non-education field
Daniel	INRW	10+	10+	Ph.D. in non-education field
Carmen	Dev Math	1-2	10+	M.Ed., K-12 Cert
Eric	Dev Math	1-2	3-5	Ed.D., M.Ed.

Instrument and Data Collection

Data for this study were collected through individual interviews. Interview protocol (See Appendix A) was developed based on a classroom assessment technique (CAT) utilized to assess a student's prior knowledge in the classroom (Angelo & Cross, 1993). This technique helps trainers create a bridge between trainees' prior knowledge and the material available to them (Angelo & Cross, 1993). The researchers attempted to design the questions so that participants' level of knowledge of the vocabulary could be ascertained. However, a follow-up question would allow a person with little knowledge of self-efficacy vocabulary to. Interviews were conducted via Zoom and audio recorded, with verbatim transcripts provided. Each interview was an hour long and only concluded after the interviewee was asked if they had anything further to add that they were not asked during the interview.

Data Analysis

Demographic data was collected through a pre-screening questionnaire. Interviews with those meeting study criteria were transcribed, and field notes were converted to electronic files, which were then sent to participants for the member checking process. First-cycle codes were determined using in vivo coding, which preserves the exact words of the participants (Saldaña, 2016). Pattern coding was used during the second cycle of coding to group the first cycle codes into fewer themes. The explanatory and inferential pattern codes identified the emergent themes (Saldaña, 2016). Participants were asked to give feedback on findings and interpretations to ensure that these are true representations of their words (Creswell & Poth, 2018).

Findings

The purpose of this qualitative case study was to understand the perspectives of developmental education faculty about their role in developing positive academic self-efficacy in their students. The first research question focused on how participant faculty perceived their roles in improving the academic self-efficacy of the students in their developmental education courses. Table 2 presents emergent themes and their corresponding codes, based on the participants' responses. Further description of the emergent themes follows.

Table 2

Emergent Themes and Relevant Codes for Research Question One

Theme	*Relevant Codes*
Building Confidence and Motivation	Beginning without judgment; Students do not internalize the teacher's bias; Creating small successes; Contextualizing the lesson; Finding motivating factors; Utilizing motivational teaching; Giving students choices
Reframing Challenges	Decreasing bias in the educational community; Communicating that developmental education is a positive thing; Everyone needs development in some area; Support for non-academic challenges; helping students feel they are not alone; Seeing challenges as opportunities to learn
Fostering Relationship	Creating relationships with positivity; Using warmth and kindness; Helping students to feel comfortable; Taking time out of class; Providing one-on-one instruction time; Treating students as an individual
Recognizing Potential	Understand self-efficacy and how it develops; Helping students see own potential; No one is good at something the first time; Growth mindset vs fixed mindset; Overcome imposter syndrome; Overcome inherent bias
Teaching Student Success Skills	Modeling; The struggle is productive; Teaching how to learn; How to practice; Teaching student-success skills

Building Confidence and Motivation

Building confidence and motivation emerged from multiple interviews with participants. This theme includes topics such as starting to teach at the student's level without judgment, preventing students from internalizing the teacher's biases, creating small successes, tailoring lessons to make them meaningful to students, identifying motivating factors, using motivational teaching techniques, and offering students choices. Four participants emphasized the importance of beginning without judgment or meeting students where they are. Fran highlighted the importance of not imposing teaching beliefs on students, adding, "The way you talk to them delivers a strong message of your estimation of them, which gets internalized." Reese noted, "Most of our students come in with imposter syndrome, one foot out the door, just waiting for one moment to confirm they're not college material, and they're gone."

All seven participants indicated that making the class or lesson important to the student was a vital part of their job. They intimated that emphasizing how the lesson is important to the students' future can be a crucial motivator for students to become engaged in the lesson. When discussing the skills acquired in developmental education courses, Sarah explained that she wanted her students to understand why different parts of the lesson were important: "So I explain to them why we're learning this—that they will not just use it in my class, but also in other classes." Participants highlighted the importance of helping students believe they could succeed.

These participants emphasized that giving choices can be difficult for new students, but that working through topics that apply to their own lives can help student motivation to overcome challenges in the future. Participants also noted that reframing challenges so students could see the value in working through them was of optimal importance to helping students succeed through any new, seemingly difficult task.

Reframing Challenges

The second theme that emerged from interviews with the participants was "reframing challenges," which includes such ideas as redefining bias, reframing how students see challenges, changing a student's reaction to challenge, and seeing challenges as an opportunity rather than a threat. Participants mentioned several challenges outside of academics that students face, including food insecurity, lack of support at home, needing childcare for their own children, and jobs. Daniel told his own story of being a first-generation college student. He said he was "scared to death," and did not know if he would succeed. He explained,

> I was either going to stay home with my friends, sell drugs, and risk going to jail or getting killed. Or I could use whatever little academic talent I had to pursue the promise of education I kept hearing about. I was at a crossroads.

Helping students to reframe challenges as learning experiences emerged from all the instructors at some point in the conversation. Reese focused on the fact that everyone has an area where they need extra tutoring and support, saying, "If I had to take another stats class, I would need tutoring because that is my area of developmental education. I need extra help to do stats." She highlighted that we only measure college readiness through math, reading, and writing, which ignores many strengths that students have that will carry them through challenges in these and other subjects.

Fostering Relationship

Fostering relationships is a theme that comprises several ideas that came from the interviews, such as creating relationships with positivity, using warmth and kindness when dealing with students, helping students to feel comfortable, taking time out of class to visit with students, providing one-on-one instruction time, and treating students as individuals. Four of the participants mentioned how important fostering relationships was between student and teacher. Building relationships develops trust and allows the teacher to identify barriers that students might need resources to overcome, determine the specific resources each student might require, and recognize any inherent biases that need to be addressed.

Recognizing Potential

This theme encompassed several different ideas that surfaced during the interviews, such as helping students see that they can accomplish their goals, helping them realize that they deserve to be in college, and encouraging students that they can do the work and make the grade. Showing students that the work they put in determines their success, communicating that everyone has challenges to overcome, and giving students the belief in themselves helps them overcome imposter syndrome, breaking down their fears and barriers to foster self-confidence.

Helping students overcome inherent bias, building their self-confidence, and showing them that no one is good at something the first time they try were all ideas included in this theme. It was apparent from this group of participants that helping students to see their own potential was an especially important aspect of teaching. Several mentioned that this was how they saw their whole job. They mentioned that, without students being able to see their own potential, there would be little improvement found in the students' work.

Teaching Student Success Skills

The instructors all mentioned teaching content skills as important, but not only the content they are hired to teach. Sarah described that teaching the skills of student success was, at times, more important than teaching her subject. Modeling, teaching students how to learn, and helping students understand the good struggle of learning were all ideas mentioned that are included in this theme.

All participants shared a version of the fact that their job as developmental education teachers was to "teach students how to learn" or "help students be ready to learn." John described his job as a teacher, "I must prepare students to learn." Carmen described other aspects of learning how to learn: "Showing them how they can do the homework, how they can participate in class. Showing them activities that make them successful." She added, "We talk about a productive struggle and how that struggle is when learning takes place."

Seven participants focused on aspects of teaching that went beyond simply teaching the content they were hired to teach. There is more to teaching than simply imparting knowledge. These additional aspects of teaching were building confidence and motivation, reframing challenges, fostering relationships, recognizing potential, and teaching student success skills.

Tools and Techniques for Developing Self-Efficacy

The discussion of teaching skills led to a follow-up question that helped us understand precisely what participants believed their role was in developing student self-efficacy. Participants were asked to describe the tools and techniques they use in their classrooms to develop students' sense of academic self-efficacy, which was the focus of the second research question in this study. Table 3 lists themes and the relevant codes that emerged in discussions with the participants.

Table 3

Emergent Themes and Relevant Codes for Research Question Two

Theme	Relevant Codes
Academic Support Resources	Connect them to resources; Show them to offices; One-on-one help; Allow retesting; Scaffolding; Student Success Skills; Course orientation; Growth Mindset; Self-teaching skills; Note-taking skills; Writing lab; Test-taking strategies; Time management skills
Non-Academic Assistance	Stress management techniques; Open communication; Counseling; Campus programs; Non-academic barriers
Developing Mindset	Discuss persistence; Empower; Listening; Rewarding bravery
Pre-Planning and Reflection	Work through processes; Setting clear expectations; Reflection on exams; Reflection on their progress; Reflection on challenges; Weekly discussions on challenges

Academic Support Resources

All participants mentioned resources for students and that their job was to connect students to those resources. Some resources may address the non-academic needs of students, while others provide extra help for academics. Academic resources included by participants were academic in nature, such as tutoring, online resources, and additional classroom opportunities like retesting, one-on-one extra help, and scaffolding lessons. Several items mentioned by participants would be described as "student success skills."

These types of skills were repeated consistently throughout the interviews. Reese discussed creating a course orientation that provided students with the essential skills necessary for success in the course. Several participants repeated study skills instruction. Note-taking skills, test-taking strategies, and good written communication skills were also mentioned. Four participants mentioned time management skills.

Eric described, "We do an 8-day study plan. What does my schedule look like eight days out? That makes life more manageable when they see it on paper." Fran specifically mentioned teaching good habits, "If they don't have good habits, I don't find they will have the outcomes they seek. So, my role as a support system is to teach them those skills."

Non-Academic Assistance

Four participants mentioned that they connected students to campus resources and online resources for non-academic needs, such as counseling, food pantry, and childcare. Sarah mentioned connecting students to on-campus resources. Carmen said that she provides students with direct links to resources in their learning management system for her class. Six of the seven participants spoke in some way about helping students to alleviate the stress of college.

Developing Mindset

The idea of empowering students seemed to flow through each of my conversations with the participating faculty members. Two participants mentioned speaking with students about overseeing their own work. According to John, "I help them realize that they are the ones in

charge as the student. They are the ones who must spend the time to focus on what they need to know." Fran said she discussed ideas like consistency and grit with her students and showed how those lead to success.

Two participants specifically mentioned the importance of listening to the students. Carmen emphasized the importance of listening and being present, allowing her students to speak. This way they feel their voice is being heard. Others described the importance of giving time for one-on-one conversations. John mentioned that his students would stay after class to discuss anything from an assignment to their favorite cars. These conversations would never happen in class, so John emphasized how important it was to "give time for these to happen organically."

Pre-Planning and Reflection

Reese said that she liked to begin the semester talking about the expectations of college and how they differ from high school or work expectations. She said, "Some of our students come from high school and some are coming back to school after working. What do your instructors assume that you know? What is a syllabus?"

Pre-planning and Reflection is a theme that comprises several ideas, such as helping students to work through processes beforehand to identify pitfalls, setting clear expectations for students so they understand the assignment, reflection on exams to understand and learn fully, reflection on students' own progress throughout the semester, thinking through challenges and how they reacted to those challenges, and weekly discussions on challenges and how they could handle them better. These topics all deal with asking a student to be mindful about their activities, how they learn, and how they improve.

Discussion

Participant answers to research question one were categorized into five emergent themes: building confidence and motivation, reframing challenges, fostering relationships, recognizing potential, and teaching student success skills. During the interviews with developmental education faculty members, never once did a participant say that the most vital role they played in building self-efficacy was imparting content knowledge to their students. In fact, just as Schunk and Meece (2005) and Wilson and Trainin (2007) asserted that developing self-efficacy and cognitive processing is as important as teaching content and skill, all participants focused on items other than teaching content. When asked what their role in developing student academic self-efficacy was, their responses included building confidence and motivation, reframing challenges, fostering relationships, recognizing potential, and teaching student success skills. The participants noted that they saw themselves as facilitators of the process of preparing students for success in life and learning. This reflects the research by Merriam and Bierema (2014) that says teaching learners how to learn and what the process of learning is to learn is of utmost importance.

Specific tools the participants listed for research question two were organized into the following themes: academic support resources, empowering students, non-academic assistance, and pre-planning and reflection. When asked about tools they utilized in fulfilling their role, participants mentioned academic support, such as scaffolding the lesson, modeling, taking time

for one-on-one help, and strategies for learning. Bandura (1977) first emphasized the importance of modeling and scaffolding in building mastery, which builds self-efficacy. Boylan and Saxon (2012) highlighted the importance of integrating tutoring and writing labs as a requirement of a course, rather than making them voluntary. Bartimote-Aufflick et al. (2016) suggested modeling and peer tutoring to develop and improve student self-efficacy.

Participants also asserted that part of their role was to ensure that students had non-academic assistance, including support like food pantry, daycare, and mental health counseling. Multiple researchers suggested the importance of addressing non-academic barriers to improve student self-efficacy (Boylan & Saxon, 2012; Cheng et al., 2015). Participants discussed empowering students, which was in line with research emphasizing the importance of setting individual and self-imposed goals (Chowdhury, 2019) and taking control of their learning process (Merriam & Bierema, 2014). They also suggested taking students through pre-planning and reflection about learning activities and other challenging collegiate situations. Kanani et al. (2017) supported self-monitoring and self-regulation strategies to increase student self-efficacy and performance.

Implications for Practice

Self-efficacy is one of the top predictors of academic success (Nasir & Iqbal, 2019; Stankov & Lee, 2014). However, none of the participants remembered ever hearing the term self-efficacy during their own teacher preparation. When asked how they learned these facets of teaching students, participants reported that they either learned them by observing other trusted teachers or that they had acquired this knowledge through their own experiences as students. Some mentioned professional development on self-efficacy and student motivation. Initial and ongoing training and support are needed for teachers on specific tools and how to utilize them in their specific teaching discipline.

All participants emphasized that better training in self-efficacy development would be helpful and would be something they would attend. Institutions should provide ongoing training and support so that teachers feel the same support from their leadership that we suggest teachers give to students. Teachers need training at the beginning of their careers, but this training should be ongoing, not only as a refresher but as a direct answer to questions they have about their own experiences in the classroom.

Research shows that evaluation strategies should be found for measuring not only how well educational practices help students learn, but also in how well they raise student self-efficacy (Schunk & DiBenedetto, 2020). Regular measurement of student self-efficacy and instruction for students on the effects of self-efficacy on their education should be integrated into the curriculum.

Administrators should establish mentor programs for new teachers. Teachers require role models and mentors with experience and higher self-efficacy, enabling them to observe firsthand how the tools and training are effective in the classroom through vicarious experiences. This select group of developmental education teachers already knew many facets of the topic, so it became apparent that they are a resource for teaching others. This was an important implication for practice. Teachers should be seen as a crucial resource used for compiling information to teach other teachers. When developing training, teachers should be involved.

Limitations and Recommendations for Future Research

This study focused on developmental education faculty at one two-year institution of higher education in southeast Texas. It was limited to instructors who teach developmental courses in mathematics, reading, writing, or college strategies/freshman orientation who were willing to participate (participation bias). The selected instructors may have similar preconceptions, working in the same program and having similar faculty training. Data were gathered through interviews, so their accuracy is subject to the interpretations through the experiences of the interviewee and interviewer. Interviewing is a limitation when other data is not requested.

A recommendation for future research is to broaden the scope of this study, state-wide and nationally, to teachers who teach diverse levels of education to enable comparisons over a larger population of instructors. Future studies could adopt a mixed methods approach to gather evidence of enhanced student self-efficacy or success in classrooms where teachers utilize tools to boost student self-efficacy. This would then help researchers to decide on training on a larger scale, rather than simply at the institutional level.

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Appendix A

Interview Protocol

The following questions were used to interview participants:

1. Tell me about yourself and what attracted you to teaching.
2. What do you know about student academic self-efficacy?
    a. If you are not familiar with the term, what do you know about "student belief in their own ability to use resources to overcome challenges in the academic environment?"
3. As an instructor, what role, if any, do you play in developing a student's academic self-efficacy?
    a. How did your understanding of your role develop?
    b. What do you understand about the teacher's role in helping students to believe in their ability to overcome obstacles to succeed at a task?
4. What specific tools or practices do you use, if any, in helping to improve student academic self-efficacy?
    a. What do students need to improve their academic self-efficacy?
    b. If a student seemed to struggle with belief in their own ability to overcome a challenge, what would you do?
5. What factors may have caused your perceptions of your own ability to affect student self-efficacy?
    a. What training did you receive specifically about self-efficacy?
    b. Where did you obtain this training?
    c. On a scale from 1 to 10, to what extent would you like to expand your knowledge in this area?
6. To what extent would a workshop on tools to develop student academic self-efficacy and how it impacts student success be helpful to you and/or other colleagues?
7. In what ways are teacher training and professional development currently helping teachers to understand this topic?
8. If you were to help plan a training for teachers on their role in developing student academic self-efficacy, what would you include? (Information, tools, reflection)
9. Is there anything else you would like to share relating to your perceptions on your role in developing student academic self-efficacy?