



Examining the Efficacy of Pre-Service Training for Enlisted Professional Military Education Instructors During the COVID-19 Pandemic

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Abstract

U.S. Air Force enlisted professional military education shifted traditionally in-person leadership interventions online due to the COVID-19 pandemic. Air Force guidance stated that pre-service faculty training focused on in-person instruction was sufficient for teaching online and that instructors did not require training that included online teaching strategies. This study was conducted to examine the efficacy of pre-service training for military leadership instructors teaching online. Utilizing a conceptual framework of teacher self-efficacy, locus of control theory, and social-cognitive theory, this research examined the experiences of four instructors who graduated pre-service training focused on in-person instruction and taught online directly thereafter. Analyzing data from interviews, observations, and student surveys, results indicated the pre-service training, coupled with the participants' military supervisory background, adequately prepared participants to teach online. Future studies should examine a larger sample size of instructors to identify trends and patterns within the professional military education instructor community.

Keywords: EPME, PME, leadership training, teaching efficacy, Air Force.

1. Introduction

The COVID-19 pandemic forced American educators to conduct classes online, and the United States military embraced this evolution of practice. The United States Air Force (USAF) traditionally presented leadership development interventions in face-to-face environments for enlisted professional military education (EPME) students (Hoover, 2017). Due to the COVID-19 pandemic, EPME schools were forced to teach facilitated online classes for the first time (Air University, 2020).

Online instructors were not required to learn to teach in ways unique to online learning environments. Air Force guidance stated that “...distance learning instructors must complete the same qualification process as a traditional classroom instructor” (Community College of the Air Force [CCAF], 2017). As enlisted instructors had never taught online previously, the opportunity to examine the validity of this guidance had never arisen within EPME.

Keys (2021) administered a teacher sense of efficacy survey to all 500 USAF EPME instructors worldwide. 129 instructors (26%) who had taught EPME online during the COVID-19 pandemic responded. Results indicated that instructors generally felt confident and competent teaching in online learning environments. This study aimed to continue the research of Keys (2021), adding to the quantitative data a qualitative insight into the feelings and experiences which accompany an EPME instructor’s general sense of efficacy in an online learning environment.

The first instructor cohort to graduate pre-service training and begin teaching online immediately thereafter completed training in May 2020. The efficacy of this training was examined by triangulating data derived from classroom observations, instructor interviews, and student end-of-course surveys. This research analyzed the resulting data through a conceptual framework of teacher efficacy, Rotter’s (1996) locus of control theory, and Bandura’s (1986) social cognitive theory. The goal of this study was to gain insight into the experiences and feelings of four EPME educators to examine the efficacy of pre-service training.

2. Literature review and conceptual framework

2.1 *EPME background*

Air Force EPME prepares warfighters for future leadership roles as they gain rank and responsibility (O’Neil, 2020; Rivera & Shufelt, 2016; Keys, 2021). Students are noncommissioned officers serving in roles from frontline supervisors to executive-level leaders responsible for the readiness and resiliency of thousands of enlisted Airmen worldwide (O’Neil, 2020; Bangari, 2014; Rivera & Shufelt, 2016). The Air Force delivers four levels of leadership training ranging from 10 to 25 academic days in duration, with servicemembers attending each course as they progress in rank (Thomas N. Barnes Center for Enlisted Education, 2020).

Enlisted leadership instructors serve as supervisors in their military career fields before being hired as faculty. Once hired, instructors attend pre-service training, traditionally consisting of 158 hours of in-person instruction (Air University, 2020a). Pre-service training focuses on teaching the basics of in-person instruction methodology, student engagement, and classroom management (Air University, 2020a). After pre-service training, instructors teach under the guidance of an instructor trainer for 120 hours before teaching independently (Department of the Air Force, 2018; Barnes Center for Enlisted Education [BCEE], 2018).

2.2 *Teacher efficacy*

Central to the conceptual framework of this study was teacher efficacy. Teacher efficacy, also referred to as teacher self-efficacy, can be defined as the belief in one’s abilities to “plan, organize, and carry out activities required to attain given educational goals” (Skaalvik & Skaalvik, 2007: 612). Tschannen-Moran et al. (1998) noted that higher teacher self-efficacy brings forth feelings of perseverance, curiosity, and drive to improve pedagogical practices. Bandura (1977) posited that teachers who experience higher levels of self-efficacy can more effectively cope with situations where they are uncomfortable or inexperienced, maintaining a positive demeanor and succeeding at tasks.

Teacher self-efficacy can have a profound impact on teachers, students, and entire schoolhouses (Stephanou et al., 2013). Skaalvik & Skaalvik (2019) determined that higher senses of teacher self-efficacy relate to increased levels of engagement with students. Eddy et al. (2020) noted that increased levels of teacher self-efficacy equate to lower levels of out-of-school suspensions when teachers engage with students in the role of disciplinarian. Zhang and Liu (2019) reported that teacher sense of efficacy plays a moderating role when examining perceived task value, motivational regulation, and learning engagement, with the moderating effect increasing when teachers displayed higher levels of self-efficacy.

Research on the ability to measure self-efficacy of educators is prevalent. Built upon eight previous methods used to measure teacher efficacy, Tschannen-Moran and Hoy (2001) measured the sense of efficacy in K-12 teachers within three areas: student engagement, instructional strategies, and classroom management. Robinia and Anderson (2010) incorporated the measurement of an additional dimension of teacher efficacy: computer skills (referred to in this study as “technology use”). This qualitative study measured the same four dimensions of teacher efficacy in a minimally researched environment: U.S. Air Force professional military educator training.

2.3 Social cognitive theory

Bandura’s (1986) social cognitive theory was another facet of this study’s conceptual framework. Social cognitive theory examines the role the social environment plays in self-regulation, motivation, and learning (Schunk & DiBenedetto, 2020). Social cognitive theory can be studied by examining environmental influences (peer modeling, rewards for student behavior), personal influences (personal values and social comparisons), self-regulation (self-motivational processes to attain goals), and behavioral influences (effort, choice of activity, or persistence) of people and their environment (Schunk, 2012; Schunk & Usher, 2019; Schunk & DiBenedetto, 2020). Bandura (1986) stressed that the reciprocal relationships between the environment, a subject’s personal factors (cognition and emotional state), and their behavior are affected by a teacher’s sense of self-efficacy. Both teacher and learners’ cognitions can enhance academic performance, increase self-regulated learning, and increase feelings of empowerment and control within the learning environment (Schunk, 1989).

2.4 Locus of control theory

Our conceptual framework also included Rotter’s (1996) locus of control theory, which portends people either feel an internal or an external locus of control. People with an internal locus of control feel that they have control over their environment and correlate successes and failures to their actions, decisions, and behaviors. Those with an external locus of control feel that externalities control events in their lives (Achhnani & Amareliya, 2020). Individuals with an internal locus of control experience higher job satisfaction and less work conflict (Nghah et al., 2009; Karkoulian et al., 2016). In contrast, individuals with an external locus of control experience more negative affectivity, neuroticism, and psychological stress (Karkoulian et al., 2016; Michel et al., 2011). Individuals with an internal locus of control tend to respond positively to stressful settings and are more confident, active, and alert when working to change their environment (Ahluwalia & Preet, 2018). These individuals are more ambitious and tend to be more driven to pursue their goals within their vocation than their counterparts with an external locus of control (Smidt et al., 2018).

This conceptual framework aimed to present a picture of the military educator who teaches online without any formalized training to do so.

3. Research question

Like many types of qualitative research, this study was inductive and explored a phenomenon without hypotheses at the study's outset (Merriam & Tisdell, 2015). This research began with one research question: how did EPME instructors feel pre-service training (focused on in-person teaching and learning) prepared them to teach in online learning environments?

4. Method

This was a case study of four instructors. A case study is generally defined as an in-depth observation, description, and analysis of a bounded system (Harrison et al., 2017). The 30 students who completed in-service training in May 2020 served as the bounded system. This study aimed to obtain detailed descriptions from participants, capturing the point of view of the individual and leveraging a constructivist mindset to build a unique yet accurate picture of an instructor teaching online with no specific training to do so.

The data within this case study were viewed through the lens of a relativist or interpretivist perspective. Within this perspective there is not assumed to be one objective reality (Yin, 2014). Rather, there are multiple realities that exist simultaneously (Harrison et al., 2017). In this study, the participants, their students, and the authors co-created our viewpoints of reality.

This study was granted exempt status from the institutional review board at Air University.

4.1 *Participants*

This case study utilized criterion sampling, as the participants were mandated to meet predefined criteria (Moser & Korstjens, 2018). The population for this study consisted of 30 instructors who completed pre-service training in May 2020. This was the first cohort who graduated pre-service training and taught in an online environment directly thereafter. While the May 2020 iteration of pre-service training was also taught online, the curriculum was unchanged from in-person classes, with all lessons focusing on in-person lesson delivery.

The authors screened the 30-graduate cohort for a representative sample, members of which were required to meet the below criteria. Eligible participants had:

- not served as an instructor previously,
- not attended instructor methodology training prior to pre-service training,
- not taught Air Force enlisted leadership in face-to-face environments,
- not taught Air Force enlisted leadership in a hybrid online and in-residence fashion, and
- taught at least one Air Force EPME course online since graduating pre-service training.

These criteria ensured participants would have to rely on the knowledge, skills, and abilities gained in pre-service training when teaching in an online environment, providing an unobscured observation of the efficacy of the training when applied in a classroom.

Jason emailed each graduate of the May 2020 pre-service training cohort to solicit participation in this study. Of the 30-member cohort, seven graduates had not yet taught a class,

19 graduates did not reply, and the remaining four graduates met participation criteria and agreed to participate. We refer to them by their pseudonyms of Shannon, Rachel, Alyssa, and Harley.

4.2 Data collection

We utilized a pragmatic constructivist philosophy when collecting and analyzing data. Merriam (1998) explains that one should use a pragmatic constructivist philosophical variation when dealing with substantial amounts of abstract concepts that must be sorted and categorized to unearth meaning, relevance, and clarity during analysis. As this study analyzed disparate abstract data types, with a goal of real-world applicability to instructor training, a pragmatic constructivist philosophical orientation was appropriate.

This case study utilized multiple data sources to triangulate results: classroom observations, interviews, and student survey results. This is a commonly-used and highly-valued approach to qualitative research, reducing bias and synthesizing data that are otherwise unavailable with single-source qualitative studies (Harrison et al., 2017).

4.3 Classroom observation

After Shannon agreed to participate in the study, she and Jason scheduled a classroom observation. Pre-service training curriculum teaches instructors to present a lesson from beginning to end to include: (a) gaining students' attention, (b) reviewing lesson objectives, (c) presenting material, (d) evaluating students, (e) providing feedback to students, and (f) concluding a lesson (D. Booth, personal communication, October 19, 2020). To evaluate the efficacy of pre-service training, Jason observed one lesson that encompassed all the above-mentioned items. Jason utilized an observation protocol that incorporated the abovementioned tasks as well as the aspects of our conceptual framework: self-efficacy, locus of control, and social-cognitive theory (see Appendix A).

The lesson consisted of a guided discussion on negotiation-related terminology. Shannon would ask a student to define a term and give an example of how that term applied to them as military leaders. Students were quick to respond to her questions and forthcoming with examples. Shannon continuously checked a virtual chatroom to address questions or comments students posed. She guided the students through the lesson's vocabulary terms and provided time for students to relate their own stories and experiences. Jason took notes and recorded portions of the online class, which concluded after one hour.

4.4 Interviews

Jason interviewed each participant for one hour to obtain insight into how they felt pre-service training prepared them to teach online. He utilized an interview protocol focused on Robinia and Anderson's (2010) four dimensions of self-efficacy: classroom management, technology usage, student engagement, and instructional strategies, and included questions relating to locus of control and social cognitive theory (see Appendix B). Jason recorded and transcribed all interviews with participant permission and cataloged data using an interpretive coding method (Erickson, 1986). Demetrius independently listened to deidentified recordings of the interviews. We agreed saturation was reached after the fourth interview, meaning the participants repeated information with no new information presented, and further discussions likely would not have provided additional meaningful data (Moser & Korstjens, 2018; Polit & Beck, 2008; Merriam & Tisdell, 2015).

4.5 *Student surveys*

We examined end-of-course student surveys for the perceived efficacy of each instructor from the viewpoints of their students. Each survey solicited information about the students' perception of the instructor's professionalism, subject-matter knowledge, rapport with students, preparation, and ability to build learner-friendly environments. We examined surveys for two classes taught by each of the participants, reviewing eight surveys total. No students provided negative comments about the participants. We categorized each student's response into one of the aspects of our conceptual framework, using the same interpretive method of coding used when examining interview data.

5. Analysis

After collecting all data, we utilized Creswell's (2009) data analysis spiral: organizing, reflecting, interpreting, and comparing data. We organized data into three categories: observation notes, interview notes, and student survey data. We reviewed all data and noted our impressions from each category. We compared our interpretation of the data to our conceptual framework, anchoring our analysis to the framework itself. We examined our findings for excerpts that would assist us in answering our research question, coding each excerpt with words or phrases. Analyzing the coded data holistically across all data types allowed us to craft coherent, evidenced answers to our research question.

5.1 *Validity, reliability, and researcher positionality*

To ensure validity and reliability, we utilized both investigator and method triangulation in this research. Investigator triangulation employs two or more researchers to observe a phenomenon and compare findings, adding breadth and multiple viewpoints to the study (Carter et al., 2014). We worked collaboratively and independently to ascertain confirming and disconfirming evidence of assertions arising from our data. Building on this analysis, we interpreted the data by developing themes, categories, and tentative hypotheses. The overarching themes and categories illustrated different aspects of the efficacy of pre-service training.

Method triangulation incorporates multiple research methods to triangulate data (Moon, 2019), represented in this study by direct observation, interviews, and student survey responses. We categorized the data from our classroom observation field notes, interviews, and student surveys using an open coding method (e.g., Erickson, 1986). We then triangulated the data to validate the findings from each source.

While conducting this research, Jason was serving within EPME as a senior instructional design manager. Therefore, his position involved preconceptions and biases that needed to be questioned and checked. The authors took measures to promote the trustworthiness, credibility, dependability, and confirmability of this study (e.g., Guba & Lincoln, 1989). The preliminary method used to eliminate potential bias was to allow only participants with whom Jason had no pre-existing relationship. He reviewed the list of potential participants and confirmed he had no pre-existing personal or professional relationships with any of the graduates. When introducing himself to participants, Jason emphasized his role as a researcher and not as a curriculum manager. Except for the interviews and observations related to this study, Jason maintained an absence of personal and professional contact with participants.

A second measure used to promote credibility, trustworthiness, dependability, and confirmability involved enlisting Demetrius's expertise to validate Jason's findings from the four interviews. As Demetrius specialized in faculty development, he proved to be an invaluable peer during this study. Often playing the role of devil's advocate, he provided feedback on all aspects of

our conceptual framework and supplied insight into the significance of the results as they pertained to pre-service training. We followed an inductive approach as we worked to uncover “important patterns, themes, and interrelationships” (Patton, 2014: 41) relating to our research question. After we independently reviewed all interviews, our collaboration ultimately resulted in a total agreement on all resulting themes, categories, and hypotheses.

During this study, Demetrius was serving as the director of pre-service education training for Air Force enlisted leadership instructors. To nullify bias that could arise due to Demetrius’ position, Jason chose all participants and conducted all interviews and observations. We were concerned participants might bias their interview responses or classroom behavior if their former instructor was directly involved in data collection. No participants were made aware that Demetrius would be involved in the study, and Demetrius was never made aware of the identity of the participants. As Jason had no affiliation with or personal stake in the success or failure of the pre-service training program, his perspective acted as a counterbalance to Demetrius’ viewpoints when analyzing interview and observational data. We conducted all analyses independently, and we did not discuss our findings until our independent studies were complete.

We believe these measures represent a pragmatic and adequately rigorous means of addressing this study’s validity, reliability, and positionality as researchers within the Air Force EPME enterprise.

6. Results and conclusions

6.1 *Instructor self-efficacy*

Participants exhibited a high sense of teacher self-efficacy when examined through Robinia and Anderson’s (2010) four categories of teacher self-efficacy: classroom management, student engagement, technology use, and instructional strategies. All participants credited pre-service training for their proficiency in each category, noting that both the curriculum and instructors within pre-service training were vital to their confidence and competence within online classrooms. The participants also mentioned their experience as military supervisors helped manage classroom dynamics.

6.2 *Classroom management*

Both pre-service training and participants’ experience as military leaders prepared them to manage online classes. No participant expressed that they felt unprepared to manage classrooms effectively online, and there were no student survey comments indicating participants were unable to manage classrooms successfully. All participants struggled with time management. As Rachel related:

I do struggle with remembering the breaks in the online environment... because basically in online [class], if somebody has to use the restroom, or deal with their kiddos in the background, or spouses, [they] just turn off their camera and go off and do it. So, having designated breaks, I struggle with.

When Jason observed Shannon’s classroom, she completed her hour-long lesson in 60 minutes. Jason asked if her ability to complete a lesson on time was something she’d learned in pre-service training, and she explained:

While [pre-service training] was helpful, what they don’t teach you in the instructor course is that, yes, you have your lesson plan that is scheduled for a block of time, but you don’t realize that you need to take breaks during the lesson itself. My first class... I went over [time] big time...so this next class, I was very cognizant... I set up a schedule for myself...I needed to map out my times.

Pre-service training, as well as the instructors' background as military supervisors, appeared to prepare instructors to manage disruptions within the online classroom. Alyssa recalled that she had students who were consistently testing her ability to manage her classroom. Jason asked if pre-service training prepared her for those situations, and she responded:

If there were criers....we did address that [in pre-service training]. If they needed to take a moment, if it was a heavy topic, [we should] just allow them to excuse themselves, just don't let them miss anything big. But....in the moment [with a combative student], it was more that supervisory personality trait that we've all learned outside [of pre-service training] that kicked in.

The ability to address disciplinary issues, manage lesson time, and keep students focused on learning tasks is consistent with a higher level of teacher efficacy (Tschannen-Moran & Hoy, 2001).

6.3 Student engagement

Pre-service training prepared most participants to engage with students online appropriately. Pre-service training instructors modeled how to appropriately engage with students online, and the participants continued to model that behavior. Alyssa explained how being an online instructor meant increased pressure to engage with students:

You have to be that much more animated online. It's like, the tactile learners, they're sitting at their desk, and if they're not a gamer, and they're not engaged...you're going to have to pull them out somehow, and doing the weird, quirky things, and moving around and using slideshows.... you have to incorporate all of that, and the teacher that I got [in pre-service training] was really great...they gave me basically everything I needed to engage with my classroom.

Shannon related how she kept open lines of communication with her students, leveraging one-on-one feedback time to engage with them:

Just like in [pre-service training], when I do instructor-student feedback, we talk a lot. It's not just a 10-minute feedback and we're done. If I had a student that I felt like there was something going on at an emotional level, I reached out to them and asked, "Hey, are you okay? Is there anything going on?"

While Rachel attended pre-service training conducted synchronously online, she taught her own class online by leveraging a primarily asynchronous model and experienced difficulty engaging with students:

We basically do "touch points." One hour in the morning, maybe one hour in the afternoon, to make sure that they got the lesson concept and did their discussion boards, and then we send them on their way. It's very hard to gauge whether or not we are forming any kind of relationship. It's unfortunate because I like to laugh and have a good time, and I can't tell if they're having a good time or not. So, it becomes very difficult for me. I have no idea whether or not these folks are forming bonds of any kind. I have no way to tell whether or not they're getting along.

Student survey responses highlighted the participants' high ability to engage with learners. Shannon's students appreciated that she always worked diligently to engage with the class. Alyssa's students expressed surprise that she was a novice instructor due to how naturally she engaged with them.

6.4 Technology use

Although not explicitly taught how to utilize the learning management system (LMS) and other instructional technology in pre-service training, participants felt prepared to leverage technology online by relying on their personal experience with technology. They also modeled the technology use they witnessed in pre-service training. Rachel explained, “I think that if people paid attention in [pre-service training], you learned a lot of things...just by being in the class itself....you had a general understanding of how [the LMS] works.”

Alyssa echoed these sentiments, relying on her experience as opposed to pre-service training to use instructional technology:

The LMS usage, I want to say that we didn't really touch on it too much other than turning in assignments [in pre-service training]....but it really isn't hard to figure out because...I like to compare this with your regular online school...if you are a student in online schooling...you are already familiar with how they deliver their LMS.

Participants relied heavily on their on-the-job trainers to master the LMS.

Harley related:

For how to grade, I didn't know what the speed grader looked like or how the rubrics would be.... how I actually type notes in them. Until the first assignment was turned in, and then I was like, “okay [trainer], I don't want to mess this up. I'm really afraid to convert this to a PDF document, so maybe you and I can sit down, and you can show me how to do this.”

While observing her class, Jason noticed Shannon was integrating video clips, chat rooms, and live video with ease. She explained her proficiency came from experience, not pre-service training:

What I needed to know from [pre-service training] was how to work the technology side...for example: sharing the screen to show a video and knowing that it's going to take longer to download that video and show it and to be patient with it. We found this out my first class: I was showing buffering on my side, and so I was thinking that it was buffering for them [the students] too, but it wasn't, and it was showing [the video], so that's what's hard about the technology side is you don't know what side is working good and what side isn't.

All participants mentioned that attending pre-service training online was beneficial to learning how to leverage technology online. From navigating the LMS to creating video breakout groups to third-party apps used online, all participants credited the pre-service training instructors' modeling of appropriate technology usage as vital to their learning.

Students identified Rachel in end-of-course surveys. They claimed she was adept at using technology and commending her for finding alternative instructional technologies to use when the LMS experienced server problems.

6.5 Instructional strategies

Pre-service training adequately prepared participants to utilize a myriad of instructional strategies online. All participants mentioned chat rooms and small-group video conference rooms as ways to observe student-to-student interactions and engage with students more intimately, citing their experience in pre-service training as the model they aimed to replicate.

Harley identified that teaching online where she could see students collaborating in real-time gave her insight into the thought processes of her students, preferring it to in-residence instruction:

If they're working on a group project, I can see where they're headed...they're doing amazing-level research that I couldn't have envisioned having done previously in-residence. So, I do feel like I'm way more connected than I would have been [in person]. Because I can see all that work [the students are doing]. They wouldn't be sharing their articles with me in-residence, right? They may say, "oh, I saw some cool article from RAND" but I wouldn't have the option to live research it with them as they're sharing these things. For example, in my last class, I had to redirect them because they were using sources that were not as....[pauses]...I had to teach them about primary versus secondary [sources] versus opinion....so I was able to redirect to my group and say, "Hey, I need you to do better research on this. we expect for you to be bringing back not just some weird guy talking about Russia. we need you to do better, and here's the reason why." So, I definitely feel way more connected to them.

While observing Shannon's classroom, Jason noticed Shannon would directly question a student about a topic, and the student responded over video. Meanwhile, other students populated a chatroom with their responses to Shannon's question. After Shannon finished talking to the initial student, she would read the chat and call on students to expand upon their text responses. The students elaborated on their answers audibly. All students had the opportunity to answer questions without speaking over one another, maximizing participation. Shannon credited her pre-service training instructor for this technique. She explained that while it wasn't explicitly taught to her, it was a behavior she observed and decided to model.

Harley employed both synchronous and asynchronous teaching methods to deliver lesson content, choosing one method over the other depending on the needs of her students:

I think it just depends on the lesson...for the first class, I was very asynchronous. I felt like they "got it," and I could send them on their way to complete the discussion posts. This [current] class, on the other hand? I had to do a lot more of, like, "let's walk through this together." So, it was a lot more synchronous than what it was the previous time around.

Students appreciated Harley's efforts, as she received positive feedback in the end-of-course surveys for her ability to adapt instruction to the needs of her students.

These data indicate a high level of teacher efficacy, as the participants appeared adept at leveraging myriad instructional strategies to meet student needs (Tschannen-Moran & Hoy, 2001; Robinia & Anderson, 2010).

6.6 Locus of control

Participants indicated an internal locus of control, meaning they exhibited behaviors or made statements indicative of the belief that they controlled the classroom environment (Rotter, 1996). No participant explicitly linked her internal locus of control to pre-service training. Rachel explained how she felt she could make the classroom more dynamic to better meet student needs:

What I do like is...I can slip the start and end times of my day. I also enjoy that I can pick and choose the open-ended questions and kind of lead them [the students] down a path that I'd like to lead them.

While participants felt a positive control over the online environment, they did not feel the need to micromanage. Participants felt confident and encouraged students to work in groups

without an instructor. Shannon pulled student names randomly from a basket to create the small groups for activities:

When I pull their names from the basket, they [the students] are all in different groups every time. When I sent them off into [the lesson] this morning, I basically let the [video conferencing software] open for them to do it on their own because I knew that they wanted to talk on their own.

Participants noted there were aspects of teaching online that were out of their control. Rachel noted:

I think at the very least [pre-service training] should prepare instructors to know what kind of obstructions to expect when instructing online...you know, I didn't think about different time zones, severe weather, internet [outages], families [distracting students]. None of that did I contemplate [before teaching].

Harley recalled a time when students began to try and control the classroom environment, but she was able to regain positive control of the class quickly:

All the students started to change their [video conferencing] background to match each other's, and they were playing a game: get everyone to change their background...it became distracting...and so I [pauses]...I did have to, you know, stop it at that point and say, "hey, guys, like, I get that the backgrounds are fun. But now you've made it not fun. Because now people were talking, and you guys aren't listening to each other. And that's not fair for the person that's talking, right? And so we're going to finish off [the lesson] and hopefully restart over again tomorrow with a much better attitude."

These data indicate that participants felt an internal locus of control, indicating a higher sense of teacher self-efficacy (Rotter, 1996).

6.7 *Social-cognitive theory*

Participants were aware of the reciprocal relationship between their emotional state, their behavior, and the classroom environment. They actively strived to create healthy learning environments.

Alyssa: It really just depends on how you approach the class. If you're energized, and you have the personality.... I say, more often than not, "alright guys, it's Monday, let's get it! Let's do this!" not, "let's just get through this." It's more of a positive spin on it, and I find it makes the class more positive.

Shannon: I think honestly, you can really make a huge impact. It doesn't matter if you're in the classroom or virtual...it's what you're saying and how you act that has such an effect on the students. We had one day where we were talking, and they [the students] came on[line], and they're like, "we are just so grateful to have you as an instructor, and we feel really blessed...you're so positive, you set the tone for us. You're motivating for us." I mean, you can do all of that virtually. It does not have to be in person.

The online environment posed limitations on how much instructors could affect the online environment with their behaviors. Rachel noted environmental distractions made it difficult for students to be immersed in the learning environment, stating, "some of their [the students'] kids are at home, but their spouse has to go into work. So now they have little kids running around....and they get distracted."

Participants indicated that they were not only aware of how their emotional state and behaviors affected the online learning environment but were conscientiously leveraging techniques to modify their behavior to influence the classroom environment positively.

Participants recognized when factors outside of their control limited their influence on the learning environment. These data indicate an elevated level of teacher self-efficacy, according to Bandura (1986).

7. Discussion

This study's findings provide foundational data which can potentially influence future training of Air Force EPME instructors. While EPME delivered courses online due to the COVID-19 pandemic, Air Force guidance stated that online instructors did not require pre-service training focused on online teaching and learning (CCAF, 2017). This study analyzed the feelings and experiences of four EPME instructors to begin validating or refuting that perspective.

In response to our research question, we conclude that pre-service training focused on in-person instruction, when coupled with participants' experience as military supervisors, adequately prepared this study's four participants to teach in online learning environments.

In addition to skills learned within pre-service training, participants relied on their background as military supervisors to manage classrooms. Student engagement techniques were sufficiently learned from pre-service training faculty who model learner engagement online. Participants graduated pre-service training with a baseline knowledge of how to use instructional technology but required more guidance in mastering the LMS. Pre-service training adequately prepared participants to leverage a variety of instructional strategies online.

These results coincide with the findings of Keys (2021). In that study, 129 of all 500 USAF EPME instructors worldwide (26%) completed a teacher sense of efficacy survey focused on teaching online during the COVID-19 pandemic. Respondents communicated that they felt adequately prepared to teach EPME in online learning environments. This case study continued research on USAF EPME during the COVID-19 pandemic and provided additional insight into why EPME instructors feel confident and competent in online classrooms.

USAF EPME leadership can combine these qualitative results with Keys' (2021) USAF EPME-wide quantitative study on instructor efficacy to determine how to best modify pre-service training for EPME instructors in the future.

8. Limitations and recommendations

It must be noted that the traditionally in-person pre-service training examined during this study was conducted online due to the COVID-19 pandemic (Kingery, 2020). Future research should focus on instructors who attend pre-service training in a face-to-face construct and immediately begin teaching online.

Additionally, this study only uses perceptions data relating to teacher efficacy. Per Bernhardt (2018), perceptions data only provides insight into how students, faculty, and other stakeholders feel about the learning environment. For a more robust examination of EPME teacher efficacy, future research should examine student learning data (e.g., learning outcome standards success), demographic data (e.g., pass rates and dropout rates), and process data (e.g., timeliness and cost) (Bernhardt, 2018).

Finally, this case study examined the emotions and feelings of four EPME instructors. Due to the small sample size the results cannot be generalized to the entire population of EPME instructors. Future qualitative research should continue to gain the perspectives of larger sample sizes of instructors to uncover trends and patterns within the EPME instructor population.

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Appendix A

Observation Protocol

Observer: Participant:

Location/Date/Time:

Lesson:

Preamble: My name is _____. I am a researcher from the Barnes Center for Enlisted Education and am conducting research on the self-efficacy of EPME instructors who are teaching online. I would like to observe your negotiation lesson and take some notes. The notes will be part of the data of the research. Your identification will not be revealed in any form.

Physical Setting	Descriptive notes
Set up of video conferencing: backgrounds, number of students on screen at once, music going, quality of AV feeds, are cameras on?	
Participants	Descriptive notes
Who was there? Who's allowed? Dress and appearance? Timeliness?	
Conversation	Descriptive notes
Convo content? Who spoke to whom? Nonverbals? Silences?	
Classroom Management	Descriptive notes
Did teacher get through lesson/break in time? Breakout groups, set up experientials? Disruptive students handled?	
Student engagement	Descriptive notes
Gained/kept student attention How disengaged students appeared/handled Did all students participate? Engaged w/one another, or w/the instructor?	
Instructor Technology Usage	Descriptive notes
How did teacher leverage technology? Helped students w/tech issues? Used technology to enhance the lesson?	
Locus of Control	Descriptive notes
Did instructor accept blame for issues? Did instructor or students control lesson flow? How did instructor deal w/the unexpected?	
Social-Cognitive Theory	Descriptive notes
Examples of how instructor behavior affected the environment?	
EPMEIC KSAs	Descriptive notes
Attention, objectives, present material, check material, feedback to student, conclusion	

Appendix B

Interview Protocol

Faculty Development

- Hypothetical: if I was to graduate the EPME instructor course (EPMEIC) tomorrow, and had to teach my first online class in a week, what additional training would I need?
- Devil's Advocate: The CCAF says that online instructors need only the same training as face-to-face instructors. Do you agree with that, and why or why not?
- In what ways have you personally supplemented EPMEIC training in your home unit?

Classroom Management

- What aspects of managing a classroom (timeliness, lesson flow and completion) did you learn in EPMEIC that has been relevant to online teaching?
- What would you inject into the EPMEIC curriculum regarding classroom management in online environments?

Student engagement

- What are some ways you've found to engage with students unique to online teaching?
- How do you identify disengaged students in an online learning environment?
- How do you deal with disengaged students effectively?
- Regarding the above questions: how much did EPMEIC your ability to engage with students in an online learning environment?

Technology Usage

- What aspects of technology usage did you have to learn after EPMEIC in order to teach online?
- How did EPMEIC influence your proficiency in using educational technology, if at all?

Locus of Control

- What are some way you can control the classroom in an online learning environment?
- What are some examples of ways the online learning environment is out of your control?
- How much of this was discussed in EPMEIC?

Social Cognitive Theory

- How do you see instructor behavior affecting the environment in an online classroom?
- Was this taught in EPMEIC? If not: should it be?

Self-Reflection

- Describe how confident/proficient you feel as an online instructor and why.
- What would be your advice to the EPMEIC students who will be teaching online after graduation?

