

**Military Faculty Development at the Post-Graduate Level: Using the Cognitive
Apprenticeship Model with Curriculum-Based Leadership**

By

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Abstract

The Department of Defense's enduring mission is to provide combat-ready military forces needed to defend our nation, deter war, and protect the security of the United States (DoD, 2020). Effective military training and education are critical to our National Defense Strategy in that it provides a way to prepare our servicemembers with the ability to carry out the mission of the Department of Defense.

Military training and education programs encompass almost every facet of adult education, from basic skills training through graduate-level higher education (Persyn & Polson, 2012). Adult teaching and learning in the military is a complex project that touches many lives and asks us to learn from the past as we design, experiment, and explore the evolving educational landscapes of the future (Zacharakis & VanDerWerff, 2012).

The purpose of this study was to update the content and structure of the military instructor faculty development program at the Judge Advocate General's School. The existing faculty development program was over ten years old and needed to be reviewed and updated because the content and structure were not serving the pedagogical needs of the faculty effectively.

This research study used three phases to address three research questions as it updated an existing in-house military instructor faculty development program. Phase I served as the needs analysis phase to determine what education-related topics needed to be included in the new program. Phase II took the results of the previous phase and not only updated but implemented the new program, and Phase III determined if those updates were successful.

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Chapter I: Introduction

The Department of Defense's enduring mission is to provide combat-ready military forces needed to defend our nation, deter war, and protect the security of the United States (DoD, 2020). Effective military training and education are critical to our National Defense Strategy in that it provides a way to prepare our servicemembers with the ability to carry out the mission of the Department of Defense. In alignment with these strategies, the United States Air Force mission and priorities revolve around the capabilities of readiness, which are realized with effective military training and education programs (AFJAGS, 2020).

Military training and education programs encompass almost every facet of adult education from basic skills training through graduate-level higher education (Persyn & Polson, 2012). Adult teaching and learning in the military is a complex project that touches many lives and asks us to learn from the past as we design, experiment, and explore the evolving educational landscapes of the future (Zacharakis & VanDerWerff, 2012). As part of that military training and education paradigm, the Judge Advocate General's (JAG) School, at Maxwell Air Force Base has been preparing military attorneys for over thirty years (AFJAGS, 2020). The JAG school achieves these training and education goals by using military instructors who possess a Juris Doctorate and are considered subject matter experts in law.

The mission of the JAG School is to provide the highest quality education and training to judge advocates, civilian attorneys, and paralegals to meet the needs of the Air Force and the Department of Defense (AFJAGS, 2020). The military commander, therefore, has a shared responsibility to develop their subordinates, and in so doing, the individual's growth, maturity, and learning goals, which are closely tied to the mission of the organization (Zacharakis & VanDerWerff, 2012).

Background

Faculty development is a way an institution can change and improve the scholarship of its faculty, therefore meeting its training and education mission, goals, and outcomes (Watson, 2019). The training mission of the JAG School depends on effectively trained military instructors, who carry out this mission and its educational goals and outcomes in leadership and law (AFJAGS, 2020).

The JAG School is a post-graduate level school that trains civilian lawyers to become military lawyers after they join the Air Force. Military lawyer training usually begins with a nine-week foundational course available at the school three times each calendar year. The JAG School also provides intermediate and advanced classes on leadership and law for the JAG Corps. The JAG School is formally tasked with this training mission for the entire Department of the Air Force.

Novice military law students are taught by experienced lawyers who have at least ten years of practice and are considered subject matter experts in the field of military law. In other words, the veteran lawyers teach other lawyers on the learning continuum from novice to advanced. The veteran lawyers who become faculty at the JAG school, however, usually do not have any formal teaching experience. Though experienced in military law, they must learn how to be successful and effective faculty members at the JAG school by learning the necessary pedagogy, the art and science of teaching. Once they are pedagogically trained, these experienced military JAGs are used as in-house faculty and instruct at the JAG School for two- to three-years. The purpose of this study was to update an existing faculty development program to meet the mission of the JAG School and its educational goals and outcomes in leadership and law.

Purpose Statement

The purpose of this study was to update the content and structure of the military instructor faculty development program at the Judge Advocate General's School. The existing faculty development program was over ten years old and needed to be reviewed and updated because the content and structure were not serving the pedagogical needs of the faculty effectively. The old program did not address the use of technology, such as web conferencing and learning management systems, a staple in today's classrooms. Mentoring was not used in the old program but was consistently requested by new instructors to help them understand their new roles and responsibilities. In addition, curriculum-based leadership was also needed because, as a military school, all instructors were expected to delegate curriculum-related responsibilities to junior officers; understanding adult teaching and learning processes, combined with the curriculum were needed in order to do this effectively.

As part of the purpose to update the content and structure of the existing faculty development program, the researcher had two other objectives. The first objective was to conduct a needs analysis at the beginning of the study to determine the needs of the instructors. The second objective was to address the contemporary classroom in terms of incorporating technology, using formal faculty development, incorporating mentoring, and ensuring curriculum-based leadership, or in this case, curriculum-based military leadership, because of the military influences embedded within the JAG school.

To meet the purpose of this research study, it was divided into three phases: Phase I corresponded with the needs analysis phase and was used to explore the needs of new faculty; Phase II corresponded with the design and implementation of results realized during the first phase; and Phase III corresponded with the evaluation phase and was used to judge the

effectiveness of the newly updated program. All endeavors centered around the goal of improving an existing new faculty military instructor program.

Research Questions

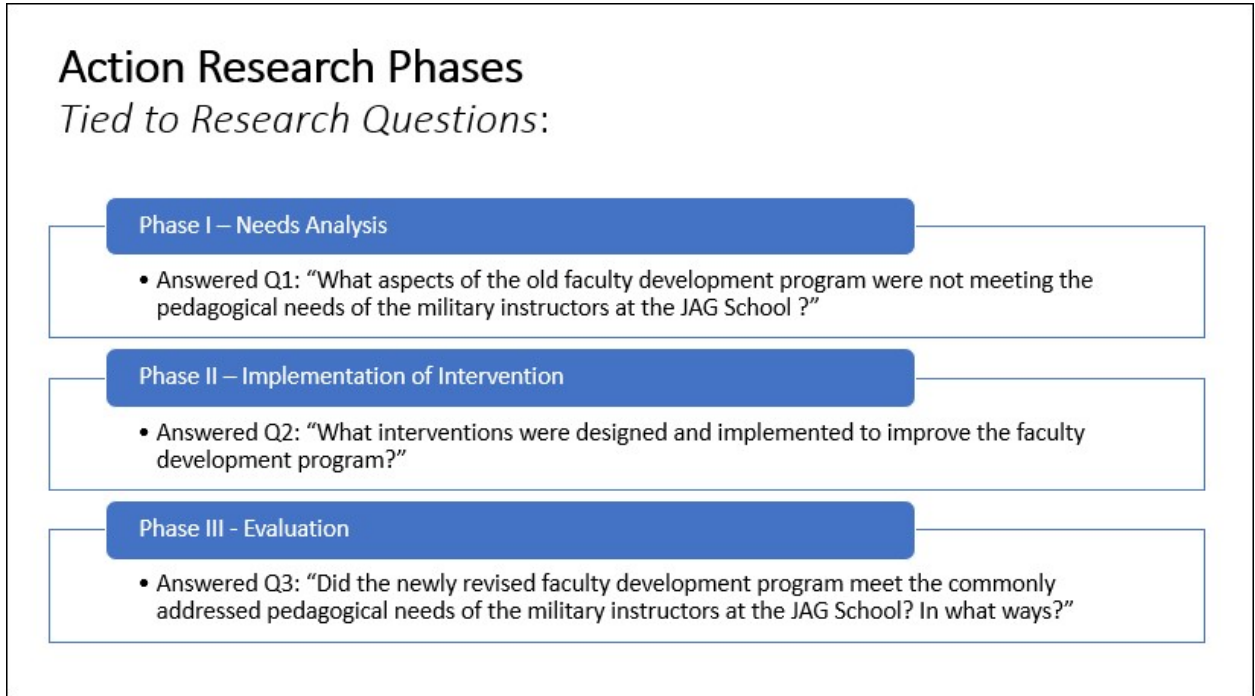
This study investigated the following research questions:

1. What aspects of the old faculty development program were not meeting the pedagogical needs of the military instructors at the JAG School?
2. What interventions were designed and implemented to improve the faculty development program?
3. Did the newly revised faculty development program meet the commonly addressed pedagogical needs of the military instructors at the JAG school? In what ways?

Three phases of research study methods were used for minimal disruption in the process of revising the military instructor faculty development program. Each of the three phases progressively addressed each of the three research questions. Phase I corresponded with the needs analysis phase and was used to answer the first research question. Phase II corresponded with the revision and implementation phase and was used to answer the second research question. Phase III corresponded with the evaluation phase and was used to answer the third research question. The following figure illustrates the phases and how each one built upon the previous phase in order to progressively answer the research questions posed by the researcher. The minimal disruption factor was prevalent throughout the process, from the needs analysis phase as part of the implementation phase and ending with the evaluation phase; these all had to be implemented with caution as not to disrupt the busy instructional schedule of the school and its faculty. The three research phases and their corresponding research questions are shown in the figure below.

Figure 1

Action Research Phases



Overview of the Research Design

Given the limited amount of research and literature about training military instructors to teach at the post-graduate level and the need to involve the participants in a minimally disruptive way, this study employed a mixed-method action research methodology to understand and infer the most appropriate way to update an existing faculty development program. Action research study methodology was used because it is a systematic process of inquiry conducted by a teacher or other learning professional to gather insight into how well learning is occurring and taking necessary interventions to improve areas in the classroom that may have challenges, problems, gaps, or shortcomings (Ferrence, 2000; Mills & Gay, 2019; Mertler, 2019; Wetzel & Ewbank, 2013).

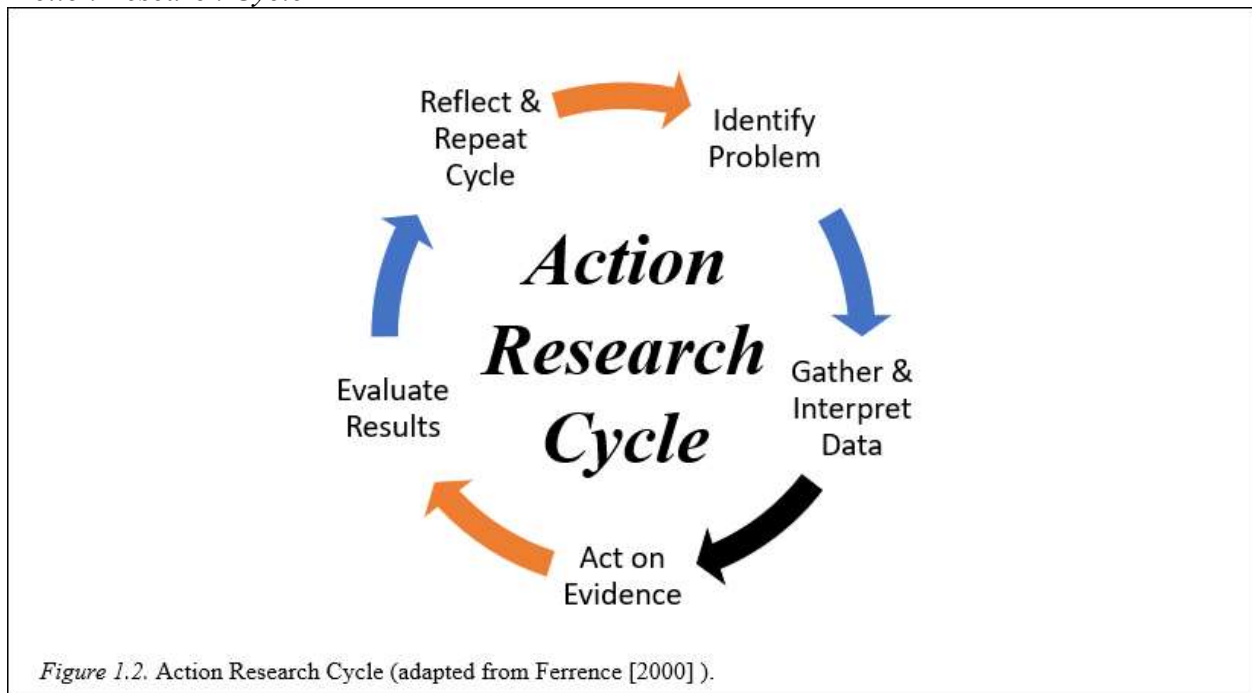
Action research is methodologically eclectic and innovative; the nature of the problem(s) to be solved drive the criteria and determined the appropriate interventions to be used (Vaccarino

et al., 2007). In this study, the action research cycle was used to discover interventions or ways to improve the program; this cycle included identifying a problem, gathering and interpreting data, acting on evidence, evaluating results, reflecting, and repeating the cycle, as needed (Ferrence, 2000).

Action research was a way to solve practical problems by working to bridge the gap between theory and practice (Vaccarino et al., 2007). This approach was best suited to this study to pinpoint pedagogical and instructional challenges, design pragmatic solutions, and create effective and meaningful change with minimal disruption to the JAG School.

Figure 2

Action Research Cycle



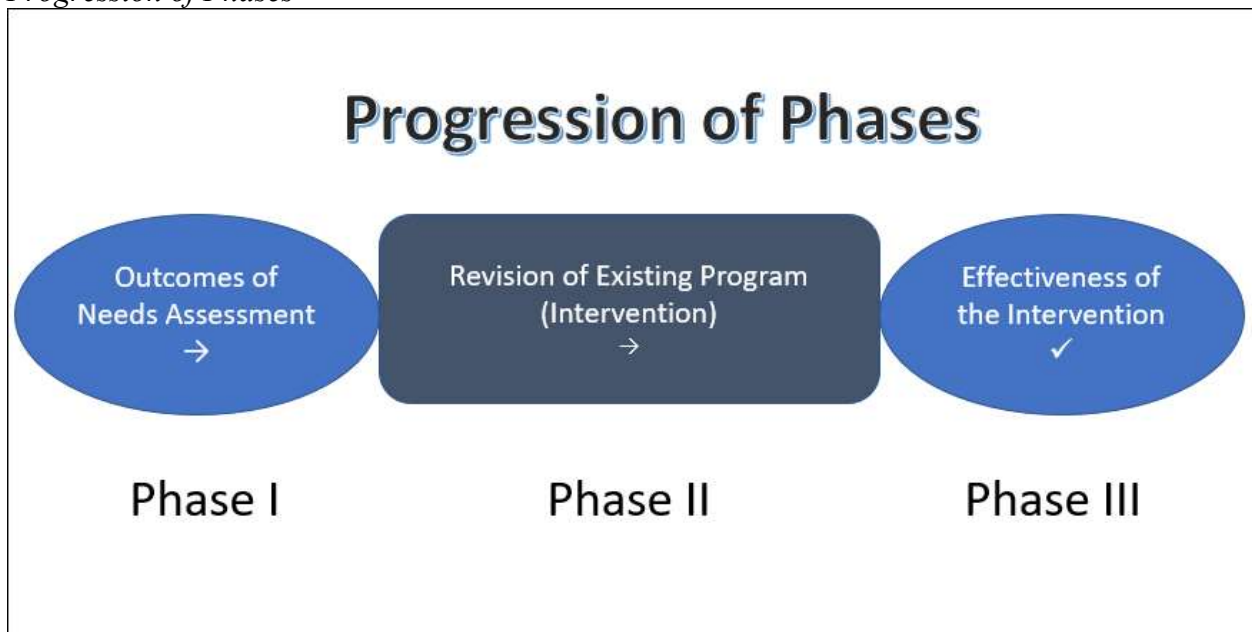
Using action research, the interpretation of initial data was used to identify major themes, which were used to determine a plan of action, called an intervention; these interventions were used to positively impact the desired change and improve the issue or situation targeted by the study itself (Ferrence, 2000). Qualitative coding and researcher reflection informed the action

research design to understand themes associated with the interventions that were used to improve the existing faculty development program.

In Phase I, qualitative data in the form of open-ended responses from a decade of faculty development surveys was coded to determine faculty needs, which were used to update the faculty development program and served as the needs assessment. Phase II data used a pre-test before the faculty development began and end-of-course survey after the faculty development program was completed and was tied to the intervention and its revisions to the existing program; this data was both qualitative and quantitative. Phase III used a post-test to determine if the updated program successfully met the pedagogical needs of the military instructors at our school and to gauge the effectiveness of the intervention; this data was also both qualitative and quantitative.

Figure 3

Progression of Phases



Theoretical Framework

This study was framed around the cognitive apprenticeship's theoretical framework where cognitive activities in the teaching and learning process closely replicate the tasks the novice partitioner would ultimately be required to do (Collins et al., 1989; Collins et al., 1991; Dennen & Burner, 2008; Maigida & Ogwo, 2013; Newstetter, 2005; Tilly & Callison, 2007; Swaim, 2017). In apprenticeships, learning usually occurs through a physical, tangible activity, where learners see the process of work while they assist a master tradesman to learn and gain experience on the job (Collins et al., 1991). Cognitive apprenticeship theory is aimed at enculturating novice learners into authentic practices by teaching them, incrementally, to understand the nature of expert practice and to think like an expert partitioner; this pedagogical approach can provide an ideal environment in which learners develop the thinking skills required for expertise (Pinelli et al., 2018).

The cognitive apprenticeship theory is rooted in constructivist learning theory where students use real-world experiences to learn in a contextualized instructional environment under an experienced practitioner (Collins et al., 1989; Collins et al., 1991). Given the typical faculty member's tour of duty at the JAG School was only two to three years in length, this apprenticeship-like program was best suited to provide the support new military instructors needed as they grew in their level of teaching experience and pedagogical knowledge.

Assumptions

The researcher made several assumptions concerning this study. The primary assumption of this study was that participants would provide honest, truthful answers. To increase the likelihood of honest responses from the study participants, the researcher ensured confidentiality

among this group by telling them that any references made about any of their answers would only reveal a respondent number, and no names.

Another significant assumption of the study regarded the participants' similar characteristics, such as having law degrees, having practiced military law for over ten years, and having been officers in the United States Air Force responsible for leading their subordinates.

Limitations

Study limitations revolved around the researcher's personal beliefs, biases, and values (Creswell & Poth, 2016). Action research reflection asks researchers to acknowledge these limitations as they conduct the reflective processes needed in order to determine appropriate classroom interventions (Dosemagen & Schwalback, 2019; Ferrence, 2000; Mertler, 2009; Tripp, 2005; Zambo, 2011). To acknowledge these potential limitations, the researcher conducted extensive journaling exercises to reveal their potential biases and values throughout the study; these potential biases and values were scrutinized by the researcher and a trusted military colleague at the JAG school to challenge those beliefs, biases, and values from a military perspective, in addition to the researcher's perspective as an educator.

Significance of the Study

The current body of literature did not adequately address military instructor training and education needed for new faculty to teach at the graduate and post-graduate level (Persyn & Polson, 2012; Swaim, 2017; Zacharakis & VanDerWerff, 2012).

The outcomes of this study were applied at the JAG school to prepare military instructors to teach graduate level courses in leadership and law. The outcomes of this study could also be applied to other military instructor faculty development programs that are tasked to teach graduate level courses.

This study added to the body of knowledge that was scant and was not only needed but desired by military schoolhouses that served the needs of higher education training programs throughout the Department of Defense (DoD, 2020).

Definition of Terms

Action Research - Action research is a process of systematic inquiry, usually conducted by a teacher or learning professional gathering insight into how effectively learning is occurring and implementing the necessary interventions to improve areas that may have challenges.

Active Learning - Active learning engages the learner with the course materials as they create meaning and understanding of the material or learning experience.

Adult Learning Principles - The ways adults learn most effectively, to include lived experiences, which differ from children.

Air Force Instructor - Noncommissioned and commissioned officers who have the requisite training to teach adult learners in a military setting; most instructors are subject matter experts in their fields but do not possess formal training in the field of education.

Andragogy - Andragogy is the art and science of adult learning.

Classroom Management - The ability to effectively handle disruptive situations, respectfully, to stay on topic and on schedule.

Cognitive Apprenticeship Model - Cognitive apprenticeship is a method that experts use to teach complex tasks where the focus of this learning-through-guided-experience is on cognitive rather than on the physical skills.

Content Authoring Tools - Software used to create digital multimedia.

Curriculum Planning - Air Force curriculum planning uses instructional systems development models such as ADDIE, the successive approximation model, and understanding by design, to analyze, design, develop, implement, and evaluate curriculum for use.

Facilitator of Learning - Person who supports or leads others in the learning process.

Flipped Classroom - In the flipped classroom, instruction is completed by the student outside of the classroom so that classroom time is open for applying what was learned.

Formative Assessment - Real-time evaluation of student understanding.

Interactive Lecture - An informal lecture that includes student interactivity by activity or questioning.

Instructional Methodologies - Instructional methodologies are techniques and processes used to teach; the various ways to teach an idea, topic, or task, commensurate and appropriate to the educational outcomes required.

Learning Management System - Software used for the management and delivery of instruction.

Learning Theory - Frameworks that describe how knowledge is processed during learning.

Lesson Presentation Formats - Similar to lesson outlines; used for various instructional presentations such as small-group learning, large-group plenary sessions, that have different time signatures and instructional methodologies based on the number of participants and the learning objectives.

Needs Assessment - A needs assessment is usually the first step in creating training or education products, to ensure the needs of the learners is understood and addressed with the curriculum or learning environment.

Reflective Practice - Reflective practice in education asks the teacher to become aware of their underlying beliefs and assumptions about learning and teaching to promote effective learning.

Reflective practice should be practiced consistently, over time, as beliefs and assumptions may change.

Rubrics - Scoring guides for abstract or complex student assignments; subjective material can be objectively scored.

Substitute Teacher Folders - Lesson plans and materials needed by a substitute teacher to accomplish a scheduled learning event.

Student-Centered Instruction - Learning that is stated and executed in terms of what the student will know or do as a result of learning, shifting learning experiences and outcomes from the teacher to the student.

Summary

The purpose of this study was to update an existing military instructor faculty development program. In preparation for this task, the researcher conducted a literature review and found very little research on how to do this effectively. The current body of literature did not adequately address military instructor training for post-graduate level instruction (Persyn & Polson, 2012; Swaim, 2017; Zacharakis & VanDerWerff, 2012). This gap in research and literature facilitated the need to conduct a needs assessment to infer and inform change at the JAG School as they sought to update its week-long, in-house, faculty development program. The researcher determined an action research study could be used with minimal disruption to the military members to update the decade-old faculty development program at the JAG school and add to the scant body of knowledge so that other military schools could benefit from the results of this study.

This research study achieved these changes by using three phases; each of the three phases of the study were associated with one of the three research questions that asked about the

current state of the faculty development program, what needed to be changed, and if that implemented change was successful. The study was framed theoretically around the cognitive apprenticeship theory as a meaningful, actionable, and pragmatic approach to quickly prepare military instructors for their teaching roles at the JAG school, a post-graduate level military law school. The process of updating this faculty development program are discussed in the following chapters.

Chapter II: Review of the Literature

This literature review discusses action research methodology and how action research's design was used to create interventions that solve problems or questions vital to a specific class or course, in this case, the faculty development course at the JAG School. The literature review goes on to discuss the cognitive apprenticeship model, which was used as the framework for the interventions discovered in the action research phase. Faculty development was at the core of this study and was researched with a specific focus on the military instructor.

Because military instructors are leaders, curriculum-based leadership was included to show what best practices were used in higher education that could be applied to military teacher-leaders' roles and responsibilities. All the other areas were researched as part of the interventions themselves, which were used to improve the faculty development program and include topics such as the flipped classroom, and the use of technology.

Action Research

Overview

Action research is a process of systematic inquiry usually conducted by a teacher or learning professional gathering insight into how effectively learning is occurring and implementing the necessary interventions to improve areas that may have challenges (Ferrence, 2000; Mertler, 2019; Mills & Gay, 2019; Wetzel & Ewbank, 2013). In broadly defining action research, one would include describing any attempts at pragmatic investigation to improve practice using an ongoing, systematic approach (Frankel & Wallen, 2009; Mills & Gay, 2019; Tripp, 2005). Action research is reflective in order to better understand the educational environment and to improve practice. While the goal of scientifically based research may be to prove the effectiveness of an instructional method, the goal of action research is to improve

teaching and learning while improving an educator's own practice (Dosemagen & Schwalbach, 2019; Mills & Gay, 2019). Action research can be used by school personnel, who have the knowledge, skills, and dispositions to pinpoint educational challenges, design solutions, and create effective change (Mills & Gay, 2019; Zambo, 2011).

Action research provides an approach to problem-solving that encourages educators to focus on a local challenge, research to understand the challenge, design an appropriate solution or intervention, act, reflect, and repeat this process until effective change is realized (Zambo, 2011). In teacher-initiated action research, the first step is to determine what to study with a desire to make things better as your goal (Mertler, 2009; Mills & Gay 2019). There are many substantive benefits of conducting action research in terms of improving the quality of teaching and learning for students, however, one of the greatest benefits involves practitioners, who, as a result of the study, stand to gain a deeper understanding of their practice, improve their discipline, and transform the knowledge used in their classrooms into meaningful professional development (Ferrence, 2000). This is why action research is positioned within qualitative, interpretivist research, with the goal of gaining that deeper understanding (Dosemagen & Schwalbach, 2019; Frankel & Wallen, 2009; Mills & Gay, 2019).

Reflective practice is vital to teaching and learning. Unfortunately, lack of time, poorly developed reflection skills, or organizational cultures that do not support reflection or stymie reflective practice can negatively impact professional growth and lifelong learning (Sellheim & Weddle, 2015). Reflection in education is not new; many scholars from the likes of Dewey to Kolb have identified reflective thinking as a goal of education and encourage teachers to become reflective practitioners who engage with their experiences to create meaningful knowledge (Sellheim & Weddle, 2015).

Action research intentionally has a formal reflection component, used to serve as a chance for the educator to take a thoughtful look at one's personal practice in a structured manner as a way to investigate the impact that practice has on teaching and learning within the classroom environment (Ferrence, 2000; Gay et al., 2012; Patton, 2002; Ponterotto, 2010; Ryan et al., 2007). Because of this perspective, action research provides an authentic experience that can lead to enrichment and positive change, not only for the school but for the researcher, as well (Zambo, 2011). Research and reflection allow practitioners to grow and gain confidence in their work as they impact the needed process of change or improvement; collaboration with others to compare strategies and thoughts are also ways to gain understanding, validation, classroom improvements, and add to the school's body of knowledge (Ferrence, 2000). Using reflection, practitioners engaged in action research must critically explore what they are doing, why they are doing it, and its impact (Dosemagen & Schwalbach, 2019).

Choosing an action research format relies heavily on choosing a project that is appropriate within one's sphere of influence, one that is of adequate importance, and one that is manageable within a specified timeframe (Mertler, 2009; Mertler, 2019; Wetzel & Ewbank, 2013). Because of the recursive nature of the research cycle, data collection and analysis often occur simultaneously, concurrent with data collection. The practitioner distills the data collected in an analysis that causes insights or epiphanies to become clear which leads interventions and action plans that become the efforts of continuous improvement (Dosemagen & Schwalbach, 2019). In action research, the interpretation of this data is used to identify major themes to determine a plan of action, or more specifically called an intervention, that will, when used, positively impact the desired outcomes, and improve the issue or situation targeted by the study itself (Ferrence, 2000).

Historical Background

Action research began as a way to solve practical problems by working to bridge the gap between theory and practice and uses a spiral, or cyclical process of planning, acting, observing, and reflecting (Vaccarino et al., 2007). Historically, action research is attributed to the repetitive cycle of planning, action, and measuring results, which originally was proposed in the 1940's by Kurt Lewin, though earlier works were encountered in Germany, that also used similar processes (Lewin, 1952; Tripp, 2005). Lewin's (1952) research cycle, with its non-linear look-think-act interpretive process seeks a problem or an opportunity in one's educational practice to solve or improve (Dosemagen & Schwalbach, 2019; Lewin, 1952).

Even though action research is not frequently used because it is very specific to a school or classroom application, it is a legitimate form of research that has value to the educator and to learners, however, it should be judged by its own set of criteria rather than criteria that are used to evaluate other forms of research (Dosemagen & Schwalbach, 2019; Mertler, 2009; Mertler, 2019). There was a decline in action research popularity in the 1950's. By the 1980s, however, there was a resurgence of action research due in part to the growth and acceptance of qualitative research (Dosemagen & Schwalbach, 2019). Action research continues to be recognized as a legitimate form of research providing practitioners with a distinctive methodology for improving their practice as they develop their craft and become reflective, empowered agents of change (Dosemagen & Schwalbach, 2019; Mertler, 2009; Mertler, 2019).

Action Research Theory

Theory can be defined as a system of tested ideas used to explain phenomena that is based on a general principle; however, this definition is subject to interpretation according to the philosophical positioning of the person defining the term and, therefore, open to the interpretation of the intended audience (Corbin & Strauss, 1990; Mertler, 2009; Stringer, 2019).

Action research is sometimes considered atheoretical due to its pragmatic orientation to action, however, theory can be situated within the action research study according to the orientation of the project; by using theory in a different way than research approaches associated within relatively fixed systems that are commonly applied to educational research, action research is not fixed but fluid and contextual (Stringer, 2019). Educational action research is often based on the application of theory, emerging from academic and professional research, however, because of the unique situational aspect and context of the study itself, moving beyond commonly accepted practices and theories that maintain the status quo may be needed to capture the intervention adequately (Mertler, 2009; Stringer, 2019). The search for solutions to the problem of change should focus on what to think, versus what to do, which requires devising new theories or re-theorizing research to determine outside-of-the-box perspectives to better understand and go beyond what we already know about the problem that is being solved, and to sustain the change or intervention that was implemented (Stringer, 2019).

Conducting the Study

In conducting action research, the practitioner continuously confronts data about the health of a school community guided by the five phases of action research inquiry, which include: 1. Identification of problem areas, 2. Collection and organization of data, 3. Interpretation of data, 4. Action based on data, and 5. Reflection (Ferrance, 2000; Mertler, 2009; Mertler, 2019). Some will add the additional steps of reviewing the related literature on the topic of concern and developing both a research plan and an action plan (Mertler, 2009). These steps serve as guidelines and should be adapted to a particular research problem or topic and, when appropriate, can be rearranged or skipped because action research takes on many forms to allow a wide range of methodologies, as each case is unique (Mertler, 2009). Therefore, there are

several criteria to consider when identifying a problem area to investigate with an action research study; one of the biggest influences of this criteria identification hinges upon finding an answer to something that the practitioner can influence as a result of the study (Ferrence, 2000).

Action research is not a linear process, it is cyclical in nature; it has a clear beginning, but it does not have a clearly defined endpoint (Mertler, 2009). It is important to recognize action research as action inquiry, which is a generic term for any process that follows a cycle in which one improves practice by cyclically planning, implementing, monitoring, describing, evaluating, and reflecting on practice to improve outcomes (Tripp, 2005). Because of this, action research needs to be narrow in focus, so it is manageable (Mertler, 2009).

In deciding what action needs to be taken, the collection of data, such as field notes, questionnaires, anecdotal records, journals, surveys, and samples of student work, need to be used to better understand what is currently happening in the classroom, and as a basis of measurement used to gauge the results of the intervention (Ferrence, 2000). As practitioner-researchers investigate problems, collect data for analysis, and reflect to find solutions, they engage in a process of continuous improvement, which provides the skills and dispositions needed to continually refine and improve practice (Dosemagen & Schwalbach, 2019; Mertler 2009; Mertler, 2019). Action research empowers educators by showing them the power of their practice as they direct the design, development, implementation, and analysis of their study, which, in turn, affects student outcomes and learning while validating the practitioner's professional judgement (Dosemagen & Schwalbach, 2019).

Reviewing Results

Action research is more closely aligned with qualitative research in its philosophical underpinnings, assumes that knowledge is relative, changing, and dependent on people and settings, and cannot be completely objective, which challenges the researcher to examine personal assumptions, beliefs, and biases (Dosemagen & Schwalbach, 2019; Leech & Onwuegbuzie, 2007; Mertler, 2009; Mertler, 2019). Data analysis is, therefore, an inductive, recursive process of methodically searching for patterns, themes, and connections, while forming judgements, coding, and categorizing (Dosemagen & Schwalbach, 2019; Ryan et al., 2007; St. Pierre & Jackson, 2014; Stuckey, 2015).

In action research, qualitative data looks for themes, categories, or patterns that emerge, though the analysis is typically less complex than other, more formal research studies (Mertler, 2009; Mertler, 2019). Thoughtful implementation of action research methodology, however, is essential to ensure the trustworthiness of the conclusions that will impact practice and the validity of the findings (Dosemagen & Schwalbach, 2019; Mertler, 2009; Mertler, 2019). To ensure validity, action research applies many of the same principles used with qualitative methods and includes using well-designed procedures, recognizing personal biases, careful and thorough data analysis, and an absence of generalizing the results to other groups of students (Dosemagen & Schwalbach, 2019). Lastly, triangulating data ensures validity in the study by providing evidence from several sources (Dosemagen & Schwalbach, 2019; Mertler, 2009; Mertler, 2019).

There is more writing about action research than documentation about action research studies because those who engage in these studies are more often interested in generating knowledge applicable to their setting rather than generating new knowledge that can be shared beyond that setting (Wetzel & Ewbank, 2013). In other words, the results of one study might not

apply to another because the findings are usually not generalizable to other populations due to their context-specific nature.

Conceptual Framework - The Cognitive Apprenticeship Model

Overview

Before the twentieth century and its use of formal schooling, apprenticeship was the most common means of learning used to transmit knowledge from expert to novice (Collins, 2006; Collins et al., 1989). The cognitive apprenticeship model is patterned after the traditional apprenticeship system of skill transmission; however, it brings learners toward expertise in a domain by focusing on the cognitive, rather than the physical tasks associated with the job (Collins, 2006; Collins et al., 1991; Garcia et al., 2018; Maigida & Ogwo, 2013). During cognitive apprenticeship learning, students see and do things in the field, while working closely with a mentor, guide, or coach, to include adding a cognitive element in that students are also taught how to think beyond the task to a deeper, more critical, multi-dimensional level (Collins et al., 1989; Maigida & Ogwo, 2013; Rosenheck, 2013; Swaim, 2017).

Traditional apprenticeship components include instructor-guided modeling and scaffolding, whereas cognitive apprenticeships have several more components, such as articulation, reflection, exploration, and the ability to learn the decision-making processes associated with the craft or skill being taught (Collins, 2006; Collins et al., 1991; Chen et al., 2009). Apprenticeships still thrive around the world as a key method for passing professional knowledge and skills from one generation to the next; in cognitive apprenticeships, the transfer of knowledge and skills is deliberately reinforced with those necessary feedback events and supports from the mentor, so the ways of thinking accompany the transfer of knowledge (Backus et al., 2010).

Cognitive apprenticeship thinking is aimed at enculturating novice learners into authentic practices by teaching them to understand the nature of expert practices around the concept of thinking like an expert practitioner; this pedagogical approach can provide an ideal environment in which learners develop the thinking skills required for expertise (Collins et al., 1991; Garcia et al., 2018; Maigida & Ogwo, 2013; Pinelli et al., 2018).

Another aim of the apprenticeship involves having learners acquire cognitive and metacognitive thinking skills in a community of practice and apply those skills to solving future problems by having them observe how experts deal with problems in an authentic context – in essence, using learning through guided experience (Collins et al., 1989; Garcia et al., 2017; Liu, 2005). This occurs by focusing on learning through guided-experience and the cognitive and metacognitive aspects of learning; the cognitive apprenticeship model asks that learning become an external dialogue to allow for observation, comment, refinement, and correction to occur, interactively, between student and instructor, therefore tapping into the thinking or cognitive aspect of the process or skill being taught (Collins, 2006; Collins et al., 1989).

Cognitive Apprenticeship Theory

The cognitive apprenticeship theory is rooted in constructivist learning theory by which students use real-world experiences to learn in a contextualized instructional environment, where cognitive activities in the teaching and learning process closely replicate the tasks they will be ultimately required to perform (Collins et al., 1989; Swaim, 2017; Tilley & Callison, 2007).

Cognitive science posits that people develop expertise, primarily through experience, over many years; in order to shorten that period of time, an apprenticeship learning path can be used to expose new hires to each of the experiences for which they need to develop proficiency, starting from simple to complex, using real-world situations and applications, and by providing the

mentorship, collaboration, and support they need to become proficient (Rosenheck, 2013; Tilley & Callison, 2007). Cognitive apprenticeship models of teaching and learning seek to advance theory through the identification of the first principles of learning, usually associated with reading, writing, and mathematics instruction, which, combined with real-world application, can help adult learners more efficiently reach their job-related training and education needs (Newstetter, 2005).

There are four interconnected dimensions required in cognitive apprenticeship learning environments: content, to include knowledge and thinking strategies; method, or teaching strategies; sequence, regarding the way learning is organized; and sociology, which is situated in collaborative, cooperative environments (Collins, 2006; Collins et al., 1989; Garcia et al., 2017; Maigida & Ogwo, 2013; Pinelli et al., 2018). The four-dimensional framework of the cognitive apprenticeship theory requires apprentices to master their content, the methods that promote expertise, sequencing skills of increasing complexity, and the sociological aspects of learning that include situated learning, communities of practice, intrinsic motivation, and collaboration (Collins et al., 1989; Garcia et al., 2017; Swaim, 2017).

The first dimension in the cognitive apprenticeships model's four dimensions speaks to content, which involves the types of knowledge required for expertise in a domain and includes tacit knowledge, which is known and internal to the expert without actually being a part of curriculum, and explicit knowledge, that has been captured on paper, books, or any other categorizable learning product that can be filed, stored, or disbursed (Collins, 2006; Collins et al., 1989; Dennen & Burner, 2008). Content also includes domain knowledge, or the conceptual and factual knowledge associated with a particular subject or skill, problem-solving strategies that use effective techniques and approaches best suited to the content, control strategies that

control the process of carrying out tasks associated with the domain, and metacognitive learning strategies that help learners practice how to think about solving problems in the domain while also honing thinking skills that can be applied to other areas of the domain (Collins, 2006; Collins et al., 1989; Dennen & Burner, 2008).

Method, the second dimension in the cognitive apprenticeship model, is the way students acquire and integrate cognitive and metacognitive strategies for using, managing, and discovering knowledge through modeling, coaching, scaffolding, articulation, reflection, and exploration, as they are embedded in contexts of learning through actual, real-world, relevant problems one would encounter on the job (Collins, 2006; Collins et al., 1989; Dennen & Burner, 2008). Modeling expected behaviors is carried out by the master apprentice, as is coaching and scaffolding; articulation and reflection, however, can be done either personally, in small groups, or one-on-one (Collins, 2006; Collins et al., 1989).

The third dimension, sequencing, emphasizes early skill acquisition and thinking associated with learning that is increased in complexity over time. This increases the diversity of strategies used for problem-solving and thinking globally, or holistically, to get a greater understanding of the whole in comparison to its parts (Collins, 2006; Collins et al., 1989; Dennen & Burner, 2008). Sequencing learning, by starting out at foundational, novice levels, and increasing complexity as students gain mastery, has been a staple of apprenticeship learning for many years; this sequencing seems logical and straightforward, however, many adult learning programs gloss over the importance of starting out small and building upon knowledge, as not to upset or disrespect the adult learner (Collins, 2006; Collins et al., 1989).

The last dimension of the cognitive apprenticeship model's framework concerns the sociological aspect of learning, which focuses on communities of practice, providing

practitioners of all levels the ability to see where, how, and who is a part of the collaborative environment, defining and solving real-world, relevant, job-related challenges with trusted and experienced colleagues, and providing intrinsic motivation for learning and process improvement (Collins, 2006; Collins et al., 1989; Dennen & Burner, 2008). As video and computer technology have improved the ability to create a simulated learning environment, or situated learning, where skills can be taught in context, in low-risk instructional environments, the dimensional frameworks can be applied to allow the practice and repetition needed before meeting with coaches, mentors, or collaborative groups (Collins, 2006).

Planning

The way students learn to think with the cognitive apprenticeship model involves using six teaching methods: modeling, coaching, scaffolding, articulating, reflecting, and exploring (Collins et al., 1989; Dennen & Burner, 2008; Maigida & Ogwo, 2013; Swaim, 2017).

Instructional planning is crucial to clarifying how educators comprehend, interpret, judge, and transform knowledge by using the cognitive apprenticeship model in observing, collaborating, reflecting, and modifying instruction; using this approach, novice teachers can learn the cognitive and metacognitive skills they need as they gain experience on the job (Liu, 2005).

Explicitly planning and using reflection encourages individuals to look at their performance and compare what they did to others' performances in order to grow in understanding, knowledge, and practice; the essential way to get better at doing things is by thinking about what they are going to do, by trying to do what they had planned, and by reflecting back on what they accomplished and how well they achieved their goals (Collins, 2006).

Faculty Development

Overview

The primary way institutions change and improve is through the imagination, pedagogy, and scholarship of their faculty; as our understanding of how students learn has developed significantly, and evidence-based faculty development strategies have been verified, it is evident that faculty development opportunities should be central to higher education efforts (Watson, 2019). Because of this, effective faculty professional development should be an ongoing, systematic, intentional process that includes mentoring, coaching, clinical supports, and reflection that is used to facilitate deliberation, dialogue, and opportunities for practice and research to solve important problems related to teaching and learning (Shealy, 2019; Welch & Plaxton-Moore, 2017). In effective faculty development, induction programs matter and make a difference in the retention and satisfaction of new teachers; the quality, quantity, and form of induction is significantly related to the effectiveness of the program, showing increases in teacher retention, improvements in pedagogical practice, and enhanced work satisfaction (Bartlett & Johnson, 2010).

Faculty members' views on self-efficacy are linked to their beliefs about how a good teacher behaves and the choices they make in the classroom, therefore, faculty development programs should be centered around the actual needs of faculty and responsive to building a teacher's sense of efficacy, or the belief in one's ability to achieve goals (Graciani et al., 2020; Strickland-Davis et al., 2020). This is why successful faculty induction programs are able to strike a balance between specificity and autonomy in not only the structure of the induction program, but the policies that are needed to support on-going effective faculty induction programs (Bartlett & Johnson, 2010). Institutions need to invest appropriate resources toward effective faculty development programs that promote authentic learning and development opportunities in order to provide faculty the knowledge, skills, and efficacy required for student

success (Strickland-Davis et al., 2020). Faculty development programs have proven to increase teacher efficacy over time, however, professional development delivered in six weeks or less, for example, may not considerably improve either teacher self-efficacy or productivity. Focusing on ways to disperse faculty professional development, incrementally, over time, is therefore recommended (Strickland-Davis et al., 2020).

Historical Background

In higher education before the 1960s, very few organized faculty development programs existed; for the most part, the focus through the first half of the twentieth century was on assisting faculty in their attempts to increase their knowledge of their academic specializations (Watson, 2019). During the late 1960s and 1970s, a realization emerged that good teaching did not happen by default or by being an expert in a given domain or field; in other words, higher education virtually had no pedagogy until the postwar baby boom demanded a more responsive approach to learning (Watson, 2019; Yilmaz, 2011). In the early 1980s, cognitive theories of learning were beginning to challenge behavioral views in higher education and, as a result, faculty development programs began focusing on teaching strategies and became more student-centered (Ross et al., 2019; TEAL, 2019; Watson, 2019; Yilmaz, 2011).

Faculty Development Theory

Several theories have successfully guided higher education faculty development programs and included adult learning theory, cognitive development theory, problem-based learning, self-directed learning, constructivism, and critical thinking (Bell, 2010; Meyer & Murrell, 2014). Andragogy, rather than pedagogy, was one of the adult learning theories developed in the 1970s by Malcom Knowles, which recognized that children and adults use different approaches to learning (Arghode et al., 2017; Meyer & Murrell, 2014; TEAL, 2019).

Andragogy and self-directed learning are two of the most important pillars of adult learning theory that lead to our current understanding of how adults learn as part of their daily lives and fits within the five assumptions of andragogy that are used to describe the adult learner as someone who: 1. Has an independent self-concept, 2. Has rich life experiences to draw from, 3. Has learning needs that are closely related to the adult's changing social roles, 4. Is problem-centered and has immediate application, and 5. Is intrinsically motivated to learn (Merriam, 2001). Adults need to know why they are learning and most learn best by doing, or problem-solving real issues, rather than focus on memorizing content; effective instructors will capitalize on those adult learning principles by incorporating them into the curriculum and instructional strategies (TEAL, 2019).

Student-centered, or active learning teaching strategies are also needed with adult learners to promote greater student learning, even though teacher-centered or lecture-based pedagogical practices remain dominant in higher education classrooms, showing a strong need for faculty professional development programs to learn and implement student-centered teaching practices (Ross et al., 2019). Usually emulating the teaching styles of their own experience, which may be antiquated, faculty members prepared by traditional graduate programs are frequently unprepared for today's adult learning needs (McKee & Tew, 2013; Strickland-Davis et al., 2020). Though higher education faculty members possess a great degree of subject matter expertise, those same faculty members are frequently unprepared for the pedagogical challenges they will encounter in the adult classroom: these are the pedagogical challenges a strong faculty professional development program can take on and make better (Strickland-Davis et al., 2020).

Faculty Development Best Practices

Teaching adults is unlike teaching children because children are viewed as empty vessels to fill with knowledge, whereas adults come to the table with vast amounts of knowledge from real-world experiences (Post & Center, 2010). There are several best practices associated with adult learning educators need to be aware of and include: setting a cooperative climate in the classroom; addressing the learner's specific needs and developing learning objectives based on those needs; designing sequential activities; and evaluating the quality of learning to make necessary adjustments to achieve the stated outcomes and objectives (TEAL, 2019). Using problem-based learning, with tasks, projects, worked examples, assignments, and activities, instruction can be translated into specific learning contexts, providing the practice, repetition, and experience in the problem-solving process that can transfer to successful and safe, low-risk instructional environments for the adult learner (Cho & Rathburn, 2013).

Comprehensive and effective induction programs must offer more help than finding the supply room and copier; they need to offer ways for faculty to learn about the students they will teach and start developing their own professional identities, especially if they come to teaching through alternative routes (Bartlett & Johnson, 2010; Carver & Feiman-Nemser, 2009).

As was stated earlier, effective faculty professional development should be an ongoing, systematic, intentional process that includes mentoring, coaching, clinical supports, and reflection (Eisner, 2015). Successful new faculty induction programs use mentors who understand the school, its culture, and priorities by allowing them to learn in and from practice (Carver & Feiman-Nemser, 2009; Clark, 2019). In its most basic form, mentorship is a buddy system that provides new teachers with a supportive colleague in the earliest days of their career; at the opposite end of the spectrum, mentorship provides a learning community with formal formative assessment and corrective feedback (Bartlett & Johnson, 2010).

In K-12 education, formal new faculty induction and mentoring programs usually include tiered credentialing systems to enable them to become more effective and hold them accountable for meeting certain professional standards (Carver & Feiman-Nemser, 2009). Peer observations, on the other hand, are used in higher education as mentoring, and if conducted under non-invasive, supportive conditions, can improve faculty teaching and learning by affirming and validating good teaching practice, increasing confidence, and creative collaborative communities with colleagues, which leads to faculty feeling less isolated and more empowered (Bell & Thompson, 2018).

As societal needs and student expectations have changed, there have been major shifts in American higher education that are reshaping the necessity of effective, on-going, faculty professional development; most of these shifts deal with how technology has impacted teaching and learning (McKee & Tew, 2013). With the advent of ubiquitous technology use in today's higher education classroom, faculty characteristics are changing, and traditional theories may not meet the needs of researching and explaining associated phenomena; understanding such change is essential so that faculty can teach, conduct innovative research, and implement these phenomena effectively in the adult learner classroom (Cherrstrom & Alfred, 2020).

Because many faculty members tend to teach as they were taught, in today's classroom, a pedagogical digital divide exists in how faculty deliver content; for example, the lecture, once seen as the staple delivery system used to impart knowledge, may not be the best medium for reaching students of the twenty-first century (McKee & Tew, 2013; Strickland-Davis et al., 2020).

There are ways to make improvements, but they must start at the pedagogical and course design level. In spite of on-going advances in instructional technologies, web-based higher

academic pedagogies continue to demonstrate a lack of quality, mostly due to varying degrees of dissemination and application of instructional design for online teaching and learning; therefore, ever evolving technologies and pedagogies need to be aligned with effective instructional design practices for curriculum that is designed specifically for online use (Ashbaugh, 2012; Kim & Bonk, 2006; Patrick et al., 2009; Sortrakul & Denphaisarn, 2009).

In efforts to improve pedagogical and course design processes, faculty-driven, data-informed, and subject matter expertise do well when additional components, such as curriculum visioning and reflective processes are used to foster continuous improvement (Wolf, 2007). Curriculum visioning begins with assessing the curriculum's strengths and weaknesses, reviewing program objectives, and identifying desirable educational experiences that will result in recommended actions taken by various stakeholders, which also serves the added benefit of providing professional development as part of this process (Wolf, 2007). Additionally, research and literature support the importance of these strong school cultures and organizational conditions that support effective induction programs especially when today's technologies have changed the learning landscape in a multitude of ways (Carver & Feiman-Nemser, 2009).

Faculty Development in the Military Setting

Although much research exists about faculty development outside of the military schoolhouse, little has been studied about military instructor induction and faculty development at military post-secondary institutions (Swaim, 2017); there are however guidebooks and manuals that drive formal military training and new faculty induction. New instructor training and new faculty orientation, in most cases, are often the first introductions into the teaching environment for most military instructors (Hennessey, 2019).

Typical adjunct military instructor assignments are between two and three years in length; up to one third of the total faculty leaves or enters the schoolhouse annually (Hennessey, 2019; Keller et al., 2013). With this rate of turnover, the Department of Defense, in coordination with any accrediting agencies, has given each branch of service the latitude needed to meet the instructional needs and instructor training at each educational institution, given these circumstances (DoD, 2020).

U.S. Army

The U.S. Army has the largest footprint, in terms of student throughput (DoD, 2020; Keller et al., 2013). The Army is most notably recognized for West Point, its service academy along the Hudson River in New York, however, the Army also has schools with baccalaureate programs at Fort Leavenworth, Kansas and Fort Lee, Virginia (Army, 2020). The Army's law school in Charlottesville, Virginia, is a post-graduate school that is similar to its counterparts, Navy, in Newport, Rhode Island, and Air Force, in Montgomery, Alabama (Air Force, 2018; Army, 2017; DoD, 2020). To meet these needs in military higher education, the Army has an educational strategy for its instructors.

All Army schools foster teaching and learning through initial training, functional training, professional military education, and faculty and staff development, to acquire, maintain, or improve the knowledge, skills, and attitudes needed to achieve the level of performance required for all mission-related duties and responsibilities (Army, 2017). There are three domains of Army learning enabling these outcomes that sister services also espouse to great degree: 1. The operational domain, where training is linked to one's assignment; 2. The institutional domain, which is linked to career progression; and 3. The self-development domain, which supports life-

long learning that enables individuals to pursue their personal and professional development goals in support of Army readiness (Army, 2017).

Because of these educational expectations, all Army instructors, whether enlisted, officer, or civilian, are required to attend faculty development; one example of this mandatory training is the Common Faculty Development Instructor Course (CFD-IC), an 80-hour, ten-day, face-to-face course offered at Army University, Fort Leavenworth, Kansas (Army, 2017; Army 2018).

Most faculty development programs in the Army are tiered for Basic Instructor, Senior Instructor, and Master Instructor, that can, with additional coursework, be used toward completion of a baccalaureate or master's degree program; many choose this path because the credits can apply to both educational and non-educational degree programs (Army, 2018).

The Faculty and Staff Development Program (FSDP) is another example that is used to support Army training and educational organizations and institutions by training and developing instructional faculty and staff who design, develop, and implement training and education for adult learners; the FSDP uses a certification process to ensure teaching and learning standards are met and maintained (Army, 2017). Three phases are used to certify Army FSDP personnel: Phase I is foundational and is used as an entry point for educational faculty and staff; Phase II is technical or intermediate and builds on the foundational aspects of the previous phase; Phase III is the last certification, at the advanced level, usually occurring after three to five years of combined training and teaching experience (Army, 2017).

U.S. Navy

The Naval Post-Graduate School (NPS) is the most recognized of higher education naval schools behind the Naval Academy at Annapolis, Maryland. While the service academy at Annapolis has four-year baccalaureate programs, NPS has post-graduate offerings to include

master's degrees and doctoral degrees in various disciplines, which can be achieved through their school at the Monterey, California campus (NETC, 2020; Appleget et al., , 2016).

Navy training and education is a system that involves many elements and, while all are important, the instructor is the keystone in the entire program; the success of the Navy depends on the instructor, who provides the operating forces with personnel trained to maintain a high degree of Fleet readiness (DoD, 2020).

All Navy instructors must meet specific training requirements to serve as faculty to include the following: graduating formal instructor training, which, at minimum, is a two-week program; obtaining required certifications for the skills they teach; passing all instructor qualification exams; and achieving successful ratings on their last two formal instructor observations (Navy, 2018). Both the Naval Post Graduate School and the Naval Education and Training Command, the larger Navy training organization, operate and maintain an Office of Faculty Development, which provides education, resources, individualized coaching, and consultation to promote excellence in teaching; serving individual faculty, departments, and schools, the professional development program offices support continuous improvement of instruction, enhance learner engagement, and expand pedagogical practices to achieve student, course, and program outcomes (NETC, 2020; NPS, 2016).

The Navy, along with its sister services, accept other institutions' instructor methodology and faculty development courses if they meet the two-week minimum requirement and are recorded on the instructor's *American Council on Education Joint Services Transcript*. An instructor memorandum of agreement with sister services may also be required, based on the mission and protocols of the school assignment (NETC, 2020; Navy, 2016).

U.S. Air Force

The U.S. Air Force's service academy, located in Colorado Springs, Colorado, is similar to the other military service academies for Coast Guard, Navy, and Army in that it provides four-year undergraduate degrees in various disciplines (USAFA, 2020). The Air Force Academy, the Community College of the Air Force, and Air University are among the Air Force's post-secondary degree-granting schools and fall under the regulatory guidance of the Air Education and Training Command (AETC) in San Antonio, Texas (USAFA, 2020; CCAF, 2020; AETC, 2020). AETC was activated in 1942, making it the oldest major command in the Air Force; its training mission touches the lives of nearly every Air Force member and has trained over twenty-five million students since its inception (AETC, 2020).

Air University at Maxwell Air Force Base in Montgomery, Alabama, is a key component of AETC and houses the Air Force's officer and enlisted centers of professional military education (AETC, 2020). Air University provides the full spectrum of Air Force education for all levels of professional development, including degree-granting programs for enlisted, officer, and civilian personnel (AETC, 2020; Air University, 2020; Barnes Center, 2020).

Depending on the school and its mission, faculty development varies from two weeks to two years in length (AETC, 2020, Air Force, 2018). For non-commissioned officer programs, the Enlisted Professional Military Education Instructor Course (EPMEIC), which is affiliated with the Community College of the Air Force and consists of 158 hours of resident classes, is required; the course includes the fundamentals of teaching, methods of instruction, basic learning theories, instructional design, and evaluation methods (Air University, 2020; Barnes Center, 2020).

EPMEIC faculty must have an associate degree or be within one year of completion; the prospective faculty member must complete this course prior to being assigned to teach (Air

University, 2020; Barnes Center, 2020). EPMEIC is the gateway course for the faculty member as it strives to produce enlisted Airmen and Space Force Guardians who can teach and lead effectively in and out of the classroom (Air University, 2020; Barnes Center, 2020).

The Air Force Academy's faculty development program for officers is two weeks in length and includes faculty orientation to the school; it also covers basic instructor training and gives policy and protocol training that all faculty must follow (USAFA, 2020). Because all instructors are leaders, curriculum-based leadership is followed in the development of the curriculum to include understanding instructional design; this, combined with a strong mentorship program for new faculty, make the academy's program a standard to follow (Air Force, 2020; USAFA, 2020).

Similar to the Naval Post-Graduate School and the Naval Academy, the Air Force Academy has a robust faculty development office to assist military instructors in all facets of carrying out their teaching responsibilities and duties; this office supports both military and civilian faculty (NPS, 2020; USAFA, 2020). If an officer desires to go beyond their two- to three-year instructor tour of duty and become permanent civilian faculty at the Air Force Academy, they would need to complete a Ph.D. in the area or subject they would teach; in this way, permanent faculty would have to follow civilian regulatory guidance for tenure-track professors (USAFA, 2020).

Air University's other programs and organizations include the following: The LeMay Center for Doctrine Development, the Holm Center for Officer Accessions, the Barnes Center for Enlisted Professional Military Education, the Eaker Center for Professional Development, Air War College, Air Command and Staff College, Squadron Officer School, the International Officer School, the School for Advanced Space Studies, the Air Force Center for Strategy and

Technology, and the Air Force Institute of Technology; the Air Force Judge Advocate General's School (AFJAGS) is not a direct organization under Air University but is a tenant school in partnership with the larger institution serving the legal school needs of both Air Force and Space Force (AFJAGS, 2020; Air University, 2020).

Adult Learning Overview

Effective teaching and learning can be a complex process, especially when you consider the needs of adults. This is why it is necessary to understand adult learning principles that focus on the motivation, experience, self-direction, application, and learning preferences of the adult learner (Vandenberg, 2005). Adult learning approaches are different from top-down pedagogical practices and include self-directed, problem-solving learning events that use critical reflection to be transformative and lead to better job understanding with personal, intrinsic, professional development (Chen, 2014). When considering the use of technology in the classroom and the potential generational differences of adults in the workplace, teaching techniques and learning preferences can be various and must be considered in all aspects in the teaching and learning of adults (Roberts et al., 2012).

In the Military Setting

Adult teaching and learning in the military setting is a complex process that touches many lives and asks us to learn from the past as we design, experiment, and explore the evolving educational landscapes of the future (Zacharakis & VanDerWerff, 2012). Military training and education programs encompass almost every facet of adult education from basic skills training through graduate-level higher education; it is no wonder that the Department of Defense is the country's largest provider of adult education, covering over eight hundred types of jobs across a broad spectrum of occupational groups (Persyn & Polson, 2012). Professional military education

provides leadership and operational planning as part of their educational experience to enhance the military members' service and career progression, which are responsibilities similar to those of managers and executives of civilian corporations; throughout history, the military has consistently found innovative approaches to meet service members' educational needs (Persyn & Polson, 2012).

The military commander has a shared responsibility to develop their subordinates and in so doing, the individual's growth, maturity, and learning goals are closely tied to the mission of the organization (Zacharakis & VanDerWerff, 2012). Military training and education programs provide military members and civilian support staff lifelong learning experiences spanning their careers and beyond; to meet the military's educational needs, the United States Army, Navy, Marine Corps, and Air Force have all integrated adult learning principles and theory into their curriculum to address learners' educational needs and organizational effectiveness (Persyn & Polson, 2012). Military schools, such as the Air Force's Air University, the Industrial College of the Armed Forces, Marine Corps University, and the Naval War College, are examples of institutions that strive to create effective military mission-related training and education (Zacharakis & VanDerWerff, 2012).

Despite the continuing efforts by the military to apply adult education theory to its training programs, however, some chronic challenges are still apparent and deal with teaching the adult learner, such as: instructors possessing subject matter expertise but lacking teaching experience or proficiency, the use of outdated instructional methodologies that rely on passive lecture-based instruction, and distance learning that is designed and delivered ineffectively (Persyn & Polson, 2012).

Adult Learning Theory

Adult learning, or andragogy, refers to teaching methods and approaches used with adults that have characteristics of being self-directed, problem-solving, and intrinsically motivated (Murray, 2018). Usually as a result of job-related roles and responsibilities, adult learners must constantly expand their knowledge and skills, thereby becoming lifelong learners. Deliberately structuring adult education curriculum to address the hallmarks of adult learning by making it relevant, engaging, and immediately applicable to one's job expands the theory of andragogy to more of a self-directed, intrinsic, use-driven model (Nicklas et al., 2019). For adult learners, successful teaching requires an understanding and appreciation of the learner's needs, including background, interests, and learning preferences (Roberts et al., 2012).

Problem-Based Learning

Problem-based instruction is a form of direct instruction wherein instructional components are taught within the context of a real or fictitious challenge that activates a learner's mental models, demonstrates problem solutions to learners, enables application of content to the solution of the problem, and facilitates further discussion, reflection, and transference of the experience to other problems or solutions outside of the classroom (Merrill & Gilbert, 2008). Using problem-based learning, especially in the military setting, can reduce or eliminate ineffective instructor-led slide presentation lectures and convert learning to student-centered, collaborative events that encourage higher-order thinking skills, which aligns with effective adult learning principles (Persyn & Polson, 2012).

Adult Learning Communities of Practice/Professional Learning Communities

Today's academic workplace requires increasingly complex scholarship for practitioner faculty resulting in the need to provide professional development opportunities to increase

faculty knowledge, which can be successfully addressed by using communities of practice (CoPs) or professional learning communities (PLCs) as a way to solve student or curricular challenges in a collaborative, collegial way and to develop faculty while improving student outcomes (Cardwell et al., 2018; Fischer, 2005; Hord, 2009). Communities of practice can be formal or informal groups in which members usually know one another and have mutual engagement, a joint experience, and a shared repertoire to work toward a common goal or objective (Annala & Makinen, 2017; Fischer, 2005). A PLC is characterized by a collaborative culture in which faculty participate in a continual process of creating new knowledge while problem-solving student challenges with a collective responsibility for supporting and helping each other improve (Hord, 2009; Wennergren & Blossing, 2017).

The Flipped Classroom Overview

Many professionals have often acknowledged that their occupation does not prepare them for teaching others; faculty must be well equipped with instructional methodologies that will not only help them teach but will allow adult students to learn effectively and transfer that knowledge to other real-world, work-related situations (Bhat et al., 2021). The methods by which educators are teaching career-professional students has been changing from passive learning by listening to lectures, for example, to active learning by shifting from knowledge acquisition outside of the classroom to knowledge application and skill development inside of the classroom (Lyons et al., 2020). A flipped classroom can engage students in active learning designed to improve skills and apply knowledge in practice (Bhat et al., 2021; Lyons et al., 2020; Marcum & Perry, 2015; Toosi et al., 2020; Wagner et al., 2020). Using real or hypothetical situations in the schoolhouse, the flipped classroom format allows students to practice analytical thinking and engage in problem-based learning as they prepare for similar situations that they will encounter

in their working-world (Bhat et al., 2021; Lyons et al., 2020; Marcum & Perry, 2015; Toosi et al., 2020; Wagner et al., 2020).

In a university context, students are expected to engage in the course material regularly and with minimal instructor support, which makes the flipped classroom model a practical solution to moving lectures out of the classroom so that in-class time can be used for active learning activities (Al-Samarraie et al., 2019). Traditional lectures, as a way to teach college students, may be too passive and lead to sub-optimal performance, whereas active learning can promote student achievement by applying and using things learned in the classroom (Marcum & Perry, 2015). The implementation of the flipped classroom in higher education has encouraged instructors to create a challenging environment that helps students link new knowledge to existing knowledge by engaging them in effective discussion and exercises; most students' reactions are generally positive to the flipped environment because they consider it to be an effective way to cover more material and thus perform better on quizzes and exams (Al-Samarraie et al., 2019).

In 1968, Benjamin Bloom developed the “mastery learning” concept that grew into today's flipped classroom, which encourages active student learning (Marcum & Perry, 2015; Toosi et al., 2020). The flipped classroom model is intended to allocate valuable time for activities that reinforce learning outside of the classroom while allowing students to practice analysis and application of principles inside of the classroom (Marcum & Perry, 2015). In its current context, the flipped classroom is understood as an instructional approach in which a student independently views content outside of class while using application, collaboration, or group-based learning inside of class; this model allows for more flexibility and hands the responsibility of viewing lower-level learning to the students themselves, which can promote

self-regulated learning in addition to student-centered in-class approaches (Wagner et al., 2020). Passive learning can be shifted to active learning in the flipped classroom by adapting lectures and activities with the integration of technology and use of immersive real-world activities (Marcum & Perry, 2015).

Effectively Designing the Flipped Classroom

Designing effective flipped classroom learning environments include moving from traditional teaching formats, such as passive lectures, into using more instructor-facilitated, student-centered, active learning activities, whereby immediate feedback is given so students can understand what was just learned (Bhat et al., 2021; Lyons et al., 2020; Marcum & Perry, 2015; Toosi et al., 2020; Wagner et al., 2020). When using the flipped classroom model, students review material outside of the classroom so that time can be used inside of the classroom for experiential learning such as in-class simulation, discussion, debate, and problem-based learning (Marcum & Perry, 2015). The flipped classroom can be seen as doing the “homework” portion, live, in class, prompting the students to prepare for the day’s in-class events (Marcum & Perry, 2015). The common characteristics of a flipped classroom model involve the following three key components: pre-classroom activity, in-classroom activity, and post-classroom activity. This blended approach is a hybrid that uses technology to deliver content to the student before they set foot in the face-to-face classroom (Youhasan et al., 2021). During the pre-class, phase content is viewed; during the in-class phase, application of the content is exercised; and during the post-class phase, assignments, quizzes or other activities are used to test or strengthen knowledge gained from the first two phases (Al-Samarraie et al., 2019).

The technology infused flipped or “inverted” classroom, in which students view technology-enhanced or video-based content outside of the classroom and use traditional class

time to apply what was learned in self-study, was first used by Lage Platte in 2000 (Wagner et al., 2020). To front-load students with content, self-paced curricular items are consumed before entering the face-to-face classroom; when using technology in particular, a learning management system can be effectively used to present, monitor, and track completion of content reviewed (Wagner et al., 2020). Flipped classroom online resources, for self-study, can include articles/readings, video clips, podcasts, study guides, slide show presentations, textbook chapters, and web links; unfortunately, unless motivated to do so, either intrinsically or extrinsically, most adults will spend little time using these online resources unless you create a situation like an assignment or provide lab time in the classroom that forces them to use those resources effectively (Marcum & Perry, 2015). To provide incentive for students to complete work outside of the classroom, points or other extrinsic values can be used (Marcum & Perry, 2015).

The active flipped classroom should have physical learning components such as tables with movable seating to support small group work, wireless networks for interactive and presentation technologies, and marker-boards for collaborative activities (Marcum & Perry, 2015). Flipped classrooms can promote student engagement, metacognition, performance, and understanding, however, key challenges include the development of video or digital materials and the time required for students to master those materials before coming into the physical classroom where they will be applied (Al-Samarraie et al., 2019).

A flipped classroom can also provide high levels of interaction between and among learners, providing interaction between and among the teacher and learners, as well (Bhat et al., 2021; Marcum & Perry, 2015; Toosi et al., 2020). As a result of changing the course content structure, flipped classroom students tend to develop soft skills such as teamwork, communication, and critical thinking. Instead of merely knowing what they learned, they

understand how to apply what they learned, usually in real-world or work-related settings (Wagner et al., 2020).

Curriculum-Based Leadership Overview

The development of academic leaders is at a critical juncture, and the need for faculty members who take on leadership roles is on the rise. Unfortunately, few institutions develop, deliver, and assess the needed supports for faculty aspiring to take on leadership roles as they continue in their careers (Baker et al., 2018). Teachers and teacher-leaders have been using curriculum-based leadership successfully for the past thirty years and much has been written on the subject (Castner, 2017). However, mid-career faculty members in the leadership pipeline, or those who aspire beyond department chair positions, are few due to the lack of preparation for those roles, roles that potentially can be filled with adequate faculty succession management programs (Baker et al., 2018).

Curriculum-based leadership is not a technical problem with a ready supply of evidence-based solutions; it calls for a transformation of a school's entire culture of curriculum in a manner that values holistic understanding beyond approaches that merely tinker with extant systems and procedures to improve efficiency or standardized test scores (Castner, 2017). Successful curriculum-based leadership requires training that is designed to equip faculty for their academic leadership roles as department chairs, division chiefs, directors, or deans (O'Bannon et al., 2010).

Despite the wealth of leadership research and the number of studies devoted to leadership training, the relationship between instructor behavior and leadership has been neglected (Patrick et al., 2009). Effective curriculum-based leadership should include formal training and job-embedded professional development with both pedagogical and leadership components and

reflective practices to understand where they need additional support (Castner, 2017). A model of effective instructional leadership includes: giving feedback, modeling, giving praise, listening, sharing experiences, using examples and demonstrations, promoting professional growth, providing opportunities to learn new techniques, and supporting collaboration and development of peer coaching and mentoring (Patrick et al., 2009).

Many stakeholders underestimate the challenges, skills, influence, and knowledge needed to practice effective curriculum-based leadership to ensure programs meet their educational requirements, to address student-centered perspectives and needs, to sustain and support engaged faculty members, to emphasize organizational learning, and to create collaborative networks that benefit faculty development and student success (Servey et al., 2020). Leadership is what propels faculty members to reach their potential, and the importance of faculty members as leaders on campus in decision-making and innovations in teaching and learning is essential to academic organizations in fulfilling their missions, which illustrates the need to be adequately developed to lead (Traynor et al, 2019). Effective curriculum-based leadership is needed across the spectrum of academic operations so that decisions such as who and what to train, which faculty to use, course content and design, quality assurance, and other elements of planning, development, and implementation of courses, which are unique to the needs of academic organizations, can be used to develop leaders beyond traditional leadership roles (Servey, et al., 2020). Therefore, being an academic leader is challenging and requires not only traditional leadership skills but also those of an effective manager, where coping with change is met with and added to coping with complexity; those practicing leadership roles must therefore demonstrate both leadership and management skills (Servey, 2020).

Leadership training workshops, allowing for multiple training opportunities as faculty hone their leadership and management skills, should focus on both business leadership skills and curriculum-based leadership that is specific to their academic leadership roles, which also needs to include appropriate and adequate mentoring (O'Bannon et al., 2010). These sessions need to be designed to be highly interactive with individualized materials based on participants' needs and are revealed by completing inventories and assessments to measure current perceptions of leadership skills, communication styles, and conflict resolution methods, which are then used to bridge the gap between faculty responsibilities and curriculum-based leadership roles (O'Bannon et al., 2010).

Developing leadership from within by using faculty leadership development programs is a best practice that can build upon experiential, interactive, and collaborative approaches with subject matter experts who intimately understand the curriculum-based needs of their teaching organization (Tsoh et al., 2019). Academic leaders who practice curriculum-based leadership, such as department chairs, course directors, and deans, have fewer models of leadership training specifically geared for academic leadership positions. Given the complexity of today's technology-driven classroom landscape, which requires innovative, bottom-up solutions, it is imperative to train academic leaders at all levels (Servey et al., 2020).

Technology – The Learning Management System Overview

Instructional technology is often associated with being a high-cost training solution, and the implementation of instructional design solutions is an issue faced by developers at all levels of business and education because of the high cost of developing a quality instructional product; however, if used appropriately, those same technologies can provide instruction that has

standardized and clear explanations, appropriate audio-visual demonstrations, and dynamic interactivity for consistent and effective adult training and education (Chen et al., 2009). Using a learning management system for learning and performance support allows users to access the things they need to learn, just-in-time, with the flexibility to learn independently and at their own pace (Ellis, 2009; Rosenheck, 2013; Wallace & Raynak, 2020).

In education, fundamental changes usually occur slowly because institutions of higher learning, in particular, are known for their grip on traditional forms of teaching and are reluctant to change; however, the learning management system has been a tool quickly adopted by those same institutions because of the capability and flexibility it provides for student, faculty, and curricular programs and can be seen as a change agent (Blackburn, 2014; West et al., 2007). The learning management system (LMS) has become a critical tool for most institutions of higher learning, and understanding the LMS will help leaders provide support for faculty who adopt the pedagogical innovations needed to effectively teach online in blended learning environments and in the face-to-face classroom (David, 2013; Muhisn et al., 2020; Rhode et al., 2017). Moving from traditional face-to-face classrooms to online learning environments requires a shift in thinking from content- or teacher-centered teaching and learning to student-centered active participation, which needs to be based on theoretical perspectives aligned with effective online design (Garcia et al., 2018).

In terms of the academic organization, high quality learning management system technical support and training play an important role in teacher efficacy and successful student outcomes (David, 2013; Zheng et al., 2018). In creating learning management system performance supports associated with curriculum workflows for independent problem-solving and just-in-time-learning, an online learning path would consist of the following: structured on-

the-job experiences to see, do, and emulate; collaborative coaching discussions online; short self-study episodes; readings; video vignettes; and mini tutorials in a self-paced format (Rosenheck, 2013).

A strong guiding purpose of using a learning management system for face-to-face, blended, and online learning is to reach the intended outcomes of a course, to increase student engagement, to prioritize instructor time, and to improve the quality of instruction; for faculty and staff to use learning management systems effectively, organizations should focus on the functional supports that help them overcome technical issues to reach those ends (Dousay, 2019; Zheng et al., 2018). Understanding the relevant factors affecting the adoption and use of the learning management system can provide effective support and training for faculty and learners; because of the LMS's capability to simplify and automate certain teaching and learning functions with technology, effective support and training will have to include those functional aspects, as well (David, 2013; Rhode et al., 2017).

Technology - Historical Background

With roots dating back to the 1960s with the first computer-assisted instruction system, the Programmed Logic for Automatic Teaching Operations (PLATO), the learning management system was popularized with the advent of the internet and since has had longstanding and steady growth in higher education to the point of its ubiquitous classroom use today (Rhode et al., 2017). As a web-based technology with 24/7 access capabilities, learning management systems play a central role in both online and face-to-face curriculum management in that they are not only used for teaching and learning but also for planning, managing, and assessing the students' learning processes in order to achieve their desired outcomes and objectives

(Alshammari et al., 2018; Beatty & Ulasewicz, 2006; David, 2013; Ellis, 2009; Mahoney & Cameron, 2008).

Technology-enabled learning is now pervasive in higher education, allowing students and faculty to share instructional materials, submit and return assignments, and communicate with one another online; however, not all student and faculty have positive perceptions of using technology for such endeavors because they may lack the necessary skills to use these technologies effectively (Lonn & Teasley, 2009; Wu, 2020; Zhu & Bonk, 2019). The crucial factors that impact effective LMS use for both students and faculty revolve around ease-of-use, or the ability to quickly find, use, or navigate to and from one LMS area or activity to another, and the level of general technical knowledge required to access, use, create, and submit content-related materials (David, 2013; Kasim & Khalid, 2016; Wyman-Blackburn, 2017; Yuen et al., 2019; Zhu & Bonk, 2019).

Since the early 2000s, online teaching and learning has been in constant transition for most of its existence; many of the tools needed to provide curricular support also rely on technologies that tend to change rapidly. The learning management system, in particular, was one of those rapidly changing tools (Beatty & Ulasewicz, 2006). Over the past decade, progress has been made in online teaching and learning, specifically with instructional design moving to a student-centered model where the instructor guides students in actively constructing an understanding of the material versus past online methodologies that used an information-transfer model of presenting information to students (Garcia et al., 2018).

Learning management systems are ubiquitous, enterprise-wide, internet-based systems that integrate a wide range of pedagogical and course administrative tools to provide asynchronous and synchronous learning environments; however, despite these benefits, there are

hidden costs in terms of using the system effectively with faculty, such as technology training, pedagogical shifts to designing learning for online use, and system maintenance and upkeep (Coates et al., 2005; David, 2013). The standard features of an academic LMS include the following: tools to manage users; curriculum access and automated curriculum work flows; self-paced tutorials, if needed; calendar functions, which can be tied to curriculum access and work flows; asynchronous and synchronous use and communications, from messaging to mentorship to web conferencing; content creation and content authoring tools; multimedia use; assignments; quiz and test questions; gradebooks; feedback; and data management (Watson & Watson, 2007). Using the learning management system to build a curriculum workflow process begins with breaking down functions and areas and associating those items with roles and deliverables accomplished by students, staff, and faculty so that each has their own start-to-finish path, created as part of the workflow itself (Hannon, 2006).

The LMS can be used to effectively manage training development and delivery by setting up a dedicated team that will be trained to prepare, implement, and close out actions and activities associated with a face-to-face, blended, or online course (Swain, 2005). Military personnel, however, by the nature of their two- to three-year rotational assignments, experience frequent turn-over, which impacts teaching and managing curriculum; the LMS can be used to automate or manage those processes for quality, consistency, and continuity (Swain, 2005). The LMS can and should be used for quality assurance purposes, course evaluation, and standardization; unfortunately, and usually due to a lack of manpower, many organizations tend to eliminate or tread lightly with this aspect of the LMS, not taking advantage of the constructive feedback that can occur in overall process improvement (Swain, 2005).

Using technology under the guidance of a subject matter expert, desired learning outcomes guide the creation of computer-managed professional development curriculum that include the use of the following: problem-based learning; audio-visual demonstrations; chunking content into smaller, more digestible units; virtual practice sessions; online assessment and knowledge-checks; data tracking; and any electronic supports necessary for faculty to learn as they progress through the curriculum (Chen et al., 2009; Mahoney, 2008). To take advantage of the strengths of online technologies, the instructional designer needs to implement a theory-based model of teaching that is student-centered; this asks for a design that is grounded in how students learn (Garcia et al., 2018; Swaim, 2017). In the recent past, technology use in higher education has led to disappointing outcomes because instructors have used computers for the presentation of existing instructor-centered materials, supporting existing teaching practices that are not student-centered and may not have been designed for online use (Garcia et al., 2018). This is changing, however, as COVID has created a need to shift from face-to-face to online learning.

Chapter III: Methods

The purpose of this mixed method action research study was to update the content and structure of the military instructor faculty development program at the JAG school and to evaluate the effectiveness of the revised program. The study was guided by the following research questions:

1. What aspects of the old faculty development program were not meeting the pedagogical needs of the military instructors at the JAG school?
2. What interventions were designed and implemented to improve the faculty development program?
3. Did the newly revised faculty development program meet the commonly addressed pedagogical needs of the military instructors at the JAG school? In what ways?

Context

Effective military training and education are critical to the United States National Defense Strategy and encompass almost every facet of adult education from basic training through graduate-level higher education (DoD, 2020; Persyn & Polson, 2012). The current body of literature did not adequately address military instructor training for post-graduate level instruction (Persyn & Polson, 2012; Swaim, 2017; Zacharakis & Van Der Werff, 2012). In the pursuit of updating and improving the JAG school's faculty development program, the researcher had to understand how these updates and improvements could occur effectively given that limited information was available.

Research Design

This was a three-phased action research study used to identify ways to improve an existing military faculty development program. Action research was used because of its

systematic process of inquiry conducted by a teacher or professional to gather insight into how effectively learning was occurring and to implement necessary interventions to improve areas that may have challenges, problems, or shortcomings (Ferrence, 2000; Gay et al., 2012; Mertler, 2019; Wetzel & Ewbank, 2013). In broadly defining action research, one would include describing any attempts at pragmatic investigation to improve practice using an on-going, systematic approach (Tripp, 2005). This approach was best suited to this study to pinpoint instructional challenges, design pragmatic solutions, and create effective and meaningful change with minimal disruption to the very busy teaching workload of the military instructors at the JAG school.

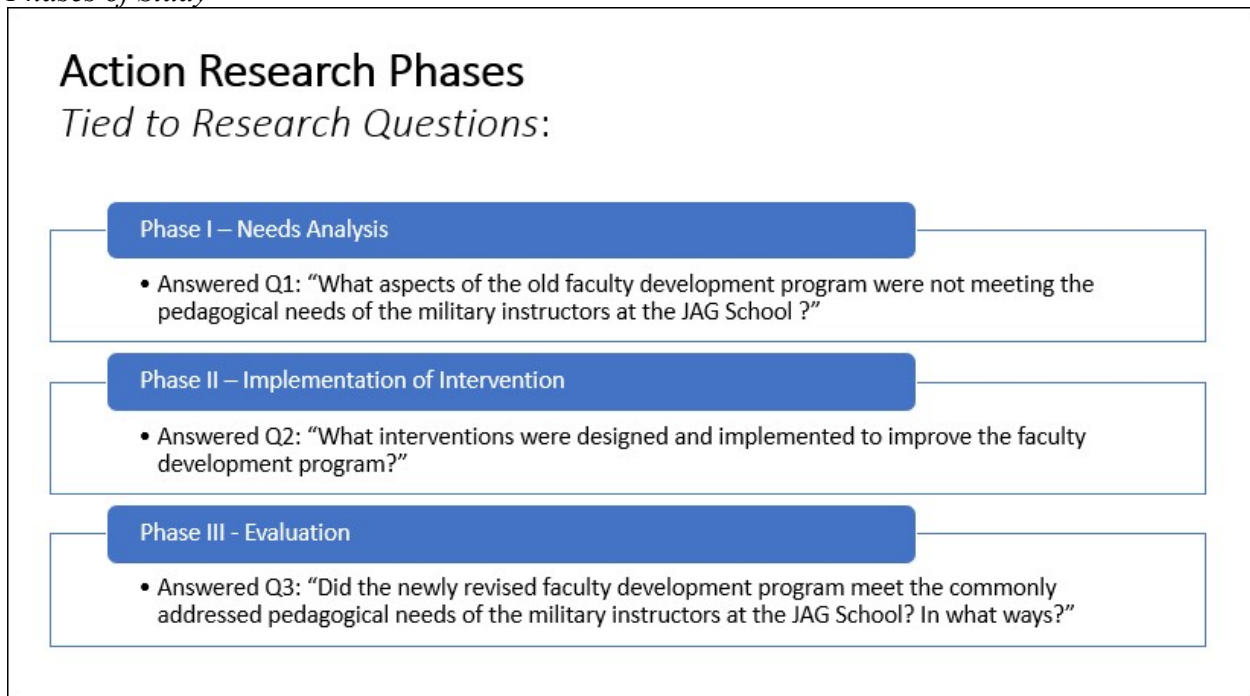
Phase I corresponded with the needs analysis phase and was used to answer the first research question, Phase II corresponded with the design and implementation phase and was used to answer the second research question. Phase III corresponded with the evaluation phase and was used to answer the third research question. All endeavors centered around the goal of improving an existing new faculty military instructor program.

The three research questions of this study informed the researcher of the pragmatic, real-world aspects of the action research study, as the researcher is a practitioner continuously confronting data about the faculty development program in order to identify problem areas, collect and organize pertinent data, interpret the data, take action on the data, and reflect on how the changes impacted the solution (Ferrence, 2000; Mertler, 2009; Mertler, 2019). This cycle is then repeated until the solution is deemed to have successfully addressed the problem set; therefore, it is cyclical in nature, always looking for ways to improve (Mertler, 2009; Mertler, 2019).

Figure 4 shows the three phases of the study. Each of the three phases was associated with a particular research question. Phase I acted as a needs analysis to discover what needed to be changed in the current faculty development program. In Phase II, an updated version of the faculty development program was implemented as a pilot or beta test to begin to understand its efficacy through change. Phase III determined if the updated program worked and if it achieved the intended outcomes of improving the pedagogical understanding of the military instructors at the JAG School.

Figure 4

Phases of Study



Background and Setting

The new military instructor faculty development program was established in 2010 to quickly train non-educators to teach graduate and post-graduate courses at the Judge Advocate General’s (JAG) School, in Montgomery, Alabama. The JAG school relied on military members, who were considered subject matter experts in military law, to teach junior members of the JAG

Corps as they progressed through their career paths as Air Force legal officers. The old faculty development program did this by using a two-week, face-to-face course taught by out-going instructors under the supervision of the Academic Director of the school.

The old faculty development program consisted of readings, homework assignments, lectures, lesson planning and teaching the lesson plans that they created. Readings and homework were given from the 461-page *Guidebook for Air Force Instructors* (November 2003 version). Hour-long lectures covered areas such as an introduction to the school and its staff, classroom preparation, basic instructional design, and various leadership topics. Creating lesson plans during the first week was guided by the guidebook and lectures on instructional design. Teaching the lesson plans that were created occurred during the second week when the new instructors presented their lectures to senior instructors who gave them feedback. After the second week was over, new instructors were expected to quickly learn what was needed in order to teach; this caused a very steep learning curve with varying levels of support and success.

The faculty development program had not been revised since its inception. It was time to determine if the old faculty development program was meeting the pedagogical needs of the military instructors at our school. This revision was also used to flatten the learning curve, give support, and set new instructors up for success.

Participants

This action research study relied on a purposive sampling technique, which involved the intentional selection of individuals (Creswell & Poth, 2016). The study's purposive sample of participants were recruited as part of an on-going faculty development program at a small, graduate-level, military law school.

Different groups of participants were included for data collection in each phase. Phase I consisted of 116 participants who completed the old military instructor training *End-of-Course Survey* from 2010-2020. Phase II consisted of 30 participants who completed the newly revised military instructor training *End-of-Course Survey* and the *Familiarity and Confidence Pre-Test* from 2021-2022; 15 of these participants were male and 15 were female. Phase III consisted of the same 30 participants who completed the *Familiarity and Confidence Post-Test* from 2021-2022. All participants possessed a Juris Doctorate degree in law at the time of the study and were considered subject matter experts in the field of law with at least ten years of military experience. All participants were commissioned military officers between the ages of 35 and 42 years.

Data Sources

The data sources for this study corresponded with each of the three phases. In Phase I, and corresponding with research question one, old faculty instructor training *End-of-Course Survey* data from 2010-2020 was used. The End-of-Course Survey was used at the end of each JAG School course as quality control and asked basic questions about the teaching and learning experience of the course that was just completed.

In Phase II, and corresponding with research question two, the newly revised faculty instructor training *End-of-Course Survey* data from 2021-2022 and the *Familiarity and Confidence Pre-Test* data from 2021-2022 were used. The newly revised course used a newly revised *End-of-Course Survey* because the old survey's questions were too general. The *Familiarity and Confidence Pre-Test* was created just for the newly revised faculty course.

Phase III, and corresponding with research question three, the *Familiarity and Confidence Post-Test* data from 2021-2022 was used and created for the newly revised faculty

course, as well. All data sources were collected as part of the new faculty instructor training program, as seen in Table 1.

Table 1

Data Sources and Data Analysis Items

Data Sources and Data Analysis	Research Questions	Data Collection Sources & Analysis Items			
		1	2	3	4
	1. Phase I <i>What were commonly addressed pedagogical needs of the military instructors at the JAG School?</i>	Old End-of-Course Survey 2010-2020			
	2. Phase II <i>What interventions were designed and implemented to improve the faculty development program?</i>		Newly Revised End-of-Course Survey 2021-2022	Familiarity & Confidence PRE-Test 2021-2022	
	3. Phase III <i>Did the newly revised faculty development program meet the commonly addressed pedagogical needs of the military instructors at the JAG School? In what ways?</i>				Familiarity & Confidence POST-Test 2021-2022

Old End-of-Course Survey

The 2010-2020 End-of-Course Survey varied over the years in the number of questions, length, and answer choices. This is why only the open-ended comments were used with qualitative coding processes to determine the unmet pedagogical needs of the faculty. Because there was no uniform or cohesive pattern to the existing survey, it was revised in 2021 to correspond to the newly revised faculty development program.

Newly Revised End-of-Course Survey

The *End-of-Course Survey* (2021-2022) was a 15-question Likert scale survey. The first two questions were demographic with questions 3-15 dealing with the quality of instruction,

teaching, and learning; it was based on the Air Force Instructor Manual (AFJAGS, 2020) and is represented in Figure 5.

Figure 5

End-of-Course Survey Example Question

2022 End of Course Student Survey			
Course Name: _____		Dates: _____	
1. Please select your branch of service:			
<input type="checkbox"/> Air Force (RegAF)	<input type="checkbox"/> Air Force Reserve (AFR)	<input type="checkbox"/> Air Nat'l Guard (ANG)	
<input type="checkbox"/> Space Force	<input type="checkbox"/> Army	<input type="checkbox"/> Navy	<input type="checkbox"/> USMC <input type="checkbox"/> Civilian
2. Please select your level of experience:			
<input type="checkbox"/> 0-6 months	<input type="checkbox"/> 6 months up to 1 year	<input type="checkbox"/> 1 to 5 years	
<input type="checkbox"/> 6 to 10 years	<input type="checkbox"/> more than 10 years		
3. Overall, this course had or maintained a high quality of instruction.			
Strongly Agree	Agree	Disagree	Strongly Disagree
Remarks: _____			
4. Overall, the instructors were prepared to teach this course.			
Strongly Agree	Agree	Disagree	Strongly Disagree
Remarks: _____			
5. Overall, I believe the course assignments facilitated learning.			

Familiarity and Confidence Pre-Test

The Familiarity and Confidence Pre-Test was a Likert scale instrument based on the 2019 RAND Teacher Efficacy Scale, which asked about the new faculty member's familiarity and confidence with teaching and learning topics. The following topics were addressed on the pre-test: The Role of the Air Force Instructor; Curriculum Planning; Learning Theory; Student-Centered Instruction; A Facilitator of Learning; Rubrics; Adult Learning Principles; Classroom

Management; Learning Management Systems; Content Authoring Tools; Interactive Lectures; Instructional Methodologies; Basic Lesson Presentation Formats; Formative Assessment; Instructor Observations; and Substitute Teacher Folders, as seen in Figure 6.

Figure 6

Familiarity and Confidence Pre-Test Example Question

<p><i>The Role of the Air Force Instructor</i></p> <p>6a. How familiar are you with the role of the Air Force Instructor?</p> <p><input type="checkbox"/> Very familiar. I am currently doing this job.</p> <p><input type="checkbox"/> Moderately familiar. I have done this job before.</p> <p><input type="checkbox"/> Slightly familiar. I have seen others do this job.</p> <p><input type="checkbox"/> Not familiar. I don't understand all that is involved in doing this job.</p> <p>6b. How confident are you teaching as an Air Force Instructor?</p> <p><input type="checkbox"/> Very confident. I have had extensive training/experience.</p> <p><input type="checkbox"/> Moderately confident. I have had adequate training/experience.</p> <p><input type="checkbox"/> Slightly confident. I have had some training/experience.</p> <p><input type="checkbox"/> Not confident. I have had little or no training.</p> <p>6c. Using a few words, describe what would make you feel more prepared to fill the role of Air Force Instructor. _____</p>

Familiarity and Confidence Post-Test

The Familiarity and Confidence Post-Test was exactly like the pre-test, however, it was given right before the military instructor left the school, in order to gauge how much they grew in their understanding of teaching and learning while at the JAG School.

Data Collection

Data collection for this study also corresponded to each of the three phases. In Phase I, data collection began by gathering data from the new faculty instructor training course called JAG-TM or JAG Teaching Methodologies *End-of-Course Survey*. Data went back to the year 2010, so ten years' worth of data from 2010-2020 was used. Because questions on the survey changed over time, only qualitative data were collected. Qualitative data consisted of open-ended

responses or comments, that were common to all ten years' worth of surveys. Those open-ended responses were coded to determine themes or trends that were used as a needs analysis for this study's purposes. The needs analysis informed the researcher what needs were met or unmet from the JAG-TM course over the period covering 2010-2020. The results of this data were used to answer research question number one.

In Phase II, *End-of-Course Survey* data from JAG-TM 2021-2022 was used as well as data from the *Familiarity and Confidence Pre-Test* of the same time period. During this phase of data collection, the *End-of-Course Survey* questions were stable, therefore allowing more trends to appear. The *Familiarity and Confidence Pre-Test* also had stable questions that allowed trend data to take shape. Two years' worth of data were collected during this phase. The results of this data were used to answer research question number two.

In Phase III, *Familiarity and Confidence Post-Test* data was used. During this phase of data collection, the results were used to triangulate all data collected. The results of this data were used to answer research question number three.

Ethics

Academic researchers are expected to uphold ethical norms and standards associated with human subjects in ways that minimize harm. Ethical research designs included consent, transparency, confidentiality, and the intent of the researcher (Creswell & Poth, 2016). Participants were provided with information regarding the time commitment of participation and were informed of their freedom to terminate their participation in the study at any time. The researcher followed these prescribed guidelines in conducting this action research study to include the approval to research as granted by the institutional review board (IRB), attached as Appendix A.

Role of the Researcher

The researcher was a doctoral student pursuing a Ph.D. in the administration and supervision of curriculum at Auburn University and served as the Academic Director of the U.S. Air Force Judge Advocate General's School at Maxwell Air Force Base in Montgomery, Alabama. The researcher's primary goal was to improve a decade-old faculty development program using the action research study method to update the program so it would meet the adult pedagogical needs of new military instructors as they were tasked to teach other adult learners at the post-graduate level.

Summary

The current body of literature did not adequately address military faculty training for post-graduate level instruction (Persyn & Polson, 2012; Swaim, 2017; Zacharakis & VanDerWerff, 2012). The researcher determined an action research study could be used with minimal disruption to the military members to update the decade-old faculty development program at their school and add to the scant body of knowledge so that other military schools could benefit, as well. This action research study achieved these changes by using three phases; each of the three phases of the study were associated with one of the three research questions that asked about the current state of the faculty development program, what needed to be changed, and if that implemented change was successful. The study was framed theoretically around the cognitive apprenticeship theory as a meaningful, actionable, and pragmatic approach to quickly prepare military instructors for their teaching roles at our post-graduate level school. The results of this redesigned faculty development program will be discussed in the next chapter.

Chapter IV: Findings

The focus of this mixed methods action research study was to update and improve the existing faculty development program at the JAG School: three phases of action research were used. The first phase was used to understand new faculty gaps in teaching adult learners at our school and answered the first research question. In the second phase, updates and revisions were made to the existing new faculty development program and answered the second research question. The last of the three phases corresponded with the evaluation of the program and answered the third research question. This chapter contains a brief overview of the analysis process, a summary of findings, and implications for practice.

Phase I – Analysis Findings to Answer Research Question One

During Phase I, it was important to understand what aspects of the old program needed to be changed so that the intervention would best meet those needs. Because the phases built on one another, spending time to target those pedagogical needs by looking at past perceptions of the old faculty development program, were necessary. Research question number one asked, “What aspects of the old faculty development program were not meeting the pedagogical needs of the military instructors at the JAG School?” During this first analysis or needs assessment phase, qualitative data from faculty development end-of-course surveys were coded and counted to determine themes or trends. In vivo coding was used to derive themes from the data itself. The language and terminology used by the participants themselves was used to determine these themes. The themes reflected the perspectives and perceptions of the participants on the end-of-course assessment. In vivo coding helped the researcher attain an in-depth understanding of the ideas and meanings expressed by the research participants. This process resulted in five specific trends that provided insight into the unmet pedagogical needs of new military instructors at the

JAG School. Those five topics were associated with: 1. Flipped Classroom (FC); 2. Instructional Design (ID); 3. Mentor / Mentoring (M); 4. Teaching Experience (TE); and 5. Teaching Pedagogy (TP). These five themes were used as the action research intervention topics that updated the new faculty development course and are represented in Table 2.

Table 2

Phase I – Findings: All Themes

Phase I	
End-of-Course Survey Qualitative Data Coding - All Themes	
Qualitative Data (2010-2020)	Theme (Number of Mentions)
1. Flipped Classroom (FC)	43
2. Instructional Design (ID)	43
3. Mentor / Mentoring (M)	20
4. Teaching Experience (TE)	38
5. Teaching Pedagogy (TP)	67

Theme 1 – Flipped Classroom (FC)

When using the flipped classroom model, students review material outside of the classroom so that time can be used inside of the classroom for experiential learning such as in-class simulation, discussion, debate, and problem-based learning (Marcum & Perry, 2015). The flipped classroom can be seen as doing the “homework” portion, live, in class, prompting the students to prepare for the day’s in-class events (Marcum & Perry, 2015). The common characteristics of a flipped classroom model involve the following three key components: pre-classroom activity, in-classroom activity, and post-classroom activity. This blended approach is a hybrid that uses technology to deliver content to the student before they set foot in the face-to-face classroom (Youhasan et al., 2021).

Table 3

Phase I, Theme 1 of 5, The Flipped Classroom Qualitative Coding Excerpts

Phase I	
End-of-Course Survey Qualitative Data Coding Examples Flipped Classroom (FC)	
Qualitative Data (2010-2020)	Theme
"There was too much to read each night. Would have liked access to the materials."	Flipped classroom
"Shorten the course – put some of it online. "	Flipped classroom
"Put all the administrative (department orientation) information online."	Flipped classroom
"I didn't feel I had enough time to read before class. Can we get reading materials, books, and examples online?"	Flipped classroom
"Would have wanted to read [all of it] before coming to class."	Flipped classroom
"Too much to do – can we get this online?"	Flipped classroom
"It would have been nice to have been able to see a few guided discussions and informal lectures [online]."	Flipped classroom

Theme 2 – Instructional Design (ID)

Effective instructional design for the adult learner was central to this topic's theme. This topic area revealed a need for our military instructors to understand and apply student-centered instructional methodologies that ensured the learners were active participants during the teaching and learning process (Bhat et al., 2021; Lyons et al., 2020). Active participation was integral and essential for the engaged learning process to occur. This format directly challenged the passive slide show lectures that were used in the recent past. The slide show format with simultaneous lectures had appeared in the past to be engaging, but the data indicated that the students were not engaged simply because the students were being compliant.

Using a flipped classroom model, by which students read through the curriculum material before attending class and applying what they learned was also an instructional design theme was revealed in the coding process.

Table 4

Phase I, Theme 2 of 5, Instructional Design Qualitative Coding Excerpts

Phase I	
End-of-Course Survey Qualitative Data Coding Examples Instructional Design (ID)	
Qualitative Data (2010-2020)	Theme (Mentioned 10+ times)
"I don't understand instructional design."	Instructional Design
"It takes time to understand curriculum development."	Instructional Design
"Show me how to make the lessons."	Instructional Design
"Need to know how to develop learning objectives."	Instructional Design
"What do you choose for the content – it's a bit confusing."	Instructional Design
"It was hard to write lessons and learning objectives. "	Instructional Design
"Need more practice with curriculum development?"	Instructional Design

Theme 3 – Mentor / Mentoring (M)

Mentoring was not a part of the old faculty development program. Mentoring was associated with the theoretical framework of this study, the cognitive apprenticeship theory. The cognitive apprenticeship theory had new instructors working with experienced instructors before those experienced instructors finished their two- to three-year tour of duty with the school. Working closely with a mentor, the transfer of knowledge and skills was deliberately and immediately reinforced or corrected, so the ways of thinking accompanied the transfer of knowledge while using real-world situations and applications (Backus et al., 2010; Newstetter, 2005; Rosenheck, 2013; Tilley & Callison, 2007). The mentoring aspect of this theoretical model helped our new instructors reach their job-related needs effectively and efficiently under the

close direction of a trusted colleague who had the experience and life lessons they needed to understand the job they were about to do in the classroom.

Table 5

Phase I, Theme 3 of 5, Mentoring Qualitative Coding Excerpts

Phase I	
End-of-Course Survey Qualitative Data Coding Examples	
Mentor/mentoring (M)	
Qualitative Data (2010-2020)	Theme (Mentioned 10+ times)
"Not sure why mentors were not used."	Mentor/mentoring
"A good mentor would have been helpful."	Mentor/mentoring
"Can we be assigned a battle buddy?"	Mentor/mentoring
"Pairing up with an experienced instructor?"	Mentor/mentoring
"I want a mentor to help me next time."	Mentor/mentoring
"Last time I had this kind of training I was assigned a mentor and suggest we do the same."	Mentor/mentoring
"A mentor would be helpful to me."	Mentor/mentoring

Theme 4 – Teaching Experience (TE)

This theme, teaching experience, was also associated with the theoretical framework of this study, the cognitive apprenticeship theory. The cognitive apprenticeship process suggested mentors show new instructors how to teach – in other words, the new faculty would observe or team-teach with the experienced instructor in order to gain insight as they themselves gained teaching experience (Collins et al., 1989; Collins et al., 1991; Swaim, 2017). This experience was meant to allow the new instructor to see or assist an experienced instructor in order to learn and gain experience on the job (Collins et al., 1991), and it offered the apprentices the opportunity to have hands-on experiences, which not only are more engaging, active learning

experiences but also are more easily translated for application when they are expected to perform the job themselves.

Table 6

Phase I, Theme 4 of 5, Teaching Experience Qualitative Coding Excerpts

Phase I	
End-of-Course Survey Qualitative Data Coding Examples	
Teaching Experience (TE)	
Qualitative Data (2010-2020)	Theme (Mentioned 10+ times)
"I learned a lot about teaching, now I need to get some practice."	Teaching experience
"I need more time to understand how to teach."	Teaching experience
"We only had one practice session over the past week, which is not enough."	Teaching experience
"I need more time to practice teaching."	Teaching experience
"I need more time to gain some experience."	Teaching experience
"Classroom sessions needed to gain more experience. "	Teaching experience
"Are we getting more faculty development time? I'm not ready."	Teaching experience

Theme 5 – Teaching Pedagogy (TP)

Teaching pedagogy, in this case, included the understanding and use of student-centered instructional methodologies for adult learners. Providing students real-world instruction and application in meaningful learning experiences was the goal of the military instructors. Understanding how those real-world, student-centered learning experiences were applied in the classroom was central to this theme because it was specifically geared towards adult learners who need to know why they are learning and how they can immediately apply what they just learned (Ferrance, 2000; Vaccarino et al., 2007; Wolf, 2007).

This theme was similar to several of the previous themes in that it was centered around adult teaching and learning; however, it was different in that it was about the application of real-

world, meaningful, student-centered learning in a landscape where content can quickly change. Other themes dealt with general teaching strategies, whereas this teaching pedagogy theme focused specifically on the use of real-world content and application, which asks the instructor to view content and methodologies from a perspective of geopolitical situations, war gaming, changing laws, or the needs of leadership, such as the President of the United States, or the Secretary of Defense. Instructors needed to know how to quickly adapt teaching pedagogy depending on the content and its immediate use. Knowing effective pedagogical choices and applications, based on content, was seen to be needed.

Table 7

Phase I, Theme 5 of 5, Teaching Pedagogy Qualitative Coding Excerpts

Phase I	
End-of-Course Survey Qualitative Data Coding Examples	
Teaching Pedagogy (TP)	
Qualitative Data (2010-2020)	Theme
"Needed more about teaching methodologies."	Teaching pedagogy
"Tell me how to keep students from falling asleep during my lectures."	Teaching pedagogy
"I would have preferred more classroom instruction on how to teach."	Teaching pedagogy
"Not all the reading assignments were helpful -- needed more substantive teaching instruction."	Teaching pedagogy
"I don't understand how to judge if others got the information I was teaching."	Teaching pedagogy
"Teaching methodologies please."	Teaching pedagogy
"It would have been helpful to have more teaching demonstrations."	Teaching pedagogy

Summary of Research Question One

Research question one asked, "What aspects of the old faculty development program were not meeting the pedagogical needs of the military instructors at the JAG School?" and

served as a needs assessment that, using action research processes, revealed five themes that were used to update the existing faculty development program.

Phase I of this three phased action research study was centered around the first research question and, as such, the answers or results of this first research question, built the foundation on which actionable change was based. Those themes provided the results of the needs analysis that translated into the design and development of the updated faculty development curriculum. Analysis, design, development, and eventually implementation was realized as a result of the themes that emerged during this phase. Phase II built out the themes by showing what interventions were needed to improve the faculty development program.

Phase II – Analysis Findings to Answer Research Question Two

Research question two asked, “What interventions were designed and implemented to improve the faculty development program?” and served as the design, development, and implementation portion of Phase II where the interventions resulting from the needs assessment from the first phase were applied to update the faculty development program.

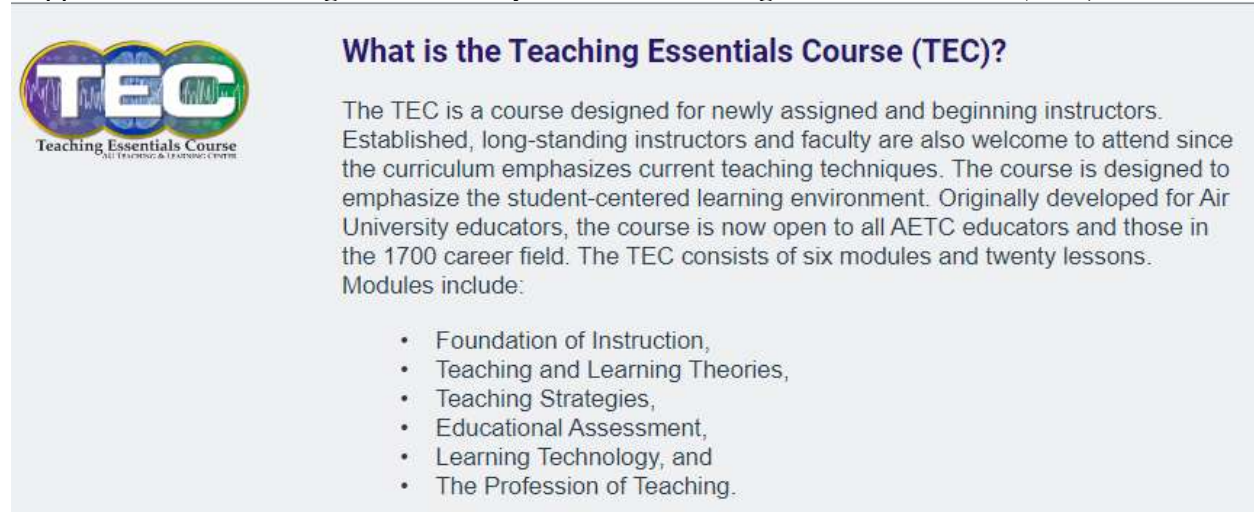
Instructional design methodologies were used to update the program in a systematic way so that the themes or topics found in Phase I were purposefully incorporated into the revised program. These instructional design methodologies included using student-centered, interactive, online learning for the first week of the program, or a flipped-classroom model, so that new faculty were prepared to apply what they learned when they got to the face-to-face week-long course. This approach was different from the previous faculty development program in that the adult learners had to prepare, online, for the face-to-face portion of the course, which had not been done in the past.

In the past, all activity was teacher-centered with reading materials provided during the evenings each night of the course as homework. Flipping the classroom and putting the materials online, including using short video vignettes of what “right” looks like in the classroom was no longer homework the night before but done several weeks before the start of the course.

Shown below in Figure 7 is the online course that was used to teach new faculty. This course was written and taught by Air University. Each instructor had approximately three months to complete this online course before attending in person at the JAG School.

Figure 7

Flipped Classroom Using Air University’s Online Teaching Essentials Course (TEC)



What is the Teaching Essentials Course (TEC)?

The TEC is a course designed for newly assigned and beginning instructors. Established, long-standing instructors and faculty are also welcome to attend since the curriculum emphasizes current teaching techniques. The course is designed to emphasize the student-centered learning environment. Originally developed for Air University educators, the course is now open to all AETC educators and those in the 1700 career field. The TEC consists of six modules and twenty lessons. Modules include:

- Foundation of Instruction,
- Teaching and Learning Theories,
- Teaching Strategies,
- Educational Assessment,
- Learning Technology, and
- The Profession of Teaching.

To evaluate whether or not this approach worked, a “Familiarity and Confidence” pre-test was given to the new faculty before they started the program, and an End-of-Course Survey was given at the end of the faculty development program. This process enabled the researcher to compare data collected before the participants received the intervention to the data collected at the end of the course. The results of the comparison mean scores are represented in Table 8 and indicate that the participants’ familiarity and confidence in their roles and with the content were increased by the flipped classroom format.

Table 8*Familiarity and Confidence Pre- and Post-Test Mean Scores Comparison*

Question	Scale = 0 to 4	Pre-Test Mean	Post-Test Mean	
<i>1.-5. Demographic Questions [on another chart]</i>				
6a. How familiar are you with the role of the Air Force Instructor?		1.80	3.83	
6b. How confident are you teaching as an Air Force Instructor?		1.46	3.66	
7a. How familiar are you with curriculum planning?		1.00	2.83	
7b. How confident are you with curriculum planning?		1.00	2.73	
8a. How familiar are you with learning theory?		1.06	3.13	
8b. How confident are you with applying learning theory?		1.06	2.96	
9a. How familiar are you with student-centered instruction?		1.00	2.83	
9b. How confident are you with applying student-centered instruction?		1.00	2.73	
10a. How familiar are you with being a facilitator of learning?		1.06	3.50	
10b. How confident are you being a facilitator of learning?		1.06	3.43	
11a. How familiar are you with rubrics?		1.50	3.66	
11b. How confident are you with rubrics?		1.50	3.53	
12a. How familiar are you with adult learning principles?		1.00	3.30	
12b. How confident are you with adult learning principles?		1.00	3.30	
13a. How familiar are you with classroom management?		1.00	3.56	
13b. How confident are you with classroom management?		1.00	3.50	
14a. How familiar are you with learning management systems?		1.00	2.30	
14b. How confident are you using learning management systems?		1.00	2.16	
15a. How familiar are you with content authoring tools?		1.00	1.96	
15b. How confident are you with content authoring tools?		1.00	1.96	
16a. How familiar are you with interactive lectures?		2.00	3.76	
16b. How confident are you with interactive lectures?		2.00	3.76	
17a. How familiar are you with instructional methodologies?		2.06	3.16	
17b. How confident are you using instructional methodologies?		1.93	3.10	
18a. How familiar are you with basic lesson presentation formats?		1.06	3.60	
18b. How confident are you using basic lesson presentation formats?		1.06	3.46	
19a. How familiar are you with formative assessment?		1.00	2.26	
19b. How confident are you using formative assessment?		1.00	2.23	
20a. How familiar are you with instructor observations?		1.00	3.86	
20b. How confident are you participating in instructor observations?		1.00	3.70	
21a. How familiar are you with substitute teacher folders?		1.03	1.33	
21b. How confident are you using substitute teacher folders?		1.03	1.33	

The results of the pre-test were used to gauge what new instructors did or did not know and their confidence levels with those specific topics, before starting the formal new faculty development course called JAG-Teaching Methodologies. For Phase II of this study, it was important to see what their baseline of knowledge was in order to build upon it and measure how much they learned as a result of the updated new faculty development course. The first five

questions were demographic in nature and were discussed in the previous chapter. The findings of the pre-test topic-specific questions 6-21 are shown in Tables 9, 10, 11, and 12 below.

Table 9

Familiarity and Confidence Questions 6 – 9

Question	Scale = 0 to 4	Pre-Test Mean	Post-Test Mean
<i>1.-5. Demographic Questions [on another chart]</i>			
6a. How familiar are you with the role of the Air Force Instructor?		1.80	3.83
6b. How confident are you teaching as an Air Force Instructor?		1.46	3.66
7a. How familiar are you with curriculum planning?		1.00	2.83
7b. How confident are you with curriculum planning?		1.00	2.73
8a. How familiar are you with learning theory?		1.06	3.13
8b. How confident are you with applying learning theory?		1.06	2.96
9a. How familiar are you with student-centered instruction?		1.00	2.83
9b. How confident are you with applying student-centered instruction?		1.00	2.73

Familiarity and Confidence Question 6a. and 6 b. - The Role of the Air Force Instructor

In terms of familiarity with the role of the Air Force Instructor, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.80 and a post-test mean score of 3.83. In terms of confidence teaching as an Air Force Instructor, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.46 and a post-test mean score of 3.66. The findings were not surprising and revealed a strong need for continued training about this topic.

Familiarity and Confidence Question 7a. and 7b. - Curriculum Planning

In terms of familiarity with curriculum planning, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.00 and a post-test mean score of 2.83. In terms of confidence with curriculum planning, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.00 and a post-test mean score of 2.73. The findings were not surprising and revealed a strong need for continued training about this topic.

The findings for this Familiarity and Confidence pre-test question dealing with curriculum planning showed all 30 participants were neither familiar nor confident with curriculum planning. The findings were not surprising and revealed a strong need for training about this topic.

Familiarity and Confidence Question 8a. and 8b. - Learning Theory

In terms of familiarity with learning theory, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.06 and a post-test mean score of 3.13. In terms of confidence applying learning theory, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.06 and a post-test mean score of 2.96. The findings were not surprising and revealed a strong need for continued training about this topic.

Familiarity and Confidence Question 9a. and 9b. - Student-Centered Instruction

In terms of familiarity with student-centered instruction, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.00 and a post-test mean score of 2.83. In terms of confidence applying student-centered instruction, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.00 and a post-test mean score of 2.73.

The findings for this Familiarity and Confidence pre-test question dealing with student-centered learning showed all 30 participants were neither familiar nor confident with student-centered learning, even after training and experience. These findings were not surprising and revealed a strong need for continued training about this topic. Student-centered learning would have to be incorporated into all future faculty development classes in order to emphasize its

importance and repeat its concepts so that all instructors would learn how to integrate it in their lessons.

Table 10

Familiarity and Confidence Questions 10 – 13

Question	Scale = 0 to 4	Pre-Test Mean	Post-Test Mean
10a. How familiar are you with being a facilitator of learning?		1.06	3.50
10b. How confident are you being a facilitator of learning?		1.06	3.43
11a. How familiar are you with rubrics?		1.50	3.66
11b. How confident are you with rubrics?		1.50	3.53
12a. How familiar are you with adult learning principles?		1.00	3.30
12b. How confident are you with adult learning principles?		1.00	3.30
13a. How familiar are you with classroom management?		1.00	3.56
13b. How confident are you with classroom management?		1.00	3.50

Familiarity and Confidence Question 10a. and 10b. - A Facilitator of Learning

In terms of familiarity with being a facilitator of learning, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.06 and a post-test mean score of 3.50. In terms of confidence with being a facilitator of learning, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.06 and a post-test mean score of 3.43. The findings were not surprising and revealed a strong need for continued training about this topic.

Familiarity and Confidence Question 11a. and 11b. - Rubrics

In terms of familiarity with the use of rubrics, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.50 and a post-test mean score of 3.66. In terms of confidence using rubrics, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.50 and a post-test mean score of 3.53. The findings were not surprising and revealed a strong need for continued training about this topic.

Familiarity and Confidence Question 12a. and 12b. - Adult Learning Principles

In terms of familiarity with adult learning principles, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.00 and a post-test mean score of 3.30. In terms of confidence applying adult learning principles, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.00 and a post-test mean score of 3.30. The findings were not surprising and revealed a strong need for continued training about this topic.

Familiarity and Confidence Question 13a. and 13b. - Classroom Management

In terms of familiarity with classroom management, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.00 and a post-test mean score of 3.56. In terms of confidence with classroom management, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.00 and a post-test mean score of 3.50. The findings were not surprising and revealed a strong need for continued training about this topic.

Table 11

Familiarity and Confidence Questions 14 – 17

Question	Scale = 0 to 4	Pre-Test Mean	Post-Test Mean	
14a. How familiar are you with learning management systems?		1.00	2.30	
14b. How confident are you using learning management systems?		1.00	2.16	
15a. How familiar are you with content authoring tools?		1.00	1.96	
15b. How confident are you with content authoring tools?		1.00	1.96	
16a. How familiar are you with interactive lectures?		2.00	3.76	
16b. How confident are you with interactive lectures?		2.00	3.76	
17a. How familiar are you with instructional methodologies?		2.06	3.16	
17b. How confident are you using instructional methodologies?		1.93	3.10	

Familiarity and Confidence Question 14a. and 14b. - Learning Management Systems

In terms of familiarity with the learning management systems, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.00 and a post-

test mean score of 2.30. In terms of confidence using the learning management system, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.00 and a post-test mean score of 2.16.

The findings for this Familiarity and Confidence pre-test question dealing with learning management systems showed all 30 participants were neither familiar nor confident with learning management systems even after training and experience.

Familiarity and Confidence Question 15a. and 15b. - Content Authoring Tools

In terms of familiarity with content authoring tools, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.00 and a post-test mean score of 1.96. In terms of confidence using content authoring tools, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.00 and a post-test mean score of 1.96.

The findings for this Familiarity and Confidence pre-test question dealing with content authoring tools showed all 30 participants were neither familiar nor confident with content authoring tools even after training and experience.

Familiarity and Confidence Question 16a. and 16b. - Interactive Lectures

In terms of familiarity with interactive lectures, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 2.00 and a post-test mean score of 3.76. In terms of confidence using interactive lectures, the findings for this Familiarity and Confidence pre-test question showed a mean score of 2.00 and a post-test mean score of 3.76.

The findings were not surprising because, as prior students, they would have participated in interactive lectures. As new instructors, however, understanding this topic from a teaching perspective was needed.

Familiarity and Confidence Question 17a. and 17b. - Instructional Methodologies

In terms of familiarity with instructional methodologies, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 2.06 and a post-test mean score of 3.16. In terms of confidence applying instructional methodologies, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.93 and a post-test mean score of 3.10.

The findings were not surprising because, as prior students, they would have experienced various content delivery methods, or instructional methodologies. As new instructors, however, understanding this topic from a teaching perspective was needed.

Table 12

Familiarity and Confidence Questions 18 – 21

Question	Scale = 0 to 4	Pre-Test Mean	Post-Test Mean	
18a. How familiar are you with basic lesson presentation formats?		1.06	3.60	
18b. How confident are you using basic lesson presentation formats?		1.06	3.46	
19a. How familiar are you with formative assessment?		1.00	2.26	
19b. How confident are you using formative assessment?		1.00	2.23	
20a. How familiar are you with instructor observations?		1.00	3.86	
20b. How confident are you participating in instructor observations?		1.00	3.70	
21a. How familiar are you with substitute teacher folders?		1.03	1.33	
21b. How confident are you using substitute teacher folders?		1.03	1.33	

Familiarity and Confidence Question 18a. and 18b. - Basic Lesson Presentation Formats

In terms of familiarity with basic lesson presentation formats, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.06 and a post-test mean score of 3.60. In terms of confidence using basic lesson presentation formats, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.06 and a post-test mean score of 3.46. The findings were not surprising and revealed a strong need for continued training about this topic.

Familiarity and Confidence Question 19a. and 19b. - Formative Assessment

In terms of familiarity with formative assessment, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.00 and a post-test mean score of 2.26. In terms of confidence using formative assessment, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.00 and a post-test mean score of 2.23.

The findings for this Familiarity and Confidence pre-test question dealing with formative assessment showed all 30 participants were neither familiar nor confident with formative assessment even after training and experience.

Familiarity and Confidence Question 20a. and 20b. - Instructor Observations

In terms of familiarity with the instructor observations, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.00 and a post-test mean score of 3.86. In terms of confidence participating in instructor observations, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.00 and a post-test mean score of 3.70. The findings were not surprising and revealed a strong need for continued training about this topic.

Familiarity and Confidence Question 21a. and 21b. - Substitute Teacher Folders

In terms of familiarity with substitute teacher folders, the findings for this Familiarity and Confidence pre-test question showed a pre-test mean score of 1.03 and a post-test mean score of 1.33. In terms of confidence using substitute teacher folders, the findings for this Familiarity and Confidence pre-test question showed a mean score of 1.03 and a post-test mean score of 1.33.

The findings for this Familiarity and Confidence pre-test question dealing with substitute teacher folders showed the lack of familiarity and confidence with substitute teacher folders,

even after training and experience. This is not surprising because substitute teacher folders were rarely used. In the future this topic will be dropped from training because of disuse.

Notable Findings – Familiarity and Confidence Pre-Test

The Familiarity and Confidence Pre-Test notable findings were not surprising because new faculty members did not have a background in education. New faculty did not have experience in teaching but did have some recollection of learning at the JAG school when they were students here themselves; because of this, many had slight familiarity with several topical areas of the pre-test. The areas that showed findings in the slightly familiar or slightly confident categories included: The Role of the Air Force Instructor; Rubrics; Interactive Lectures; and Instructional Methodologies. Again, as prior students at the JAG school, these topics were slightly familiar.

There were some topics that showed complete lack of familiarity or confidence. The findings revealed little or no prior knowledge and were not surprising for non-educators. These areas were instructor-specific, a role in which they lacked formal education or experience and included: Curriculum Planning; Student-Centered Instruction; A Facilitator of Learning; Adult Learning Principles; Classroom Management; Learning Management Systems; Content Authoring Tools; Basic Lesson Presentation Formats; Formative Assessment; Instructor Observations; and Substitute Teacher Folders.

In Phase II another instrument was used. The End-of-Course Student Survey was used at the end of the in-person, week-long JAG-Teaching Methodologies new military faculty instructor program. This instrument has been used for over ten years for all JAG school courses and will continue to be used indefinitely to collect constructive feedback about instruction.

Over time, the end-of-course questions had changed, however, during 2021-2022, the questions analyzed did not change during that time period and were analyzed during this phase to answer research question two, along with the data revealed from the pre-test mentioned in the previous section.

End-of-Course Student Survey

The End-of-Course Student Survey (2021-2022) was a 15-question Likert scale survey. The first two questions were demographic with questions 3-15 dealing with the quality of instruction, teaching, and learning. See figure below.

Figure 8

End-of-Course Student Survey

End-of-Course Positive Experience

Question Comparison

2010-2020:

93% Positive (Strongly Agree or Agree)

*I believe JAG-TM accomplished its mission. **

2021-2022:

98% Positive (Strongly Agree or Agree)

Overall, I believe this course was value added (I am glad I attended).

**This was the only question that did not change over the period 2010 -2020; it was updated in 2021 because it was too ambiguous.*

The findings for the End-of-Course Student Survey indicated that 98% of the 30 participants had a positive learning experience and believed the course was value added; in other words, the students were glad they attended JAG-Teaching Methodologies. The only question from 2010-2020 that could be compared to this question, because the questions changed over

time, was about the course accomplishing its mission to teach new faculty with 93% participants responding that they had a positive learning experience during this time period. The 2021-2022 revised course was perceived to be slightly better at 98%. See Figure 9.

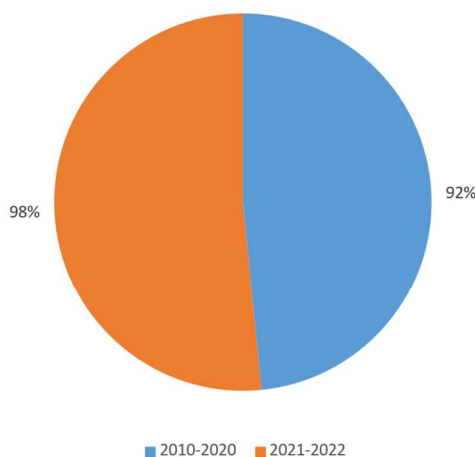
Figure 9

End of Course Positive Experience

Positive Experience at JAG-TM

End-of-Course Survey Data

Positive Experience
End-of-Course Survey
92% 2010 -2020
98% 2021 -2022



The Familiarity and Confidence Post-Test was not given at the end of the week-long, in-person new faculty training because it would not have captured the growth of the instructor. The End-of-Course Survey was used instead to capture the quality of the learning experience. The post-test, which will be discussed in Phase III and show how much instructors grew during their two-year tour of duty teaching at our school, and in which areas they grew the most.

Summary of Research Question Two

Research question two asked, “What interventions were designed and implemented to improve the faculty development program?” Phase II resulted in a revised program that was implemented

and tested to see if the revisions brought about improvement. The course was flipped, which changed it from two weeks in-person to one week online and one week in-person, so new faculty could do portions of the course online before attending at the school. Specific topic areas were added or revised to meet the needs of the new faculty, so their learning experience was tailored to their non-educator backgrounds, as revealed in Phase I. The newly revised course with these substantive changes managed to score a 98% positive learning experience after implementation, which was better than the previous two-week course.

Phase III – Analysis Findings to Answer Research Question Three

Research question three asked, “Did the newly revised faculty development program meet the commonly addressed pedagogical needs of the military instructors at the JAG school? In what ways?” In Phase III, Familiarity and Confidence Post-Test data were used. During this phase of data collection and analysis, triangulation of data from Phase I and Phase II was desired and achieved. The results of this data were used to answer research question number three.

Research question three was the last research question associated with this action research study, also known as Phase III or the evaluation phase, to judge the efficacy of the previous two phases and the culmination of the study. Phase III was able to show if the needs assessment, redesign and development of the new faculty development course, implementation, and evaluation achieved the goal of updating and improving the program.

The Familiarity and Confidence Post-Test was completed by faculty before they left our school to go back to their law offices to determine how much they grew as instructors and if the topics they learned while they were at the school made a difference in their pedagogical understanding. The post-test was also used to see what pedagogical challenges still existed for exiting instructors so that those areas could be focal points for the new and updated faculty

development program. The 2021-2022 Familiarity and Confidence Post-Test revealed three challenges common to the 30 participants as they left the school after the completion of their two-year teaching duties. Those challenges were revealed in the low scores on the post-test and revolved around the topics of student-centered instruction, learning management systems, and content authoring tools.

Before starting the new faculty development program, all 30 participants were neither familiar nor confident with student-centered learning. After completing the revised new faculty development program and teaching at the school for two years, they only had modest gains in this area of teaching. The implications of these low scores translated into offering more training in this subject area.

Before starting the new faculty development program, all 30 participants were neither familiar nor confident with learning management systems. After completing the revised new faculty development program and teaching at the school for two years, they had little gains in this area of teaching technologies. The implications of these low scores resulted in a shift in responsibilities with the learning management system at our school. The permanent civilian team was trained to maintain courses and course materials in the learning management system so instructors no longer had that burden; training in the use of the learning management system, for faculty was minimal and commensurate with a smaller role for the instructor.

Before starting the new faculty development program, all 30 participants were neither familiar nor confident with content authoring tools. After completing the revised new faculty development program and teaching at the school for two years, they had minimal gains in this area of teaching technologies. The implications of these low scores translated into offering more training in this subject area.

Summary of Research Question Three

Research question three asked, “Did the newly revised faculty development program meet the commonly addressed pedagogical needs of the military instructors at the JAG School? In what ways?” Phase III resulted in seeing how the pedagogical needs were met to the level of specificity required that changed some of the duties and responsibilities of our instructors.


The Familiarity and Confidence Post-Test indicated one area in particular that, no matter how much training and experience on the job, challenged the faculty. That area revolved around technology. School administrators took notice of this technology-related challenge. As a result of this on-going challenge, some of the technology-related duties and functions were removed from the instructors’ responsibilities and placed with permanent civilian personnel who did not leave the school every two years. The learning management system was the most daunting technology-related challenge that the civilians were trained to manage. The learning management system duties were given to the civilians because it caused the instructors the greatest amount of difficulty and required a steep learning curve to understand, operate, and maintain.

Phase III’s culmination of data from the previous two phases also showed how the goal of the study, updating a new faculty development program called JAG-Teaching Methodologies, was successfully met. The prior program had not been updated since its creation ten years earlier. The updates, including exploring what the military instructors needed, used, and found necessary for their success as new instructors, closed out this action research study. The findings indicated that a flipped classroom was needed to teach pedagogical topics before coming to the face-to-face class. The findings also indicated that using the actual lessons they would teach, combined with a one-on-one mentor for support, was also needed. These changes were positively supported by the data.

The next review of this faculty development program will occur in three to five years to ensure the needs of our military instructors at the JAG School will continue to be met.

Figure 10

Mentoring Agreement



MENTORING AGREEMENT

***PURPOSE:** This Mentoring Agreement was created to ensure mentees and mentors develop a mutual understanding of expectations, roles, and responsibilities, as they support one another as faculty members. Additionally, it creates a series of identifiable benchmarks to achieve during this process.*

As a mentee, I agree to do the following:

1. Meet regularly with my mentor and maintain frequent communication.
2. Look for multiple opportunities and experiences to enhance my learning.
3. Maintain confidentiality of our relationship.

As a mentor, I agree to do the following:

1. Serve as a mentor for _____ and provide guidance, oversight, and encouragement.
2. Provide feedback to the mentee as a way to learn their new faculty roles and responsibilities.
3. Meet regularly with my mentee to review their progress towards their goals.
4. Maintain confidentiality of our relationship.

Name of Mentee: _____ Date: _____

Name of Mentor: _____ Date: _____

Benchmark/Goal #1: Watch your mentor teach two times.|

Chapter V: Conclusion

While research has studied faculty development as a way institutions can change and improve the scholarship of its faculty (Watson, 2019), military instructor training and education has lagged (Persyn & Polson, 2012). Effective faculty development should be an on-going, systematic, intentional process that includes mentoring, coaching, and clinical supports (Shealy, 2019). The cognitive apprenticeship model, the theoretical framework of this study, used many of these best practices, which were applied to the updated faculty development program at the JAG School. This action research study sought to add to the body of knowledge that was lacking for military instructors at the graduate level, while improving an existing faculty development program.

This area of research was valuable to study because the Department of Defense was tasked with training its military members at every level of adult education, including graduate and post-graduate learning (DoD, 2020). This area of research was also valuable to both the JAG School and the Department of Defense as they met their mission of training in support of the United States' National Defense Strategy (DoD, 2020). By adding to the body of knowledge, this study helped guide military education and training institutions at many levels as they prepared military instructors inside and outside of the JAG School in its task of teaching graduate courses in leadership and law (AFJAGS, 2020).

This chapter contains a general overview of the study, connections of findings to current literature, implications for educational practice, and recommendations for future research.

Overview of the Study

This action research study used three phases to address three research questions as it updated an existing in-house military instructor faculty development program. Phase I served as

the needs analysis phase to determine what education-related topics needed to be included in the new program. Using qualitative coding, five themes emerged; those themes, or results of Phase I, revealed the educational topics that were included in updating the ten-year-old faculty development program.

Phase II took the results of the previous phase and not only updated but implemented the new program. Phase II was created using a flipped classroom model where instructional content was placed on a learning management system in a self-paced format that could be asynchronously completed by the new faculty member before attending the face-to-face week-long new faculty development course. Using the cognitive apprenticeship model's mentor paradigm, Phase II included pairing new faculty members with experienced mentors to provide team-teaching practice and support.

Phase III determined if those updates were successful. The results of this phase indicated that updating the faculty development program was needed and appreciated. Most of the themes that emerged during the first phase repeated themselves in Phase III as important and worthwhile topics to know as a new instructor. Again, having a mentor was overwhelmingly popular and provided the support that was needed as the new faculty members learned their new roles and responsibilities as military instructors. This data also supported the literature researched in this study's review of literature.

Phase III's surprising findings were that no matter how much training the faculty received during their two years at the school, they continued to have difficulty with technology and, in particular, with the learning management system. A non-training solution was used to resolve this challenge. The solution was to take the learning management system duties and responsibilities away from faculty, a unanimous decision by all stakeholders.

Connections of Findings to Current Literature

This study's results closely followed the educational themes and topics found in literature, such as providing mentoring, coaching, and clinical supports that are needed for a successful faculty development program (Shealy, 2019). This was especially important to our military instructors because they did not possess prior teaching knowledge or experience.

The findings also were needed because current literature had little to offer in terms of information for military instructors who, again, had no educational background but needed to quickly get the training needed to teach adult learners.

Implications for Research

Research implications suggest that the findings can have important policy-level actions and practices at the JAG school and possibly at the Air Force and DoD level. Based on this study, the policy-level actions at the JAG school could include partnering with another similar schoolhouse, such as the U.S. Air Force Academy, or the Army's JAG school to further study similar challenges in training military instructors in higher education.

There are more practical implications that can bring about further study to capture best practices for this niche group of instructors, who all share the common bond of having to quickly be trained to teach, over a short two- to three-year assignment, and many of whom lacked experience in this kind of work before they entered their schoolhouses.

These best practices could be published and finally added to the scant literature that is available and that is much needed, especially as today's teaching technologies become more complex. These best practices could also be applied to other sister-services, helping to create a support system within its ranks by creating a larger community of practice among the military faculty cadre as they teach and lead.

Implications for Educational Practice

Because this action research study particularly focused on the JAG School at Maxwell Air Force Base, the implications for educational practice were viewed from that lens in terms of the educational practices that were updated for use in the in-house new faculty development program.

The self-paced online pedagogical training provided the flexibility incoming military instructors needed and appreciated. Applying what they learned online in the face-to-face classroom rounded out the training program in ways they could immediately use at the podium, in a real-world setting. Having mentors who supported them during this training period and beyond was also effective and was clearly indicated in the findings.

Another particular implication for educational practice within our school was that this action research study was used to benchmark the new faculty development program. In three to five years, another curriculum review is scheduled to occur; the End-of-Course Survey feedback and the Familiarity and Confidence Pre/Post Survey data will be helpful in comparing and contrasting ways the program may need to change in the future.

Recommendations for Future Research

There were, however, some perceived gaps in understanding that occurred as a result of this action research study. Three following gaps are recommended for future research:

1. How to ensure mentors are prepared adequately to support new faculty.
2. What to do about instructors who are assigned to our school but cannot attend the JAG Teaching Methodologies course.
3. How to convince upper echelons of leadership to extend the teaching tour of duty from two years to four years, so the learning curve is not so steep.

Closing Statement

This three-phased action research study identified ways to improve an existing military faculty development program and, in the process, the researcher was able to add to a body of knowledge that was scant at best. Knowing the needs of new faculty was a necessary starting point in this action research study. Changing the program to be partially online met the needs of our incoming military instructors. Applying what they learned online in a real-world face-to-face setting with a mentor to guide them was an effective training solution. Removing technology roles and responsibilities that they could not master was a non-training solution that was appreciated. Lastly, adding this action research study to the body of knowledge that was scant, was achieved.

In closing, having a mentor and adequate supports makes all the difference in both the civilian and military new faculty indoctrination teaching and learning processes. The mentors wanted to pay forward what they had received themselves.

When you learn, teach. When you get, give. --Maya Angelou

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Appendix A

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AUBURN UNIVERSITY HUMAN RESEARCH PROTECTION PROGRAM (HRPP)

EXEMPT REVIEW APPLICATION

For assistance, contact: The Office of Research Compliance (ORC)
Phone: 334-844-5965 E-Mail: IRBAdmin@auburn.edu Web Address: <http://www.auburn.edu/research/vpr/ohs>
Submit completed form and supporting materials as one PDF through the [IRB Submission Page](#)

Hard copies forms are not accepted. Where links are found hold down the control button (Ctrl) then click the link.

1. Project Identification

Today's Date: May 7, 2022

Anticipated start date of the project: May 15, 2022 Anticipated duration of project: 1 Year

a. Project Title: A Mixed Methods Study to Improve Graduate Level Military Instructor Training

b. Principal Investigator (PI): Linda "Lindy" Summerlin Degree(s): Ph.D. Candidate
Rank/Title: Graduate Student Department/School: Educational Foundations, Leadership, and Technology
Role/responsibilities in this project: Researcher
Preferred Phone Number: (256) 541-0374 AU Email: LAS0090@auburn.edu

Faculty Advisor Principal Investigator (if applicable): Dr. Jung Won Hur
Rank/Title: Professor Department/School: Educational Foundations, Leadership, and Technology
Role/responsibilities in this project: Faculty Advisor
Preferred Phone Number: (334) 844-3019 AU Email: jzh0011@auburn.edu

Department Head: Dr. J. Satterfield Department/School: Educational Foundations, Leadership, and Technology
Preferred Phone Number: (334) 844-3060 AU Email: jws0089@auburn.edu
Role/responsibilities in this project: Department Head

c. Project Key Personnel – Identify all key personnel who will be involved with the conduct of the research and describe their role in the project. Role may include design, recruitment, consent process, data collection, data analysis, and reporting. ([Do not include non-personnel, see Guidance Page](#)). Exempt determinations are made by individual institutions; reliance on other institutions for exempt determination is not feasible. Non-AU personnel conducting exempt research activities must obtain approval from the IRB at their home institution.

Key personnel are required to maintain human subjects training through [CITI](#). Only for EXEMPT level research is documentation of completed CITI training NO LONGER REQUIRED to be included in the submission packet. NOTE however, the IRB will perform random audits of CITI training records to confirm reported training courses and expiration dates. Course title and expiration dates are shown on training certificates.

Name: Linda "Lindy" Summerlin Degree(s): Ph.D. Candidate
Rank/Title: Graduate Student Department/School: Educational Foundations, Leadership, and Technology
Role/responsibilities in this project: Researcher

- AU affiliated? Yes No If no, name of home institution:

- Plan for IRB approval for non-AU affiliated personnel?

- Do you have any known competing financial interests, personal relationships, or other interests that could have influence or appear to have influence on the work conducted in this project? Yes No

- If yes, briefly describe the potential or real conflict of interest:

- Completed required CITI training? Yes No If NO, complete the appropriate [CITI basic course](#) and update the revised Exempt Application form.

- If YES, choose course(s) the researcher has completed:

Responsible Conduct of Research for Social and Behavioral Social, Behavioral and Education Sciences RCE 1-RCR. Completion Date: 11-Jan-2019. Expiration Date: 10-Jan-2024. Record ID: 29884383

The Auburn University Institutional Review Board has approved this document for use from
05/09/2022 to
05/09/2024
Protocol #: 22-23W IR 2205

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IRB #2 Social and Behavioral Emphasis – AU Personnel – Basic/Refresher & 1 Basic Course. Completion Date: 24-Jan-2019. Expiration Date: 23-Jan-2022. Record ID: 3026620.

Responsible Conduct of Research for Social and Behavioral Social, Behavioral and Education Sciences RCR 2-RCR Refresher. Completion Date: 24-Jan-2019. Expiration Date: 23-Jan-2023. Record ID: 30266273.

Name: _____ Degree(s): _____
Rank/Title: _____ Department/School: _____

Role/responsibilities in this project:

- AU affiliated? Yes No If no, name of home institution:
- Plan for IRB approval for non-AU affiliated personnel?
- Do you have any known competing financial interests, personal relationships, or other interests that could have influence or appear to have influence on the work conducted in this project? Yes No
- If yes, briefly describe the potential or real conflict of interest:
- Completed required CITI training? Yes No If NO, complete the appropriate [CITI basic course](#) and update the revised EXEMPT application form.
- If YES, choose course(s) the researcher has completed:

Name: _____ Degree(s): _____
Rank/Title: _____ Department/School: _____

Role/responsibilities in this project:

- AU affiliated? Yes No If no, name of home institution:
- Plan for IRB approval for non-AU affiliated personnel?
- Do you have any known competing financial interests, personal relationships, or other interests that could have influence or appear to have influence on the work conducted in this project? Yes No
- If yes, briefly describe the potential or real conflict of interest:
- Completed required CITI training? Yes No If NO, complete the appropriate [CITI basic course](#) and update the revised EXEMPT application form.
- If YES, choose course(s) the researcher has completed:

d. **Funding Source** – Is this project funded by the investigator(s)? Yes No

Is this project funded by AU? Yes No If YES, identify source

Is this project funded by an external sponsor? Yes No If YES, provide name of sponsor, type of sponsor (governmental, non-profit, corporate, other), and an identification number for the award.

Name: _____ Type: _____ Grant #: _____

e. List other AU IRB-approved research projects and/or IRB approvals from other institutions that are associated with this project. Describe the association between this project and the listed project(s):
n/a

2. Project Summary

a. Does the study **TARGET** any special populations? Answer YES or NO to all.

Minors (under 18 years of age; if minor participants, at least 2 adults must be present during all research procedures that include the minors)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Autumn University Students	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Pregnant women, fetuses, or any products of conception	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Prisoners or wards (unless incidental, not allowed for Exempt research)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Temporarily or permanently impaired	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

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- b. Does the research pose more than minimal risk to participants? Yes No
if YES, to question 2.b, then the research activity is NOT eligible for EXEMPT review. Minimal risk means that the probability and magnitude of harm or discomfort anticipated in the research is not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. 42 CFR 46.102(i)
- c. Does the study involve any of the following? if YES to any of the questions in item 2.c, then the research activity is NOT eligible for EXEMPT review.
- | | |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Procedures subject to FDA regulations (drugs, devices, etc.) | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Use of school records of identifiable students or information from instructors about specific students. | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Protected health or medical information when there is a direct or indirect link which could identify the participant. | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Collection of sensitive aspects of the participant's own behavior, such as illegal conduct, drug use, sexual behavior or alcohol use. | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
- d. Does the study include deception? Requires limited review by the IRB* Yes No

3. MARK the category or categories below that describe the proposed research. Note the IRB Reviewer will make the final determination of the eligible category or categories.

1. Research conducted in established or commonly accepted educational settings, involving normal educational practices. The research is not likely to adversely impact students' opportunity to learn or assessment of educators providing instruction. 104(d)(1)
2. Research only includes interactions involving educational tests, surveys, interviews, public observation if at least ONE of the following criteria. (The research includes data collection only; may include visual or auditory recording; may NOT include intervention and only includes interactions). Mark the applicable sub-category below (I, II, or III). 104(d)(2)
- (I) Recorded information cannot readily identify the participant (directly or indirectly linked);
OR
- surveys and interviews: no children;
- educational tests or observation of public behavior: can only include children when investigators do not participate in activities being observed.
- (II) Any disclosure of responses outside would not reasonably place participant at risk; OR
- (III) Information is recorded with identifiers or code linked to identifiers and IRB conducts limited review; no children. Requires limited review by the IRB.*
3. Research involving Benign Behavioral Interventions (BBI)** through verbal, written responses including data entry or audiovisual recording from adult subjects who prospectively agree and ONE of the following criteria is met. (This research does not include children and does not include medical interventions. Research cannot have deception unless the participant prospectively agrees that they will be unaware of or misled regarding the nature and purpose of the research) Mark the applicable sub-category below (A, B, or C). 104(d)(3)(i)
- (A) Recorded information cannot readily identify the subject (directly or indirectly linked); OR
- (B) Any disclosure of responses outside of the research would not reasonably place subject at risk;
OR

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- (C) Information is recorded with identifiers and cannot have deception unless participants prospectively agree. **requires limited review by the IRB.***
- 4. Secondary research for which consent is not required: use of identifiable information or identifiable bio-specimen that have been or will be collected for some other "primary" or "initial" activity, if one of the following criteria is met. Allows retrospective and prospective secondary use. **Mark the applicable sub-category below (i, ii, iii, or iv).** 104 (d)(4)
 - (i) Bio-specimens or information are publicly available;
 - (ii) Information recorded so subject cannot readily be identified, directly or indirectly linked investigator does not contact subjects and will not re-identify the subjects; **OR**
 - (iii) Collection and analysis involving investigators use of identifiable health information when use is regulated by HIPAA "health care operations" or "research" or "public health activities and purposes" (does not include bio-specimens (only PHI and requires federal guidance on how to apply); **OR**
 - (iv) Research information collected by or on behalf of federal government using government generated or collected information obtained for non-research activities.
- 5. Research and demonstration projects which are supported by a federal agency/department AND designed to study and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or service under those programs. (must be posted on a federal web site). 104.5(d)(5) (must be posted on a federal web site)
- 6. Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives and consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture. The research does not involve prisoners as participants. 104(d)(6)

*Limited IRB review – the IRB Chair or designated IRB reviewer reviews the protocol to ensure adequate provisions are in place to protect privacy and confidentiality.

**Category 3 – Benign Behavioral Interventions (BBIs) must be brief in duration, painless/harmless, not physically invasive, not likely to have a significant adverse lasting impact on participants, and it is unlikely participants will find the interventions offensive or embarrassing.

*** Exemption categories 7 and 8 require broad consent. The AU IRB has determined the regulatory requirements for legally effective broad consent are not feasible within the current institutional infrastructure. EXEMPT categories 7 and 8 will not be implemented at this time.

4. Describe the proposed research including who does what, when, where, how, and for how long, etc.

a. Purpose

The purpose of the proposed research is to update and improve an existing graduate-level military instructor training program. The researcher (who), as standard classroom protocol, ensures all military instructors attending the JAG- TM initial faculty development course, fill out associated pre- and post-tests and surveys (what), before and after this specific course (when), by using paper or digital online formats (how), during the military instructor's (2-3 year) tour of duty (for how long).

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- b. Participant population, including the number of participants and the rationale for determining number of participants to recruit and enroll. Note if the study enrolls minor participants, describe the process to ensure more than 1 adult is present during all research procedures which include the minor.
Survey data from 2010-2021 will be analyzed from 133 past military instructor (participants) who attended the Judge Advocate General – Teaching Methodologies (JAG-TM) initial faculty development course (military instructor training program) during that time frame. Survey data from 2022 will be gathered from up to 30 current military instructors who have recently attended JAG-TM initial faculty development course (military instructor training program) within the past year.
- c. Recruitment process. Address whether recruitment includes communications/interactions between study staff and potential participants either in person or online. Submit a copy of all recruitment materials.
This is a purposive workplace recruitment process. Recruitment materials do not exist because school policy dictates that every military instructor must attend JAG-TM initial faculty development course (military instructor training program).
- d. Consent process including how information is presented to participants, etc.
All participants will understand the purpose(s) of the survey(s) and will be given the option to opt-out of the process, if requested.
- e. Research procedures and methodology
Qualitative data from 2010-2021 surveys will be used with action research coding processes to conduct a needs assessment. 2022 data collected will be both qualitative and quantitative. 2022 data will be used to triangulate data collected in the needs assessment phase (2010-2021) and determine if updates to the existing faculty development program were successful.
- f. Anticipated time per study exercise/activity and total time if participants complete all study activities.
The single 2010-2021 survey has already been completed by participants; no additional time on their part is necessary except for minimal member-checking for clarity/clarification. Because of the number of survey instruments (six) and member-checking discussions involved, the 2022 time per participant will be approximately 2 hours. (Up to 30 participants x 2 hours per participants = 60 hours.) Discussing the instruments is an expectation already held by the school; this time signature is normal and not out of the ordinary.
- g. Location of the research activities.
Maxwell Air Force Base, Montgomery, AL - Judge Advocate General's School
- h. Costs to and compensation for participants? If participants will be compensated describe the amount, type, and process to distribute.
n/a
- i. Non-AU locations, site, institutions. Submit a copy of agreements/IRB approvals.
N/A per JAG School, who is the sole owner of the pre- and post-tests, student surveys, and survey data; U.S. Air Force has delegated IRB approval to the sole owner of the data, the JAG School, which is a "tenant" organization and not affiliated with Air University. The JAG School has determined no IRB approval is necessary for documents that are within the normal classroom scope of use; all instruments are (and have been) a part of the JAG-TM initial faculty development program and will continue to be used regardless of this study.

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for quality control since the school's inception in the 1950s. Per Air Force policy, no identifiable information is contained in student surveys; copies of surveys/results are kept in a two-factor authenticated data base and are only available to minimal school administrators.

5. Waivers

Check applicable waivers and describe how the project meets the criteria for the waiver.

- Waiver of Consent (including existing de-identified data)
- Waiver of Documentation of Consent (Use of Information Letter, rather than consent form requiring signatures)
- Waiver of Parental Permission (in Alabama, 18 years-olds may be considered adults for research purposes)

a. Provide the rationale for the waiver request.

6. Describe the process to select participants/data/specimens. If applicable, include gender, race, and ethnicity of the participant population.

Up to 30 participants will be selected as part of an existing military instructor training program. All participants will hold a Juris Doctorate degree and have been practicing military law for at least ten years. All 30 participants will be Air Force commissioned officers holding the rank of Major or Lieutenant Colonel, with an age range of between 35-45 years of age. The gender split of these military instructors has traditionally been 50% male and 50% female and is expected to remain the same. Ethnicity data is not available for use per Air Force Personally Identifiable Information (PII) policy (see Air Force Instruction 33-332, 10MARCH2020, Air Force Privacy and Civil Liberties Program for more information).

7. Risks and Benefits

7a. Risks - Describe why none of the research procedures would cause a participant either physical or psychological discomfort or be perceived as discomfort above and beyond what the person would experience in daily life (minimal risk).

Pre-test(s), post-test(s) and surveys are commonly used items at this military school and the use of these instruments in the classroom are both normal and expected. This school has existed since the 1950's and these processes and procedures have been used successfully, without physical or psychological discomfort, since the school's inception; these instruments are considered part of the school's quality control activities.

7b. Benefits – Describe whether participants will benefit directly from participating in the study. If yes, describe the benefit. And, describe generalizable benefits resulting from the study.

n/a

8. Describe the provisions to maintain confidentiality of data, including collection, transmission, and storage. Identify platforms used to collect and store study data. For EXEMPT research, the AU IRB recommends AU BOX or using an AU issued and encrypted device. If a data collection form will be used, submit a copy.

Storage of data is in a learning management system (LMS) at the JAG School which is accessible via two-step authentication and only available to the researcher; it is locked from use and cannot be accessed or seen by others.

a. If applicable, submit a copy of the data management plan or data use agreement.

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9. Describe the provisions included in the research to protect the privacy interests of participants (e.g., others will not overhear conversations with potential participants, individuals will not be publicly identified or embarrassed).

No data will be discussed neither privately nor publicly and will remain between the participant and researcher. All discussions (member-checking, and clarification) will occur in a closed-door office with the consent of the participant. No recordings will be made. No conversations will be (or can be) heard outside of the closed-door office space. No individual will be publicly identified or embarrassed in order to protect the privacy interests of the participant(s).

10. Additional information and/or attachments.

In the space below, provide any additional information you believe may help the IRB review of the proposed research. If attachments are included, list the attachments below. Attachments may include recruitment materials, consent documents, site permissions, IRB approvals from other institutions, data use agreements, data collection form, CITI training documentation, etc.

Attachments: 1. End of Course (EOC) Student Survey; 2. Familiarity and Confidence Pre-Test; 3. Familiarity and Confidence Post-Test; 4. Qualifying Instructor Observation (Comment section only will be used for survey and triangulation purposes); 5. 90-Day Instructor Observation (Comment section only will be used for survey and triangulation purposes).

Required Signatures (If a student PI is identified in Item 1.a, the EXEMPT application must be re-signed and updated at every revision by the student PI and faculty advisor. The signature of the department head is required only on the initial submission of the EXEMPT application, regardless of PI. Staff and faculty PI submissions require the PI signature on all versions, the department head signature on the original submission)

Signature of Principal Investigator: Lindell Swannick Date: 05/18/2022

Signature of Faculty Advisor (if applicable): Tyler Wood Date: 05/19/2022

Signature of Dept. Head: James Satterfield Date: 5/17/2022

Version Date: 5/7/2022

EOC SURVEY QUESTIONS

Instructions: This is 15-question anonymous survey. Please select the most appropriate answer. If needed, use "other" to give more information. (You can use "other" with any response.) Thank you.

When you are finished, please send the completed survey to the Academic Director.

info.summer@usmc.af.mil

COURSE TITLE: _____

Date: _____

DEMOGRAPHICS

1. Please select your branch of service:

- | | | |
|--------------------------------------------|--------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> Air Force (RegAF) | <input type="checkbox"/> Air Force Reserve (AFR) | <input type="checkbox"/> Air Nat'l Guard (ANG) |
| <input type="checkbox"/> Space Force | <input type="checkbox"/> Army | <input type="checkbox"/> Navy |
| <input type="checkbox"/> USMC | <input type="checkbox"/> Civilian | |

Other (open-ended text) _____

2. Please select your level of experience:

- | | | |
|----------------------------------------|------------------------------------------------|-----------------------------------------|
| <input type="checkbox"/> 0-6 months | <input type="checkbox"/> 6 months up to 1 year | <input type="checkbox"/> 1 to 5 years |
| <input type="checkbox"/> 6 to 10 years | <input type="checkbox"/> 11 to 15 years | <input type="checkbox"/> 16 to 20 years |

Other (open-ended text) _____

INSTRUCTION

3. Overall, this course had or maintained a high quality of instruction:

- Strongly Agree Agree Disagree Strongly Disagree

Other (open-ended text) _____

4. Overall, the instructors were prepared to teach this course:

- Strongly Agree Agree Disagree Strongly Disagree

Other (open-ended text) _____

5. Overall, I believe the course assignments facilitated learning:

- Strongly Agree Agree Disagree Strongly Disagree n/a

Other (open-ended text) _____

EOC SURVEY QUESTIONS

6. Overall, the content was presented effectively:

Strongly Agree Agree Disagree Strongly Disagree

Other (open-ended text) _____

7. Overall, I believe this course was value added (I am glad I attended):

Strongly Agree Agree Disagree Strongly Disagree

Other (open-ended text) _____

8. Overall, I was able to access the content/slides/articles:

Strongly Agree Agree Disagree Strongly Disagree n/a

Other (open-ended text) _____

LEARNING ENVIRONMENT

9. Overall, I was able to use technology/CAMPUS effectively:

Strongly Agree Agree Disagree Strongly Disagree n/a

Other (open-ended text) _____

10. Overall, the class schedule/pace was adequate for the materials presented:

Strongly Agree Agree Disagree Strongly Disagree n/a

Other (open-ended text) _____

11. The large auditorium and/or learning environment was conducive to learning:

Strongly Agree Agree Disagree Strongly Disagree n/a

Other (open-ended text) _____

12. The seminar room/courtyard(s) were conducive to learning:

Strongly Agree Agree Disagree Strongly Disagree n/a

Other (open-ended text) _____

EOC SURVEY QUESTIONS

13. What do you think was missing from this course?

Open-ended text response _____

14. What do you think would help improve this course?

Open-ended text response _____

15. Is there anything you want us to know (about this course or about your learning experience) that can help future students?

Open-ended text response _____

Routing:

Please send your completed survey to the JAG School Academic Director, info@sumnerjag.us.af.mil

2022 Familiarity and Confidence Survey
Needs Assessment

Familiarity and Confidence Levels

This survey is used to better prepare our instructional staff and find out their training needs.

Your answers will be used to develop a targeted faculty development program. Thank you in advance.

This survey will take between 8 - 11 minutes to complete. Please choose an answers to each question.

Demographics & Prior Training Experience:

1. I'm an officer enlisted civilian
 2. I've worked with military law for 5+ years 7+ years 10+ years
 3. I have had formal instructor training prior to coming to AFJAGS yes no not sure
 4. I have gone to faculty development workshops prior to AFJAGS yes no not sure
 5. I feel I can learn all I need to know to teach while I'm at AFJAGS yes no not sure
-

The Role of the Air Force Instructor

6a. How familiar are you with the role of the Air Force Instructor?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

6b. How confident are you teaching as an Air Force Instructor?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

6c. Using a few words, describe what would make you feel more prepared to fill the role of Air Force Instructor. _____

2022 Familiarity and Confidence Survey
Needs Assessment

Curriculum Planning

7a. How familiar are you with curriculum planning?

- Very familiar.** I am currently doing this job.
- Moderately familiar.** I have done this job before.
- Slightly familiar.** I have seen others do this job.
- Not familiar.** I don't understand all that is involved in doing this job.

7b. How confident are you with curriculum planning?

- Very confident.** I have had extensive training/experience.
- Moderately confident.** I have had adequate training/experience.
- Slightly confident.** I have had some training/experience.
- Not confident.** I have had little or no training.

7c. Using a few words, describe what would make you feel more prepared to engage in curriculum planning. _____

Learning Theory

8a. How familiar are you with learning theory?

- Very familiar.** I am currently doing this job.
- Moderately familiar.** I have done this job before.
- Slightly familiar.** I have seen others do this job.
- Not familiar.** I don't understand all that is involved in doing this job.

8b. How confident are you with applying learning theory?

- Very confident.** I have had extensive training/experience.
- Moderately confident.** I have had adequate training/experience.
- Slightly confident.** I have had some training/experience.
- Not confident.** I have had little or no training.

8c. Using a few words, describe what would make you feel more prepared to apply learning theory in the classroom. _____

2022 Familiarity and Confidence Survey
Needs Assessment

Student-Centered Instruction

9a. How familiar are you with student-centered instruction?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

9b. How confident are you with applying student-centered instruction?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

9c. Using a few words, describe what would make you feel more prepared to apply student-centered instruction in the classroom. _____

A Facilitator of Learning

10a. How familiar are you with being a facilitator of learning?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

10b. How confident are you being a facilitator of learning?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

10c. Using a few words, describe what would make you feel more prepared to be a facilitator of learning. _____

2022 Familiarity and Confidence Survey
Needs Assessment

Rubrics

11a. How familiar are you with rubrics?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

11b. How confident are you with rubrics?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

11c. Using a few words, describe what would make you feel more prepared to use rubrics in the classroom. _____

Adult Learning Principles

12a. How familiar are you with adult learning principles?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

12b. How confident are you with adult learning principles?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

12c. Using a few words, describe what would make you feel more prepared to apply adult learning principles in the classroom. _____

2022 Familiarity and Confidence Survey
Needs Assessment

Classroom Management

13a. How familiar are you with classroom management?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

13b. How confident are you with classroom management?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

13c. Using a few words, describe what would make you feel more prepared to apply classroom management. _____

Learning Management Systems (LMSs)

14a. How familiar are you with LMSs?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

14b. How confident are you using LMSs?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

14c. Using a few words, describe what would make you feel more prepared to use LMSs. _____

2022 Familiarity and Confidence Survey
Needs Assessment

Content Authoring Tools

15a. How familiar are you with content authoring tools?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

15b. How confident are you with using content authoring tools?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

15c. Using a few words, describe what would make you feel more prepared to use content authoring tools. _____

Interactive Lectures

16a. How familiar are you with interactive lectures?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

16b. How confident are you with interactive lectures?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

16c. Using a few words, describe what would make you feel more prepared to be use interactive lectures. _____

2022 Familiarity and Confidence Survey
Needs Assessment

Instructional Methodologies

17a. How familiar are you with instructional methodologies?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

17b. How confident are you using instructional methodologies?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

17c. Using a few words, describe what would make you feel more prepared to use instructional methodologies. _____

Basic Lesson Presentation Formats

18a. How familiar are you with basic lesson presentation formats?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

18b. How confident are you using basic lesson presentation formats?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

18c. Using a few words, describe what would make you feel more prepared to use basic lesson presentation formats. _____

2022 Familiarity and Confidence Survey
Needs Assessment

Formative Assessment

19a. How familiar are you with formative assessment?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

19b. How confident are you using formative assessment?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

19c. Using a few words, describe what would make you feel more prepared to use formative assessment. _____

Instructor Observations

20a. How familiar are you with instructor observations?

- Very familiar. I am currently doing this job.
- Moderately familiar. I have done this job before.
- Slightly familiar. I have seen others do this job.
- Not familiar. I don't understand all that is involved in doing this job.

20b. How confident are you participating in instructor observations?

- Very confident. I have had extensive training/experience.
- Moderately confident. I have had adequate training/experience.
- Slightly confident. I have had some training/experience.
- Not confident. I have had little or no training.

20c. Using a few words, describe what would make you feel more prepared to participate in instructor observations. _____

2022 Familiarity and Confidence Survey
Needs Assessment

Substitute Teacher Folders

21a. How familiar are you with substitute teacher folders?

- Very familiar.** I am currently doing this job.
- Moderately familiar.** I have done this job before.
- Slightly familiar.** I have seen others do this job.
- Not familiar.** I don't understand all that is involved in doing this job.

21b. How confident are you using substitute teacher folders?

- Very confident.** I have had extensive training/experience.
- Moderately confident.** I have had adequate training/experience.
- Slightly confident.** I have had some training/experience.
- Not confident.** I have had little or no training.

21c. Using a few words, describe what would make you feel more prepared to use substitute teacher folders. _____

Thank you for your time. Your answers will help build an effective faculty development program for our new and existing instructors. Much appreciated.