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Military Instructors' Perspectives on Interactive Multimedia Application in Military Classrooms

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Abstract

The objective of this study is to investigate the application of interactive multimedia instruction (IMI) products in military classrooms. This study explored the experiences of military instructors with barriers, application strategies, and professional development resources. Military instructors are crucial in facilitating soldiers' learning experiences and applying multimedia products effectively to ensure soldiers are combat ready. A phenomenological approach was used in this study, which involved seven certified military instructors as participants. Semistructured interviews were conducted to collect data, and a qualitative content analysis was performed. The study yielded four findings that provided insights into military instructors' perspectives on applying IMI products in military classrooms. The findings of this study contribute to enhancing the understanding of the application of IMI products and provide recommendations for improving the professional development of military instructors.

The U.S. Department of Defense (2019) has emphasized integrating modern learning products, processes, and support systems to train service members better and stay competitive with foreign military capabilities. This push toward technology in military learning environments allows for realistic and challenging experiences that help to prepare military learners for combat situations (U.S. Department of the Army [DA], 2019). As such, military instructors must have a solid technical knowledge of interactive multimedia instruction (IMI) products. IMI products are educational technologies that include simulators, artificial intelligence, learning management systems (LMS), and other technologies (DA, 2018). Previous studies have shown a need for more emphasis on training instructors in this area (Alhassan, 2017).

While past research has focused on instructor training and knowledge, there is a gap in the literature regarding military instructors' perspectives on applying IMI products in military classrooms. This study aimed to fill the literature gap by investigating military instructors' lived experiences of applying IMI products in military classrooms. This study also sought to understand the barriers military instructors face, application strategies, and professional development resources when using IMI products in military instructional settings. The research question focuses on military instructors' perspectives on barriers faced, application strategies, and professional development resources associated with applying IMI products in military instructional settings.

This qualitative study is significant because instructional technologies like IMI products are critical to modernizing military education and training. The findings of this research can provide the U.S. Army Training and Doctrine Command (TRADOC) with valuable insights into how the organization can train its military instructors effectively in technology-rich learning environments. The results of this study can also influence the professional development opportunities of military instructors across TRADOC. The study's findings and recommendations can also help to enhance digital modernization readiness within TRADOC, the U.S. Army, and the Department of Defense.

Literature Review

Multimedia Instructional Strategies

Multimedia products engage learners through multiple senses in a single environment and align with specific instructional strategies (Adams et al., 1996). They facilitate collaborative learning and communication among learners and teachers, improving academic performance and collaboration skills (Koh et al., 2016). Authentic and inquiry task strategies allow learners to bring experiences and interests into the classroom. These experiences enhance multimedia that support group activities, such as small-group discussions, research projects, scientific tools, and community-based projects (Koh et al., 2016). Simultaneous modalities provide learners with multiple stimuli through multimedia products, including images, animations, videos, audio clips, and text, such as simulators (Adams et al., 1996). Given the available instructional strategies, there exists a gap in the literature on military instructors' applications of multimedia instructional strategies.

IMI Engagement and Levels of Interactivity

Yueh et al. (2012) found that the degree of participant students' multimedia engagement produced variances in the students' perceptions of multimedia instruction. These variances in student perceptions of multimedia instruction, in turn, im-

pact the level of multimedia interactivity. The U.S. Department of Defense (2001) defines interactivity levels as student engagement with IMI products, which reflects the appropriate level of interactivity with various IMI products. The four levels of interactivity provide a framework to identify and define student engagement with IMI products (U.S. Department of Defense, 2001). These levels of interactivity include passive, limited, complex, and real-time participation. The passive level requires learners to show a procedure with computer-generated multimedia products. The limited participation level requires learners to use computers or multimedia to assess students' intellectual skills or provide feedback. The complex participation level requires learners to use limited real-time simulations to perform specific operational tasks. Finally, the real-time participation level requires learners to perform real-time simulations in operational settings.

Given the levels of multimedia interactivity, there exists a gap in the literature on the degree of instructors' prior engagement with interactive multimedia instruction and understanding of the levels of interactivity in multimedia instruction. The instructors' level of previous engagement with IMI products informs their perceptions of multimedia tools and their applications. These perceptions are developed through prior experiences and knowledge of IMI products, shaping the instructors' foundational understanding of the levels of interactivity in multimedia instruction.

IMI Product Barriers

The 21st-century education system focuses on developing students' critical thinking and adaptability skills using digital tools such as Web 2.0, social media, games, and simulations (Peck, 2020). However, instructors and teachers face various barriers when using these digital tools. Smith et al. (2020) identified stereotype barriers, including assumptions that digital natives possess innate knowledge and competence in using technology. Önalan and Kurt (2020) identified two levels of barriers that affect higher education teachers' integration of technology in classrooms: resource barriers and belief barriers. Resource barriers include a lack of training,

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technical support, and resources, while belief barriers relate to instructors' attitudes and self-efficacy toward technology use.

Önalan and Kurt's (2020) study used quantitative methodologies to collect and analyze the samples' perceptions of resource and belief barriers. Considering this study, a gap in the literature requires further exploration of teachers' or instructors' perceptions of resources and belief barriers. Additionally, Önalan and Kurt recommended using a qualitative approach to explore teachers' perceptions of resource and belief barriers. Suddick et al. (2020) recommend a phenomenological approach to understanding participants' experiences and establish meaning. The gap in the literature reflects an existing need to explore teachers' or instructors' perceptions of resource and belief barriers based on lived experiences as associated with phenomenology.

Similarly, Dinc (2019) categorized barriers into first-level (external) and second-level (internal) factors such as access to IMI products, confidence in applying IMI products, and beliefs about technology. Dinc's study included a population of preservice elementary education teachers who yielded results that are not generalizable in military education settings. Mayes et al. (2015) also assert that user needs, attitudes, expectations, and beliefs are internal factors to applying IMI products. Finally, Hutchison and Woodward (2018) posit that a lack of context and experience with current technologies limits secondary education teachers' knowledge and ability to use these technologies. The results of the study provided implications of necessary technology integration professional development for teachers. However, professional development barriers, such as a lack of context and experience with current technologies, limit teachers' knowledge of use and ability to apply IMI products in instructional settings (Hutchison & Woodward, 2018).

Implications of IMI Product Application

Martin's (2016) study found that military education students and instructors value using technology-rich environments for training and preparing soldiers for future missions. Students believe that technology can support education and increase critical thinking, and instructors recommend using technology to facilitate learners' crit-

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ical thinking. However, there is a knowledge gap between military instructors and their perceived abilities to apply IMI products in the learning environment. Classroom resources such as multimedia-assisted instruction can improve learners' interest and effectiveness (Liu et al., 2020). Pricilia et al. (2020) and Toteva and Grigorva (2014) suggest pairing effective IMI product designs such as videos, animations, images, and summaries with appropriate teaching approaches and learning techniques. Effective teaching with IMI products requires multiple techniques and strategies to maintain learners' interests (Hamilton, 2019).

Methodology

Research Design

This study used a phenomenological research design to explore the experiences of military instructors with IMI product applications in the military classroom. Phenomenology is a research approach that focuses on understanding an individual's experiences and the meaning they attach to those experiences (Suddick et al., 2020). This design was appropriate for this study as it allowed the researchers to understand the instructors' experiences and perceptions of using IMI products in the classroom.

Research Settings

The research setting is a military training school for current soldiers at a U.S. Army School of Excellence (pseudonym). The School of Excellence is a traditional brick-and-mortar institution with virtual learning capabilities. The classrooms include smartboards, overhead projectors, Wi-Fi, and individual computer stations. The School of Excellence uses Blackboard as its LMS for hybrid learning. Under the Department of Defense COVID-19 pandemic health protection guidelines, Microsoft Teams software is part of the School of Excellence's instructional technology plan. The School of Excellence has separate simulator rooms for various types of virtual combat and military occupation specialty performance tasks and experiences. After completing prerequisite training, the School of Excellence provides field training experiences as capstone exercises for students.

Participants

The study included seven participants: three U.S. Army enlisted instructors and four officer instructors. This study uses the criterion sampling method to select participants based on their certification to instruct by TRADOC and their experience in teaching soldiers and junior officers (DA, 2018). The sample size of seven partic-

Table 1
Descriptive Demographic Data

Participants	Title	Gender	Age	Ethinicity	Level of Education	Service Year	Teaching Year
Castle	Officer Instructor	Male	32	African American	MS	9	2
Jim	Enlisted Instructor	Male	40	Caucasian	MS	18	9
James	Enlisted Instructor	Male	38	Caucasian	MS	14	2.5
Steven	Enlisted Instructor	Male	37	Caucasian	MS	19	4
Eric	Officer Instructor	Male	36	Caucasian	MS	16	2.5
Elizabeth	Officer Instructor	Female	40	Hispanic	MS	10	4
Kendrick	Officer Instructor	Male	33	African American	MS	14	3

ipants was deemed appropriate for a phenomenological study as it falls within the typical range of five to 25 individuals (Leedy & Ormond, 2016). Table 1 provides demographic data of the participants. Using pseudonyms in the study helped protect the participants' identities. In addition, the collection of demographic data provides a better understanding of the participants' teaching experiences.

Data Collection and Analysis

This study utilized two one-hour rounds of one-on-one semistructured interviews to collect data. The researcher selected one-on-one interviews to enable a comprehensive exploration of participants' experiences, perceptions, and understandings of a phenomenon (Stofer, 2019). Both interviews were conducted using Zoom and recorded in cloud storage. During the first round of interviews, the researcher used an interview protocol that included seven demographic and seven open-ended questions. The following questions are samples from the first-round interview protocol:

- How many years have you served in the Army?
- Before becoming an instructor, describe your previous experience with interactive multimedia products such as simulators, virtual reality, games, smartboards, electronic tests, learning management systems, etc.

- What application of IMI products do you use in your classroom? When/How do you use them? How would you describe the usefulness of these products?
- How would you describe your professional development experiences that support your efforts to apply IMI products?

Conducting follow-up second-round interviews allows the researcher to clarify any incomplete, unstated, misunderstood, or missing data or to explore any areas of responses that seemed implicit. The following sample questions were asked as part of the second around interview questions:

- Are there any additions or deletions to the responses provided?
- Is there anything that I may have missed or misunderstood in the transcription of your responses?

This approach ensures that the researcher has a complete understanding of the data and provides an opportunity for the researcher to discover any issues that may have arisen during the first round of interviews.

The data analysis followed Hsieh and Shannon's (2005) qualitative content analysis (QCA) steps. QCA focuses on language and context to describe and quantify a phenomenon. The researcher began the QCA by first reading all the transcripts repeatedly to achieve immersion and understanding of the textual data's context. Next, the researcher checked the accuracy of the audio transcript by listening to it while reading it.

In the second step, the researcher began the first-cycle coding process, which occurs concurrently through all phases of the QCA. According to Miles et al. (2020), the first cycle of descriptive coding assigns a short symbolic phrase to the textual data, summarizing and translating each data unit. The researcher applied the descriptive codes against the participants' transcribed responses. For example, Jim's response to interview question seven was assigned the descriptive code: "I had little integration experience with the smart boards or anything like that. Coming up through high school." Next, the researcher used MAXQDA data analysis software to note the relationship between unique and significant similar and different codes that aligned with the research questions.

The third step required the researcher to reflect on jotted notes taken during the interviews. These notes allowed the researcher to approach the data with his first impressions, thoughts, and initial analysis (Hsieh & Shannon, 2005). The researcher used these notes as ideas for analytic consideration throughout this study. For example, the researcher included a jotted note in the margin of the transcription about "participants' similar responses about professional development availability."

In step four, the researcher sorted the initial codes and notes into categories based on how the codes are related (Hsieh & Shannon, 2005). During the categorization process, the researcher made necessary changes to the codes and categories based on data analysis. The data analysis allowed the researcher to develop the following categories related to question seven:

Figure 1

Sample of Qualitative Content Analysis Matrix

Measuring Unit	Code	Category	Theme
RO-2 Question 7 Kendrick	I've used virtual, uh, rollover simulators, and those are to reenact being hit by IED and how to, uh, get yourself out, um, in that, but in the academic environment, also a bunch of like different Blackboard websites and other virtual training, uh, websites as well. So a fair amount of experience using them.	Experiences as a Soldier	Range of Experiences
RO-2 Question 7 Jim	I had little integration with the, with the smart boards or anything like that, coming up through high school	High School Experiences	Range of Experiences
RO-2 Question 7 James	I've always, I've always had a deep interest in multimedia and, and, um, uh technology. Um, so, you know, into gaming as I was a kid growing up, starting with the, uh, Nintendo system and kind of following those through and playing PlayStation and all that kind of stuff.	High School Experiences	Range of Experiences

Before becoming an instructor, describe your previous experience with interactive multimedia products such as simulators, virtual reality, games, smartboards, electronic tests, learning management systems, etc.:

- Pre-military experiences
- High school experiences
- College experiences
- Limited experiences

Finally, in step five, the researcher developed themes from the sorted categories using the generic QCA matrix. According to Hsieh and Shannon (2005), the researcher sorts the initial codes and notes into categories based on how the codes are related. The developed themes were based on the categorized codes and notes and were used to answer the research questions. Figure 1 is a section from the QCA matrix used in this study.

Findings

Finding 1: Having foundational technology experiences is critical to military instructors' successful application of IMI products.

When discussing instructors' premilitary service experiences, most participants have enriched experiences with IMI products. These enriched experiences are shaped by participants' prior knowledge of and learning with IMI products. These preservice experiences include childhood experiences, secondary education experi-

ences, higher education experiences, and job requirement experiences. For example, James said, "I have always had a deep interest in multimedia and technology. I was into gaming as a kid growing up." Eric stated, "I have used simulators for a few things during my undergrad." However, two participants had limited experience such as Jim, who mentioned, "I had little experience with the smart boards or anything like that when I was coming up through high school." According to the descriptive demographic data table, participants with limited experiences with IMI are 40 years of age. Which in this study, places Jim and Elizabeth in the digital immigrant population. All participants acknowledged an array of IMI products they have engaged in, which informed their current knowledge of IMI products and their uses.

The findings of this study showed that participants who have been deluged with IMI product experiences and possess the knowledge required tend to incorporate open education resources (OER) as IMI products into the instructional experiences. In this study, OER IMI products are described as independently sourced by instructors not traditionally included in an organization's educational technology plan. For instance, Eric and Kendrick possess in-depth knowledge of IMI products and incorporate additional outsourced IMI products such as Google Classroom, Kahoot, Cal Topo mapping program, and YouTube videos into their classrooms. In contrast, participants such as Jim had limited preservice experiences with IMI products and focused only on essential products, such as Microsoft PowerPoint and smart boards.

Finding 2: Barriers that impact military instructors' applications of IMI products.

The second finding of this study showed that participants have experienced several barriers while applying IMI products in instructional settings. However, according to the literature, the barriers the participants reported are all resource and belief and level one (external) and level two (internal). These barriers varied in the following aspects:

Software Licensing. Some participants reported constantly facing software licensing issues that inhibit their ability to use available IMI products. For example, James explained that a challenge he faced was "software licensing issues." According to the literature, software licensing is a resource and level one barrier.

Connectivity. Some participants reported frequent connectivity issues, such as the LMS being down or internet disconnection. For example, Jim stated, "One of the main challenges I often run into in my organization is LMS site downtime." According to the literature, connectivity is a resource and level one (external) barrier.

Student Dislocation from the Instructor. Some participants reported feeling uncertain when they could not assess student engagement. For example, Kendrick stated, "I cannot see online students' faces and gauge how well they comprehend." According to the literature, student dislocation from the instructor is a belief and level two (internal) barrier.

Distractions. Some participants indicated the distractions when studying at home. Kendrick says online students "are at home and have things in the background that sometimes pulls them away (distractions)." Current literature suggests that a distraction is a belief and level two (internal) barrier.

Cultural. Some participants stated that instructing students with various cultural and learning backgrounds made using IMI products in their instructional settings challenging. Castle explained, "You have to learn that students that come from different parts of the world, and some of them are just more analog driven, and what I mean by analog driven, there is a lot of the digital interfaces and digital products that we use." Castle's response alludes to the various backgrounds and experiences of the learners he has. Many of Castle's learners are international students or digital immigrants who do not share similar digital cultural experiences. According to the literature, a cultural barrier is a belief and level two (internal) barrier.

Inadequate Technology Support. Some participants reported that software updates are common, but the hardware would not receive the appropriate update; they (participants) would encounter various technical problems. Kendrick explained, "It can be challenging working with the department to get them to come in and reinstall the proper drivers and update them." According to the literature, inadequate technology support is a resource and level one (external) barrier.

Finding 3: Strategies that military instructors use to apply IMI products in military instructional settings.

The participants' responses allude to IMI product application strategies being critical to enhancing the learning experience and improving instruction effectiveness. The findings of this study showed various strategies that participants used to apply IMI products in the classroom.

Using Multiple IMI Products in the Classroom. Participants reported using LMSs such as Blackboard in addition to PowerPoint, YouTube videos, video chat, and other technologies. Jim states, "I use different smartboard systems and PowerPoint, Excel, spreadsheet, trackers, and utilization of the Army's publication system."

Promoting Digital Collaboration. Some participants encouraged student communication and interaction via discussions and group work. Eric mentioned, "Google classroom, I can provide individual feedback to students through emails through instant messages through the system."

Using OER (Open Educational Resources). Participants used Google Earth, videos, and Kahoot to simulate students' learning interests. James stated, "I use things [IMI products] like Cal Topo, mapping software that'll help you create and print your maps."

Requesting Prereading. Participants described how to use prereading to get students ready for class activities. Kendrick said, "I think the most prominent strategy is having the students do prereading about the topics that we will talk about before-

hand so that they can come into the class already having a general idea of what we will be talking about."

Preparing an Instruction Backup Plan for Technology Failure. Participants mentioned that they had to be prepared for the technology failure. Eric mentioned that he replaced unworkable digital materials with hands-on projects.

Finding 4: Professional development, classroom resources, and technical support are crucial to building and sustaining military instructors' IMI product knowledge and application skills.

Participants in this study identified professional development, updated hardware and software, and technology support (i.e., help desk) as necessary resources for applying IMI products in military classrooms. All participants indicated that short-term, professional development courses were essential for gaining necessary IMI product knowledge and skills. For instance, Kendrick explained that during the instructor course, he learned about adult learning models and 18 different teaching techniques. When a new program or system was released, participants received training on how to use the specific technology or application in the classrooms, which Elizabeth referred to as "train the trainer." Castle noted that they were shown the function of the new update to understand how to utilize it with IMI products.

Despite the availability of professional development opportunities, participants expressed the need for updated training content. Steven and Eric mentioned that they had to be self-reliant and engage in multimedia to stay current with available IMI products. Jim even stated, "There was no training whatsoever." In addition, Eric identified the need for updated equipment and software. He said, "The military is known well for buying something; they will wait 20 years to buy something else." Similarly, Elizabeth stated that some of the equipment necessary for teaching was not always accessible.

Participants also considered help desk or technology support as a crucial resource. Immediate technical support and resources were necessary, as reported by most participants. Castle mentioned that when a piece of equipment or interface malfunctioned, he could call the help desk and would be prioritized for a repair.

Discussion and Recommendations

Finding 1

This finding aligned with Peck's (2020) study in that familiarity with digital tools was associated with participants' experiences in civilian learning environments and their regular use of digital technologies. The study found that the more exposure participants had with IMI products, the more likely they were to incorporate technology

into their classroom teaching. Thus, understanding a military instructor's preservice experiences or familiarity with IMI products is crucial for an organization's effort to modernize or enhance the instructional experience.

Recommendation. Before duty assignments, instructors should participate in an instructor duty assignment assessment to determine their preservice IMI product experiences. The assessment will help identify military instructors' familiarity with IMI products and those with much or little experience with IMI products. Moreover, it will inform the instructors about the type of IMI products they need to know and prepare to use prior to teaching a class.

Finding 2

The findings of this study identified the barriers to software licensing and technology support aligning with that of current literature. The software licensing and technology support barriers experienced by the participants aligns with the studies of Önalan and Kurt (2020) and Dinc (2019), which identified the lack of equipment or software and technology support as IMI product application barriers. The findings of this study support Önalan and Kurt's and Dinc's arguments that lack of equipment and technology support impede secondary education teachers' applications of IMI products in classrooms. Conversely, the identified connectivity issues, student dislocation from the instructors, distractions, and cultural barriers of this study are not aligned with Önalan and Kurt, and Dinc. However, these barriers contribute to the existing body of literature on barriers faced by participants while applying IMI products.

Recommendation. A collaborative effort is necessary to overcome the barriers mentioned above that involves developing a competent educational technology support team comprised of educational technologists, instructional designers, multimedia specialists, technology support specialists, network engineers, computer programmers, and software developers (Mayes et al., 2015). This team can comprehensively plan IMI product applications and manage technology and support services. The team leader can provide the School of Excellence and military instructors with the necessary services to mitigate any issues or inhibitors to IMI product application. Higher education and secondary education instructions have teaching learning and resource centers that provide comprehensive educational plans that can potentially serve as a model for the School of Excellence. It is recommended that policies or plans are revised to reflect the establishment of educational support team to explore the development of comprehensive educational technology plans.

Finding 3

The findings of this study identified helpful application strategies for using multiple IMI products in the classroom, promoting digital collaboration, using OER, requesting

prereading, and preparing an instruction backup plan for technology failure. Using OER aligns with Toteya and Grigorva's (2014) study, which posits that the learning process becomes adaptable and appealing when new material is presented through IMI products from casual or professional life settings. Finally, the learners' prereading strategy aligns with Liu et al. (2020), who found that students should adopt reading strategies to improve learner autonomy. Conversely, promoting digital collaboration and instruction backup plans for technology failure strategies are new and add to the existing body of knowledge on the application of IMI products in military classrooms.

Recommendation. Several helpful resources must be made available to the instructors in IMI product application strategies. First, a comprehensive IMI product list must be developed that supplements current IMI products in School of Excellence classrooms. This product list could include IMI products that meet U.S. Army cyber security guidelines and regulations, as well as various OER products that can be applied in military classrooms. Furthermore, an approved supplemental IMI product list can improve the quality and quantity of instructional content presented to learners (Toteva & Grigorva, 2014). Second, establishing courseware that requires learners to preread foundational content before engaging IMI products provides learners with background knowledge of course content. Finally, the School of Excellence should provide instructors with technology failure backup plans, as these plans will ensure minimal degradation of the instruction and learning experiences.

Finding 4

This study found professional development resources and technical support as requirements for applying IMI products in military classrooms. First, this study identified IMI product professional development training opportunities as a resource that informs instructors' knowledge of appropriate IMI product applications. This finding aligns with Hutchison and Woodard's (2021) assertion that learners' instructional needs require systematic approaches built upon the instructors' knowledge of digital technologies. Furthermore, this finding aligns with Aydın et al. (2021) in that professional development training programs can increase military instructors' IMI product application self-efficacy. Second, this study found that available technical support, such as a help desk, is a crucial resource for IMI product applications. The help desk can provide the technical expertise required to resolve or mitigate potential hardware or software issues. The technical support finding of this study is new and will add to the existing body of knowledge on IMI production applications.

Recommendation. Considering finding four, the researchers recommend consistent IMI product orientation and application of professional development opportunities. Professional development opportunities will give instructors the experience needed to become familiar with IMI products and their application in various instructional settings. Next, the researchers recommend that the School of Excellence develops a

competent educational technology support team that will provide military instructors with the technical support resources required to mitigate inevitable technical challenges. The recommended members of the educational technology support team should consist of educational technologists, instructional designers, multimedia specialists, technology support specialists, network engineers, computer programmers, and software developers (Mayes et al., 2015). This team will ensure that instructors have the technical support required to pair or apply IMI products in appropriate instructional settings. Currently, higher education and secondary education institutions have adopted similar technology support team models as recommended in this study.

Limitations of the Study

One limitation of this study is the researchers' inability to recruit more certified military instructors from the School of Excellence to participate in semistructured interviews. Only seven participants attended this study. Moreover, the findings from this qualitative research study may not be generalizable in fields other than military training schools. Although similar instructional technology structures exist in K–12, higher education, and adult education settings, the generalizations of these findings may produce varying results. Lastly, the differences in credentialing requirements for civilians and the military can affect future research methodologies for studying this subject.

Recommendations for Further Research

This study explored military instructors' perspectives on IMI product applications in classrooms as a single phenomenon. Future research could compare the lived experiences of military instructors across multiple U.S. Army Schools of Excellence. Furthermore, research comparing the experiences of military instructors at U.S. Army Schools of Excellence to those at the U.S. Air Force and U.S. Navy training schools can enhance the existing body of knowledge on IMI product application in military education.

Conclusion

The findings of this study demonstrated the significance of preservice technology experiences in military instructors' success in applying IMI products in classrooms. Additionally, this study revealed that military instructors encountered various barriers, such as software licensing issues, connectivity issues, student dislocation from the instructor, interruption of the instructional experience cultural barriers, and

insufficient technology support. Consequently, military instructors implemented diverse strategies to promote and enhance students' learning with IMI products, including using multiple IMI products in the classroom to enable students to choose the most suitable ones, encouraging digital collaboration, utilizing OER, assigning prereading, and preparing for technology malfunctions.

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