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Feedback from the Field for the Captains Career Course Common Core, p3 Shafto

> Memory Processes Behind Leader Identity Formation, p16 Amey and Shaughnessy

> > Army University Telework, p30 Lauer, Petersen, and Shafto



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February 2025

Table of Contents

to Outcomes-Based Military Education

PEER-REVIEWED ARTICLES

3

		Meredith Shafto
3	16	Memory Processes Behind Leader Identity Formation and Its Effects on Soldier Development: A Machine Learning Approach Rachel C. Amey and Stefanie P. Shaughnessy
3	30	Army University Telework: A Case Study in Organizational Learning to Promote Rapid Culture Change Shanda Lauer, Steven Petersen, and Meredith Shafto
	ANNO	DUNCEMENTS
ť	52	Upcoming Conferences of Note

Feedback from the Field for the Captains Career Course Common Core: Relevance



Letter from the Editor

JML

elcome to the February 2025 Army University Learning Symposium proceedings edition of the *Journal of Military Learning (JML)*, the U.S. Army's only peer-reviewed research journal.

This special edition includes three peer-reviewed articles from authors who presented at the 2024 Army University Learning Symposium in June 2024 from the Army Research Institute, the Institutional Research and Assessment Division of the Vice Provost of Academic Affairs from Army University, and the Army Management Staff College. These include a case study on rapid policy change in a learning institution, a qualitative study on feedback from the Captains Career Course, and a quantitative study on memory processes and leader identity formation using machine learning.

As I begin my time as the new editor in chief of the *JML*, I would like to express my sincere gratitude to Dr. Steven (Steve) A. Petersen for his exceptional leadership to the *JML* during his time as editor in chief. I am honored to follow in Steve's footsteps and look forward to building on the foundation he established, bringing my own vision and enthusiasm to the role as we continue to grow and evolve.

We will soon have an exciting change for the *JML*. After publishing our semiannual edition in April 2025, we will transition to a continuous publication model. This will bring numerous benefits to authors and readers alike, including a faster time-to-pub-



Audrey E. Ayers, PhD Journal of Military Learning Editor in Chief

lication for authors, a reduction in publication backlog, and increased impact of educational research on military practice, through more rapid dissemination and application. The *JML* brings current adult learning discussions and educational research from the military and civilian fields for continuous improvements in learning. Only through critical thinking and challenging our educational paradigms can we as a learning organization fully reexamine and assess opportunities to improve our military education.

A detailed call for papers and the submission guidelines can be found at <u>https://</u> <u>www.armyupress.army.mil/Journals/Jour-</u> <u>nal-of-Military-Learning</u>. **CS**



Feedback from the Field for the Captains Career Course Common Core

Relevance to Outcomes-Based Military Education

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Abstract

The Captains Career Course Common Core (C5) has undergone a major modernization effort since 2022 (Fortuna, 2023). While ongoing evaluations have provided feedback on the course experience (Shafto & Lauer, 2023), there are currently no methods for reliably linking C5 evaluations with operational performance. A report of the first year of evaluations can be found in Shafto and Lauer (2023). Defining operationally relevant outcomes and demonstrating that they have been achieved is a requirement of outcomes-based military education (OBME), a key approach to modernizing professional military education (Chairman of the Joint Chiefs of Staff [CJCS], 2020; Vandergriff, 2010). The current article uses an OBME framework to identify requirements for effective C5 external evaluations. Information to guide the development of evaluations was gathered via discussions with quality assurance officers at Captains Career Course (CCC) schools and centers of excellence, who administer CCC external surveys. These discussions revealed diverse approaches to CCC external evaluations and identified challenges and best practices for developing effective C5 external evaluations that support OBME requirements. The themes emerging from the quality assurance officer discussions contribute to a broader conversation about how institutions across the learning enterprise can support

the goals of professional military education by establishing reliable feedback between operational and educational environments.

The Captains Career Course Common Core (C5) has undergone a major modernization effort since 2022 (see Fortuna, 2023). While evaluations during the course have provided valuable feedback (Shafto & Lauer, 2023), optimizing this and other professional military education (PME) modernization efforts requires measuring the impact of modernization on operational performance through effective *external evaluations*.¹ A report of the first year of evaluations can be found in Shafto and Lauer (2023).

There are currently no methods for reliably measuring the impact of C5 instruction on operational performance after graduation. Quality assurance officers (QAO) across the schools and centers of excellence (COE) who teach at the Captains Career Course (CCC) administer external evaluations of the CCC, but they are not targeted to evaluate the impact of common core instruction specifically. See TRADOC Pamphlet (TP) 350-70-14, *Training and Educational Development in Support of the Institutional Domain*, for an overview of external evaluations (U.S. Army Training and Doctrine Command [TRADOC], 2021).

This article considers the challenges to developing an effective C5 external evaluation that supports the aims of PME modernization. To gather insight on the specifics of these challenges and how they may be addressed, respondents from QAOs at CCC schools and COEs provided information on their external evaluation practices. The results provide a summary of key findings and how they can be leveraged for the development of effective external evaluations for the C5.

C5 Modernization and External Evaluations

The proponent of the C5 is the Instructional Design Division, Vice Provost of Academic Affairs, Army University. The Instructional Design Division develops centralized curricula and lesson plans for five modules that constitute the C5: the Army profession, mission command, operational processes, operations, and training. The aim of the common core instruction is to provide baseline knowledge on essential leadership, operations, and training management abilities regardless of each officer's specialization.

¹ This article uses the term "evaluation" per TRADOC Regulation 11-21 (2014), "A systematic, continuous process to appraise the quality (or determine the deficiency), efficiency and effectiveness of a program, process or product. It provides the mechanism for decision makers to assure quality" (p. 15). Typical evaluations for educational courses and programs include using surveys or similar formats to garner feedback from key stakeholders including current students, graduates, leaders, or instructors.

OUTCOMES-BASED MILITARY EDUCATION

The fiscal year 2023/2024 modernization of C5 was initiated in late 2020, with implementation in October 2022. Key changes included a novel blended design for active-duty instruction, including a new distributed learning prerequisite prior to the residential course. Additional details of this phase of C5 modernization are provided in Fortuna (2023). Evaluation of the new C5 instruction began in October 2022 and has included feedback from students and instructors across the CCC schools/COEs (Shafto & Lauer, 2023). See Shafto and Lauer (2023) for a report of the first year of evaluation. The results of these evaluations were used to identify strengths and weaknesses of the distributed learning instruction and how the new distributed learning instruction impacted on residential common core instruction. However, these evaluations do not provide feedback from the field. Understanding the effectiveness of C5 modernization requires linking educational measures (such as feedback from graduates or professional performance measures) gathered after graduation.

An Outcomes-Based Approach Can Guide C5 External Evaluations

Establishing educational-operational links is necessary to align C5 modernization with the adoption of an *outcomes-based* approach (CJCS, 2020) to PME. Outcomes-based military education (OBME), and outcomes-based education more generally, advocates that education should be student-focused; this means shifting away from what needs to be taught and prioritizing what students need to *learn*. The "outcome" in OBME refers to a clear statement of what students should be able to *know and do* when finishing the course, and an OBME approach requires developing methods to justify and assess those outcomes (CJCS, 2020).

OBME is not an alternative to the widely implemented analyze, design, develop, implement, and evaluate (ADDIE) model of curriculum development. Rather, outcomes-based frameworks can be tested within the ADDIE process (Magallanes, 2019), and a targeted OBME approach is a means of supporting and optimizing AD-DIE stages.

Adhering to OBME requires an approach that "focuses on outputs, emphasizing evidence collected from direct and indirect assessments of student performance both

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within and external to the learning environment" (CJCS, 2020, p. A-1). Most relevant for C5 evaluation, achieving OBME goals requires an evidence-based demonstration of real-world outcomes. That is, "the ultimate demonstration of PLO [program learning outcome] achievement ... occurs post-graduation in follow-on professional work" (CJCS, 2020, p. A-2).

However, across the Army learning enterprise, there is no standard evidence-based approach to achieving the OBME goal of establishing predictable and operationally relevant external measures (e.g., Ellinger & Posard, 2023). Questions remain on how to define and evaluate post-course outcomes systematically (Ellinger et al., 2023) and how to link students' educational achievements with their professional skills (Eldeen et al., 2018). Outside of the Army learning enterprise, predictive models are used to demonstrate OBME goals: with appropriately designed outcome measures, models can predict students' final performance in a course (Brooks & Thompson, 2017) or predict postgraduate outcomes like employability (Othman et al., 2020). For C5, to establish reliable relationships between educational and operational measures, an effective external evaluation must have several key characteristics:

- 1. **Representative.** External evaluation measures must be systematically collected to create representative datasets. This is a challenge because graduates may be difficult to contact or there may not be consistent opportunities after graduation to either provide evaluation feedback or measures of performance.
- 2. Linkable. Linking educational and operational measures requires that both types of measures are observable and measurable (Rao, 2020; Schreurs et al., 2020) and grounded in a shared set of principles. This can be a challenge if available operational measures do not reliably reflect PME outcomes. Additionally, establishing a common framework pre- and post-graduation can be difficult because schools and COEs teaching the CCC have a wide range of operational goals, and student career opportunities and responsibilities vary both before and after their course. Establishing predictive relationships must account for variable student and graduate experiences.
- 3. Actionable. To provide actionable feedback as part of the ADDIE process, measures must be specific enough to support decision making, and a reliable data infrastructure must exist not only to collect external evaluations but to also feed this information back to relevant stakeholders.

QAO CCC External Evaluations Can Inform C5 Evaluations

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The remainder of this article outlines an initial response to the challenges above, which involved gathering information from QAOs about current CCC external evaluations. While these external evaluations do not focus on common core topics, they are clearly relevant as they gather responses from CCC graduates and query CCC-relevant topics. These evaluations also have two other characteristics that will provide important lessons for developing C5 evaluations.

First, QAO external surveys are well-established and standardized. Surveys are sent out at each school and COE six to 12 months after students graduate their courses. The requirements for external survey delivery are outlined in TP 11-21, *Army Quality Assurance Program Procedures*, and described in TP 350-70-14 (TRADOC, 2021, 2024b). TP 11-21 outlines requirements for collection and dissemination, including that institutions must "submit a quarterly summarized external survey data report to the HQ TRADOC QAO External Survey Program Manager, who prepares a summary of the aggregate results for the AQAP Director to brief TRADOC senior leaders" (TRADOC, 2024b, pp. 57–58). External surveys include three required questions. Graduates must be asked (1) if the training and education they received adequately prepared them to perform their jobs at their units, and (2) if they were trained and educated on the same equipment, or concepts, they use at their units; leaders must be asked (3) if the training or education that their personnel received adequately prepared them to perform their jobs at their units.

A second and complementary characteristic of these surveys is that they provide a useful range of different practices. While the use of *required* questions is a key benefit for standardizing quality control and accreditation efforts, QAO procedures also allow for variability in how individual institutions approach the external surveys. First, the required questions are *a minimum*, so that institutions can ask a wider range of questions. Second, institutions can "distribute their external survey reports to institutional stakeholders as required by local policy" (TRADOC, 2024b, p. 58), allowing the results of the survey to inform in-house processes at schools/COEs. Because the CCC is taught across a range of schools and COEs, a summary of QAO practices and procedures can provide information about different approaches to survey content, implementation, dissemination, and application.

QAO External Surveys: Feedback from the CCCs

The following section includes an overview of the methods including the discussions, results of the discussions, and feedback from the discussions.

Overview of Methods

Discussions were held with QAO representatives of Aviation Center of Excellence, Cyber Center of Excellence, Fires Center of Excellence, Intelligence Center of Excellence, Maneuver Center of Excellence, Maneuver Support Center of Excellence, Medical Center of Excellence, Mission Command Center of Excellence, and U.S.



Army Institute for Religious Leadership. No school or individual will be attributed in describing feedback received.

Discussion topics were constructed to provide feedback on key topics from each representative. The three key topics were (1) the content, timing, and recipients of the external surveys; (2) how feedback from the surveys is used, including describing the relevant stakeholders; and (3) key challenges and desired improvements to the feedback process. The discussions were semistructured so that the conversations both covered key discussion topics and encouraged individualized input.

The primary focus of the questions was on the external survey procedure for CCC graduates, but because many QA officers are responsible for evaluating multiple courses, they often commented on a range of courses. Comments covering other courses are integrated here since the methodological lessons learned from a range of courses are likely to be relevant for developing C5 external evaluations. These discussions did not aim to evaluate the QAO external survey process but to use the range of experiences across the schools/COEs to provide insights for developing C5 external evaluations.

Results of QAO Discussions

This section summarizes the key themes that emerged from the discussions that can inform the development of C5 external evaluations.

Schools/COEs Take Different Approaches to External Evaluations. Respondents described a range of feedback approaches that extended beyond the required survey questions and the use of the survey format.

1. School-specific external survey content. While a few representatives indicated that only the three required QAO questions were administered in the external surveys, most indicated that they extended the questions on the external survey to include questions about tasks or skills that were specific to the school or COE's course objectives.

2. Using external surveys for the ADDIE process. Only one representative indicated that they used the feedback exclusively for higher-level QAO purposes (sending a report to TRADOC QAO). Most respondents indicated wider use of feedback including sending results to local leaders, using results in postinstructional conferences and after action reviews (AARs), or providing findings to developers as input into the ADDIE course development process. The perceived usefulness of the external survey data for the ADDIE processes was mixed. While external survey data was always gathered and considered, the feedback that drove decisions sometimes came from other sources such as in-house surveys implemented by the course manager or director of training, or independent decisions from the commandant.

3. Alternative avenues of external feedback. Just as most respondents reported adding to the required QAO questions, most also reported other methods for

8

OUTCOMES-BASED MILITARY EDUCATION

gaining external feedback. For graduate feedback, some schools/COEs developed in-house surveys while others took advantage of AARs, critical task site selection boards, or job analyses as opportunities for getting feedback from the operational force. A minority of respondents described ongoing or planned initiatives that actively reach out to the operational environment, including gathering evaluations at umbrella weeks or sending representatives to combat training centers (CTC) to gather relevant feedback during and following training events. For leader feedback, a commonly reported tactic was to get leader feedback from those who have come for in-person PME such as precommand courses; a related approach was to seek informal discussions with senior leaders coming to invited events such as conferences.

Schools/COEs Face Challenges in Gathering Effective External Evaluations. As reported above, representatives across the schools/COEs suggested limits on the usefulness of using survey data alone, due to a set of common challenges in acquiring effective external evaluations.

1. Representative feedback. The most mentioned challenge was low survey return rate. Return rates of less than 10% were commonly mentioned, with some lower than 2%. Respondents provided a range of suggestions for why response rates may be low, including survey fatigue (receiving so many survey requests that motivation to respond declines), limited time available to respondents to prioritize survey completion, and students being difficult to contact because they have not been issued a government email address, have multiple government email addresses, or work within a security environment where survey invitations are blocked. Resourcing was another challenge mentioned by several respondents. For example, it was not always possible to identify time or expertise for developing an in-house external survey. Similarly, one respondent mentioned that new or evolving PME requirements may add the need for new targeted evaluations but without those requirements being formally resourced. Ideas on how to improve the representativeness of data collection included considering mechanisms for reducing survey fatigue, exploring alternative survey implementation platforms that may reduce security interference, and finding ways to increase leadership involvement in the feedback process to make it a higher priority for graduates.

2. Linkable feedback. The second challenge to the utility of the external survey feedback was whether data provided feedback that could be linked to educational measures. Respondents questioned whether the "right" questions were always asked. For example, while the required QAO questions probe critical issues about course efficacy, they may be too general to provide feedback that course managers or curriculum developers can use to update course materials. One respondent noted it is critical that surveys are designed with improvement goals in mind, so it is clear how survey results do or do not provide evidence of improvements or declines in course qualities. A related challenge was that, when asking about specific skills and abilities learned in the course, evaluators face the challenge that graduates may have

had highly variable experiences after leaving the course. Respondents suggested that in addition to asking graduates about their skill *proficiency*, it is important to probe whether the skill is or has been *relevant* for their duties. Likewise, a challenge in asking leaders for feedback is that evaluators do not always know if current leaders are commanding recent graduates or if they have the relevant expertise to evaluate graduates' competency in specific skills and abilities. In response to the limitations of using survey data alone, several respondents reported ideas for alternative sources or formats of feedback. These ideas were aimed at improving the usefulness of evaluation feedback as well as addressing the difficulties of data collection. First, respondents suggested methods for improving feedback from installations such as creating tiger teams or appointing responsible personnel at installations who could identify recent graduates and gather feedback; having someone in an installation who could track graduates would also aid in identifying relevant leaders at the same installation. Second, several respondents suggested the potential for gathering relevant feedback during training events at CTCs. A school/COE representative could ask targeted questions above and beyond the measures already recorded at the training event, which could provide targeted feedback that could be directly related to educational aims and objectives. Third, some respondents indicated it would be beneficial to have knowledge of and access to existing data sources. Existing or planned sources of data, such as data that may become available as part of the Integrated Personnel and Pay System-Army, could provide external feedback without necessitating additional data collection. Finally, one respondent suggested a novel means of obtaining operational "feedback" by increasing the proportion of military (versus civilian) instructors to bring recent operational experience back to the educational environment.

3. Actionable feedback. A third set of challenges highlighted the question of how and whether feedback could be actioned, including whether there is a well-established flow of response data to relevant stakeholders. This factor had variable impact on respondents, with some describing explicit infrastructure for feedback to both be reported (e.g., to course managers) and to be applied (e.g., during AARs); in contrast, some respondents expressed concerns that feedback may need to be "pushed" to relevant stakeholders and may or may not be used consistently.

Summary of Feedback

Discussions with QAO representatives across a range of schools and COEs revealed that as well as gathering feedback on the required external survey questions, there is a diverse range of approaches used to acquire external feedback on how educational outcomes are realized in the operational environment. Many schools add targeted questions to the required questions to achieve more actionable feedback for curriculum improvement. In response to a core challenge of low response rates for

OUTCOMES-BASED MILITARY EDUCATION

graduates and their supervisors, institutions have turned to a convergent approach, utilizing several methods for obtaining feedback from the operational environment. As one respondent suggested, the external surveys serve as just one piece of a feedback puzzle.

While this is summary is not an exhaustive survey of external feedback from either QAOs or other sources (such as in-house evaluations), the experience and expertise gathered from the participating representatives provides critical considerations in developing and implementing an external evaluation of the C5. These considerations are discussed in the next section.

Developing C5 External Evaluations: Lessons Learned and Recommendations

The main goal of the C5 external evaluation is to establish predictive links between PME and the operational environment. This requires external measures that are quantitative, can be gathered systematically so they are representative, and can be demonstrated to link meaningfully to specific PME goals. Based on discussions with QAO representatives, a successful C5 external evaluation should address key challenges.

1. Improve representativeness by addressing low response rate. Compared to school-specific evaluations, the C5 evaluation can partially mediate the concerns of poor return rates because the common core is taught enterprise-wide and has an annual graduate sample of over 8,000 per year. Even a return rate of 3%–5% would provide 200–400 respondents. However, subsetting the data to examine the variability in responses across schools/COEs, components (active duty, Army Reserve, and National Guard), or specific classes would reduce sample size accordingly. Thus, plans for a C5 external survey should consider suggestions from the QAO respondents to address apathy and survey fatigue, including making surveys short and convenient to take.

2. Make data linkable by considering performance measures. Many respondents reported getting graduate performance measures such as from the Center for Army Lessons Learned following training events at CTCs. While respondents indicated that these additional measures were sought to compensate for low survey return rates, operational performance data could be more informative than survey feedback if it could be directly linked to performance measures from PME. However, QAO respondents highlight challenges in using performance measures, reporting that feedback from training events may be too general and schools/COEs rarely have representatives there to ask targeted questions.

Using operational performance measures for the C5 evaluation presents a data collection challenge. Just as some schools used existing measures from CTC training events, one possibility is to identify and evaluate existing professional products that

reflect the performance of C5 skills, such as writing samples that can be evaluated with reference to CCC communication instruction. If extant products are not available, an alternative is to develop new C5-related performance measures and administer them to graduates. As highlighted by QAO respondents, performance measures have the potential to provide more direct and relevant feedback than survey evaluations but come with significant challenges in data access (for existing measures) or collection (for novel measures).

In response to the challenges of data collection, many QAO representatives reported using a convergent approach to external feedback, supplementing survey data with feedback from other sources, such as leaders who are participating in educational programs or graduates completing CTC events. This convergent feedback helps overcome the low return rates from external surveys and difficulties of acquiring performance data, as well as providing a range of data types for consideration. Taking a convergent approach could provide benefits to a C5 external evaluation by diversifying the available types of data. However, there are also disadvantages to a convergent approach: first, accessing and analyzing multiple data sources increases the required resources, and second, using several smaller diverse datasets will make it difficult to establish quantifiable links between educational and operational measures.

3. Develop actionable questions by considering stakeholders. Respondents emphasized the challenges in making sure that questions are actionable by ensuring that there is a pathway for data to flow from the survey back to key stakeholders. C5 instruction covers general, doctrinally based topics and is taught in a variety of contexts at the schools and COEs. It may therefore be a difficult challenge to develop feedback questions that are concrete enough to be used in curriculum development but general enough to be asked of graduates across the schools/COEs. This challenge may mean that an effective C5 external evaluation will require an iterative process to develop measures which can both identify general targets for improvement and account for the range of post-graduate experience, such as whether graduates have had opportunities to apply what they learned.

Relevance of C5 External Evaluations for Other Army-Wide Initiatives

Establishing links between C5 educational and operational measures supports the goals of the OBME approach across the Army learning enterprise, and effectively evaluating C5 modernization can support the evaluation of other modernization efforts. Moreover, developing direct educational-operational links contributes to the establishment of a *learning ecosystem*, a continuum of diverse, flexible, and lifelong learning. The learning ecosystem is a key component of the vision of the future of

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OUTCOMES-BASED MILITARY EDUCATION

Army education laid out in *The Army Learning Concept for 2030–2040* (TRADOC, 2024a; Walcutt & Schatz, 2019).

Directly measuring the impact of PME on operational success is critical for demonstrating that PME is achieving its purpose. However, as we see from the example of C5, developing effective external evaluations is challenged by the lack of both a data *infrastructure* and a participation *culture* to ensure representative feedback. It is beyond the scope of this article to provide specific recommendations for these broad issues, but the input received suggests three general considerations:

- 1. Action is needed to reduce survey fatigue and other barriers to providing feedback. Because the survey burden builds cumulatively, efforts need to be centralized to consider the total feedback requirement on students and grad-uates, while still allowing individual institutions to gather targeted feedback flexibly.
- 2. A culture of participation needs to be encouraged, for example by communicating to leaders, students and graduates how their feedback is used to improve curriculum and how improving PME will benefit them.
- 3. Getting useful feedback requires resources. While time and money are at a premium, the inefficiencies inherent in collecting imprecise or unusable data must be considered. Moreover, investing in data collection that provides useable feedback may save resources downstream by optimizing the outcomes of PME.

Summary and Conclusions

There are significant challenges to establishing reliable predictive relationships between PME outcomes and operational performance. However, understanding how PME impacts readiness is not only important for C5 modernization. This issue sits at the center of Army-wide initiatives to institute OBME across PME, increase data-centric approaches to curriculum development, and establish a learning ecosystem that supports a continuum of career-long learning.

This article represents a small corner of these broader issues, gathering lessons from QAO efforts across the CCC schools/COEs that can be used to design effective C5 external feedback. The approaches at the different schools and COEs provide invaluable insight into both potential approaches and the pitfalls and challenges of gathering external feedback.

The conceptual links between this effort and broader Army-wide initiatives highlight the need for this bottom-up effort to be met with top-down leadership involvement. The ability to reliably acquire external feedback requires developing a culture where participants understand how improving PME provides Army-wide benefits, and a data collection infrastructure that can support the data-driven goals for Army modernization. The views expressed in this article are those of the author and do not reflect the official policy or position of the U.S. government, the Department of Defense, the U.S. Army, or Army University.

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Memory Processes Behind Leader Identity Formation and Its Effects on Soldier Development

A Machine Learning Approach

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Abstract

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> In the present work, we demonstrate how natural language processing can assist Army researchers in understanding soldiers' perceptions of their leadership positions over time and the implications these views may have on their leadership training and development. We use these methods to extract and classify specific memory types that research has suggested are indicative of one's mindset and willingness to develop. Our findings show how these previously unscalable memory predictor variables can be extracted from archival data using language models. We replicate foundational psychological findings in an Army sample, illustrating how these variables can predict soldiers' willingness to develop as leaders. Future work is discussed that aims to replicate and expand on the current results.

The research subject in the field of psychology. Social psychological literature emphasizes that autobiographical memories form aspects of one's identity over time (Chessell et al., 2014; Libby & Eibach, 2002). These memories, recalled as episodic or semantic memories, influence self-perception and later behavior (Pezdek & Salim, 2011). Episodic memories often contain vivid details, while semantic memories may be biased as they contain more generalized information (Klein & Loftus, 1993; Klein et al., 1996). Thus, how one recalls memories can affect how one might identify with certain domains and the decisions one makes within

MEMORY PROCESSES

those domains. Past military research has linked autobiographical memory to leader identity and career advancement but hasn't explored how *memory type* influences identity development, particularly in leadership positions (Shaughnessy & Coats, 2018; Shaughnessy et al., 2018). This work begins to address these gaps using natural language processing (NLP) to quantitatively analyze soldiers' leadership accounts and experiences, providing new insights and methods to enhance the understanding of soldier leader development.

Autobiographical Memory and Identity

For decades, psychologists have explored what comprises identity and how individuals understand themselves. For the past few decades, it has been understood that self-knowledge derives from cultural roles, societal roles, and relationships (Wang, 2006). Autobiographical memories are central to these influences, as identity is shaped over time through long-term memory (Bluck & Alea, 2008; Proust, 2003). While it is evident that autobiographical memory significantly informs identity, the processes of recalling these memories and the types used in shaping identity remain areas of ongoing inquiry.

Episodic and Semantic Memory Recall—Applications to Leader Identity and Development

Klein and Loftus (1993) distinguished between episodic and semantic self-representations. Semantic autobiographical memories consist of general traits and social information about oneself, while episodic self-knowledge includes specific events relevant to a person's identity tied to contexts, dates, or times. Due to the different types of information these memories contain, recalling episodic and semantic memories has been suggested by the literature to impact identity formation and behavior differently. To date, research has suggested that the specificity in episodic memories allows for a more flexible, transient identity, enabling individuals to support various identities as needed (Nicholas & Mattar, 2024; Tulving, 2002). These findings can be demonstrated in adolescents who report more episodic memories when exploring aspects of their identities. This flexibility has also been linked to mental states conducive to learning and decision-making (Lalla et al., 2022; Nicholas & Mattar, 2024). Conversely, adults, when prompted with a similar paradigm, tend to report more semantic memories when reflecting on aspects of their identities (Beike et al., 2023; Klein & Loftus, 1993; Klein et al., 1996). Recalling more semantic memories indicates a fixed identity resistant to change or a more enduring sense of self, as adults often recall general identity-relevant behaviors in a semantic fashion. This rigidity

03

has been linked to mental states that may hinder adaptability and learning (Beike et al., 2023; Haslam et al., 2011; Klein et al., 1996).

These findings suggest that the way individuals recall aspects of their identity may reveal the malleability of their mindset or mental state toward a specific aspect of one's identity and one's potential to learn new information relevant to that domain. Malleability thus has significant implications for self-perception and willingness to develop within a particular identity, such as leadership. For instance, recalling oneself as a leader using episodic memories may indicate a capacity for continued growth and development, while reliance on semantic memories may suggest a more static self-view as a leader.

Integrating Quantitative Analyses into Qualitative Data

Past leader identity research, which inspired this project, was primarily qualitative (Shaughnessy et al., 2018). This approach provided deep insights into how leaders develop within the Army through candid soldier responses. However, qualitative research has limitations such as interrater bias and the resources these methods require in terms of time and personnel (Grimmer & Stewart, 2013; Patel et al., 2012). These limitations may not pose concern with smaller research samples or research with resources allocated to train and validate human coders, but with applied research, these limitations significantly interrupt ongoing work. Not only do we need to minimize human error and potential biases, but we also need results with a much faster turnaround. Additionally, since we are working with personnel, there is simply a ceiling on how many subject-matter experts we can request to train as human coders. Thus, to generalize and scale findings to larger Army populations, a quantitative approach is needed.

This article demonstrates how researchers can utilize NLP to analyze qualitative interview data quantitatively, thereby reducing the need for extensive human coding. NLP can quantify text and tag phrases, and assess sentiment, revealing meaningful

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MEMORY PROCESSES

patterns invisible to human coders. Additionally, using readily available data with these analyses minimizes labor and time costs and offers a nonintrusive method to examine new predictors without collecting additional data from Army populations. Ultimately these methods have the potential to save cost, reduce personnel hours, and decrease soldier burden while minimizing human error. Thus, archival interview data was used to extract episodic and semantic memory predictors using NLP analyses.

Research Objectives

The present work explores whether memory variables can predict leader development. To achieve this, four research objectives were established. First, given that natural language responses might not explicitly indicate episodic or semantic memories, analyses were planned to determine if responses included appropriate proportions of episodic and semantic elements (i.e., not biased toward one type of response or the other). Second, the present effort aims to accurately classify episodic and semantic responses using a locally run NLP model, thereby ensuring the secure processing of Army data. Specifically, we sought to build a model that could classify these responses with at least 80% accuracy. Third, based on the psychological literature of Klein and Loftus (1993) that suggests adults and adolescents may recall aspects of their identities using different types of memories, we investigated whether memory system variables differ between early and late career personnel. In other words, this analysis would examine whether types of memory recall are influenced by stages of leader development. Finally, we examined the predictive power of these memory variables. Using inspiration from past work that suggests malleable mental states can be conducive to learning (Zarrinabadi et al., 2022), we wanted to examine whether episodic or semantic memories could predict individuals' willingness to continue their leader development, bolstering their leader identities. These results would help us determine if these memory system variables, previously unused as predictors in Army settings, may predict relevant Army outcomes.

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Methods

The following section discusses participants of the study, methods, predictable variable extraction, and the outcome variable coding.

Participants

The Follower Leader Identity Integration Study (FLII; Cooperative Agreement Number W911NF-15-2-0134) was utilized, which interviewed 84 individuals about their leader and follower identities. Specifically, these interviews consisted of 26 civilian employees from a large retail company, 17 DOD civilian (veterans) employees from one command¹, and 41 Army soldiers. Because the interviews inquired about both leader and follower identity, only questions that specifically tapped into leader identity were utilized (e.g., "What does leadership mean to you?", "Why do you lead?", and "Can you tell me a story that's a good example of why you lead?").

Interview data was utilized in the following manner. All retail civilian interviews were utilized to train the language model. Because the third and fourth research objectives relied on the Army soldier and DOD civilian employee data, these interviews were utilized to create the predictor and outcome variables. Each DOD civilian and Army soldier response consisted of an average of 85.66 sentences (SD = 37.68). Two individuals were removed for speaking significantly more than the average participant (above 2.5 standard deviations from the average), leaving the sample with 56 usable interviews for predictors and outcomes.

Predictor Variable Extraction

The language model was built in the Army Vantage Data Analytics Platform using the retail civilian interview responses from participants in addition to explicit episodic and semantic phrases not from the retail civilian interview responses. For example, an explicit semantic phrase would look like, "The Wright brothers invented the first successful airplane." An explicit episodic phrase would look like, "I went to the park yesterday afternoon to play baseball." Utilizing the retail civilian interview sentences as training data allowed the model to learn what more complex episodic and semantic memories looked like in natural language responses. Importantly, retail civilian interview responses also mirrored Army soldier and DOD civilian responses as the same questions were posed to each sample. Including explicit episodic and semantic phrases helped the model understand how to differentiate between these memory types using more simplistic examples. In total, 520 memory state-

¹ All DOD civilians interviewed were U.S. veterans.

ments were provided to train the model; episodic and semantic memories represented 272 and 248 sentences, respectively.

To complete the second research objective, multiple language model configurations were tested. These included models using larger transformers, advanced computer algorithms that help machines understand and process human language more effectively (e.g., En core_web_lg from spaCy models [spaCy, 2024]), and XGBoost (Extreme Gradient Boosting) after fine-tuning the hyperparameters, settings that control how machine learning models learn and make predictions, with GridSearch (Tran et al., 2023). XGBoost was the first model we tried as it is a powerful and scalable machine learning algorithm for supervised learning tasks, known for its efficiency, accuracy, and speed, particularly in regression and classification problems like the current task. GridSearch is helpful in creating the most accurate XGBoost model, as it finds the optimal hyperparameters for the data fed into the model to improve performance. However, even after fine-tuning hyperparameters with GridSearch, our XGBoost models with larger transformers only had an average accuracy rating of 63%. This did not meet our classification goal for the second research objective. We realized that our training data may have been too small for these more complex language models and decided to try simpler models to improve our classification accuracy. Further elaboration as to why our more complex models may have failed is available in the discussion.

Taking a simpler approach, we were able to build a language model with an accuracy rate of 83%. This satisfied our second research objective and was built in the following way. Training data were cleaned and tokenized using a smaller transformer than what we utilized in the more complex models. Specifically, we used En_core_ web_sm from the spaCy models (2024). En_core_web_sm is a small English pipeline trained on written web text (blogs, news, comments), which includes vocabulary, syntax, and entities. The data is vectorized using a term frequency inverse document frequency vectorizer. This type of vectorizer transforms text into a meaningful representation of numbers, which is used to fit machine learning algorithms for prediction (Aizawa, 2003). The vectorizer accomplishes this by counting how often specific words appear in a document and checking for how unique those words are. This helps the model understand what words are important so it can summarize main ideas. Finally, to predict outcomes, a logistic regression classifier was used due to the binary nature of the outcome variables (episodic or semantic).

Once a successful model that was able to classify between memory types was built, the predictor variables were created. The model was fed each sentence of the Army soldier and DOD civilian responses, and it calculated the total number of semantic and episodic sentences from the binary output. The ratio of episodic to semantic responses for each respondent was also calculated, in addition to counting the total number of sentences per response to use as control variables. We did not want our findings to be swayed by individuals who may have simply written more than others.

Variable	Ν	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Semantic Count	56	11	82	34.96	16.45	0.94	0.68
Episodic Count	56	9	100	49.82	24.90	0.38	-0.70
Total Sentences	56	24	175	84.79	38.30	0.32	-0.05
Episodic to Semantic Response Ration	56	0.41	3.08	1.51	0.63	0.60	0.20

Table 1 Descriptive Statistics of Predictor Variables

Outcome Variable Coding

Interview responses were separated sentence by sentence into a dataset. The outcome variable of interest was coded by two raters from the final questions asked in the interview ("How did you develop into who you are as a leader?" And, "How have you changed as a leader over time?"). Specifically, raters coded for the intention to continue developing as a leader (e.g., continued reading or training courses, seeking out mentors) in a binary fashion (0, no mention; 1, mention). The sample had 30 individuals who did not mention any intention to continue developing as a leader and 26 who explicitly mentioned that they intended to continue developing as a leader. This distribution suggests that this coded variable could be used as a viable outcome as it had a relatively equal distribution. If the variable did not have an equal distribution (e.g., five individuals who mentioned they intended to continue developing as a leader and 51 individuals who did not) we would not be able to utilize the variable with confidence. Further, the interrater reliability between the two coders was calculated using Cohen's Kappa and achieved a score of .79, indicating substantial agreement between the two coders.

Results



To address the first objective, descriptive statistics across the main predictor variables were estimated. Results showed that all variables had a normal distribution indicating good variation for both episodic and semantic predictors (Semantic Memory Count: M = 34.96, SD = 16.45, Skewness = .94, Kurtosis = .68; Episodic Memory Count: M = 49.82, SD = 24.89, Skewness = .38, Kurtosis = -.69; see Table 1). This pattern was also apparent within participant responses to each specific question (not the aggregate

MEMORY PROCESSES

Figure 1

Differences in the Number of Episodic and Semantic Memories Recalled by DOD Civilians and Soldiers When Recollecting Their Leader Identities



as shown in Table 1) suggesting that each response given by participants had a normal distribution of episodic and semantic recollections. In other words, there was no specific question that prompted more episodic or semantic responses from our sample.

For the third objective², a multivariate general linear model (GLM) was run to contrast predictor variables between Army soldiers and DOD civilians. Results suggested that there were memory recall differences between the two groups consistent with past literature. DOD civilians reported higher numbers of semantic memories in comparison to Army soldiers (F(1,54) = 6.55, p = .015, $\eta^2 = .11$; see Figure 1). Further, this difference was also reflected in the ratio of episodic to semantic memories recalled by participants. Army soldiers reported a greater difference between the number of episodic to semantic memories recalled in their responses in comparison to DOD civilians (F(1,54) = 5.56, p = .02, $\eta^2 = .09$; see Figure 2). There was no difference between the number of episodic memories recalled by DOD civilian or Army soldiers (p > .05; see Figure 1).

Finally, we addressed research objective four. To understand the predictive nature of these memory system variables, a binary logistic regression was run to test how

² The second objective was addressed in the methods section with the successful building of the language model.



Figure 2

Differences in the Ratio of Episodic to Semantic Memories Recalled by Participants



Error Bars: 95% CI

Note. Higher ratio values represent greater numbers of episodic recollections in comparison to semantic recollections.

episodic and semantic memories could predict individuals' intentions to continue developing as a leader, suggesting a more malleable mindset regarding leader identity. As psychological theories would suggest, episodic memory count was a meaningful predictor of leader development intentions (B = 0.02, SE = 0.01, Wald $\chi^2 = 3.89$, p < .05). The logistic regression model testing episodic memory was statistically significant, $\chi^2(1) = 4.23$, p < .05. The model explained 9.7% (Nagelkerke pseudo R^2) of the variance in explicitly mentioning development in a free response prompt and correctly classified 60.7% of cases. Overall, results suggest that the more episodic memories an individual recollects in their interview responses the more likely they are to spontaneously mention their leader development intentions. Semantic memory count had no effect on this outcome variable (p > .05).

Discussion

The present work sought to automatically extract memory system variables that indicated how soldiers and DOD civilians thought of themselves as leaders over time. Analyses utilized archival interview data in addition to a trained language model to classify these responses. Results demonstrated that natural language interview

MEMORY PROCESSES

data contained normally distributed proportions of episodic and semantic responses which allowed them to be utilized as predictors. It was also possible to construct an in-house language model that classified these responses with up to 83% accuracy. Importantly, findings replicated psychological research. First, evidence was found that as leaders develop over time the memory systems used to recall leader identity may change. DOD civilian workers in their second careers recalled their leader identity using more semantic memories than Army soldiers. Second, across all DOD civilian and Army soldiers, a positive relationship was observed between the number of episodic memories recalled and the spontaneous mention of an individual's intent to continue developing as a leader.

Present results begin to tie together ways to implement predictors that were previously too obtrusive for Army use. To date, the use of episodic and semantic memories as predictors has been utilized by conducting extensive interviews and coding the outcomes using human raters (Levine et al., 2002). Although these methods are valid and reliable, they pose significant issues for the current effort due to the aforementioned challenges with human raters and would not be viable without some sort of automated assistance. Other methods include invasive neuroimaging techniques (Burianova et al., 2010). Similarly, although these methods hold great promise in the realm of basic research and academia, they are too intrusive for the applied application we are currently pursuing, which requires scalable predictors. Due to these limitations, part of the novelty of the present work utilizing archival data and NLP is that it allows these types of cognitive predictors to become accessible for Army assessment needs.

For example, memory system predictor variables may be able to provide insight into the mental state of soldiers to determine important outcomes such as the likelihood to successfully complete leadership training and development. We also would like to highlight the potential of these variables to be used in combination with other well utilized predictors. Memory system predictor variables may be used in combination with others for wholistic personnel assessments. Understanding how soldiers encode prior training, along with other knowledge, skills, abilities, and other characteristics scores, can help predict optimal future job roles for their development. For example, a soldier with weak leadership traits but high episodic encoding may be more prone to having a more flexible mental state and may embrace development opportunities more than a soldier with high semantic encoding. This differentiation may aid in determining the best job fit for soldiers to maximize their individual differences getting the right person, in the right job, at the right time.

Limitations

Although the results are promising, we want to stress that this is the first exploration of this idea of using memory variables as predictors in an Army setting, and

25

that more work is needed. A major limitation that must be addressed is the size and distribution of the sample. This sample limited us not only in the types of models we could run but also what we could test with confidence. Our XGBoost model likely failed due to insufficient training data. XGBoost models require an appropriate amount of data given the problem at hand. Here we are asking the model to learn small differences between phrases with relatively similar sentence structures. Thus, a small training dataset likely limited the accuracy of the XGBoost model due to insufficient representation, overfitting, and limited feature discovery. In other words, with a small dataset, the model may miss important patterns, become too specialized to the training data, and fail to learn generalizable features. Increasing the size of the training dataset can provide the model with more information to learn from, thereby reducing these limitations and potentially leading to improved accuracy. In addition to greater accuracy, training a model on additional Army data would help the model better handle Army-specific acronyms and jargon, likely aiding its accuracy using a different approach.

The bias-variance tradeoff, a fundamental concept in machine learning, may have also played a role in the XGBoost model's limited accuracy. The bias-variance tradeoff refers to the balance between a model's ability to generalize well to new data (low bias) and its tendency to overfit the training data (high variance; Belkin et al., 2019; Geman et al., 1992). Bias occurs when a model is too simple and fails to capture important patterns in the data, resulting in poor performance on both training and test data. Variance occurs when a model is too complex and fits the noise in the training data, performing well on the training data but poorly on new, unseen data. In the case of the XGBoost model, it is possible that the model became too specialized to the training data (high variance) and failed to generalize well to new data, or that simplifying the model to reduce overfitting introduced bias, leading to underfitting and decreased accuracy. Finding the optimal balance between model complexity and simplicity is crucial to achieving good generalization performance and can be achieved with a larger sample size.

Because of our limited sample, we were also restricted to what types of analyses we could run. Although we were able to contrast DOD civilian and soldier memory types to replicate past work, looking across soldier rank or time in service would help bolster our initial work in addition to expanding on it. Additionally understanding how memory types may change during recollection across current enlisted soldiers may be more relevant for assisting in current Army needs.

Future Work

To address the above limitations, we are currently adding 89 archival interviews of Army soldiers that ask similar questions to the current archival data used. Adding these responses into our dataset will allow us to not only test language models

MEMORY PROCESSES

that have the potential to be more accurate (i.e., XGBoost) but will also allow us to replicate and expand on current findings. For example, future work should consider testing *across* Army ranks to see how memory types may predict intentions to continue developing as a leader. This would allow us to ask whether soldiers in higher ranks recall leader identity differently than those in lower ranks and whether this may impact their future training plans.

Future work should also aim to extract other outcome variables like positive and negative leader growth (e.g., mentioning that one gained or lost positive qualities through their development) to see how that may relate to soldiers' recollections. Psychological research suggests that memory types may be able to influence how one views their identity development over time (Wilson & Ross, 2003). In other words, individuals' self-views are influenced both by what they remember about their personal past as well as how they remember these episodes and events. This would allow us to understand the predictive potential of the memory type variables so we can apply them to the best use cases as well.

Finally, future work should examine current findings not only collapsed across responses as in the present work but also within each response to each leadership question. This may allow us to focus on which responses to specific questions may be more predictive of soldier behaviors and decisions within the Army context. Together, we hope that these current and future findings assist in developing more accurate predictors of soldier behaviors and development, allowing us to develop training and experiential learning that will maximize individual soldier effectiveness and consequently, facilitate overall Army readiness.

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Army University Telework A Case Study in Organizational Learning to Promote Rapid Culture Change

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Abstract

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> Army modernization requires developing the Army as an adaptive learning organization, which in turn depends on cultivating the reguirements for rapid and sustainable organizational learning such as workforce development and the integration of enabling technology. Early 2020 provided a case study in rapid modernization as Army University adapted to the COVID-19 pandemic by creating situational teleworking opportunities to protect the health of employees who had previously worked on Fort Leavenworth, Kansas. Nearly 1,100 leaders, educators, and support staff learned to do their jobs from home to continue to meet the Army University education and training mission. Following the rapid adoption of telework, Army University created sustainable telework practices by supporting organizational learning at the individual and organizational levels. This article applies organizational learning models to uncover how the telework rollout at Army University was successful despite being abrupt, unprecedented, and incongruent with standing organizational culture. We outline the process of initial rapid change including learning and training requirements for individual and staff groups such as new vocabulary, communication plans, new technology, and new supervisor capabilities for leading hybrid or remote teams. We then discuss how Army University responded to sustain initial culture change through the process of organizational learning, to include knowledge creation, retention, and transfer at individual, group, and organizational levels.

ARMY UNIVERSITY TELEWORK

Telework practices in Army University currently support a range of modernized learning approaches and, more broadly, the experience of Army University contributes to an understanding of how Army institutions can successfully enact organizational learning.

This article highlights how Army University responded to the forcing function of the COVID-19 pandemic to institute rapid culture change across the organization, and how a coordinated effort underpins the successful sustainment of that initial culture change through the process of organizational learning including knowledge creation, retention, and transfer at individual and organizational levels. The article considers the implementation and sustainment of a successful telework policy across Army University as a case study in organizational learning. We use findings from the Army University telework surveys to provide key evidence for both the success of the telework policy implementation and the achievement of key stages of organizational learning. This case study is part of a broader conversation of how modernization efforts like telework support the development of a learning organization.

Army University as a Learning Organization

Army University was established in 2015 with the purpose of "creating a unified university system for the Army" (Brown, 2015, p. ii). Army University is responsible for the education of tens of thousands of soldiers and Army civilian professionals, employing approximately 300 military members and over 800 Army civilian professionals. Army University blends traditional American university academic excellence with best practices and lessons learned in existing military education programs (Perkins, 2015). As a dual-hatted higher education institution and military entity, Army University was well-poised to incorporate principles of a *learning organization* in keeping with the aims of the wider Army (Gerras, 2002).

Calton et al. (2021) highlights five key dimensions for the Army as a learning organization: (1) cultivate learning support, (2) orient toward a shared future, (3) explore new perspectives, (4) synchronize capabilities, and (5) manage organizational knowledge. Learning organizations have forward-thinking leadership and cultivate collaborative learning, support a "lifelong learning" mindset, make room for innovation, and enable knowledge sharing.

One of the foundational steps to becoming a *learning organization* is to produce evidence of *organizational learning*, which involves the learning processes that occur within an organization (Tsang, 1997). As discussed in Calton et al. (2021), a learning organization is one "that continuously orients itself towards the processes or activities involved in organizational learning" (p. 1), and organizational learning is nec-

essary but not sufficient to create a learning organization. *The Army Learning Concept 2030–2040* (U.S. Army Training and Doctrine Command [TRADOC], 2024), highlights the link between organizational learning and learning organizations: "A learning organization is one that values and rewards individual learning and that has explicit mechanisms to support organizational learning. In other words, it has processes to enable knowledge sharing and continuous organizational behavioral adaptation" (p. 17).

The focus of this article is not to specify the complicated relationship between becoming a learning organization through undergoing organizational learning but to showcase how the incorporation of principles of organizational learning through the COVID-19 pandemic and the successful telework innovation has contributed to Army University culture change and development as a learning organization.

Army University Pandemic Response

Prior to the COVID-19 pandemic, the overwhelming majority of Army University employees worked in a government-owned building on site. The students of the Command and General Staff College were also on site. Telework, defined as "an alternate work arrangement that permits Army Civilian Professionals/Service Members to perform officially assigned duties at designated locations away from the traditional worksite, including their homes and other preapproved worksites" (Army

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32

ARMY UNIVERSITY TELEWORK

University [AU] Policy Memo 5, 2022), was rare. Remote work, defined as "separate and distinct from telework, where Army Civilian Professionals and their conventional worksite are in different geographic regions" (AU Policy Memo 5, 2022), was only accepted on a case-by-case basis with overwhelming support from direct leaders. In the spring of 2020, the institution was forced to react to the transformed operational environment caused by the rapid spread of COVID-19. In March 2020, Army University sent most employees and students into a virtual or remote learning/working environment. Nearly 1,100 leaders, educators, and support staff continued to meet the Army University education and training mission from home.

Early 2020 provides a case study in rapid modernization as Army University adapted to the COVID-19 pandemic by creating situational teleworking opportunities to maintain the Army University mission. Over time, Army University leaders recognized that tasks, including critical missions, were successfully accomplished, and leaders began gathering evidence to decide whether to sustain this initial culture change through practices of organizational learning. A series of surveys were developed and deployed to systematically collect feedback from Army University military and civilian employees on their experiences of telework during the COVID-19 pandemic and to evaluate the practice of telework and subsequent telework policies.

Army University Telework Surveys

The Army University telework survey was framed to determine workforce perceptions, find practices of value, and identify gaps in need of improvement under current teleworking conditions, which would then feed into an iterative process of improving organizational learning. The survey was conducted 25 April to 9 May 2022. There were 494 staff and faculty who responded to the telework survey, a response rate of 42.6%. The second survey was conducted 27 July to 11 August 2023. This time, 384 individuals took part in the Telework and Remote Work Survey, a 29.7% response rate. On both surveys, civilians responded nearly twice as often as military members, and certain suborganizations had low response rates both years due to leader nonadoption of the telework policy at the time of the surveys. However, the return rates for both surveys do indicate a good level of interest in telework and are typical return rates of previous large-scale civilian and military survey response rates collected by this team, and of email survey response rates (decreasing over time from ~38% in 2001) within the general public (Sheehan, 2001). The survey covered the topics of general satisfaction with and recommendations regarding the telework policy, resourcing issues, messaging and communication, effects of telework on employees and on the education and training of students, limitations of telework, work productivity impacts, and retention and recruitment. In addition, the second survey also targeted feedback specifically on the Army University Policy Memorandum 5,

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"Telework and Remote Work" and implementation plans utilized by Army University suborganizations to provide additional clarity for organizational learning.

These surveys provided leaders with critical evidence of whether the organizational change to expand telework was received positively and whether there were gaps in practices or attitudes that could be used to address challenges to organizational change. The telework survey results reflected positive experiences and attitudes toward telework. Overall satisfaction with the telework policy was very positive, and respondents gave concrete suggestions for improving it. Ratings were also positive for questions about trust, communication, resourcing, and availability of technology. Preference to telework was rated highly by employees, with individuals indicating that telework had a positive impact on their quality of life by providing improved mood, health, available time, and family life. Critically, employees reported almost no change to their yearly evaluation after teleworking, and those that improved cited increased productivity as the cause. This finding was corroborated by supervisors, agreeing that their workers were productive at the same level or better while teleworking. Finally, employees also viewed the telework policy as an important retention and recruitment tool.

The feedback of employees and supervisors regarding telework was a critical capture for Army University leaders. Having data not only to indicate the positivity of the telework and the telework policy, as mentioned above, but also having data that was pertinent to organizational learning on the effectiveness, work output, utilization, implementation, etc., as described in future sections of this article, bolstered leader individual understanding of their organization, allowed them to advocate for and track culture change over time and justified their decisions to continue telework after the pandemic.

Army University Leaders

While employees and students clearly supported telework adoption by remaining on mission during and after the COVID-19 pandemic, Army University leadership played a key role in the successful telework rollout, milestones, and continued maintenance of the initiative.

Successful telework is a result of good leadership (Contreras et al., 2020; Silva-C. et al., 2019). From Offstein et al. (2010), "the single greatest variable in predicting telework success was rarely technology. Invariably, it was leadership" (p. 34). Leaders who are to be successful with telework must cultivate trust (Brown et al., 2016), make communication more explicit, move to shared or distributed leadership, and have a results-based approach rather than a process-based approach (managing results rather than managing time) (Peters et al., 2016; Sanders, 2022). Because many of the factors that determine the success of telework reside with leadership, individual



ARMY UNIVERSITY TELEWORK

interviews with Army University leaders were conducted in April 2023 to more fully understand leader decision-making processes, and to successfully document key aspects of leadership goals and telework milestones. This information contributed to the selection process of a model of organizational change that highlights important milestones through which Army University leaders guided their organization.

Applying Organizational Change Models to Telework Implementation

Organizational change is notorious for being difficult to accomplish (Burnes, 2005), and if the change is seen as incongruent with the current culture of the organization, it is likely to fail (Petersen & Bartel, 2020). While the telework roll out was abrupt, unprecedented, and incongruent with current Army University culture, these "revolutionary" characteristics can support success: "Almost all successful organizations evolve through relatively long periods of incremental change punctuated by environmental shifts and revolutionary change" (Tushman & O'Reilly, 1996, p. 11). At the onset of COVID-19, Army University was forced to undergo a quick period of revolutionary change, including changes in organizational practices, strategy, communication structure, technology, and culture.

To better understand the factors supporting this culture change, we turn to existing frameworks for organizational change from the organizational and management science fields. Some change models, such as Kotter's (1996) eight-step model and Buller's (2015) 10 analytical lenses approach are viewed by some as rather prescriptive. Others, such as Lewin's (1947) three-step model have considerably fewer steps or phases and are viewed by some as rather simplistic and not prescriptive enough.

Because the change being researched in this study was initially driven by the outside environmental impact of COVID-19, the authors decided to view this change through Kotter's eight accelerators of change. Kotter (2012) introduced eight accelerators for change as an update or addition to his earlier eight-step change model. In his more recent work, Kotter recognizes that some changes are not the result of a leader's deliberate choice to make change, but rather their reaction to outside forces that make the change a necessity. This is what happened in 2020, with the Army University work model changing almost instantly from nearly 100% in-person to nearly 100% telework.

Kotter (2012) posits that necessary changes, which eventually result in lasting organizational culture change, are made by and through eight "accelerators." These accelerators (see Figure 1) are the drivers of a change effort, and though they generally arrive in sequence, it is not necessary that they happen sequentially. They can begin in any order, happen simultaneously, or even iteratively throughout a change process. The accelerator model thus presents a more interactive vision of change, where

Figure 1

Kotter's (2012) Eight Accelerators of Change



Note. The eight accelerators that enable rapid change can be visualized around a central topic, goal, or change initiative, which Kotter refers to as the "big opportunity."

several networks or suborganizations can be working through different accelerators in any sequence at any given time. Similarly, evidence gathered in the current study indicates that results tied to one accelerator can also have connections to others.

Army University Telework Adoption Through the Lens of Kotter's Eight Accelerators

In this section, we will discuss the Army University telework adoption through the lens of Kotter's (2012) eight accelerators.

The Big Opportunity

The "big opportunity" that was presented to Army University as a result of the forced telework model for its employees and students in 2020 was that it could take

694

ARMY UNIVERSITY TELEWORK

Figure 2

Timeline of Army University Telework Implementation



the lessons learned from that experience and make its own hybrid model for employees and students that would allow them to work through telework or in person based on organizational needs and individual desires.

Create a Sense of Urgency

The first accelerator concerns itself with establishing and "maintaining a strong sense of urgency with as many people as possible" (Kotter, 2012, p. 27). This drives people to buy into or at least "try on" change. Employees tend to do things the same way over time because it feels normal and comfortable. Because of this, creating a sense of urgency for any change effort is an accelerator that should not be overlooked. Without a sense of urgency, people who resist, or are indifferent to change, might take the position of "waiting out" the appetite for new ways of doing things. A sense of urgency to make change, "allows behavior to happen that many who have grown up in mature organizations would think unimaginable" (Kotter, 2012, p. 28).

The original sense of urgency to adopt telework at Army University was created by the COVID-19 public health emergency declared on 13 March 2020 (see Figure 2). However, the subsequent remission of the pandemic created a new source of urgency for Army University leaders. They recognized that the change forced onto the organization by the pandemic had value and returning to the pre-COVID work model of daily office presence might be a step backward. The source of urgency became focused on the rollout and implementation of regular and recurring telework to prevent a loss of momentum. Leaders needed to assume some risk, capitalize on telework tools already in place, and build on the positive gains learned throughout 2020 to take advantage of the big opportunity that lay in front of them. In response to this urgency, the deputy provost led the charge for the telework initiative by writing an initial telework policy and circulating it among Army University leaders.

Build a Guiding Coalition

The second accelerator is crucial in change success, as it initiates the momentum and leverages the heightened sense of urgency to establish a core of people or teams that will form the initial network of supporters for change and assist in seeing the change through. To capitalize on the urgency of the telework initiative, when the pandemic ended, Army University leaders built a coalition to support changes in the work model, including leaders at Army University, Combined Arms Center (CAC), and TRADOC levels, as well as representatives of the Civilian Personnel Advisory Center who had to ensure any actions taken were not an infraction of labor laws or union guidelines. In addition to senior leaders and administration, supervisor and employee support was critical, so the deputy provost held touchpoints with Army civilian professionals and military employees and drew feedback from entities that had internally adopted regular and recurring telework.

The feedback from employees and supervisors indicated that productivity had not suffered during the pandemic period of situational telework, and some tasks had benefitted from the increase in focus and decrease in distractions such as visiting or office background noise. Many employees felt gaining back the time they usually spent commuting improved work-life balance and that the opportunity to telework could assist in the recruitment and retention of talent for the organization.

Form Strategic Vision and Initiatives

In accelerator number three, the coalition clarifies a vision and identifies strategic initiatives that can move the organization toward the vision. Key to this step is that the message and initiatives are consistent with senior leader goals but formed and carried out by the coalition. Change agents create a common understanding of the change purpose and garner support from invested stakeholders. This is important because the change initiatives could be such that a management-driven hierarchy may be ill-equipped to handle in a sufficient or timely way (Kotter, 2012).

Army University's vision was to maintain and build upon the practices acquired through teleworking during COVID by building in flexibility that supported transparency: the initial policy was permissive rather than prescriptive, would be reviewed after the first year, and empowered supervisors in suborganizations to implement telework. The approach encouraged subordinate organizations to take ownership of the policy and create individual implementation policies based on their

38

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ARMY UNIVERSITY TELEWORK

Table 1

Army University Telework Survey Responses Relevant for Kotter Accelerator, Form the Strategic Vision and Initiatives

Survey Items	Positive Responses		
	2022	2023	
I understand the work requirements of the Army University Telework and Remote Work Policy.	N/A	99.6%	
I understand the duties required of me while teleworking or working remotely.	97.6%	98.8%	
My leadership clearly communicated the repercussions of failing to maintain my telework or remote work agreement.	90.8%	88.6%	
My leadership clearly communicated telework or remote work expectations.	91.2%	89%	

leaders, organizational requirements, and culture. Middle managers were then able to implement, resulting in all employees having a clear vision of responsibilities and requirements.

Table 1 provides some evidence from the employee's point of view that the effort to create a coherent vision for the telework policy was successful: the overwhelming majority of respondents agreed that they understood duty requirements and expectations while teleworking.

Enlist a Volunteer Army

The strategic vision built in the third accelerator facilitates the next—enlisting a volunteer army (i.e., a group strongly committed to pursuing the goal). "In the fourth accelerator, the guiding coalition, and others who wish to help, communicate information about the change vision and the strategic initiatives to the organization in ways that lead large numbers of people to buy into the whole flow of action" (Kotter, 2012, p. 31). This accelerator broadens the acceptance and visibility of the change effort across the organization and begins to pull others into the change agent network.

Army University leaders advertised this change in a number of ways, but one highly impactful mechanism was implementing and disseminating the results of the Army University telework surveys. The research team briefed survey results to Army University leaders, policy, and program analysts within their staffs, and provided the

Table 2

Army University Telework Survey Responses Relevant for Kotter Accelerator, Enlist a Volunteer Army

Survey Items	Positive Responses		
	2022	2023	
I am satisfied with the current Army University Telework and Remote Work Policy.	78.7%	75.9%	
The current Army University Telework and Remote Work policy has been fairly implemented in my unit.	N/A	72.6%	

results in multiple formats so leaders could disseminate them widely, both up and down the chain of command. Army University leaders briefed results of the survey showing the impacts of telework during quarterly supervisor professional development training sessions, meetings with division chiefs, and during workforce sessions with all employees. The dissemination helped increase interest in telework and decrease misconceptions and stigma, which ultimately created leverage and momentum for the change.

Table 2 indicates that in addition to leadership support for the development and implementation of the Army University telework policy, employees are also members of the "volunteer army," endorsing their satisfaction with the policy.

Enable Action by Removing Barriers

Once the network has grown to a sizeable force that is taking action, the fifth accelerator becomes relevant, removing barriers that would either prevent the initiative from succeeding or slowing to the point of interest loss. Any real or perceived barriers will be capitalized on by resistant fence-sitters or naysayers to continue the status quo.

At the onset of COVID, Army University removed barriers to telework and remote work by improving infrastructure and technology, providing employees with required hardware, such as laptops, and enabling widespread VPN access so employees could conduct their work securely. Licenses for collaborative software, such as Microsoft (MS) Teams, were provided to support remote meeting and teaching. Critically, employees were offered training for software such as MS Teams to ensure useability. These initial developments have continued to evolve with initiatives such as the Army "Bring Your Own Device" program enabled by the Azure Virtual Desktop, which al-



ARMY UNIVERSITY TELEWORK

lows users to stay connected with their email, collaborative software, and shared documents, while being less dependent on government-issued equipment.

When employees returned to work after the pandemic, barriers in mentality regarding regular and recurring telework existed in the form of employee or supervisor disagreement that telework fit with Army culture. After coming out of isolation, many employees were glad to return to the office and wanted telework to be a thing of the past. Others were confused about the requirement to come back full time to the office, citing their individual productivity had not decreased during COVID. Leaders recognized that individuals needed autonomy to make the choice right for them. Supplementary information on the merits of telework and the objective data that had been collected through the surveys became more widely available. Workforce sessions became opportunities for open dialogue and for individuals to express concerns and receive guidance. They were also an opportunity to dispel myths, follow up on issues, and improve communication among employees and leaders.

An additional barrier to starting post-pandemic regular and recurring telework was the lack of relevant policies from higher-level organizations; neither Department of the Army, TRADOC, nor CAC had policies in place for long-term telework. This barrier was removed by the working draft version of the Army University telework policy clearing all administrative hurdles; it was officially published in October 2022.

While some barriers could be readily anticipated, the telework surveys provided key information about additional barriers to successful telework and whether they had been overcome. Table 3 suggests that the way the Army University telework policy was implemented addressed many typical barriers to successful telework. These include concerns about how teleworking may impact evaluations or career progression, having clear expectations, and having responsive support and training for both subordinates and supervisors.

Generate Short-Term Wins

As the change initiative gains momentum, it is critical to the success and continued forward progress to generate and celebrate short-term wins, the sixth accelerator. Generating, publicizing and celebrating short-term wins shows the organization that the change is gaining traction and provides recognition to the change network. These shared successes encourage more people to see the change as urgent, inevitable, or promising, and to volunteer to be pulled into the process.

Army University celebrated short-term wins by using the first year's survey data to spread awareness regarding the successful implementation and benefits of telework, and the second year's data to show the policy was written well and implemented fairly. The momentum, successes, best practices, and tactics, techniques,

Table 3

Army University Telework Survey Responses Relevant for Kotter Accelerator, Enable Action by Removing Barriers

Survey Items	Positive Responses		
	2022	2023	
It is my perception that teleworking had a neutral or positive influence on my current DPMAP or evaluation rating.	99%	98.4%	
It is my perception that telework or remote work has limited or will limit my promotion potential or upward mobility for my career.	5.9%	4.4%	
While teleworking or remote working, my supervisor holds me accountable to the same productivity standards as when I am in the office.	95.5%	96.4%	
Any issues I faced while teleworking or remote working were resolved promptly by my leadership.	83.8%	85.4%	
I have been given the appropriate training to be confident supervising telework and remote employees.	89.9%	98.1%	
My employees are lacking resources to be successful while teleworking or working remotely.	25.4%	1.9%	
As a supervisor of teleworking or remotely working employees, I find myself having to work harder to maintain the same level of communication compared to when they are in the office.	40.7%	38.9%	

and procedures of supervisors in suborganizations were solicited in both telework surveys, which were then consolidated and reported to leaders who promulgated these strategies for success to other organizations to demonstrate short-term wins.

The collaborative infrastructure put in place also generated wins by allowing individuals to attend meetings without requiring conference room reservations or large auditoriums. Removing the requirement for in-person attendance has increased inclusivity and representation and improved the speed and spread of communication throughout the organization.

During the lockdown, another short-term win became clear when inclement weather occurred, resulting in the closure of Fort Leavenworth due to treacherous driving conditions. However, because employees were largely teleworking, hundreds of instructors, Army civilian professionals, and students were able to contin-



ARMY UNIVERSITY TELEWORK

Table 4

Army University Telework Survey Responses Relevant for Kotter Accelerator, Generate Short-Term Wins

Survey Items	Positive Responses		
	2022	2023	
Weighing both positive and negative aspects above, I prefer to telework or remote work rather than work in the office every day.	64.2%	68.4%	
I was provided the necessary training to be confident and capable instructing or training students online.	70%	79.2%	
I have been provided with the resources my position requires to be successful in performing my duties while teleworking or working remotely.	90.6%	91.8%	
As a supervisor, it is my perception that telework, or remote work has either improved or did not influence the morale of my unit.	86.5%	88.7%	

ue the mission with little disturbance. Every inclement weather episode since has generated additional short-term win opportunities for both situational and regular teleworkers.

An additional large and unforeseen win came when CAC and TRADOC utilized portions of the Army University telework policy and survey results while drafting and updating their policies. Receiving buy-in and support from the higher-level organizations was a confidence builder that this policy and the program were on the right track for the organization.

Table 4 suggests that the first time the Army University survey was administered, employees were positive about key issues such as preferring to telework and performing their duties including teaching. Supervisors responding to the 2023 survey also agreed that telework did not negatively affect their team's morale.

Sustain Acceleration

"Accelerator 7 keeps the entire system moving despite a general human tendency to let up after a win or two" (Kotter, 2012, p. 33). Senior leaders and change advocates continue to publicize the accomplishments of the initiative while still seeking opportunities to sway a diminishing number of opponents. It is an extension of generating the short-term wins in that it continues to build on all the previous accelerators and



maintain the momentum of the change effort over a long period of time, leading to the final step of instituting change.

Army University sustained acceleration by using the data to identify aspects of the policy that weren't working, make changes, and publicize them. Additionally, a four-hour training course was created by CAC and instituted with the Army Management Staff College. This course, titled Leading Hybrid Teams, capitalized on available best practices and successes reported, becoming a requirement for all supervisors. This course reiterates supervisory practices that are critical to maintaining an effective telework program and environment. Creating the training and expanding to all supervisors meant that even those who were uncertain about telework or unsupportive were still set up for success.

As Army University tools and policies expanded to normalize telework, the benefits of telework and remote work as a recruitment tool became clearer and more of a consideration for inclusion in future job postings to compete for top talent with other federal organizations and to attempt to recruit younger workforce generations, who have been notoriously difficult to interest in federal employment (Newhouse, 2024).

Despite the noted successes, it should be stressed that there is a continual need for action to sustain implementation. While the flexibility of the telework policy was a strength for transparency and implementation, it also provides latitude for supervisors to reduce or eliminate telework in positions where they nominally allow it. Evidence from the second Army University telework survey indicated 29 out of 384 people (7.5% of total survey respondents) provided examples indicating their positions were approved for regular and recurring telework, though they were discouraged or denied the opportunity to do so by their supervisors. This is an issue that needs follow up and continual assessment to act upon issues discovered through organizational learning, sustain the gains of the telework initiative, and ensure we do not introduce inequities in the application of telework that could have potential implications on recruitment and retention of employees.

Tables 4 and 5 provide evidence that the earlier wins have been sustained or increased, and that the use of telework has started to have broader implications including affecting retention and recruitment. Telework has been integrated into generalized work practices, with supervisors using available face to face time effectively and employees agreeing that telework does not negatively impact their productivity or work ethic.

Institute Change

"Accelerator 8 helps institutionalize wins, integrating them into the hierarchy's processes, systems, procedures, and behavior—in effect, helping to infuse changes into the culture of the organization" (Kotter, 2012, p. 33). This final accelerator is incredibly important, as it is the one that codifies the change in policy and practice

ARMY UNIVERSITY TELEWORK

Table 5

Army University Telework Survey Responses Relevant for Kotter Accelerator, Sustain Acceleration

Survey Items	Positive Responses		
	2022	2023	
Because of the ability to telework, I am more likely to recommend working at Army University.	69%	88.1%*	
The teleworking policy has increased my willingness to continue working for Army University.	NA	74.6%	
Because I telework or work remotely, my work ethic is that I work the same amount or harder for the organization as I did when I was in-person.	NA	99.2%	
While teleworking or working remotely, I complete the same amount or more work compared to when I am in the office.	74.9%	72.4%	
My leadership takes advantage of the time together in the office to effectively utilize face-to-face interaction.	NA	87.5%	
My students are able to communicate with me as effectively or more effectively while I telework or remote work, compared with classroom face-to-face instruction or training.	43.7%	42.6%	
My students are receiving the same quality of education or training in the online environment as when they would if they were being taught face-to-face in my classroom	41.3%	56.2%	

Note. * Denotes a scale change from 5-point Likert in 2022 to True/False scale used in 2023. May appear more positive.

and turns what is new into normal organizational behavior. At this point, the big opportunity is solidified and demonstrated to be an initiative with staying power that will not fizzle out in time.

Army University has worked to institutionalize change by using findings from the telework surveys to update the telework policy and seek to publish this revision, with the support of champions for change at each echelon. There is continued support to ensure that supervisors are successful with the Leading Hybrid Teams training course. At the time of this writing, all supervisors in CAC have completed the course. The process of implementing telework at Army University is also taught as a case study during the Strategic Leadership Course at the Army Management

Table 6

Army University Telework Survey Responses Relevant for Kotter Accelerator, Institute Change

Survey Items	Positive Responses		
	2022	2023	
Please indicate your interest in future (or continued) remote employment by Army University.	NA	84.3%	
Compared to last year, my instruction or training online has improved.	NA	38.8%	
I see the Army University Telework and Remote Work Policy as a step in the right direction for our organization.	89.6%	86.1%	
It is my perception that my leadership trusts me to telework or remote work.	88%	80.8%	
I trust my leadership to telework.	90.9%	89.5%	
As a supervisor, I am in support of the Army University Telework and Remote Work Policy.	86%	83.7%	

Staff College to educate senior Army leaders on the possibilities and paths to culture change. Employee face-to-face sessions with the deputy provost are still occurring annually during site visits, ensuring employees have a venue to provide feedback to higher-level leaders about telework and remote work.

By making the telework policy available to all eligible employees at the very beginning of their employment, the program and requirements are now showcased as an element of the existing organizational culture. Educating employees about telework at the earliest opportunity ensures understanding and transparency. The telework surveys and results are continually briefed during new employee orientations. The telework contract and the telework training requirements are on the new employee required checklist and available on the CAC website, demonstrating permanence and leader support of the program.

Table 6 highlights some of the positive employee responses that reflect an ongoing culture change in Army University in embracing the use of telework and remote work. For example, a majority of respondents expressed an interest in remote work, and a sizeable minority of instructors agreed that the quality of online instruction is improving year on year (another 56.7% were neutral). Respondents are also generally positive about telework being good for Army University. Finally, while supervisors' feelings about telework are often a key stumbling block to long-term success, super-

ARMY UNIVERSITY TELEWORK

visor respondents to the survey indicated they support the policy and that supervisors and their subordinates trust each other. These measures suggest not only a positive attitude toward the experience of telework but also provide support for the idea that a culture change has occurred.

Discussion

The current article presents a case study of Army University's telework policy implementation as an example of organizational learning, with the findings from two surveys providing both evidence for the success of the cultural change and specific support for key stages in change management. Beyond the scope of this article, our findings contribute to two related topics: the evaluation of telework implementation in government workplaces and the contribution of organizational learning to the goal for the Army to become a learning organization.

Telework in Government Workplaces

The positive results from both surveys are consistent with previous research on telework, which also indicates employees' preference for telework and that telework increases work-life balance, perceived productivity, and commitment to the organization (de Vries et al., 2019; Harker Martin & MacDonnell, 2012; Mullins et al., 2022; Ramirez, 2022; Vega et al., 2015). Government-specific research on telework has been conducted by Kwon and Jeon (2018), who analyzed data from the Federal Employee Viewpoint Survey and found an increased satisfaction in telework programs linked to the 2010 Telework Enhancement Act, leadership commitment, and cultivating a performance-oriented culture. Likewise, Lewis et al. (2023) used Federal Employee Viewpoint Survey data from before and during the pandemic to suggest that those institutions that switched to frequent telework during the pandemic had decreased turnover. Data from the two Army University telework surveys suggest the benefits and challenges for Army University employees and leadership are typical of those identified in previous research: telework can been seen positively by employees (Ameen et al., 2023; Mullins et al., 2022; Ramirez, 2022) and improve retention (Lewis et al., 2023), but leadership attitudes and flexibility play a major role in whether telework adoption is successful (Adekoya et al., 2022; Contreras et al., 2020; Mullins et al., 2022; Röpke, 2023; Sanders, 2022).

Evidence from both telework surveys indicates positive findings, but the surveys were not completed by every individual within the organization. Limited response is a typical limitation of survey research and highlights the importance of using additional and convergent forms of feedback, such as leader roundtables soliciting employee feedback, monitoring of employee telework usage numbers, regular leader check ins with both military and civilian supervisors, and maintaining a sustained effort to promulgate the telework policy to Army University suborganizations that have not yet fully instituted telework despite having the option available. Organizational learning requires the organization to accurately see itself to bring all employees onboard, systematically remove barriers, and support useful and useable innovations.

Telework Supports Organizational Learning for a Learning Organization

Given the challenges involved, the adoption and sustainment of the Army University telework policy can be seen as an important example of innovative organizational learning in support of the broader goal for the Army of being a *learning* organization.

This article has highlighted the ways in which Army University telework adoption followed key steps needed for successful organizational learning. We can also consider the complementary evidence that telework adoption has supported the dimensions of a learning organization. As described earlier, the five key dimensions of a learning organization denoted by Calton et al. (2021) revolve around themes of *innovation* and *collaboration*: (1) cultivate learning support, (2) orient toward a shared future, (3) explore new perspectives, (4) synchronize capabilities, and (5) manage organizational knowledge. Kotter's (2012) accelerator steps that supported telework adoption echo some of these dimensions, such as cultivate learning support (build a guiding coalition), orient toward a shared future (form strategic vision and initiatives), and manage organizational knowledge (institute change).

Additionally, telework adoption benefits the Army as a learning organization through its second-order effects. As mentioned in the short-term wins section, we have seen increases in meeting attendance for hybrid/online modalities of meetings. This is one example of a broad benefit Army University leverages as a distributed organization, with locations across not only the United States but also the world. Army University is also a hierarchical organization, with nested structures based on military hierarchy for both educational and administrative practices. The advent of telework has created or expanded available technology for working, managing, meeting and teaching in virtual or hybrid environments. This new infrastructure has enabled better communication and collaboration both laterally across the institution and vertically through levels of seniority. Adopting technologies such as MS Teams has not only allowed individuals in remote locations to meet more easily but has also provided greater ability to identify relevant collaborators. MS Teams has enabled the creation of worldwide working groups, communities of interest and committees with a size and diversity not possible before the pandemic. High-level meetings are accessible via MS Teams that would have previously been closed to many levels of the organization. Large-scale hybrid meetings are possible for both administration

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ARMY UNIVERSITY TELEWORK

and for the exchange of innovative ideas that would not have previously been considered. Virtual learning has increased the scale of professional military education and Army civilian educational opportunities and has offered opportunities such as speakers from remote locations who otherwise could not participate. Many of these collaborative innovations could have been possible without widespread telework and virtual instruction, but the reality is that the infrastructure required was not created or maintained until the tipping point of organization-wide telework.

Conclusions

For the Army to thrive as a learning organization, it is critical to support organizational learning opportunities. Given the success of telework adoption across Army University, we suggest that the lessons of this case study be considered in the continued drive for the Army to be a learning organization. In short, successful organizational learning underpins the successful learning organization. This case study may be used by higher-level organizations or reapplied at Army University during times of required rapid organizational learning and culture change, such as the anticipated future widespread rollout of artificial intelligence applications. However, even as we highlight the success of telework adoption, we have no evidence that Kotter's (2012) accelerator steps or any other model of organizational learning were considered or applied during telework implementation. Rather, we see the connections to key steps in successful organizational learning only in retrospect. Moving forward, it is critical for Army University and the wider Army to not leave organizational learning to chance. Successful innovation is unlikely to occur without systematic guidance and strong leadership, especially when significant culture change is required.

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Upcoming Conferences of Note

April 5-8, 2025: Higher Learning Commission (HLC)

Chicago, IL

https://www.hlcommission.org/learning-center/annual-conference/

Held annually in the spring in Chicago, the conference offers learning, professional development, and networking opportunities for HLC members.

June 6-8, 2025: The 2025 Teaching Professor Conference

Washington, DC

https://www.magnapubs.com/teaching-professor-conference/

This conference focuses upon practical, evidence-based tools and practices to help instructors excel in the classroom. The Teaching Professor Conference is your opportunity to dive into effective teaching practices, enhance student learning, and join a supportive community of fellow faculty members who share your same challenges.

June 26-28, 2025: Adult Education Research Conference (AERC)

Montgomery, AL

https://newprairiepress.org/aerc/

AERC is an annual North American conference that provides a forum for adult education researchers to share their experiences and the results of their studies with students, other researchers, and practitioners from around the world.

October 6–10, 2025: American Association for Adult and Continuing Education (AAACE)

Cincinnati, OH

https://www.aaace.org/page/Conference

This is the annual conference of one of the nation's largest organizations for adult and continuing education. AAACE is the publisher of three leading adult education journals: *Adult Education Quarterly, Adult Learning*, and the *Journal of Transformative Education*.

October 13-15, 2025: Association for Continuing Higher Education (ACHE)

Milwaukee, WI

https://www.acheinc.org/87th-annual-conference-2025

ACHE is a dynamic network of diverse professionals who are dedicated to promoting excellence in continuing higher education and to sharing their expertise and experience with one another.

January 8-10, 2026: International Teaching Learning Cooperative

San Diego, CA

https://www.lillyconferences-ca.com/

This conference provides opportunities for the presentation of the scholarship of teaching and learning. Faculty and administrators at various stages in their academic careers come from across the United States, representing nearly every discipline found in higher education.

UPCOMING CONFERENCES

January 11–14, 2026: Future of Education Technology Conference (FETC) Orlando, FL

https://www.fetc.org/2026

FETC 2026 will host hundreds of sessions across eight distinct tracks that will spark ideas and inspire motivation. Tracks include district, school, classroom, information technology, coach, inclusion, sports, and library leaders.





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Submission Guidelines

Manuscripts can be submitted at any time, and we welcome contributions from a diverse range of authors. Please see our Author Submission Guidelines for more information on manuscript preparation and submission. *cs*

Author Submission Guidelines

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- Adhere to the 7th edition of the *Publication Manual of the American Psychological Association (APA)*
- Include manually typed references to prevent layout conflicts
- Feature a one-paragraph abstract summarizing the manuscript's content
- Include charts, graphs, and figures that follow APA 7th edition style guidelines
- Include photos, if applicable, in JPEG format with a resolution of 300 dpi or higher, along with
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