2024 Army University Learning Symposium

Full Program

Virtual Session: 11-14 June 2024

Hybrid Session: 24-28 June 2024

Virtual Attendance:
ArmyU Learning Symposium - Marshall
Guest Link: https://us.bbcollab.com/guest/11c3afd5fc3249a685ca040dcdc8ae2c
ArmyU Learning Symposium – Arnold
Guest Link: https://us.bbcollab.com/guest/d72c3d6eb72b4d36b6d06365cf6a0cfa

2024 Army University Learning Symposium

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24-28 JUNE - Hybrid Session Agenda

LOCATION: LEWIS AND CLARK CENTER - 100 Stimson Ave, Fort Leavenworth, KS

VIRTUAL ATTENDANCE:

Marshall https://us.bbcollab.com/guest/11c3afd5fc3249a685ca040dcdc8ae2c

Arnold https://us.bbcollab.com/guest/d72c3d6eb72b4d36b6d06365cf6a0cfa

(Subject to change) All times in Central Daylight Time

MONDAY, 24 JUNE

1400-1600	**IN-PERSON REGISTRATION** | Upper Atrium - Lewis and Clark Center **ARMY UNIVERSITY PRESS INFORMATION AND FILM VIEWING** | Marshall "Okinawa: Typhoon of Steel" - Introduction and discussion of the AUP and AU Films mission; film viewing followed by discussion and Q&A session
1200-1630	**NEW CLASSROOM DESIGN DEMONSTRATION** | Classrooms 2161 and 2162 - Lewis and Clark Center

TUESDAY, 25 JUNE

0730-0900	**IN-PERSON REGISTRATION / POSTER AND TABLE SETUP** | Upper Atrium - Lewis and Clark Center **VIEWING OF "LEVEL SET" PME VIDEO (every 30 minutes)** | Marshall
0900-0930	**WELCOME AND OPENING REMARKS** | Marshall **Dr. David Cotter** -Dean of Academics & Professor, Command and General Staff College; Chief Academic Officer, Army University
0930-1015	**KEYNOTE SPEAKER** | Marshall (Virtual) Track 1 - AI Applications for Learning **Jeffrey R. Jones** -Deputy to the Commanding General at the U.S. Army Cyber Command
1015-1030	**TRANSITION**
1030-1130	**INVITED PANEL** | Marshall Track 3 - Learning Science & Technology **Introducing the AI Center of Research for Excellence in Education (AIRCOEE)** Dr. Benjamin Nye -USC Institute for Creative Technologies; Dr. Jose-Luis Ambite -USC Information Sciences Institute; Dr. Stephen Aguilar -USC Rossier School of Education; Dr. Becky Robinson -Army University, Vice Provost for Academic Affairs *Moderator:* Dr. Sena Garven -Army University, Vice Provost for Academic Affairs
1130-1200	**GROUP PHOTO** | Eisenhower
1200-1330	**LUNCH (On Your Own)**
1330-1400	**CONCURRENT SESSION #1** (CHOOSE ONE)

Track 1 - AI Applications for Learning	Track 3 - Learning Science & Technology
Human-Machine Teaming with Generative AI to Accelerate Data Literacy Course Development | Marshall Ms. Janet Spruill -Aptima, Inc.	**Neural Activity Mapping of Army Aviation Flight Task Performance** | Arnold Dr. Christina Parker -Air Force Special Operations Command

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1400-1415 **TRANSITION**

1415-1445 **CONCURRENT SESSION #2** (CHOOSE ONE)

Track 1 - AI Applications for Learning

Humanizing Military Learning Assessment through the Non-Human: AI as a Tool for Affective Domain Learning Assessment | Marshall

Dr. Shanda Lauer -Army University, Vice Provost for Academic Affairs; Dr. Nathan White -Graduate School for Professional Development, Army Institute for Religious Leadership; Dr. Randy Brou and Dr. Victor Ingurgio -Army Research Institute for the Behavioral and Social Sciences

Facilitator: Dr. Becky Robinson

Track 2 - Learning Organizations

Rethinking the Upskilling Initiative: A Case Study on Learning Readiness and Innovative Strategies | Arnold

Ms. Karen O'Brien -Modern Technology Solutions, Inc

Facilitator: Dr. Bill Page

1445-1500 **TRANSITION**

1500-1530 **CONCURRENT SESSION #3** (CHOOSE ONE)

Track 2 - Learning Organizations

AI-Assisted Revisions for Curricula (ARC) for Army Training and Education: Techniques and Prototype Progress | Marshall

Dr. Jose-Luis Ambite -USC Information Sciences Institute

Facilitator: LTC Elvin Fortuna

Track 5 - Learning Strategies

Enhancing Scenario Planning with AI While Managing Group Dynamics for Complex Problem Solving | Arnold

Dr. Rheanna Plemons -Western Kentucky University, School of Leadership and Professional Studies; SFC George Joseph -U.S. Army Cadet Command

Facilitator: Dr. Audrey Ayers

1530-1545 **TRANSITION**

1545-1600 **CLOSING REMARKS** | Marshall

Dr. Keith Beurskens -Director, Vice Provost of Academic Affairs, Army University

1600-1645 **BREAKOUT SESSION - Artificial Intelligence Applications for Learning: Ways Forward** | **Arnold**

1730-1930 **SOCIAL** | Upper Atrium - Lewis and Clark Center

POSTER SESSION **AIRCOEE DEMONSTRATION**

WEDNESDAY, 26 JUNE

0900-0915 **WELCOME AND OPENING REMARKS** | Marshall

Mr. Alan Bodle -Deputy, Vice Provost for Digital Education, Army University

0915-1000 **INVITED SPEAKER** | Marshall

Track 5 - Learning Strategies

Dr. Allison Abbe -Research Psychologist, Professor of Organizational Studies and the Matthew B. Ridgway Chair of Leadership Studies at the U.S. Army War College

1000-1015 **TRANSITION**

1015-1045 **CONCURRENT SESSION #4** (CHOOSE ONE)

Track 1 - AI Applications for Learning

Considerations in Incorporating AI into the ALE | Marshall

Dr. Sena Garven -Army University, Vice Provost for Academic Affairs

Facilitator: Ms. Victoria Williams

Track 2 - Learning Organizations

Conflict Mapping Tools: Resilience, Education, Mission Accomplishment | Arnold

Dr. Ian Edgerly -Army Special Operations Command, 1st Special Forces Command (A); Ms. Jessica Arriola - Department of Defense Education Activity, Southeast District

Facilitator: LTC Elvin Fortuna

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1045-1100 **TRANSITION**

1100-1200 **CONCURRENT SESSION #5** (CHOOSE ONE)

Track 3 - Learning Science & Technology

Panel: Virtual Learning Practices: Potentials, Pitfalls, and a Path for Innovation | Marshall

Dr. Meredith Shafto -Army University, Vice Provost for Academic Affairs; Dr. Thomas Stewart -National University; Mr. Alan Bodle -Army University, Vice Provost for Digital Education; Dr. Robert Arp -Army University, Army Management Staff College; Dr. Randy Brou -Army Research Institute for the Behavioral and Social Sciences; Dr. Rodney Morris -U.S. Army Command and General Staff College; MAJ Ethan Swepston -Army University, School of Advanced Military Studies

Facilitator: Dr. Audrey Ayers

Track 5 - Learning Strategies

TRADOC's New Frontier | Arnold

Dr. Dick McCallum -Army University, Vice Provost for Digital Education

Track 2 - Learning Organizations

Active Learning Pedagogy for Adult Online Education | Arnold

Dr. Glen Downing -U.S. Army Command and General Staff College

Facilitator: Dr. Charles Vance

1200-1330 **LUNCH (On Your Own)**

1330-1415 **INVITED SPEAKER**| Marshall (Virtual)

Track 4 - Learning Data

Dr. David M. Markowitz -Army Chief Data Officer and Analytics Officer

1415-1430 **TRANSITION**

1430-1500 **CONCURRENT SESSION #6** (CHOOSE ONE)

Track 1 - AI Applications for Learning

Artificial Intelligence-Enabled Cyber Training | Marshall

CPT Zachary Szewczyk -U.S. Army Pacific, 3rd Multi-Domain Task Force

Facilitator: Dr. Becky Robinson

Track 5 - Learning Strategies

Credentialing: Going Digital with DOD MilGears - Pathways towards Success | Arnold

Ms. Melora McVicker -Office of the Under Secretary of Defense for Personnel and Readiness, Force Education and Training; Ms. Rita Detrick, Solutions for Information Design, LLC (SOLID)

Facilitator: Mr. Doug Redel

1500-1515 **TRANSITION**

1515-1545 **CONCURRENT SESSION #7** (CHOOSE ONE)

Track 3 - Learning Science & Technology

Applied Learning Science for Skill and Knowledge Acquisition | Marshall

Dr. Shanda Lauer -Army University, Vice Provost for Academic Affairs; Dr. Gregory Hughes and Dr. Wade Elmore - Army Combat Capabilities Development Command - Soldier Center

Facilitator: Dr. Becky Robinson

Track 4 - Learning Data

Educating Tomorrow's Defense Leaders by Enabling AI-Readiness through DoD University Data Standardization | Arnold

Mr. Layne Nelson and Mr. Vincent Boragina -Huron Consulting Services LLC; Mr. Jacob Benjamin - ManTech Digital Transformation Consulting

Facilitator: Dr. Meredith Shafto

1545-1600 **TRANSITION**

1600-1615 **CLOSING REMARKS** | Marshall

Dr. Keith Beurskens -Director, Vice Provost of Academic Affairs, Army University

1615-1700 **BREAKOUT SESSION -Learning Science and Technologies/Learning Data: Ways Forward** | **Arnold**

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THURSDAY, 27 JUNE

0900-0915 **WELCOME AND OPENING REMARKS** | Marshall

Mr. Frank Wenzel -Director, Army Management Staff College, Army University

0915-1000 **INVITED SPEAKER** | Marshall (Virtual)

Track 2 - Learning Organizations - Women, Peace, and Security

COL Katie B. Crombe -Chief, Joint Operational War Plans Division

1000-1015 **TRANSITION**

1015-1045 **CONCURRENT SESSION #8** (CHOOSE ONE)

Track 1 - AI Applications for Learning

Designing the Army Writing Enhancement Tool (AWE): Generative AI to Promote Writing Skills | Marshall

Dr. Benjamin Nye -USC Institute for Creative Technologies

Facilitator: Dr. Becky Robinson

Track 4 - Learning Data

Developing Evaluations for Modernization: The Case of the Captains Career Course | Arnold

Dr. Meredith Shafto -Army University, Vice Provost for Academic Affairs

Facilitator: Dr. Shanda Lauer

1045-1100 **TRANSITION**

1100-1200 **CONCURRENT SESSION #9** (CHOOSE ONE)

Track 2 - Learning Organizations

Panel: Optimizing the Army as a Learning Organization: FCoE's Assessment Framework | Marshall

Dr. Kyle G. Smith, Ms. Cyndy Farrell, and Mr. Skip Harrison - U.S. Army Fires Center of Excellence.

Moderator: Dr. Michele Calton -Department of Health and Human Services, Agency for Healthcare Research and Quality

Facilitator: Dr. Charles Vance

Track 5 - Learning Strategies

Assessment and Development of Complex Cognitive Skills in Army Officers: Research Program Overview | Arnold

Dr. Kingsley Ejiogu -Army Research Institute for the Behavioral and Social Sciences

Facilitator: LTC Elvin Fortuna

Track 1 - AI Applications for Learning

Memory Processes Behind Leader Identity Formation and its Effects on Soldier Development: A Machine Learning Approach | Arnold

Dr. Rachel Amey -Army Research Institute for the Behavioral and Social Sciences

Facilitator: Dr. Audrey Ayers

1200-1330 **LUNCH**

1330-1400 **RECOGNITION CEREMONY** | Marshall

1400-1415 **TRANSITION**

1415-1445 **CONCURRENT SESSION #10** (CHOOSE ONE)

Track 1 - AI Applications for Learning

A Standards-Based Approach to AI-Enabled Learning Detection in Unity-based Simulations, Field Training, and Distributed Learning | Marshall

Mr. Jim Goodell -Quality Information Partners; INFERable; Institute of Electrical and Electronics Engineers; Mr. Shelly Blake-Plock -Yet Analytics

Facilitator: Dr. Becky Robinson

Track 2 - Learning Organizations

An Interview-Based Thematic Analysis of Army Leaders' Central Tasks and Developmental Goals | Arnold

Dr. Sarah Kruger -Consortium of Universities of the Washington Metropolitan Area; Dr. James Nye -Army Research Institute for the Behavioral and Social Sciences

Facilitator: LTC Elvin Fortuna

1445-1500 **TRANSITION**

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1500-1545	**CONCURRENT SESSION #11** (CHOOSE ONE)	
	Track 2 - Learning Organizations	Track 1 - AI Applications for Learning
	Panel: Optimizing the Army as a Learning Organization: Quartermaster School's Learning Ecosystem | Marshall Mr. William Quimbayoglen, Mr. Rodney Shelton, SFC Joseph Catterson, SSG Michael Jackson -U.S. Army Quartermaster School, Petroleum and Water Department. *Moderator:* Dr. Michele Calton, Department of Health and Human Services, Agency for Healthcare Research and Quality *Facilitator:* Dr. Bill Page	**Unlocking the Power of AI in Army Education: A Hands-On Workshop** | Arnold Dr. Jeffrey Sun, Dr. Kelli Peck Parrott, Dr. Taylor Pratt, and Ms. Clarissa Bruton -University of Louisville; Mr. John Lilygren -U.S. Army Cadet Command, Directorate of Leader Development and Education; CPT Charles Holbrook -University of Wisconsin-Eau Claire *Facilitator:* Dr. Shanda Lauer
1545-1600	**TRANSITION**	
1600-1615	**CLOSING REMARKS** | Marshall **Dr. Keith Beurskens** -Director, Vice Provost of Academic Affairs, Army University	
1615-1700	**BREAKOUT SESSION - Learning Organizations/Learning Strategies: Ways Forward** | **Arnold**	
FRIDAY, 28 JUNE		
0900-1100	**AIRCOEE DEMONSTRATION** | **Arnold**	
1130-1330	**MUSEUM TOUR** | **Frontier Museum - 100 Reynolds Ave**	

2024 Army University Learning Symposium

Abstracts: Hybrid Session

Tuesday, 24 June

Concurrent Session #1

13:30 -14:00

Human-Machine Teaming with Generative AI to Accelerate Data Literacy Course Development

Location: Marshall

Presentation

Ms. Janet Spruill - Aptima, Inc.

Facilitator: Dr. Becky Robinson

The application of Artificial Intelligence (AI)-based large language models (LLMs) provides an opportunity to generate training products more quickly, and with the same level of efficacy, as human operators, particularly with humans in the loop. Appropriate use of these models can significantly reduce the time and costs associated with training development while simultaneously ensuring quality of outcomes. This session provides an overview of the technology, processes, and application of this transformative capability to the training development workflow for a new Army data literacy course.

Presenters will demonstrate the use of expertly crafted prompt engineering strategies that leverage the sophisticated capabilities of AI, ensuring generation of precise, contextually relevant content for multiple cohorts. An innovative, structured prompt engineering methodology steers LLMs to efficiently generate high-fidelity training artifacts in less than 20% of the time. It supports a wide variety of prompts, from simple question and answers or fill-in-the-blanks to complex multi-step Chain-of Thought (CoT) and Retrieval Augmented Generation (RAG) approaches.

Importantly, the solution embodies a harmonious partnership of AI and human expertise by having the AI articulate the rationale behind each output. This helps foster trust between the ISD and AI and reduces process time from months to days. This thoughtful and precise application of AI/LLMs provides Army training developers with more than a new tool—it provides a strategic advantage to accelerate "Speed to Mission," and helping to ensure that the Army's training systems and methods are as responsive and forward-thinking as the Soldiers they are intended to serve.

Neural Activity Mapping of Army Aviation Flight Task Performance

Location: Arnold

Presentation

Dr. Christina Parker -Air Force Special Operations Command

Facilitator: Dr. Meredith Shafto

The following paper explores how Army Aviation could leverage the neural pattern mapping of cognitive activity during flight task performance for curriculum design as well as learning and performance modernization that directly supports multi-domain operational environments. This study introduced a commercial-of-the-shelf (COTS), eight (8) non-contact node EEG device into a cap and through iterative exploratory research methods sought to establish and confirm both learning and learned neural activity patterns for the performance of nine (9) selected rotary-wing flight tasks. This initial research, as a technology review, collected performance data regarding the interface between the EEG device and Army Aviation Flight Simulators. The first step of the analysis, using device-specific machine learning analysis, was compared to establish differences and baselines of learned (control) and learning (experimental) flight task performance neural activity patterns while also monitoring device or simulation 'noise' interruptions to the data collected. As gateway research, the data collected in this research opens doors to greater opportunities for multi-branch studies that address

cognitive load, attention, and other brain-based influences and impacts on learning and mission performance. The data serves to improve understanding of when learning occurs and knowing how to adjust curriculum design to be immediately responsive to performance needs. It acts as a trigger for future research that informs organizational education structures, occupational proficiency, and mission readiness that ultimately enhance wartime readiness under Large-scale Combat Operations.

Concurrent Session #2
14:15 – 14:45

Humanizing Military Learning Assessment through the Non-Human: AI as a Tool for Affective Domain Learning Assessment

Location: Marshall

Presentation

Dr. Shanda Lauer - Army University, Vice Provost for Academic Affairs
Dr. Nathan White - Graduate School for Professional Development, Army Institute for Religious Leadership
Dr. Randy Brou and Dr. Victor Ingurgio - Army Research Institute for the Behavioral and Social Sciences

Facilitator:
Dr. Becky Robinson

U.S. Army Soldiers execute missions in increasingly complex Operational Environments (OE) that tax their abilities and skills across all human domains. Current Army training and education efforts focus primarily on cognitive and psychomotor domains, but do not adequately address the affective domain, "[t]he domain that examines a student's ability to internalize what is learned in the form of feelings and attitude" (TR 350-70). Affective Domain components, such as motivation, ethics, values, and emotional intelligence, can significantly enhance or inhibit student learning and therefore, should be attended to in the classroom. However, training and education in the affective domain is often difficult to accomplish within TRADOC contexts due to difficulty with measuring affective domain growth. The Army Research Institute, Army University, and the US Army Institute for Religious Leadership designed a proof-of-concept research program to develop and evaluate Soldier affective competencies using enhanced curriculum, validated self-assessment scales of AD components, and Reactive Open-Response Assessments (RORA). The RORA are AI-enhanced scenarios built in an interactive digital tool, allowing for learners to gain experience and repetition in affective OE scenarios, while receiving both competency-relevant feedback, and developmental opportunities to build critical attributes, competencies, and skills. This guiding research provides preliminary evidence that AD competencies can be taught and assessed within the TRADOC learning context. The final results of this research will start a conversation toward a possible paradigm shift in favor of a complete and holistic three domain training and education perspective to create more adept and mission capable Army Leaders and Soldiers.

Rethinking the Upskilling Initiative: A Case Study on Learning Readiness and Innovative Strategies

Location: Arnold

Presentation

Ms. Karen O'Brien - Modern Technology Solutions, Inc

The conventional wisdom in instructional design holds that well-defined learning objectives in data literacy, analytics, and artificial intelligence are the starting point for upskilling success. This presentation will challenge this assumption, and others, by examining a case study of establishing a decision-support analytics division within an Army organization. Using a narrative rich with both surprising successes and failures, this case study uncovers unexpected barriers, proposes unconventional solutions, and highlights a neglected set of learning objectives that are essential for successful upskilling. It integrates these lessons-learned into a

Facilitator:
Dr. Bill Page

practical framework for evaluating organizational readiness for upskilling and for developing strategies to get your learners and leaders to the starting line. This case study offers a novel perspective on developing a curriculum that addresses the deeper needs of a modernizing workforce and advocates for a shift towards a more inclusive, learner-centered approach to developing adaptable, skilled professionals who are ready to contribute to the analytics-enabled Army.

Concurrent Session #3

15:00 – 15:30

AI-Assisted Revisions for Curricula (ARC) for Army Training and Education: Techniques and Prototype Progress

Location: Marshall

Presentation

Dr. Jose-Luis Ambite -USC Information Sciences Institute

Facilitator:
LTC Elvin Fortuna

The Army is fundamentally a "learning organization" that engages in not only training, but also lessons learned about its organizational and business processes. This includes both smaller updates (e.g., changes to technical manuals) and larger doctrinal shifts. As doctrine and manuals evolve, course curricula and resources must be updated. Identifying the materials that need to be changed and updating these materials requires extensive effort from the curriculum developers, which subtracts from effort that could be devoted to the development of new resources. This task is particularly challenging since training materials encompass text documents, spreadsheets, slides, and other formats; and the changes vary in scope and granularity. Fortunately, recent advances in machine learning and natural language processing provide methods for semantic analysis that promise to reduce the effort of curricula revision by quickly identifying sections of training materials relevant to each particular change. The ARC framework 1) ingests army publications, such as army doctrine and field manuals, as well as current lesson plans, 2) indexes these documents at the appropriate level of granularity (e.g., a paragraph of a field manual, or a slide in a lesson plan), 3) uses information retrieval and semantic similarity to identify related units among old and new doctrine, and 4) displays search results related to a specific textual unit in a web-based graphical interface. This approach should significantly speed up the process of curriculum revision. This work is part of the AI Research Center of Excellence for Education (AIRCOEE) in collaboration with Army University.

Enhancing Scenario Planning with AI While Managing Group Dynamics for Complex Problem Solving

Location: Arnold

Presentation

Dr. Rheanna Plemons -Western Kentucky University, School of Leadership and Professional Studies
SFC George Joseph -U.S. Army Cadet Command

This presentation discusses the pedagogical application of artificial intelligence (AI) in teaching case study analysis, scenario planning, and managing diverse teams. Scenario planning is a crucial skill for future organizational leaders who will encounter complex problems in dynamic settings. In addition, future leaders must learn to navigate diverse teams to ensure optimal performance.

During this session, the presenters will explain the value of using case studies to help students connect with real-world problems and how students can pull from their content knowledge and experiences to solve those complex cases. The presenters will illustrate how AI can analyze those proposed solutions to generate hypothetical outcomes for further consideration. Using AI for predictive modeling will help future leaders remove bias from decision-making and force them to view outcomes from different perspectives while planning for potential consequences of actions.

Facilitator: Dr. Audrey Ayers	Finally, the presenters will describe how instructors can use AI to purposefully control team assignments to challenge students to work with others who have conflicting personalities or to leverage the strengths and weaknesses of team members based on personality traits.

Poster Session

Upper Atrium – Lewis and Clark Center
17:30 – 19:30

Track 1 Posters - AI Applications for Learning

1A Processing (AI Language Tools), Plug-Ins, and Privacy

Dr. Jeffrey Sun and Dr. Taylor Pratt - University of Louisville	In the realm of natural language processing (NLP) and understanding, AI language tools have gained significant prominence. However, many users are unfamiliar with the diversity and origins of these tools. Notably, robust and complex NLP models like OpenAI's Generative Pretrained Transformer 4 (GPT-4), Microsoft Azure, and Google's Bidirectional Encoder Representations from Transformers (BERT) exemplify this advancement. This workshop aims to shed light on various NLPs, distinguishing their features. The session will then delve into concepts related to external plug-ins, an organization's preferred development environment, and the integration of Application Programming Interfaces (APIs). Privacy and security considerations will be consistently emphasized, and the workshop will conclude with a comprehensive discussion on these crucial aspects. This session is tailored for experienced instructional designers, unit leaders, and organizational policymakers .

1B Coreference Resolution, Quick Categorization, and Curriculum Developments

Dr. Robert Arp, Army University, Army Management Staff College	Coreference resolution (CR) is one type of artificial intelligence (AI) process whereby all linguistic expressions in a text that refer to the same real-world entity are identified. For example, consider the sentences: “Susan has a cat named Fred. She loves him. He purrs for her, and she scratches Fred’s belly.” CR entails noting that Susan, she, and her refer to the same entity, while Fred, he, and him refer to another entity. In this in-person presentation, using an AI tool called Semaphore, I demonstrate how CR may be used for locating and classifying elements in text into pre-defined categories such as the names of persons, organizations, locations, expressions of times, quantities, monetary values, and others. Such work is not only useful for students in writing and gathering their thoughts, but also for instructors in developing curriculum.

1C Generative Artificial Intelligence in Undergraduate Research at USMA

MAJ Hayden Deverill, COL James Bluman, MAJ John Scudder, and LTC John Paynter - U.S. Military Academy at West Point	The United States Military Academy at West Point is a fully accredited undergraduate institution of higher learning, offering 36 academic majors to a graduating class of approximately 1000 cadets. Most of these academic majors require a senior thesis or capstone research project as part of their degree requirements. Moreover, many underclass cadets begin pursuing research prior to their senior year, so every year, there is a large pool of undergraduate researchers at West point. The advent of free, publicly available large language models and generative artificial intelligence (AI) has the potential to disrupt higher education. Most educators first think of the risks associated with generative AI truncating the learning process. However, in the context of undergraduate research, generative AI has the potential to both aid and abet research progress as well as undermine the learning that should be occurring within a research project. Faculty from four departments have joined together to pursue a multi-year

study focused on the role of generative AI in undergraduate research. We intend to learn how cadets use generative AI and what the impact of this technology is on their education, their scholarship, and their development as professionals. The primary goal of our research is to understand student perspectives and use cases for generative AI across multiple academic disciplines. A secondary goal is to help inform instructors how best to advise, teach, and demonstrate generative AI. The full paper will address the methodology of the study and some preliminary results.

Track 2 Posters - Learning Organizations

2A Diversity, Equity, and Inclusivity Skills of PME Instructors: A Potential Knowledge and/or Application Gap

Dr. Meredith Shafto and Dr. Shanda Lauer - Army University, Vice Provost for Academic Affairs
Dr. Cynthia Patterson -U.S. Army Fires Center of Excellence;
Ms. Chaya Blackmon Cason and Ms. Davida Stevenson -Army Civilian Career Management Activity

Diversity, Equity, and Inclusivity (DEI) initiatives have gained priority within the Department of Defense (DoD) due to the growing recognition that addressing DEI can improve recruitment, retention and adaptability in the operational force. The Army People Strategy advocates for identifying and recruiting diverse civilian talents needed to organize, train, and equip the force.

Attending Professional Military Education (PME) is a critical opportunity for improving DEI, both by creating a diverse and inclusive environment for all students to thrive, and second by providing an educational opportunity for students to learn about DEI topics.

The skills and abilities of Instructors and Developers are paramount in bringing DEI principles to the PME experience, but there is currently no clear understanding of how educators are trained or selected to enable DEI principles in the curriculum or classroom.

This presentation will describe the results of a survey administered in the Spring of 2024 to instructors and curriculum developers across TRADOC. Results address 3 key research questions: (1) Do Instructors and Developers have the experience and skills needed to create curricula and classroom environments that reflect DEI principles? (2) Are Instructors and Developers offered the training needed to create curricula and classroom environments that reflect DEI principles? (3) What if anything do Instructors and Developers believe needs to be improved about the course content or classroom environment to reflect DEI principles?

Results will be discussed in the context of how the DEI skillsets of Instructors and Developers can be supported to best impact PME.

2B Army Credentialing and Apprenticeship Programs

Mr. Travis Votaw and Mr. Russell Gray - Army University, ACCESS

On average, half a million users complete Foreign language (FL) lessons from Global Language Online Support System (GLOSS) every year. GLOSS offers open online resources for independent foreign language (FL) learners. What distinguishes highly visited lessons from the others? This study explores the main characteristics of most accessed lessons by Chinese-Mandarin (CM) users during calendar year 2023. The lesson selection combines listening and reading skills at a Limited Working Proficiency at 2+ILR skill level. The authors adapted a rubric consisting of 15 criteria to assess a total of 40 GLOSS lessons. A percentage-based approach revealed which aspects influence an online lesson's success. The results show how these aspects do or do not significantly affect the success (number of hits) of a lesson, influencing its popularity. The study produces lessons learned and implications for future actions and research in the field of online FL learning.

2C Underlying Dimensions of the Army Learning Organization Assessment

Dr. Marcus Fagan - Army Research Institute for the Behavioral and Social Sciences

This research examined the tenability of different factor structures of the Army Learning Organization Assessment (ALOA; Calton et al., under review) using DA Civilians and Soldiers (n = 386). The ALOA measures the Army Learning Organization Maturity Model (ALOMM; Calton et al., 2021) that contains five dimensions (cultivation of learning support, orientation towards a shared future, exploration of new perspectives, synchronization of capabilities, and management of organizational knowledge). Calton et al. (under review) created initial evidence for the ALOA factor structure; however, high correlations (>.90) between the ALOMM dimensions suggest a higher-order factor or bi-factor model are plausible (Calton et al., under review). Theoretically, previous works (Calton et al., 2021; under review) support the ALOMM dimensions, but different LO measures (e.g., Song et al., 2009) support a higher-order factor over LO dimensions, analogous to a g factor in intelligence research (e.g., Jensen, 1998). Using confirmatory factor analysis, we found that a bi-factor and higher-order model fit well. Conceptually, a bi-factor model establishes a general LO culture factor that could improve every facet of a LO while not directly improving any of the five dimensions. Conversely, in a higher-order factor model, the general LO culture factor would indirectly affect an LO through improving the five ALOMM dimensions. A higher-order conceptualization would imply focusing on general LO culture would generate the biggest changes in an organization, while a bi-factor conceptualization places equal emphasis on both LO cultural and ALOMM dimensions for driving organizational change. Additional implications will be discussed at the symposium.

Track 5 Posters - Learning Strategies

5A Revolutionizing Professional Military Education: The Total Soldier App Proposal

CPT Chris Slininger -HRC Innovation

This proposal advocates for a transformative approach to Professional Military Education (PME) through the implementation of an innovative app-based learning platform, termed the "Total Soldier app." Traditional PME models are critiqued for their limitations in engaging individuals, validating mastery, and fostering continuous learning. The proposed solution leverages a dynamic, microlearning-based system that tailors content to individual needs, considering past lessons, assignments, and knowledge gaps. Drawing inspiration from the Salesforce Trailhead app, the Total Soldier app aims to provide personalized leadership paths for Soldiers, supporting their development from fundamental training to specialized roles within the military.

The app facilitates a seamless integration of learning pathways, allowing Soldiers to prepare for specific units, missions, and roles. Bite-sized microcourses, accessible via mobile devices, enable Soldiers to learn throughout the day, ensuring sustainable growth. Moreover, the proposed system offers progress reports for raters and senior raters, enhancing developmental counseling and future assignment recommendations. Instructors receive insights into cohort strengths and weaknesses, enabling tailored PME sessions. This holistic approach empowers Training and Doctrine Command (TRADOC) to identify trends and refine course programs to address evolving needs.

By introducing the Total Soldier app, this proposal envisions a paradigm shift in PME, fostering a culture of continuous learning, adaptability, and individualized development for military personnel. The implementation promises to revolutionize the Army's educational framework, ensuring that each soldier is equipped with the knowledge and skills necessary for their evolving roles and responsibilities.

5B Empowering Military Instructional Design through Educational Design Research

LTC Elvin Fortuna - Army University, Vice Provost for Academic Affairs

This presentation explores the innovative integration of Learning Assisted by Artificial Intelligence (LA-AI) to enhance teaching methodologies, emphasizing hands-on activities that require students to actively engage with AI systems to complete assignments. By seamlessly blending traditional education with cutting-edge technology, we aim to cultivate a dynamic learning environment that prepares students for the evolving landscape of the digital era.

The core focus is on practical applications, wherein students actively collaborate with AI tools to solve real-world problems, fostering a deeper understanding of both subject matter and AI principles. Through these hands-on activities, we address the crucial need for students to develop not only technical skills but also critical thinking, creativity, and adaptability in the face of emerging technologies.

Furthermore, the presentation emphasizes the ethical use of AI, ensuring that students not only gain proficiency in utilizing AI but also understand the ethical implications surrounding its application. This approach aims to instill a sense of responsibility and awareness, shaping future professionals who can leverage AI for societal benefit while mitigating potential risks.

By sharing insights and practical strategies, this presentation provides examples for educators seeking to integrate LA-AI into their teaching practices, fostering an educational environment where students actively participate in shaping a technologically advanced and ethically responsible future.

5C Survey of the Army Learning Enterprise (SALE): An Enduring Investigation in Support of Outcomes Based Military Education (OBME) in Army Professional Military Education (PME)

Dr. Shanda Lauer and Dr. Meredith Shafto -Army University, Vice Provost for Academic Affairs

The Survey of the Army Learning Enterprise (SALE) is a yearly enterprise-level assessment of the relevance, challenge, and overall quality of professional military education (PME) and the Civilian Education System (CES). The objectives of the SALE are to facilitate the collection of best practices, lessons learned, and tactics, techniques, and procedures from courses and schools who are excelling; and to facilitate identification and remediation of barriers to success. In line with Outcomes Based Military Education, the SALE provides feedback from the operational environment which the leadership of TRADOC, CAC, Centers of Excellence (CoEs), and schools can use to improve how education supports the readiness of Soldiers and Army Civilians. Phase 1 includes large-scale surveying of graduates, and Phase 2 involves targeted follow-up of key issues. Phase 1 surveys are administered each year to alternating cohorts of Army Soldier graduates of the previous two years of PME: NCO cohort data is collected during odd years, and the Officer, Warrant Officer, and CES cohort during even years. Surveys are administered to a representative sample of graduates across PME level, cohort, branch/MOS, and component. Phase 2 involves follow-up focus groups, interviews, and site visits to enrich the understanding of the strengths and areas for improvement identified in Phase 1. This poster will advertise the SALE as the only enterprise-level assessment of PME and CES. Our aims are to raise general awareness, invite inquiries for organization-specific report generation, and solicit interest from institutions who may wish to participate in Phase 2 targeted data collection.

Wed, 26 June

Concurrent Session #4

10:15 – 10:45

Considerations in Incorporating AI into the ALE

Location: Marshall

Presentation

Dr. Sena Garven - Army University, Vice Provost for Academic Affairs

Facilitator:
Ms. Victoria Williams

Through thoughtful implementation, transparent communication, and ongoing improvement, educational institutions can harness the power of AI to create a more engaging, efficient, and effective learning environment. This requires careful planning, continuous evaluation, and a focus on ethical considerations to ensure that technology enhances the learning process without replacing the human element of education. While AI has the potential to greatly enhance adult education, there are several challenges and concerns that need to be considered. Many of the potential issues can be ameliorated with careful planning and continuing research.

Some of the potential issues with AI in the ALE include:

- AI-driven content can lead to a one-size-fits-all approach that doesn't effectively cater to diverse adult learners.
- AI systems can reinforce existing biases and inequalities and hinder equitable learning opportunities.
- AI-based instruction may lead to a reduction in meaningful human interaction, which can be crucial for certain types of learning and skill development.
- Issues including as transparency, accountability, and the potential for replacing human educators need careful consideration.
- Ensuring that AI-generated materials are and remain accurate, reliable, and pedagogically sound is a significant challenge.
- Excessive reliance on AI could lead diminished learning experience, with less mentorship, guidance, and emotional support.
- Some “soft skills” such as emotional intelligence, creativity, and critical thinking, may be challenging for AI to effectively teach or assess.

This presentation will discuss the potential issues as well as propose possible interventions and remedies.

Conflict Mapping Tools: Resilience, Education, Mission Accomplishment

Location: Arnold

Presentation

Dr. Ian Edgerly - Army Special Operations Command, 1st

Few would question the postulation that conflict is a dynamic and complex process which works at multiple levels and echelons within the Department of Defense (DOD). Indeed, the organization’s transcendent purpose is purely conflict related, i.e. to fight and win our nation's wars. To refine this further, external conflict with foreign actors is not the only type of conflict that the organization faces. Conflicts come on multiple levels and range from the everyday interpersonal conflicts addressed by human resource organizations, conflicts handled by educational staff, and of course the international conflicts usually thought of when discussing the DOD. Models through which to analyze conflict are diverse and can potentially cause a

Special Forces Command (A)
Ms. Jessica Arriola - Department of Defense Education Activity, Southeast District

Facilitator:
LTC Elvin Fortuna

multitude of misunderstandings about the same conflict, event, or situation. This discussion presents two larger cases (DODEA and US Army Special Operations) where conflict mapping education as a heuristic tool was and can be utilized to great effect to assist in operationalizing dynamical conflict understanding or transformation strategies. Conflict mapping education has shown to create resilient and learning organizations that in turn work better across the interagency due to the similarity of the tool utilized. This will be explicated via the presentation of a framework and practical exercise built around discussions on the development of multiple perspectives via things such as growth mindset, developing a problem solver mentality, establishment of different ways of seeing the operational environment, utilization of organizational systems theory, and individual and collective group learning. Come prepared to be actively engaged and apply knowledge to theoretical situations using conflict mapping.

Concurrent Session #5
11:00 – 12:00

Virtual Learning Practices: Potentials, Pitfalls, and a Path for Innovation

Location: Marshall

Panel

Dr. Thomas Stewart Johnson -National University; Mr. Alan Bodle -Army University, Vice Provost for Digital Education
Dr. Robert Arp - Army University, Army Management Staff College
Dr. Randy Brou - Army Research Institute for the Behavioral and Social Sciences
Dr. Rodney Morris - U.S. Army Command and General Staff College
MAJ Ethan Swepston -Army University, School of Advanced Military Studies

As part of the expanding use of Digital Education across the learning enterprise, there has been an acceleration in the use of both synchronous and asynchronous Virtual Learning (VL). Creating VL courses that are on-demand and technology-supported is a key aspect of modernizing educational approaches, but the rapid increase in the use of VL may risk implementation outpacing the ability to create centralized approaches and best practices. Key questions remain about how to optimize VL practices and agree on criteria for evaluating success or failure across the potentially wide range of VL instantiations. This panel will bring together people with different VL roles and who have experience in different VL formats. The goals of the panel are to (1) Discuss current and potential benefits of employing VL approaches, and identify challenges to achieving these benefits, and (2) Highlight the contexts where further research, innovation, or discourse are needed to optimize the use of VL. The second topic may include a range of issues, including how to define different categories of VL, develop a shared understanding what courses are good candidates for using VL, cultivate the skills students, instructors, and developers need in a VL environment, and determine if VL is effective through established best practices and evaluation criteria.

Moderator:
Dr. Meredith Shafto
Facilitator:
Dr. Audrey Ayers

TRADOC's New Frontier

Location: Arnold

Presentation

Dr. Dick McCallum -Army University, Vice Provost for Digital Education

Facilitator:
Mr. Eric McClaflin

There is a new frontier unfolding within the education and training arena. Invariably, this new horizon is being shaped by a double-edged sword that carves both promising opportunities and potential drawbacks. The current trajectory of development, propelled by the spirit of innovation, is expected to unleash a tsunami of artificial intelligence (AI) technology rushing toward the curriculum design and delivery of all military education and training.

As AI technology permeates the teaching and learning transaction, a proactive strategy is needed. While TRADOC remains committed to using AI technology to enhance the future of teaching and learning, the problem statement is discernable: There is an urgent need to formulate a guiding artificial intelligence strategy for the future of Army Education and Training.

Given the broad range of good and bad possibilities within this new frontier, a collaboratively developed Artificial Intelligence Strategy will thoughtfully guide the future of military teaching and learning. AI already fosters important ethical considerations. The automation of processes may yield the potential of unintended consequences. Emerging AI capabilities are expected to increase existing hazards, especially in the area of data privacy and IT security. Education and training guidelines and guardrails are needed. In some cases, organizations may need to develop an AI Bill of Rights for their learners.

There is a sense of urgency pending with this unfolding opportunity. Time is of the essence. Each month that passes, the scales tip away from the chance to be proactive and we move closer toward a required reactive approach. Once again, the Army Bugle is signaling it is time for deliberate action before the proverbial Genie is out of the bottle.

Active Learning Pedagogy for Adult Online Education

Location: Arnold

Presentation

Dr. Glen Downing - U.S. Army Command and General Staff College

Facilitator:
Dr. Charles Vance

As the demand for online education increases, so does the debate on how best to deliver course material. Hybrid courses, those that have both asynchronous and synchronous online elements, lend themselves well to unique pedagogical approaches. Unfortunately, the delivery mode can hinder student interaction. Active learning pedagogies are one tool available to promote greater interaction in a traditional classroom. What is less clear is how active learning works in the hybrid environment. In this study, I examined the application of active learning pedagogies in hybrid, adult, online classes in the University of Southern Mississippi higher education administration program. The data supports a conclusion that active learning techniques positively impact achievement of learning outcomes in these courses. Active learning techniques also had an overall positive impact on the adult learner's motivation and desire to learn. This study adds yet another data-point supporting the efficacy of active learning and calling into question the use of traditional lecture in the classroom.

Concurrent Session #6

14:30 – 15:00

Artificial Intelligence-Enabled Cyber Training

Location: Marshall

Presentation

CPT Zachary Szewczyk -U.S. Army Pacific, 3rd Multi-Domain Task Force

Facilitator:
Dr. Becky Robinson

When it comes to training cyber forces, the military's institutions continue to focus on fundamental knowledge and basic skills. The onus for operationally relevant training, then, falls to an already overburdened operational force that—although in possession of the knowledge and experience necessary to conduct effective cyber training—often lacks the time and personnel to do so. This presentation details my process for using artificial intelligence to teach new cyber Soldiers how to function as defensive cyber analysts. Drawing on U.S. Cyber Command's Host Analyst and Network Analyst Job Qualification Record requirements at the Basic, Senior, and Master levels, and my own extensive operational experience in the Cyber Protection Brigade, I used a mixture of Python, LaTeX, and large language models to design and build fifty-four classes on host and network analysis. Starting with just 5,000 words in general module descriptions, this pipeline generated 284,000 words across 1,600 slides and a nearly 800-page training book. Content generation is a fantastic role for artificial intelligence, particularly when paired with domain experts and when used in an iterative manner. Compared to the thousands of person-hours it would have taken to build this training material manually, my pipeline built it in three short days for just $34.68. This project is a case study in the power of applying artificial intelligence to learning.

Credentialing: Going Digital with DOD MilGears - Pathways towards Success

Location: Arnold

Presentation

Ms. Melora McVicker -Office of the Under Secretary of Defense for Personnel and Readiness, Force Education and Training
Ms. Rita Detrick, Solutions for Information Design, LLC (SOLID)

Facilitator:
Mr. Doug Redel

Department of Defense (DOD) MilGears, is an online platform that supports Service members throughout the military lifecycle. It is built upon the robust data from the Credentialing Opportunities On-Line (COOL) websites, utilized across services to aid Service member credential attainment and career development. DOD MilGears takes things further through a suite of tools that provide Service members with custom recommendations to support career and credential planning. It aims to empower service members by generating a Learning and Employment Record (LER), a skill-based digital record that aggregates training and experiences (e.g., Training, Certifications, Tech schools, PME, and EPME), by integrating data that is typically dispersed across various systems. The LER is an invaluable digital record for military personnel as it is a master resume that transparently communicates their military-acquired knowledge, skills, and abilities. It can be used for recruiting efforts or shared with education and career counselors to support planning and advising. MilGears leverages the LER to connect service members, veterans, prospective recruits, and civilians with customized career and education pathways based on their complete educational and experiential history.
This presentation will begin with a brief overview of the history and purpose of the platform. It will then feature short demonstrations of key tools, including Quick Explorer, Engage My Career, and Career Decision Support Tool, before showing how the LER connects to career pathways. Finally, the presentation will emphasize how Service members and counselors can utilize MilGears to set training, education and career goals and create actionable plans to achieve them.

Concurrent Session #7

15:15 – 15:45

Applied Learning Science for Skill and Knowledge Acquisition

Location: Marshall

Presentation

Dr. Shanda Lauer - Army University, Vice Provost for Academic Affairs
Dr. Gregory Hughes and Dr. Wade Elmore - Army Combat Capabilities Development Command - Soldier Center

Facilitator:
Dr. Becky Robinson

Researchers in the field of cognitive science have discovered simple and potent methods for enhancing the acquisition and long-term storage of new knowledge and skills. However, the efficacy of these methods has not been systematically investigated in Army schoolhouse contexts. The purpose of this project was to address this gap by applying minimally-invasive and cost-efficient methods from the learning sciences to enhance outcomes in the Air Assault courses at The Sabalauski Air Assault School at Fort Campbell, KY. To gain an understanding of course content, pain points, and instructional methods, we conducted Soldier touchpoints (e.g., focus groups, interviews, and in-person observation). We coordinated with schoolhouse cadre to identify where, when, and how science-backed learning techniques should be applied. In Experiment 1, we integrated these learning techniques into supplementary learning materials aimed at enhancing written test performance. We delivered this content to Soldiers in collaboration with the Advanced Distributed Learning Initiative (ADL) through their PERvasive Learning System (PERLS) web-based and mobile platforms. Soldiers who used PERLS passed their exams at a higher rate than those who did not. In Experiment 2, the cadre implemented minor, low-resource modifications to their hands-on practical exercises. Higher pass rates on hands-on skill exams were observed in classes that implemented these changes compared to those that did not. The economical resourcing, adherence to existing Army course standards, and promising educational outcomes of this research prompt proliferation of these and similar cognitive science backed methods throughout many training and education environments in the Army Learning Enterprise.

Educating Tomorrow's Defense Leaders by Enabling AI-Readiness through DoD University Data Standardization

Location: Arnold

Presentation

Mr. Layne Nelson and Mr. Vincent Boragina -Huron Consulting Services LLC
Mr. Jacob Benjamin – ManTech Digital Transformation Consulting

Facilitator:
Dr. Meredith Shafto

In today's increasingly complex world, DoD higher education institutions play an essential role in preparing future military and civilian personnel to promote and defend our nation's interests. Effective use of artificial intelligence (AI) at DoD universities is crucial for military readiness, but its effectiveness hinges on the presence of mature, integrated data systems. Before embarking on the journey to AI enablement, DoD universities must understand their current state on the analytics maturity curve, as AI technologies can only perform as well as the data sources that power them.

To enable AI-powered student development, ManTech, a DoD systems integration (SI) leader, and Huron, a Salesforce Education Cloud SI leader, partnered to digitally transform a DoD university's student life cycle and support services data systems. We commenced a multi-phase journey to standardize their data, modernize their antiquated and disparate data systems, and enable efficient data access. By advancing their position on the analytics maturity curve, we helped the university's leadership:

- Gain improved insights into their students through enterprise-wide data accessibility
- Manage students' educational journeys by auditing degree progress and automating course planning based on academic period demands and forecasts
- Enable process automation, improving student experience with self-service capabilities
- Establish the necessary foundation for future technological advancement and AI enablement

We explain how our work at this university can be replicated across DoD higher education institutions to realize the data framework and maturity journey necessary to drive AI-powered military readiness.

Thurs, 27 June

Concurrent Session #8

10:15 – 10:45

Designing the Army Writing Enhancement Tool (AWE): Generative AI to Promote Writing Skills

Location: Marshall

Presentation

Dr. Benjamin Nye-USC Institute for Creative Technologies

Facilitator:

Dr. Becky Robinson

The Army Writing Enhancement Toolset (AWE) is an intelligent tutoring system and writing-support tool to assist instructors in teaching the army writing style for distinct categories of Army writing (e.g., point papers, orders). This research effort is exploring the capabilities and limitations of using generative AI large language models (LLM's) to help soldiers reflect on content and structure of their writing. AWE differs from traditional writing support tools (e.g., Grammarly, Co-Pilot) rather than suggest direct improvements, AWE is developing reusable activities to promote long-term writing skills, such as asking questions about an issue with the paper so that the learner will think to ask those questions about their future papers.These activities include reverse outlining (discussing an outline based on the AI's "read" of the paper), comparing the BLUF (bottom-line up front) against the full paper content, and asking about the structure used to organize sections (e.g., causal relations, echelon levels). AWE seeks to advance two goals for Army writing instruction: 1) emulating a structured peer review or teaching assistant who models questions and issues a soldier should think about when writing and 2) enabling soldiers to benefit more from real instructors and coaches, by helping them develop a more coherent first draft. As a secondary effort, the AWE project is also developing an inventory of the types of LLM prompts which can productively analyze writing products for educational feedback, considering both their strengths and their boundary conditions.

Developing Evaluations for Modernization: The Case of the Captains Career Course

Location: Arnold

Presentation

Dr. Meredith Shafto -Army University, Vice Provost for Academic Affairs

Facilitator:

Dr. Shanda Lauer

Student evaluations provide critical feedback for course improvement, which is particularly important following major changes to curriculum. As modernization efforts move forward across PME, the enterprise needs best practices for gaining reliable feedback on how changes impact learning.

This presentation reports the results of large-scale evaluation of the Captains Career Course Common Core (C5) modernization. This modernization was implemented starting in October 2022 and involves the addition of a distributed learning (DL) component and the updating of C5 topics in the residential course.

The aim of the evaluation was to provide actionable feedback on a complex and dynamic modernization process; to achieve this we used a multidimensional and longitudinal approach. First, data were collected before modernization and for over a year following implementation, allowing for both a before-and-after comparison and for tracing changes over time during the transition. Second, feedback was gathered both at the end of the C5 and following each of the DL modules, allowing the relation of interim to final evaluations. Third, evaluations were gathered over all CCC schools and COEs, providing a diverse range of experiences. Finally, evaluations during the DL phase and at the end of the C5 were related to course assessments,

providing a key link between subjective measures of course experience and objective measures of performance.

Results are considered in terms of their implications for C5 modernization and the methodological approach is discussed in terms of what characteristics are critical for capturing actionable feedback during periods of curriculum transition.

Concurrent Session #9

11:00 – 12:00

Optimizing the Army as a Learning Organization: FCoE's Assessment Framework

Location: Marshall

Panel

Dr. Kyle G. Smith, Ms. Cyndy Farrell, and Mr. Skip Harrison - U.S. Army Fires Center of Excellence.

Facilitator:
Dr. Charles Vance

The Army Learning Concept 2030-2040 details a framework for modernizing learning in the Army. A key component of the concept is taking a learning organizational approach that integrates learning across the three domains: Institutional, Operational, and Self-development. This integration is conceptualized as a learning ecosystem that is dynamic and continuous utilizing technology and identifying talent to improve overall Army readiness. But what does a learning ecosystem actually look like? How do we know when success has been achieved? The Fires Center of Excellence (FCoE) has developed an innovative approach to achieving this success. Their assessment framework embodies the learning ecosystem concept connecting educational assessments to job performance metrics that further enhances curriculum and faculty/ staff development. This dynamic learning ecosystem allows for rapid innovation, enhanced operational adaptability, and maximizes human performance resulting in intellectual overmatch of our competitors. The FCoE will discuss their best practices and lessons learned highlighting the benefits and challenges of such an assessment framework. Specific friction points that were experienced during the process will be discussed along with solutions to those challenges. They will emphasize the need to improve feedback loops between the training centers, schoolhouses, students, and supervisors of their graduates. Their framework is an example of what right looks like and how the Army as a learning organization can optimize individual and team performance for success in future competition.

Assessment and Development of Complex Cognitive Skills in Army Officers: Research Program Overview

Location: Arnold

Presentation

Dr. Kingsley Ejiogu -Army Research Institute for the Behavioral and Social Sciences

Facilitator:

The Army's cognitive talent is a core competitive asset with strategic value. The U.S. National Defense Strategy identifies complex thinking skills among the essential requirements that enable Soldiers to meet the Army's strategic need to "out-think, out-maneuver, out-partner, and out-innovate" our adversaries. The Army could utilize its cognitive talent effectively and efficiently by using accurate measures and methods to assess, track, and develop complex cognitive skills in Army officers. Valid assessments and development methods will enhance the Army's capability to measure and to track its officers' cognitive potential and performance indicators across their career lifecycle to promote individual and team success and achieve Total Army readiness as envisioned in the Army People Strategy. This presentation will discuss ARI's research program (RP) on Assessment and Development of Complex Cognitive Skills in Army Officers. The RP addresses the need for tailored assessment measures that allow

LTC Elvin Fortuna

for lifecycle assessments and that provide developmental feedback on critical complex cognitive skills for Army officers. The RP also aims to identify best-practice methods to accelerate the development of complex cognitive skills that are critical requirements for problem-solving and decision-making in the future operational environment, which the National Defense Strategy and the Army People Strategy describe as "increasingly complex and shaped by several emergent trends." The RP aims to deliver research that enhances the Army's capability to assess its officer performance and to focus its learning and development activities at the right level and at the right time, throughout professional military education and the officer career lifecycle.

Memory Processes Behind Leader Identity Formation and its Effects on Soldier Development: A Machine Learning Approach

Location: Arnold

Presentation

Dr. Rachel Amey - Army Research Institute for the Behavioral and Social Sciences

Facilitator:
Dr. Audrey Ayers

Advances in artificial intelligence and technology are profoundly affecting how individuals develop and educate their workforce. In the present work we observe how some of the latest machine learning methods for natural language processing can help Army researchers make sense of how Soldiers view their positions over time and the implications these views may have on their training and development (i.e., learning). Importantly, we use machine learning to extract individual-level variables related to identity, highlighting the extraction of memory types, that cannot easily be quantified with more traditional self-report methods (e.g., Likert scales). These linguistic variable types related to identity are important in relation to job related outcomes. Indeed, identity has been shown to be a strong predictor of job-satisfaction, developmental success, performance, and retention (Rothausen et al., 2017; Wang & Zhang, 2021). Social psychological literature suggests that autobiographical memories accumulate over time to form aspects of one's identity. Further, how these memories are recalled may shed light on the best training and development options for a given Soldier as some types of autobiographical memory recall may imply more fixed or malleable mindsets regarding one's identity. The present work utilizes machine learning processes to examine the memory mechanisms behind Soldier accounts of their positions collected through natural language interviews. These methods have the potential to bring new, replicable, insight to the topics of Soldier development and training through technological advancements.

Concurrent Session #10

14:15 – 14:45

A Standards-Based Approach to AI-Enabled Learning Detection in Unity-based Simulations, Field Training, and Distributed Learning

Location: Marshall

Presentation

Mr. Jim Goodell - Quality Information Partners; INFERable;

This session will present a technical approach to inference detection — an artificial intelligence capability that enables the real-time detection of learning that is occuring during a learning experience. The session will focus on learning experiences that can take place in Unity-based simulations, in online learning, or in instrumented field training contexts. The presentation will explore how activities that take place within learning experiences can emit evidentiary data that may be used to infer readiness, proficiency, or knowledge gain in real-time. Reference models will be shown that exclusively leverage standards-based data architectures to

Institute of Electrical and Electronics Engineers
Mr. Shelly Blake-Plock -Yet Analytics

Facilitator:
Dr. Becky Robinson

demonstrate the feasibility of such an approach to training in Synthetic Training Environments (STE) and distributed learning.

An Interview-Based Thematic Analysis of Army Leaders' Central Tasks and Developmental Goals

Location: Arnold

Presentation

Dr. Sarah Kruger - Consortium of Universities of the Washington Metropolitan Area
Dr. James Nye - Army Research Institute for the Behavioral and Social Sciences

Facilitator:
LTC Elvin Fortuna

Throughout Army officers' careers, they must be prepared to lead at their current level and to develop for future roles. That said, the Army does not have a means to model the components of key experiences that most contribute to future growth. Here, we will apply an interviewing method derived from the study of lifespan development to identify the components of experiences that best support the competency growth necessary for leaders to perform as they progress to higher echelons of command. Specifically, we focus on competency growth from company-grade to field-grade leadership, representing a critical transition in officers' careers.

The Constructive-Developmental (CD) Theory (Kegan, 1982) describes stages of cognitive, social, and emotional complexity. It uniquely describes stages of adult growth, rather than culminating in young adulthood. The Subject-Object Interview enables evaluation of a person's current CD stage. We adapted this method to target the transition from company-grade to field-grade leadership. We are taking a flexible coding approach (Deterding & Waters, 2021) to analyze responses to two questions (N=43), with the second question varying by participant rank: (1) What is your central leadership task? (2) [CPTs] How is your leader preparing you for field-grade leadership? [MAJs-COLs] How are you developing your subordinates for the transition to field grade?

We will present themes, organized by leadership echelon and developmental stage. These findings will identify priorities for competency growth from direct to organizational leadership, permitting tailored training of leaders to address specific needs in development for the next level.

Concurrent Session #11
15:00 – 15:45

Optimizing the Army as a Learning Organization: Quartermaster School's Learning Ecosystem

Location: Marshall

Panel

Mr. William Quimbayoglen,

All aspects of learning are being impacted by emerging technologies, but what does right look like? How do we maximize the emerging technology while maintaining a focus on the diverse individual learner needs? The Army Learning Concept (ALC) 2030-2040 describes the Army's future learning environment as a multi-modal learning culture that is learner centric, accessible anytime, and anywhere. The cornerstone of the ALC is the development of an Army learning ecosystem that shares real-time quality data across learning domains, incorporates diverse

Mr. Rodney Shelton, SFC Joseph Catterson, SSG Michael Jackson -U.S. Army Quartermaster School, Petroleum and Water Department.

Moderator:
Dr. Michele Calton
Facilitator:
Dr. Bill Page

perspectives, and enhances talent management. This panel discussion will identify best practices and lessons learned from a prominent learning institution and their partners that are making great strides in creating a successful learning ecosystem. The Quartermaster School will discuss their multi-modal approach to learning by describing their efforts to create learning tools that allow their students to continually hone their capability within all learning environments, whether it occurs in formal settings, such as physical or virtual classrooms, or in self-directed, just-in-time, social, experiential, or other informal environments. Their success is the result of an amazing partnership with the Enterprise Classroom Program (ECP) and The Army Distributed Learning Program (TADLP) working side-by-side to create amazing learning opportunities for their students. Their combined efforts have resulted in improved Army readiness and operational cost reductions. The panel will show what right looks like in the future Army's learning ecosystem to inspire other learning organizations in their implementation of the ALC and modernizing learning.

Unlocking the Power of AI in Army Education: A Hands-On Workshop

Location: Arnold

Presentation

Dr. Jeffrey Sun, Dr. Kelli Peck Parrott, Dr. Taylor Pratt, and Ms. Clarissa Bruton -University of Louisville
Mr. John Lilygren - U.S. Army Cadet Command, Directorate of Leader Development and Education

Facilitator:
Dr. Shanda Lauer

Explore the transformative potential of Artificial Intelligence (AI) for Army educators in this in-person workshop. Divided into three components, the session begins with an overview of valuable AI tools for educators. Participants then engage in hands-on experiences with generative AI tools. In breakout groups, we will co-lead the following activities –

•GROUP ALPHA creates a presentation from an existing lesson;
•GROUP BRAVO generates quizzes from read-aheads and designs rubrics from an assignment; and
•GROUP CHARLIE crafts images from text descriptions and summarizes an uploaded report within a minute

Following these generative AI activities, each group will showcase their experiences with the respective AI tools to the entire room. The session will conclude with key tips, relevant lessons, and guidance, along with a reference to a University of Louisville website containing instructional videos on using selected AI tools. Join us to discover the efficiency and utility AI can bring to your educational practices.

2024 Army University Learning Symposium

11-14 JUNE VIRTUAL SESSION AGENDA

Chat with the Presenter(s) Timeslots

Chat Link: https://us.bbcollab.com/guest/ef5aa8fe27da4604b994482997ca5afa

Pre-Recorded Presentations and Papers: https://armyuniversity.edu/Organizations/LearningSymposium/Content

All times in Central Daylight Time

	11 JUNE	12 JUNE	13 JUNE	14 JUNE
0900-0930	*Track 5 - Learning Strategies* **Critical Task and Site Selection Board - Outcomes (CTSSB-O): New Design for Outcome-based Military Education** CW4 Michael Lima, Ms. Mandy Allen	*Track 5 - Learning Strategies* **Feedback from the Field for Captains Career Course Common Core: Relevance to Outcomes-Based Military Education (Paper)** Dr. Meredith Shafto	*Track 5 - Learning Strategies* **Evaluating the Effectiveness of Civilian Education: Before, During, and After the Intermediate Course** Dr. Meredith Shafto, Dr. Shanda Lauer, Dr. David Culkin, Mr. Aaron Monson, Dr. David Quisenberry	*Track 5 - Learning Strategies* **The Crucial Role of Emotional Intelligence in the Age of AI Learning** Prof. Ying Shiroma
0945-1015	*Track 1 - AI Applications for Learning* **AI Chatbots for Education: Enhancing Instructional Design and Assessment Creation for Army Educators** Dr. Jeffrey Sun, Dr. Kelli Peck Parrott, Dr. Taylor Pratt, Ms. Clarissa Bruton, Mr. John Lilygren	*Track 2 - Learning Organizations* **The Basic Skills Education Program: Organizational Learning for Soldier Retention** Dr. Shanda Lauer, Dr. Becky Robinson, Dr. Robert Henry, Dr. Wendy Sanders, Mr. Jayson Dodge	*Track 2 - Learning Organizations* **Early Integration of Design into the Soldiering Culture** Mr. Jim Steddum	*Track 1 - AI Applications for Learning* **Training the Future Army Radiographer** Mr. Walter Rose
1030-1100	*Track 2 - Learning Organizations* **Modernizing Professional Military Education in the Digital Age** MSG Noel DeJesus	*Track 2 - Learning Organizations* **Enhancing Interagency Learning Through Simulations** Ambassador (Ret) David Miller, Ms. Katie Elliott	*Track 2 - Learning Organizations* **Army University Telework: A Case Study in Organizational Learning to Promote Rapid Culture Change** Dr. Shanda Lauer, Dr. Meredith Shafto, Dr. Steven Petersen	*Track 5 - Learning Strategies* **Design for Complexity: Enhancing Military Learners' Knowledge Transfer in Ill-Structured Domains through Learner-Controlled Interactive Multimedia Instruction** LTC Elvin Fortuna

2024 Army University Learning Symposium

	11 JUNE	12 JUNE	13 JUNE	14 JUNE
1115-1145	Track 1 - AI Applications for Learning **Engaging AI During a Master Educator Course – Adult Learners Working Smarter Not Harder** Dr. Andrea Paganelli, Dr. Jeremy Lodgson, Dr. Martha M. Day	*Track 1 - AI Applications for Learning* **Where Do We Go from Here? Exploring the Limits of Current Intelligent Tutoring Technology (Paper)** Dr. Erica Kessler	*Track 1 - AI Applications for Learning* **Generative AI in Higher Education: The Good, The Bad, and The Kinda Scary Aspects to Consider** Dr. Ondrea Wolf	*Track 4 - Learning Data* **Modeling Competency Growth Across Organizational Transitions** Dr. William Weyhrauch
1200-1230	*Track 1 - AI Applications for Learning* **Generative Artificial Intelligence in Writing: The Student Perspective** Ms. Rita Detrick, Dr. Jinhee Kim	*Track 2 - Learning Organizations* **Overcoming a Bias Against Novelty when Evaluating Subordinates' Novel Ideas** Dr. James Nye, Dr. Jennifer Mueller	*Track 5 - Learning Strategies* **Revolutionizing Professional Military Education: The Total Soldier App Proposal** CPT Chris Slininger	*Track 2 - Learning Organizations* **Panel: Self-Development Decision-Making** Dr. Stefanie Stancato, Dr. William Weyhrauch
1245-1315	*Track 1 - AI Applications for Learning* **Generative Artificial Intelligence in Undergraduate Research at USMA (Paper)** MAJ Hayden Deverill, COL James Bluman, MAJ John Scudder, LTC John Paynter	*Track 1 - AI Applications for Learning* **Blackboard: Inspire, Accelerate and Improve Course Design with Trustworthy AI** Mr. David Palmer	*Track 3 - Learning Science & Technology* **The Efficient NCO: Developing an AI-Ready Leader** Mr. Alan Kang	
1330-1400	*Track 3 - Learning Science & Technology* **What Makes an Online Foreign Language Lesson for Autonomous Learners Successful?** Dr. Isabelle Santizo, Dr. Julia Voight	*Track 2 - Learning Organizations* **Building Organizational Readiness through Effective Succession Planning (Paper)** Mr. David Martin	*Track 5 - Learning Strategies* **Outcome Based Design for Classroom Exercises** Dr. William Davis, Jr., LTC Isaac Howard, Mr. Kevin Hudie	

2024 Army University Learning Symposium

	11 JUNE	12 JUNE	13 JUNE	14 JUNE
1415-1445	*Track 5 - Learning Strategies* **Learning Strategies and Transfer of Knowledge: Empowering Soldiers with Credit for Prior Learning (CPL)** Ms. Michele Spires	*Track 5 - Learning Strategies* **One Rubric to Rule Them All: A Dual-Structured Approach to Assessment** Dr. Stephanie Hostetter, Mr. Jon French		*Track 5 - Learning Strategies* **Panel: Update to the Project of Educating for Creativity through Storytelling** Dr. Kenneth Long
1500-1530	*Track 1 - AI Applications for Learning* **Panel: Not-So-Artificial Intelligence: Teaching and Learning AI Literacy in a PME Community** Dr. Sandra Leavitt, Ms. Aileen Houston, Dr. Kate Egerton, Ms. Chloe Woida		*Track 3 - Learning Science & Technology* **Surveying the Middle Ground: Neutral Responses in Research on Army Leadership** Dr. Marielle Machacek	*Track 1 - AI Applications for Learning* **Panel: Unlocking the Power of Conversational Insights Using Deep Learning, Psychology, and Linguistics** Dr. Arjun Nagendran, Dr. Steven K. Johnson, LtGen (USMC, Ret.) Michael Groen *Moderator: Mr. Chris Lind*
1545-1615	*Track 3 - Learning Science & Technology* **Dynamic Assessment of Grammar: New Module on the Online Diagnostic Assessment (ODA) System** Dr. Sun-Kwang Bae	*Track 3 - Learning Science & Technology* **Age of AI: Building Basic AI Competency for Data Analytics Through a Game-Based Learning Environment** Dr. Ning Wang	*Track 1 - AI Applications for Learning* **High Speed, Low Drag - Teaching Responsible Use of AI** **&** **Empowering Education: Learning Assisted by Artificial Intelligence through Hands-On Engagement** Prof. Nicole Winget	*Track 4 - Learning Data* **Manufacturing Readiness Badges: Using Alternative Credentials to Communicate Military-Earned Skills** Ms. Deanna Parker, Ms. Rita Detrick

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Got other types of feedback? A **survey invitation** will be emailed after the Symposium to get a full range of feedback

2024 Army University Learning Symposium

Abstracts: Virtual Sessions

Pre-recorded content and papers are available to view:
https://armyuniversity.edu/Organizations/LearningSymposium/Content

Link for chats with the presenters: https://us.bbcollab.com/guest/ef5aa8fe27da4604b994482997ca5afa

Track 1: Artificial Intelligence Applications for Learning

Not-So-Artificial Intelligence: Teaching and Learning Al Literacy in a PME Community

Online chat:
11 JUN 1500 – 1530

Panel

Dr. Sandra Leavitt, Ms. Aileen Houston, Dr. Kate Egerton, and Ms. Chloe Woida -Naval Postgraduate School

Adult learners in professional military education need autonomy and community to achieve learning goals. Successful education about and with artificial intelligence (Al) depends on whether students, faculty, and writing centers collaborate to understand and ethically engage with Al, which will likely become critical for military advantage where arguably humans remain more important than technology.

Al literacy is simultaneously a desired learning outcome for students and a critical capability for educators. Definitions of AI literacy vary across disciplines. We first consider how military priorities to develop Al capabilities across the ranks compare with nascent efforts to integrate Al learning into higher education.
Next, we examine student intake assessments and exit surveys at the Naval Postgraduate School (NPS). These instruments reveal that NPS learners learn best as collaborative stakeholders in their education and, as such, should shape how generative AI is integrated and explored.

As generative Al consumes all the oxygen in the room, we next draw on the role Al already plays in learning and teaching. NPS uses an Al-powered plagiarism detection software for building a community understanding of academic integrity, through a constructive team approach involving students, coaches, and faculty.
Finally, we turn our focus to the classroom, the front line of generative Al integration. Opportunities for supporting Al literacy proliferate through active engagement emphasizing critical thinking. How students respond to outputs and academic scenarios related to generative Al use provides insights for effective Al integration in PME and beyond.

High Speed, Low Drag - Teaching Responsible Use of AI

Online chat:
13 JUN 1545 – 1615

Presentation

The presentation, "High Speed, Low Drag - Teaching Responsible Use of AI," delves into the academic implications of AI and advocates for the responsible and ethical use of artificial intelligence in education settings. The discussion emphasizes the importance of cultivating a learning environment where students not only harness the power of AI but also understand the ethical considerations associated with its application.

Prof. Nicole Winget,
Campbell University

Addressing the crucial need for responsible AI use throughout a learner's educational journey, the presentation provides tangible suggestions for educators to integrate AI into their curriculum. From discussing the societal impact of AI to promoting critical thinking skills, attendees will gain insights into fostering a well-rounded understanding of AI among students.

Drawing on personal experiences, the presenter will share specific examples from her homeland security and criminal justice classes, showcasing how AI concepts are woven into the fabric of these disciplines. The presentation highlights student and faculty responses, demonstrating the effectiveness of implementing responsible AI education. By the end of the session, attendees will have a toolkit to instill a sense of responsibility in students, preparing them not just as AI users but as ethical contributors to the ever-evolving landscape of artificial intelligence.

Empowering Education: Learning Assisted by Artificial Intelligence through Hands-On Engagement

Online chat:
13 JUN 1545 – 1615

Presentation

Prof. Nicole Winget,
Campbell University

This presentation explores the innovative integration of Learning Assisted by Artificial Intelligence (LA-AI) to enhance teaching methodologies, emphasizing hands-on activities that require students to actively engage with AI systems to complete assignments. By seamlessly blending traditional education with cutting-edge technology, we aim to cultivate a dynamic learning environment that prepares students for the evolving landscape of the digital era.

The core focus is on practical applications, wherein students actively collaborate with AI tools to solve real-world problems, fostering a deeper understanding of both subject matter and AI principles. Through these hands-on activities, we address the crucial need for students to develop not only technical skills but also critical thinking, creativity, and adaptability in the face of emerging technologies.

Furthermore, the presentation emphasizes the ethical use of AI, ensuring that students not only gain proficiency in utilizing AI but also understand the ethical implications surrounding its application. This approach aims to instill a sense of responsibility and awareness, shaping future professionals who can leverage AI for societal benefit while mitigating potential risks.

By sharing insights and practical strategies, this presentation provides examples for educators seeking to integrate LA-AI into their teaching practices, fostering an educational environment where students actively participate in shaping a technologically advanced and ethically responsible future.

AI Chatbots for Education: Enhancing Instructional Design and Assessment Creation for Army Educators

Online chat:
11 JUN 0945-1015

Presentation

How can Army educators collaborate with instructional Machine-Based co-designers or teaching assistants to enhance their teaching methods? Seeking innovative approaches to engage students and personalize learning, this session,

facilitated by a team of academics from the University of Louisville, will feature a video presentation on generative artificial intelligence (AI) chatbots.

Dr. Jeffrey Sun, Dr. Kelli Peck Parrott, Dr. Taylor Pratt, and Ms. Clarissa Bruton - University of Louisville; Mr. John Lilygren -U.S. Army Cadet Command, Directorate of Leader Development and Education

The presentation will showcase four chatbot tools—namely Bard, ChatGPT, Claude, and Co-Pilot—and guide participants through two practical instructional tasks: constructing a lesson plan and creating an assessment tool. Following these activities, participants will share their experiences on a discussion board tool. In summary, this asynchronous learning experience will guide participants in exploring the capabilities of various AI chatbots and their potential applications in education. Through hands-on activities in two teaching scenarios, participants will gain practical insights. Furthermore, they will have the opportunity to post lessons learned and reflections on the responsible use of AI in education, fostering a valuable discussion on the topic.

Where Do We Go from Here? Exploring the Limits of Current Intelligent Tutoring Technology

Online chat:
12 JUN 1115-1145

Presentation

Dr. Erica Kessler -Army Research Institute for the Behavioral and Social Sciences

The instructional standard in training is one-on-one human tutoring, which enables both students and tutors to develop mutual understandings of how each other will approach knowledge, practice in a domain, and tailor instruction according to a student's needs. Despite a desire to implement one-on-one human tutoring broadly in professional military education, the Army requires scalable methods, which are more cost and time efficient in comparison to one-on-one tutoring. The Army Learning Concept explains that embracing the expanding capabilities of technologies such as artificial intelligence (AI) supports leader development at every echelon (TRADOC Pamphlet 525-8-2). However, a deeper understanding of the relationship between human learners and tutors is needed to provide insights on how to maximize the utilization of AI technologies in military learning contexts. While superficial attributes of human-to-human learning are important, the current work focuses on the attributes outside the exchange of information. We turn our focus to gaining insights on the epistemological framework within the human-to-human interaction. Human interaction facilitates the co-construction of contextualized and principled knowledge, which provides the student with a means to understand their world. The proposed paper will explore three aspects of human tutoring that will be challenging for automated tutors to replicate: (a) mutual theories of mind for sophisticated tailoring to student needs, (b) principled and contextualized real-world understanding, and (c) student trust in the veracity and value of the instructional content.

Generative Artificial Intelligence in Writing: The Student Perspective

Online chat:
11 JUN 1200-1230

Presentation

Ms. Rita Detrick and Dr. Jinhee Kim -Old Dominion University

The influx of generative artificial intelligence (GenAI) technologies has created an environment that enables students to use AI in their academic writing to an unprecedented degree. Responding to the changes in the technological and educational ecosystem necessitates considering both the potential benefits and complications that could arise from GenAI-assisted systems. This provides a launching point to prepare educators to make full use of GenAI's capabilities in the learning process. To support this, it is imperative to thoroughly collect and evaluate the diverse points of view held by actual users of such systems, with specific attention paid to the student's voice. Users are best suited to articulate their needs, preferences, and challenges. It is from this perspective that this study was undertaken, conducting interviews with 20 Chinese students enrolled in a higher

education institution to delve into their individualized perspectives and experience using GenAI to support their academic writing process, leveraging a ChatGPT 4.0 embedded writing system that was developed by the researchers. Findings included identification of the various roles students expected AI to play throughout the writing process, such as peer, tutor, and assistant. Further, the study uncovered student perceptions about the advantages students envisioned AI could provide within the writing process, their overall performance, and their social-emotional learning. Student participants also identified potential challenges, including student-related, AI-related, and task-related difficulties. This work lends itself to a more comprehensive understanding of the impact GenAI has on writing activities, providing insights that can influence instructional design and future educational technology design.

Blackboard: Inspire, Accelerate and Improve Course Design with Trustworthy AI

Online chat:
12 JUN 1245-1315

Presentation

Mr. David Palmer -Anthology; Blackboard

This year, Blackboard Learn unveiled the AI Design Assistant, extending advanced generative AI capabilities to instructors and instructional designers. Developed in collaboration with Microsoft, the cutting-edge AI features empower educators to build course structures, source images, and create assessments more efficiently. Blackboard Learn's AI Design Assistant streamlines course creation, facilitates instructional design scalability, and inspires subject matter experts throughout the course-building journey.

The AI Design Assistant is seamlessly integrated into Blackboard Learn workflows, provided at no additional cost. The AI Design Assistant transformative capabilities include:

1. Image Sourcing: By leveraging contextual information, the AI Design Assistant recommends free images from Unsplash, sparing instructors from the challenges of copyright issues when enhancing course visuals.

2. Course Structure Suggestions: The AI Design Assistant proposes options for course structure based on inputs like course name, description, objectives, and complexity; and allows instructors to easily review and customize instead of starting from an empty course shell.

3. Test Question Generation: The AI Design Assistant auto-generates test questions from existing content, refining the questions based on instructor inputs such as learning objectives, question types, and question complexity.

4. Formative Question Banks: Streamlining assessment, the AI Design Assistant generates question banks from learning modules, enabling instructors to select, edit, and customize questions according to their preferences.

5. Rubric Creation: The AI Design Assistant simplifies rubric creation by offering various types (percentage, points) with customizable variables, reducing the labor-intensive process for instructors and instructional designers.

Engaging AI During a Master Educator Course – Adult Learners Working Smarter Not Harder

Online chat:
11 JUN 1115-1145

Presentation

Dr. Andrea Paganelli,
Dr. Jeremy Lodgson, and
Dr. Martha M. Day -Western Kentucky University

The Western Kentucky University, Master Educator Course (MEC) is a 16-credit hour program designed for Army ROTC faculty seeking professional development. The MEC curriculum is designed to address andragogy, instructional strategies, educational technology, and organizational analyses. During the six-course sequence MEC participants take an instructional design course that is focused on andragogy, instructional strategies, and educational technology.

Within this instructional design course, assignments are implemented that have artificial intelligence (AI) components. Based upon assignments in the instructional design course, during our demonstration session we will; discuss the current state of AI in the higher education classroom, demonstrate course embedded activities that contain artificial intelligence, share challenges encountered when instructing adult learners with AI enriched activities, and provide shared learner experience with including AI in coursework.

The demonstration will include exploring activities for course openers, developing questions for discussion, and crafting assessments. Each of these will be addressed through the lens of a different AI Chat bot or AI enhanced educational technology tool.

Artificial Intelligence is a tool that is here to stay. Let us engage AI to support each of our learners working smarter not harder.

Generative Artificial Intelligence in Undergraduate Research at USMA

Online chat:
11 JUN 1245-1315

Presentation
Paper

MAJ Hayden Deverill,
COL James Bluman,
MAJ John Scudder, and
LTC John Paynter -U.S. Military Academy at West Point

The United States Military Academy at West Point is a fully accredited undergraduate institution of higher learning, offering 36 academic majors to a graduating class of approximately 1000 cadets. Most of these academic majors require a senior thesis or capstone research project as part of their degree requirements. Moreover, many underclass cadets begin pursuing research prior to their senior year, so every year, there is a large pool of undergraduate researchers at West point. The advent of free, publicly available large language models and generative artificial intelligence (AI) has the potential to disrupt higher education. Most educators first think of the risks associated with generative AI truncating the learning process. However, in the context of undergraduate research, generative AI has the potential to both aid and abet research progress as well as undermine the learning that should be occurring within a research project. Faculty from four departments have joined together to pursue a multi-year study focused on the role of generative AI in undergraduate research. We intend to learn how cadets use generative AI and what the impact of this technology is on their education, their scholarship, and their development as professionals. The primary goal of our research is to understand student perspectives and use cases for generative AI across multiple academic disciplines. A secondary goal is to help inform instructors how best to advise, teach, and demonstrate generative AI. The full paper will address the methodology of the study and some preliminary results.

Unlocking the Power of Conversational Insights Using Deep Learning, Psychology, and Linguistics

Online chat:
14 JUN 1500-1530

Panel

Dr. Arjun Nagendran - Relativ.ai Inc.
Dr. Steven K. Johnson - National University
LtGen (USMC, Ret.) Michael Groen

Facilitator: Mr. Chris Lind

We have hundreds of conversations everyday, be it at work, or in our personal lives.
Some conversations feel enlightening, some feel productive, and others are just downright difficult.

What is true about all these conversations, is that they are the building blocks for how connected, engaged, productive, and, ultimately, how successful we are in our professional or personal lives. Be it a negotiation, a compromise, motivation, providing feedback, or simply facilitating a constructive discussion within teams, the nature of these conversations are critical to the associated outcomes.

So what are the secret ingredients in a conversation that lead to favorable outcomes?

At Relativ, we are on a journey to use deep learning, psychology, and linguistics to explore this very question. We have a broad range of use cases, with clients in healthcare, sales, client success, education, and individuals with special needs, all interested in finding the answer.

In this panel, we discuss how components of AI such as Deep Learning and Large Language Models can be used to unlock hidden insights in conversational data that are predictive of real world outcomes. We discuss applications of this technology to help create products that increase daily productivity, either through 24/7/365 on-demand practice opportunities at scale, or by analyzing recorded or live conversations that occur on an everyday basis. We expect this discussion to be useful for professionals in learning and assessment, and empower faculty/staff to embrace these technologies to enhance teaching, and lifelong learning, through AI-powered experiential practice, on-demand, and at scale.

Training the Future Army Radiographer

Online chat:
14 JUN 1500-1530

Presentation

Mr. Walter Rose, Army Combat Capabilities Development Command - Armaments Center, Quality Engineering & System Assurance

Building various databases of digital radiographs for various Army product lines is a critical task as efforts to incorporate artificial intelligence are underway. Deploying neural networks to aid radiographic inspection seek to increase speed and accuracy of the process. There are additional hidden benefits to the organic industrial base by deploying artificial intelligence with respect to radiographic inspection. A database of digital images can serve as an important training tool for Army radiographers. Currently, the time and cost required to train human radiographers is a significant investment. Having the ability to routinely audit the accuracy and precision of human radiographers can prove valuable. Construction of a database of each product line will allow for human radiographers to be trained expeditiously and with lower cost. Modernization efforts towards the training of nondestructive personnel are currently underway throughout the Department of Defense. I seek to underscore the importance of training Army civilians on Army assets expeditiously. Other benefits to the Army are highlighted including but not limited to: the initial training, retraining, and cost. In addition to training Army radiographers, there is suspicion over the use of artificial intelligence for radiographic disposition. Human-Machine teaming can lead to greater trust of these systems across the industrial base.

Generative AI in Higher Education: The Good, The Bad, and The Kinda Scary Aspects to Consider

Online chat:
13 JUN 1115-1145

Presentation

Dr. Ondrea Wolf -El Paso Community College

Understanding how Generative AI was developed within the context of evolving changes in information sharing in the past six years is vital to understanding the benefits and limitations of such a great tool. This presentation covers how Gen AI was developed, how we as a society look at data today and the relationship to information literacy in Gen AI, how the tool is developing, and some great ways of using it in higher education.

Track 2: Learning Organizations

Enhancing Interagency Learning Through Simulations

Online chat:
12 JUN 1030-1100

Presentation

Ambassador (Retired) David Miller and Ms. Katie Elliott, Diplomatic Studies Foundation

The Diplomatic Studies Foundation (DSF) has created a new training and professional development tool, the Peace Game, that promises to support the Department of Defense and its sister departments within the security apparatus. The Peace Game is a two-day, wargame-inspired exercise that brings together defense, diplomatic, development, and intelligence officers who simulate a country team and work to mitigate pressing challenges through whole-of-government approaches. Unlike wargames, the solutions are ideally non-kinetic. DSF partnered with the ICONS Project at the University of Maryland to create the scenario, and the exercise is run on the ICONSnet platform. The scaling and reach of the Peace Game promises to progress as the ICONS team continues to incorporate emerging technologies. Specifically, ICONS is incorporating AI and modeling tools for chatbots, scenario inject creation, and state-of-play monitoring. The Peace Games is a vital tool that can be continuously utilized and modified by different USG agencies to train and prepare their professionals. It provides hands-on experience in a crisis situation and promotes cross-departmental understanding, filling a critical gap in the existing training opportunities. While the military conducts wargame exercises, it struggles to sufficiently integrate civilian officer participation. As a result, key learning and training exercises are segmented and siloed without any broader cooperation. The Peace Game allows officers to train together, draw from one another's typical training practices and unique learning cultures, and bridge civilian-military gaps. DSF hopes to highlight this innovative training tool at the Army University Learning Symposium.

Overcoming a Bias Against Novelty when Evaluating Subordinates' Novel Ideas

Online chat:
12 JUN 1200-1230

Presentation

Research suggests leaders tend to reject novel ideas, even when they desire novel, high-quality approaches, because the inherent uncertainty of novelty conflicts with important decision-making goals. However, a leader's scope-of-concern (SOC), or the level of breadth and integration among goals, may provide a motivating buffer against this bias. A leader's SOC influences how they manage tension between goals, with higher SOC motivating one to enact tension-engaging-practices (TEP) to continue evaluating novel ideas even if their novelty initially conflicts with goals related to predictability and utility. We predicted that leaders'

Dr. James Nye -Army Research Institute for the Behavioral and Social Science

evaluation of the decision to enact TEPs depends on their SOC, meaning that leaders with high SOC will more positively evaluate someone who enacts TEPs. Additionally, we believe that creative leadership is a dyadic phenomenon, emerging when leaders enact TEPs and Staff believe their leader possesses high SOC to not reject novel ideas.

We collected survey data from 232 Army officers. Company Commanders (CC) rated themselves on SOC and TEP (n=89), staff rated CCs on TEP and SOC (n=154), and Battalion Commanders (BC) rated CCs on creative leadership and overall performance and rated themselves on SOC (n=22). Results supported the hypotheses: The interaction between BCs' SOC and CCs' self-rated TEP predicted BC's assessment of CC's overall performance. In addition, the interaction between CCs' TEP and staff perceptions of CCs' SOC predicted BCs' assessment of CCs' creative leadership. We will discuss recommendations for leaders seeking to lead more creative teams, expand their SOC, and engage in TEP.

The Basic Skills Education Program: Organizational Learning for Soldier Retention

Online chat:
12 JUN 0945-1015

Presentation

Dr. Shanda Lauer and Dr. Becky Robinson-Army University, Vice Provost for Academic Affairs

Dr. Robert Henry, Dr. Wendy Sanders, and Mr. Jayson Dodge -Army University, ACCESS

The Army Learning Concept (ALC) 2030-2040 provides a conceptual framework to build a learning organization that empowers learners to meet the total Army's readiness requirements and sustain intellectual overmatch of adversaries. During a three-year process, an organizational learning framework was applied to the update and standardization effort of the Basic Skills Education Program (BSEP). The BSEP is an on-duty program designed to help Soldiers improve their functional reading, writing, and/or math skills. The goal is to promote retention, increase re-enlistment options, and improve job performance. Soldiers increasing their General Test scores during the BSEP can switch MOS, enroll in college courses, or become officer candidates, which are extremely important retention tools. To take steps towards becoming a learning organization, ACCESS and ArmyU queried the individual, group, and organizational levels of the BSEP to conduct an extensive series of surveys determining: 1.) why Soldiers were enrolling in the program, and what barriers they faced prior, 2.) the critical elements of the existing curriculum that should be retained during the standardization, 3.) measures of program effectiveness by asking graduates about their accomplishments, and 4.) aspects of the new standardized curriculum and implementation that BSEP instructors had critical feedback. The comprehensive results of these surveys were widely socialized among BSEP personnel at all levels during a post-instructional conference. By creating, retaining, and transferring new knowledge within the organization before, during, and after the standardization, BSEP personnel have been able to take important steps to improve their program, to benefit Army Soldier retention.

Building Organizational Readiness through Effective Succession Planning

Online chat:
12 JUN 1330-1400

Presentation

Purpose: To explicate the interconnection of self-efficacy, leader development, and organizational readiness and its relevance to executive leadership through the lens of succession planning and a critical review and analysis of scholarly literature.

Mr. David Martin -HQ, TRADOC, G-37 Training Directorate

Background: Succession planning evolved from a human resources task to a more holistic endeavor over the decades. However, modern succession planning across sectors needed to be more cohesive and standardized. Some contexts primarily focused on C-suite executives due to the top-down driven nature of those organizations, even though the business environment in various sectors continued to become more complex and interconnected. This underscored the need for organizations to consider deliberate succession planning at all levels to face contemporary challenges and prepare for the future, mainly as leaders contend with overall organizational development concerns, including conditions of gender developmental inequality.

Conclusion: Multi-faceted succession plans enabled successful transition management practices and mitigated turnover intentions, which produced employees committed to their institution and bolstered self-efficacy. Moreover, support structures inherent in organizations' succession plans that addressed developmental needs at all levels added to self-efficacy and promoted performance outcomes among their members.

Practical Implications: Leaders should consider the current context of a multi-generational workforce, a future context with nearly one-quarter of the population consisting of retired persons by 2040, and their role in building systems and processes to build organizational readiness.

Originality/Value: The viewpoint may assist organizations and their leaders in mitigating the risks of organizational disruptions by implementing prudent steps to efficiently assimilate and acculturate new personnel while creating opportunities for the kind of development that builds self-efficacy at a reasonable pace.

Self-Development Decision-Making

Online chat:
14 JUN 1200-1230

Panel

Dr. Stefanie Stancato and Dr. William Weyhrauch - Army Research Institute for the Behavioral and Social Sciences,
Dr. James Daugherty -Center for Army Leadership,
Dr. Trent Lythgoe -U.S. Army Command and General Staff College,
Dr. David Cox -Endicott College

Field Manual (FM) 6-22 recognizes the importance of self-development, emphasizing that Army leaders need to “set time aside for self-development” (Department of the Army, 2022). Self-development is a critical component of all Soldiers’ competency growth, contributing to individual differences in development across the career lifecycle, as self-development is largely driven by individual agency and is a key contributor to variation in competency profiles between leaders. However, competing professional demands and the devaluation of delayed outcomes can alter a Soldier’s strategies for engaging in self-development learning opportunities. Engaging in self-development may result in several outcomes, both monetary (such as increased pay, promotion potential) and non-monetary, (such as autonomy, prestige, and career prospects outside military service). A decision-making approach to the design of self-development opportunities may enable the Army coaches, training managers, and instructional designers to leverage individual leaders’ self-development decision-making processes to improve and tailor self-development training programs to fit the Army’s intent for career long, progressive, and sequential leader development. This panel discussion will include experts from behavior analytic and economic decision-making sciences and Army leader education and will focus on the application of behavioral economic and cognitive decision-making tools, such as

nudges (i.e., scarcity, value functions) and framing effects, for increasing leaders' engagement with self-development opportunities.

Modernizing Professional Military Education in the Digital Age

Online chat:
11 JUN 1030-1100

Paper
Virtual Poster

MSG Noel DeJesus -U.S. Army Sergeants Major Academy

The urgent modernization of the United States Army's Professional Military Education (PME) in the era of digital technology, with a particular focus on artificial intelligence (AI), is central to the discourse presented. Despite the Department of Defense's significant technological investment, including a $7.6 billion contract with Microsoft in 2019, the Army's learning environment has not kept pace with integrating innovative and collaborative technologies. The analysis emphasizes the critical need for ethical AI application to enhance soldiers' learning experiences, aiming to attract, train, and retain Generation Z soldiers while adapting to the rapid technological advancements. The digital revolution and AI advancements necessitate a transformation in leadership development towards fostering innovation and adaptability. The critique extends to the current state of PME, which is mired in outdated software use and shows resistance to adopting new technology. The introduction of Microsoft's AI platform, Copilot, illustrates the potential to revolutionize learning by encouraging critical and creative thinking. Moreover, the role of AI in broadening research capabilities and enhancing academic precision is explored, advocating for a reevaluation of academic integrity policies to incorporate AI responsibly. Despite collaborative efforts with universities that support AI, the existing paradox in policies that limit AI use in education is highlighted. The discourse advocates for a nuanced approach to reform, recommending policy updates that permit ethical AI utilization, ensuring the Army's educational system remains relevant, and preparing leaders for future challenges.

Early Integration of Design into the Soldiering Culture

Online chat:
13 JUN 0945-1015

Paper

Mr. Jim Steddum -U.S. Army Warrant Officer Career College

Since TRADOC's creation in 1973, the Army has focused on task-based instructional methodologies for its primary workforce: junior enlisted, non-commissioned, and company-grade officers. The nation's unrelenting scrutiny of Soldiers compared to similar age and socio-economic populations combined with the escalating peer/near-peer threats necessitate Soldiers to operate heroically in uncertain and often artificial environments. The operational environment requires Soldiers to perform skill-based tasks with the cognitive application of the commander's intent and instinctual behaviors evaluated by the affective domain. The standard skill-based task training or high-paced knowledge-based education may be inadequate for the future fight—or even the current learning environment of the generation serving in the junior ranks. Some training environments effectively simulate complex, high-stress situations that force affective reactions but insufficient feedback. It is time to dust off an older theory about how the world works, as it may be more applicable to the current problems of the day. Sciences of the Artificial was a lecture turned book by Herbert A. Simon (1969). His study of the artificial world and the complexities arising from the interface of natural and artificial environments form the basis of modern design thinking. The Army's current capacity for design thinking is relatively immature and severely compartmented. Design education is limited to the Army's most senior noncommissioned and field-grade officers and is limited to planning military operations. People-centric design frameworks must culturally

augment operational art mindsets. The early integration of practical design thinking education is critical to the Army's decisive success in war and peace.

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

Online chat:
13 JUN 1030-1100

Paper

Dr. Shanda Lauer and Dr. Meredith Shafto -Army University, Vice Provost for Academic Affairs

Dr. Steven Petersen -Army University, Army Management Staff College

Army modernization requires developing the Army as an adaptive learning organization, which in turn depends on cultivating the requirements 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. Nearly 2,000 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, group, and organizational level. This paper applies organizational learning models to uncover how the telework rollout at Army University was successful despite being abrupt, unprecedented, and incongruent with standing Army 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 the initial cultural change through the process of organizational learning, to include: knowledge creation, retention, and transfer at individual, group, and organizational levels. 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.

Track 3: Learning Science and Technologies

Age of AI: Building Basic AI Competency for Data Analytics Through a Game-Based Learning Environment

Online chat:
12 JUN 1545-1615

Presentation

Dr. Ning Wang, USC Viterbi School of Engineering

Artificial intelligence (AI) is core to the future of Army technology. The military will be unable to make the necessary changes to incorporate AI until the military better understands AI. Such understanding requires education. More importantly, building an AI-ready workforce within the military requires educating the entire workforce on the AI knowledge and skills most relevant to their jobs. The DoD created a guideline for AI Education Strategy, which defines worker archetypes based on their engagement of AI at work and the required AI competency for each worker archetype. In this paper, we will discuss a game-based learning environment, called Age of AI, to for building basic AI competency, particularly related to data analytics, for learners without engineering background. The role-playing simulation game guides learners in AI problem-solving in military-themed missions. The learning objectives build upon data science education from higher

education and incorporates the DoD guideline for AI Education Strategy. Through gameplay, learners not only grasp the core concepts in AI for data analytics but also experience the impact of AI models they build in the game. We will discuss the design of the gameplay that incorporates AI learning objectives for knowledge, application, and ethical use.

Dynamic Assessment of Grammar: New Module on the Online Diagnostic Assessment (ODA) System

Online chat:
11 JUN 1545-1615

Presentation

Dr. Sun-Kwang Bae -Defense Language Institute Foreign Language Center

The ODA system, developed by the Defense Language Institute Foreign Language Center, has recently incorporated an interactive grammar assessment module into its existing reading and listening assessments. The module aims to offer language learners more systematic and comprehensive feedback on their grammatical competence compared to the feedback provided in the reading and listening assessments. The ODA Grammar comprises separate assessment sets at three different ILR levels: 1, 1+/2, and 2+/3. The assessment items include word/phrase-category, sentence-category, discourse-category items, and components for assessing grammar in listening.

The grammar module features a dynamic assessment aspect. If a user fails to answer correctly on a specific grammatical feature, the system provides immediate feedback related to the feature and offers another opportunity for the user to answer the same item. After completing a module, a two-tiered written report is generated on the user's performance, with and without hints, to assess the user's proximity to acquiring the targeted grammatical feature. This report informs learners about their grammatical strengths and weaknesses, and the immediate feedback during the assessment session provides opportunities for learning.

The ODA system, accessible at this link, is a fully automated, web-based language proficiency diagnostic tool that offers formative feedback to users on areas they need to address to progress to the next proficiency level. The grammar module can be utilized by users who exhibit deficiencies in grammatical ability during regular reading and listening assessments.

What Makes an Online Foreign Language Lesson for Autonomous Learners Successful?

Online chat:
11 JUN 1330-1400

Presentation

Dr. Isabelle Santizo and Dr. Julia Voight -Defense Language Institute Foreign Language Center

On average, half a million users complete Foreign language (FL) lessons from Global Language Online Support System (GLOSS) every year. GLOSS offers open online resources for independent foreign language (FL) learners. What distinguishes highly visited lessons from the others? This study explores the main characteristics of most accessed lessons by Chinese-Mandarin (CM) users during calendar year 2023. The lesson selection combines listening and reading skills at a Limited Working Proficiency at 2+ILR skill level. The authors adapted a rubric consisting of 15 criteria to assess a total of 40 GLOSS lessons. A percentage-based approach revealed which aspects influence an online lesson's success. The results show how these aspects do or do not significantly affect the success (number of hits) of a lesson, influencing its popularity. The study produces lessons learned and implications for future actions and research in the field of online FL learning.

Surveying the Middle Ground: Neutral Responses in Research on Army Leadership

Online chat:
13 JUN 1500-1530

Presentation

Dr. Marielle Machacek - Center for Army Leadership

Self-report instruments (e.g., surveys) commonly use Likert-style response scales that include a neutral option. However, this option may be used to avoid answering questions accurately for reasons such as social desirability or cognitive biases. This can negatively impact the psychometric properties of the items and constructs being measured. This study examines the use of the neutral response option in lines of research, the Center for Army Leadership's Annual Study on Army Leadership (CASAL) survey and program evaluation results related to the Career Long Assessments-Athena program. The study investigates whether different groups use the neutral option differently using negative binomial regression and analyzes psychometric properties using polytomous item-response theory and multiple correspondence analysis. Overall, the findings suggest the neutral response options are being used appropriately and do not affect the psychometric properties of these research surveys. While some items and constructs may display issues, this is not widespread. The report also provides recommendation concerning if/when to use the neutral option and if problems are present, how they can be addressed.

The Efficient NCO: Developing an AI-Ready Leader

Online chat:
13 JUN 1245-1315

Paper

Mr. Alan Kang -University of Arizona

The growth of Artificial Intelligence (AI) has made it increasingly important to educate a force that is able to effectively use these tools. Decisions on when to use AI, where to integrate AI, and how to choose the right AI tool all start with choices made by people. This article highlights the importance of adapting education to develop an AI-ready leader through the lens of the Basic Leader Course (BLC). First, we discuss why training a leader to think efficiently sets the best foundation for understanding how to use AI effectively. Then, we provide a set of detailed recommendations on how the BLC curriculum can be updated to instill this mindset for the benefit of both the soldier and the Army.

Track 4: Learning Data

Manufacturing Readiness Badges: Using Alternative Credentials to Communicate Military-Earned Skills

Online Chat:
14 JUN 1545-1615

Presentation

Ms. Deanna Parker and Ms. Rita Detrick -Solutions for Information Design, LLC (SOLID)

The Walmart-funded Manufacturing Readiness project, in collaboration with Solutions for Information Design (SOLID), the Manufacturing Institute (MI), and Jobs for the Future (JFF), designed alternative credentials to explore the utility and value of using digital badges to communicate and signal military-earned skills.

This project identified and prioritized transferable skills within a manufacturing context and developed a scalable framework that supported the analysis and alignment of military training and experience to these contextualized skills across military occupations and civilian industries. Emphasizing the transferability of skills gained through military experience can promote recruitment, support internal talent management, and enable a smoother transition experience. By communicating skills in a recognizable way, potential recruits can better understand how the military helps them prepare for their future. Further, a more in-depth understanding of a servicemember's skillset empowers military leaders

to make data-driven decisions related to those skills. This approach positions military service as a step in a stackable pathway that connects individuals to career goals. This work is meant to support the growing skills economy and the recognition of military skills across the workforce, providing the military and other employers with an expanded talent pipeline.

This session will provide an overview of the coordinated efforts of this project, discussing the skill identification process, the digital badge technology employed, and the current progress of the pilot and related evaluation. Thus far, over 725 badges have been awarded to servicemembers and veterans across services, including over 370 badges awarded to Army SkillBridge participants.

Modeling Competency Growth Across Organizational Transitions

Online chat:
14 JUN 1115-1145

Presentation

Dr. William Weyhrauch - Army Research Institute for the Behavioral and Social Sciences

As the Army modernizes talent management and adapts to evolving demands, research is required to identify ways to prepare leaders throughout their careers for multidomain and large-scale combat operations. Army Field Manual 6-22 describes key developmental transitions that must be meaningfully negotiated for leaders to perform well at higher echelons (pp. 1-5 to 1-7). These developmental transitions are often conceptualized as adaptation to tasks of greater scope, greater uncertainty, and longer time horizons. However, the growth of leader competencies across those transitions may be shaped by both contextual changes in scope of responsibility, uncertainty, and time horizons and the characteristics of individuals. Measuring competency growth is deeply challenged by the job context in which competencies are performed and developed through practice (e.g., on-the-job training). If the Army accounts for interdependencies between individual differences and contextual demands in scientific models and assessments, it may be better positioned to enhance leader competency growth. ARI's research package "Modeling Competency Growth" focuses on building scientific models and assessments to address how leaders' competencies grow within their careers, accounting for variations in individual leaders, in types of competencies, and in contexts of performance. This presentation will summarize four lines of effort: (1) documenting competency growth patterns across the transition from tactical to organizational leadership, (2) identifying competencies that require reframing and differential measurement across levels, (3) exploring individual agency factors that shape growth patterns, and (4) extending growth stage theories into middle adulthood to support learning science applications at career transitions.

Track 5: Learning Strategies – Transfer of Learning

One Rubric to Rule Them All: A Dual-Structured Approach to Assessment

Online Chat:
12 JUN 1415-1445

Presentation

The CJCS OBME effort emphasizes direct assessment of student learning at the course and program levels. Prior to OBME, the Global College's (GC) assessment tools were designed to assess only at the course level. Consequently, this created a need for a method of directly assessing student performance against the institution's program learning outcomes (PLOs). To meet this need, the GC is

Dr. Stephanie Hostetter and Mr. Jon French -Air University

piloting a new assessment approach that both measures course-level outcomes and directly informs program-level assessment. The approach uses a Modular Rubric (MR), which provides a bank of standardized rubric criteria that are mixed and matched with assignment-specific criteria into a comprehensive assessment tool. The resulting rubric evaluates assignment-type elements (e.g., essay, discussion) but also directly assesses PLO-specific elements through criteria uniquely organized by Bloom's learning levels. This dual-structured approach streamlines assessment, merging the benefits of customized rubrics with resource efficiency.
After developing the initial rubric, the GC implemented a multi-phase evaluation plan, including several iterative rounds of peer review on the rubric's design and validity. The results informed the pilot version of the rubric that debuted in Fall 2023. Currently, the GC is examining data from these courses to inform further revisions.
In this presentation, we will 1) Describe the background and purpose of the MR approach, 2) Describe the process for developing, evaluating, and revising the MR, and 3) Discuss some of the benefits and challenges of this approach. We believe this topic will provide valuable and practical insights for this audience, especially those grappling with OBME requirements.

Update to the Project of Educating for Creativity through Storytelling

Online chat:
14 JUN 1415-1445

Panel

Dr. Kenneth Long -U.S. Army Command and General Staff College, Department of Sustainment and Force Management

Our team were a featured F2F panel that were one of 8 highlighted presentations in the 2022 Symposium on the subject of Using the Fletcher Method of Story Science for Improving Creativity in Leaders. We have expanded the programs of research into exciting new areas in the SF community' learning organizations, at the EOD School, at the Space and Missile Defense Command and in pilot programs in CGSC, all of which demonstrate significant advances in pedagogy and andragogy. Elements of the research has been published in Harvard Business Review and the Journal of the New York Academy of Science. We propose to provide both a summary and update on the research and some promising new lines of inquiry that have a wide range of practical applications across PME and in the professional development programs for units and individuals that are easy to apply. This can be done as a paper of a presentation but would be most effective as a panel, similar to the one we did in 2022

The Crucial Role of Emotional Intelligence in the Age of AI Learning

Online Chat:
14 JUN 0900-0930

Presentation

Prof. Ying Shiroma -Defense Language Institute

As we immerse ourselves deeper into the Age of Artificial Intelligence (AI) learning, Emotional Intelligence (EI) becomes crucial to bridge the gap between technological advancement and the inherently human aspects of language acquisition.

This presentation explores the multifaceted impact of EI on foreign language learning in the context of AI integration. It delves into how heightened EI skills enhance language learners' abilities to navigate and interact with AI-driven language platforms, creating a more personalized and empathetic learning environment. The discussion will highlight the significance of EI in fostering motivation, resilience, and cultural sensitivity among language learners, ensuring a more holistic and immersive language learning experience.

Furthermore, the presentation addresses the critical role of emotional understanding in language teacher-student relationships within AI-assisted classrooms. It explores how AI technologies can be leveraged to augment language instruction while emphasizing the irreplaceable human connection and emotional support provided by language educators. Strategies for integrating EI principles into AI-driven language education platforms will be discussed, with an emphasis on creating adaptive and emotionally resonant learning environments.

In conclusion, this presentation aims to provide a deep understanding of the interplay between Emotional Intelligence and Artificial Intelligence in foreign language learning. By recognizing the strengths of each and advocating for a harmonious integration, educators and learners can navigate the evolving landscape of language acquisition, striking a balance that optimizes both the technological advancements and the inherently human aspects of language learning.

Critical Task and Site Selection Board - Outcomes (CTSSB-O): New Design for Outcome-based Military Education

Online Chat:
11 JUN 0900-0930

Presentation

CW4 Michael Lima and Ms. Mandy Allen -U.S. Army Ordnance School

Training Developers are asked to use the ADDIE process to develop outcome-based learning. This charge is uniquely difficult for military training developers with formal education in lesson plan development. As a broadening assignment in training development, their MOS does little to prepare them to create learning products. Army institutional training begins with a CTSSB. Each proponent's CTSSB creates an individual critical task list (ICTL) that supports the institutional training with current learning product requirements. Learning product approaches and styles must expand from the traditional objectives-based ICT to an output expressed as knowledge, value, and performance. Proponent's CTSSBs must be given the assignment to identify what graduates of Professional Military Education (PME) must know, value, and perform to be successful in their operational assignments. Providing input focuses on the output of the learning experience. While proponents have the authoritative ability to design lessons with a learning objective that supports knowledge, skills, and abilities, it is ineffective. The last military occupational skill CTSSB this author conducted shows that training developers do not have learning requirements input that supports the lesson design strategy for an outcomes-based education approach. Current training design fits within two categories; the lesson plan is developed from an ICT, or a lesson is developed using knowledge, skills, or attitudes. The second approach is seldom used due to the inability to fully train the ICT. A new design outcome-based CTSSB, with augmented intelligence is required, if PME is to move past the current antiquated train to individual critical task model.

Design for Complexity: Enhancing Military Learners' Knowledge Transfer in Ill-Structured Domains through Learner-Controlled Interactive Multimedia Instruction

Online Chat:
14 JUN 1030 – 1100

Presentation

This educational design research project, initiated in February 2024, explores the effectiveness of learner-controlled interactive multimedia instruction (IMI) in ill-structured domains. The study is grounded in Cognitive Flexibility Theory (Spiro et al., 1987) and Mayer's Cognitive Theory of Multimedia Learning (Mayer, 2020), focusing on military learners. It investigates how learner control over

LTC Elvin Fortuna -Army University, Vice Provost for Academic Affairs

content sequencing facilitates the development of flexible and adaptive knowledge structures, enhancing knowledge retention, transfer, and intrinsic motivation—key for mastering content in ill-structured domains vital for multidomain operations. The research focuses on two aspects of the project: the design team's processes and the learners' experiences, centered around two questions:

1. How can learner control of sequencing in interactive multimedia instruction support military learners in learning in an ill-structured knowledge domain?

2. How can cross-functional teams of researchers, experts, and learners incorporate an educational design research approach to support learning in ill-structured knowledge domains?

This partnership between Army University and Army Sustainment University aims to derive design principles that promote deep learning, interest, and autonomy, critical for navigating the complexities of ill-structured knowledge domains in military contexts. Expected outcomes include actionable insights for integrating learner control in IMI, enhancing military readiness and adaptability beyond traditional classroom settings.
Anticipated contributions of this research include novel design principles for IMI in ill-structured domains and a deeper understanding of cross-functional collaboration's role in educational design, offering significant implications for military education and operational preparedness.

Evaluating the Effectiveness of Civilian Education: Before, During, and After the Intermediate Course

Online Chat:
13 JUN 0900-0930

Presentation

Dr. Meredith Shafto and Dr. Shanda Lauer -Army University, Vice Provost for Academic Affairs

Dr. David Culkin, Mr. Aaron Monson, and Dr. David Quisenberry -Army University, Army Management Staff College

The Army Civilian Implementation Plan (2022) advocates that developing the talent of Army Civilians is critical for overall Army readiness. Educational opportunities provide a key pathway for creating Army Civilian leaders, as indicated by recent direction from the Deputy Assistant Secretary of the Army for Civilian Personnel (DASA-CP) to enhance Civilian Education System (CES) courses. To demonstrate the effectiveness of the CES courses it administers, the Army Management Staff College (AMSC) must not only cultivate excellent course experiences but also demonstrate transfer of knowledge by mapping learning in CES courses with success in the workplace. In response to the need to evaluate the long-term effectiveness of CES courses in developing leaders, AMSC has collaborated with the Institutional Research and Assessment Division at Army University to create a multi-dimensional evaluation of the CES Intermediate Course (IC). The IC was selected as a test case for this evaluative approach because of its critical timing during ACP career progression and the quantity and diversity of the students who take the course. This presentation outlines the ongoing evaluation effort by highlighting methods for garnering feedback from the workplace, reviewing current results, and discussing planned analyses. Evaluations include the perspectives of students before, during and after taking the IC as well as feedback from their supervisors. The design also includes input from employees who are eligible but have not taken the course. This approach aims to provide AMSC leadership with evidence to optimize the ability of the IC to develop Army Civilians' real-world leadership ability.

Revolutionizing Professional Military Education: The Total Soldier App Proposal

Online Chat:
13 JUN 1200-1230

Presentation

CPT Chris Slininger -
Department of the Army HQ,
Foreign Intelligence
Directorate

This proposal advocates for a transformative approach to Professional Military Education (PME) through the implementation of an innovative app-based learning platform, termed the "Total Soldier app." Traditional PME models are critiqued for their limitations in engaging individuals, validating mastery, and fostering continuous learning. The proposed solution leverages a dynamic, microlearning-based system that tailors content to individual needs, considering past lessons, assignments, and knowledge gaps. Drawing inspiration from the Salesforce Trailhead app, the Total Soldier app aims to provide personalized leadership paths for Soldiers, supporting their development from fundamental training to specialized roles within the military.

The app facilitates a seamless integration of learning pathways, allowing Soldiers to prepare for specific units, missions, and roles. Bite-sized microcourses, accessible via mobile devices, enable Soldiers to learn throughout the day, ensuring sustainable growth. Moreover, the proposed system offers progress reports for raters and senior raters, enhancing developmental counseling and future assignment recommendations. Instructors receive insights into cohort strengths and weaknesses, enabling tailored PME sessions. This holistic approach empowers Training and Doctrine Command (TRADOC) to identify trends and refine course programs to address evolving needs.

By introducing the Total Soldier app, this proposal envisions a paradigm shift in PME, fostering a culture of continuous learning, adaptability, and individualized development for military personnel. The implementation promises to revolutionize the Army's educational framework, ensuring that each soldier is equipped with the knowledge and skills necessary for their evolving roles and responsibilities.

Outcome Based Design for Classroom Exercises

Online Chat:
14 JUN 1330-1400

Presentation

Dr. William Davis, Jr.,
LTC Isaac Howard, and
Mr. Kevin Hudie -U.S. Army
Command and General Staff
College, Ft. Belvoir Campus

A significant component for most PME courses is the end of course exercise. However, it was found “Army units at every echelon struggle to meet mission and training requirements due to lack of creativity, critical thought, and disciplined initiative,” during real world exercises. This presentation proposes a way to increase the creativity, critical thought, and initiative of students undergoing an in-class exercise. This presentation, developed by four experienced faculty, will show how to use case-in point teaching theory, emergent decision-making theory, and adult education theory to achieve desired outcomes. It will address all facets of the exercise such as real-time coaching, getting the most out of briefing, how to generate emergent decision-making, incorporating reflective practice, and how to optimize learning during an after-action-review. The paradox we will be addressing is that although curriculum developers try to mimic the real-world environment to prepare the students; this fails because the classroom is not the real world and trying to do things like add voluminous information to replicate reality only inhibits good outcomes. Our recommendations will focus on teaching techniques and classroom exercise designs that will increase the desired learning outcomes of a classroom end of course exercise. We will optimize the unique opportunities a classroom presents to develop critical thinking, creativity, and initiative.

Learning strategies and Transfer of Knowledge: Empowering Soldiers with Credit for Prior Learning (CPL)

Online Chat:
11 JUN 1415-1445

Presentation

Ms. Michele Spires -American Council on Education

The American Council on Education (ACE) is unwavering in its commitment to empowering soldiers on their path to postsecondary education by recognizing the intrinsic value of their military experiences. This session highlights ACE's dedication to two pivotal objectives: (1) fostering academic success through the effective validation of learning and the transformative role of Credit for Prior Learning (CPL), and (2) connecting stakeholders to the transferability of knowledge acquired in military service to academic contexts. Participants will gain practical insights into the empowering potential of CPL, facilitating a seamless transition for service members with actionable strategies to enhance academic success. The session sheds light on tangible outcomes, addressing the removal of barriers and ensuring increased consistency for soldiers transitioning between service, academic pursuits, and the civilian workforce. With a rich history of contributing to a more accessible and supportive educational landscape, ACE invites attendees to explore effective transfer of learning strategies and engage in discussions on the portability of military learning, encompassing courses and occupations, to academic success. Let's identify actionable strategies to empower soldiers by emphasizing the role of Credit for Prior Learning and showcasing tools like the re-imagined ACE Military Guide, paving the way for a more accessible and empowering journey.

Feedback from the Field for Captains Career Course Common Core: Relevance to Outcomes-Based Military Education

Online Chat:
12 JUN 0900-0930

Paper

Dr. Meredith Shafto -Army University -Vice Provost for Academic Affairs

As part of U.S. Army modernization efforts, Outcomes-Based Military Education (OBME) has been endorsed as an important part of updating approaches in Professional Military Education (PME; CJCSM 1810.01). OBME advocates that education should be student-focused, shifting away from what needs to be taught and prioritizing what students need to learn. A key requirement of implementing OBME principles in PME is defining operationally relevant outcomes and demonstrating that they have been achieved through feedback from the operational environment. This paper presents an overview of the current state of feedback from the operational environment relevant to the Captains Career Course (CCC) Common Core. The aim of the paper is both to summarize the available evaluations and assessments, and to gauge the ability of current measures to (a) capture operational requirements, and (b) be used to establish predictive relationships between PME outcomes and operational performance measures. Practices from all CCC schools and COEs are sampled to provide the widest range of available approaches for capturing operational measures and linking measures to PME outcomes. Identifying both gaps and best practices will inform the development of predictive models as part of OBME implementation in the CCC. More broadly, this paper can contribute to building a generalizable process for evaluating available links between PME and operational performance, which can be applied to other courses.