

The Army University Research Program (January–December 2023)

Background

The Army University Research Program (AURP) is a learning sciences research program with the aim of improving education across the enterprise with innovative projects that address specific needs. The AURP was created by the vice provost of academic affairs (VPAA), Army University (ArmyU) in 2019 to support evidence-based innovation in the learning enterprise. It is an inclusive program: one needn't be a researcher by trade to contribute. Practitioners can be faculty/instructors, curriculum or faculty development staff, students, or research staff.

The administration of the AURP rests in the Institutional Research and Assessment Division (IRAD), VPAA, ArmyU. The AURP uses the Army Learning Coordination Council structure to drive oversight of research projects via recommendations from the Learning Continuum Committee (LCC). AURP activities are managed by one of the five LCC subcommittees, the Learning Sciences Subcommittee (LScS). The LScS serves as the principal working group and advisory body to the LCC concerning learning science and research. The IRAD chief is the permanent cochair of the LScS. Another scientist within the community serves as cochair. The charter for the LScS is available from the LScS SharePoint page at <https://armyeitaas.sharepoint-mil.us/sites/tr-cac-au-vpaa/SitePages/Learning-Sciences-Committee.aspx>.

The strengths of AURP projects rest with the fact that, as mentioned previously, topics can be proposed by anyone and the research is done in a collaborative environment with investigators from organizations as varied as IRAD, the Center for Army Leadership, the Army Research Institute, the U.S. Army Institute for Religious Leadership, the Sabalauski Air Assault School, the U.S. Army Combat Capabilities Development Command-Soldier Center, the Sustainment Center of Excellence, and U.S. Northern Command gender advisors. This makes certain that products or policies developed through this process have had input from potential user groups and subject-matter experts.

AURP Projects and Status

Since its introduction at the November 2019 meeting of the LScS, the AURP has resulted in nine supported research projects. The Table provides an overview of projects.

Table
Supported Research Projects Since 2019

Title and Year Begun	Project Description
Survey of the Army Learning Enterprise (SALE) (2019)	SALE provides an enterprise-level overview of professional military education (PME) from the student perspective after they return to the operational force. The main aims are (1) to facilitate the collection of best practices, lessons learned, and techniques, tactics, and procedures from those who are excelling; and (2) to facilitate the identification and remediation of barriers to success. SALE is now a command-directed project.
Tacit Knowledge Transfer (2019)	Tacit knowledge refers to the knowledge, skills, and abilities an individual gains through experience that is often difficult to put into words or otherwise communicate. Understanding tacit knowledge and how it is transferred within the total force is critical to improve the military's agility, adaptability, and speed of responding to any challenges presented by adversaries.
Defining and Quantifying Rigor in Army PME (2020)	The term "academic rigor" is often used within Army doctrine and heard within command directives. However, there is not a common understanding of what is meant by "academic rigor" within PME. The aims of this project are to (1) create a common understanding in the context of PME of the term "academic rigor" and (2) develop tools to measure and evaluate the level of rigor in specific courses. This project has transitioned from AURP purview to ArmyU for pilot testing.
Applying Learning Science to Skill and Knowledge Acquisition (ALSSKA) (2020)	Academic research in learning and memory has validated several strategies to optimize the acquisition and retention of knowledge and skills. The aim of this project is to establish (1) learning outcomes associated with strategies for skill and knowledge acquisition; and (2) practices of value, lessons learned, and tactics, techniques, and procedures associated with the implementation of strategies. The final research reports are complete and will be published in 2024.
Improving Self-Regulated Learning (SRL) Through Assessment and Feedback in a Distributed Learning Environment (2021)	For learning to be successful, students must be proficient in self-regulation skills including planning, goal setting, discipline, and focus. The aim of this project is to determine whether providing learner-centric assessments along with adaptive feedback and strategies for optimizing skills in self-regulation improves learning outcomes in a distributed learning environment. The key planned product of this project is an assessment and feedback tool leveraging adaptive learning technology to improve SRL skills.
Identifying Best Practices for Instructor Training for Virtual Learning (2022)	As the Army looks to modernize, Army instructors may increasingly be tasked to teach in a distributed learning environment. This will likely involve instructing online through platforms such as MS Teams or Blackboard. The aims of this project are (1) to identify best practices and challenges for virtual learning (VL) instructors and (2) to develop recommendations for VL instruction that can be used throughout the learning enterprise. The final research reports are complete and will be published in 2024.
Assessing Affective Domain Growth in Soldiers (2022)	The affective domain is "the domain that examines a student's ability to internalize what is learned in the form of feelings and attitude" (TRADOC Regulation 350-70, <i>Army Learning Policy and Systems</i> , 2017, p. 127). The aim of this project is to develop an affective domain assessment for use in Army training and education contexts. We propose utilizing existing, scientifically validated scales to help build an assessment of the affective domain to be used in Army training and education contexts.
Diagnostic Classification Models for Army Education, Training, and Development (2023)	The aim of this project is to compare the effects of traditional normative approaches to cognitively diagnostic assessment and diagnostic classification modeling (DCMs)—criterion-referenced approaches to estimating knowledge, skills and behavior mastery, and providing feedback. Moreover, this research intends to explore which information from DCMs can best inform Army feedback, reporting, and development processes along with how advancements in artificial intelligence can help facilitate the adoption, usage, and utility of these approaches.
Predicting Operational Performance in OBME (2023)	The implementation of Outcomes-Based Military Education (OBME) in PME requires defining and achieving operationally relevant outcomes. This project is framed within the Captains Career Course and aims to develop measures of graduate success that are targeted, measurable, and predicted by formative and summative course assessments.

AURP Way Forward

As the AURP grows, additional programmed funding will be required for contracted research support and to transition products to the operational force. Every year, new, varied, and relevant research ideas are proposed to the LScS; it is hoped that collaborations and support through the LScS continue to grow, and the Army Learning Enterprise can produce better educated soldiers through these efforts. 