

Utah State University Researchers Develop New Model to Improve IT Training and System Adoption

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Dr. Kelly J. Fadel, Robert J. Mills, and Dr Reagan R. Siggard

LOGAN, Utah — Organizations spend billions of dollars each year on IT training, yet employees often remain frustrated when adapting to new systems. Even small technology migrations — such as moving from PeopleSoft to Workday or switching learning platforms — can disrupt productivity, raise costs, and slow adoption.

A new theoretical model from Utah State University researchers may explain why. Developed by Dr. Kelly J. Fadel, Dr. Robert J. Mills, and Dr. Reagan R. Siggard, the Systems Analogical Learning Theory (SALT) builds on cognitive science research to show how users transfer knowledge from old systems to new ones.

Key findings include:

- Old knowledge is always activated. Users rely on mental models of old systems when approaching new ones.
- Similarity type matters. When both design and underlying logic align, transfer is smooth. When only surface features match, users often misapply old knowledge.
- Learning pathways differ. SALT identifies four pathways, ranging from quick “literal similarity” matches to challenging “de novo” learning when no analogies apply.

Why it matters:

Despite major investments in training, many programs fail to anticipate the analogies users inevitably make. SALT provides a framework to help organizations design or select systems with learning in mind, predict where errors may occur, and create training that explicitly maps old workflows to new ones.

About the research:

- Paper Title: *A Theoretical Model of Information Systems Analogical Learning (SALT)*
- Authors: Dr. Kelly J. Fadel, Dr. Robert J. Mills, Dr. Reagan R. Siggard
- Conference: Hawaii International Conference on System Sciences (HICSS), 2025

The researchers are now moving from theory to empirical studies and are seeking collaboration with organizations undergoing system migration projects.