Agent Based Approach to Modeling Technical Skill Acquisition

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Abstract: US Army Training and Doctrine Command (TRADOC) typically lags behind industry and the Army in their pace of providing relevant training to warfighters. This can lead to technologies becoming outdated before the Army implements a standard for training. The issues compound when dealing with the complex software packages prevalent in most Army acquisition programs. This leads to underutilization of technology based tools that are potentially of great benefit to warfighters and resistance to further investment in software based solutions to complex problems. Using the SAGE toolset as a case study, this work developed an Agent-based model to determine how rapidly technical skills diffuse through a user base. Ultimately, this model shows that with a dedicated budget for training, software based tools such as SAGE can be fully taught to a user base to an acceptable level of competency before a standardized training package is approved through the TRADOC pipeline.

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