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**Investigating Cognitive Task Difficulties in an Electronic Training System Design**

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**Abstract**

*Electronic training (e-training) system has been a useful approach in the higher learning institution to enable a virtual training environment. It is a concerted effort to ensure the educational service educators to equip themselves with professional knowledge, skill, values, and practices through in-service training program organized based on competency development, lifelong learning and career path.*

*Current works show that there is less emphasis on the effect of design and process difficulties faced by e-training end-users. Therefore, in the process of designing the e-training system, an Applied Cognitive Task Analysis (ACTA) was performed by a group of experts, to elicit critical and identify the most difficult cognitive elements.*

*The result shows that the experts faced difficulties in two system design elements which are system design and functionality, and course content design. Therefore, to increase user engagement in the e-training system, experts proposed three recommendations: (i) graphical user interface that contains simple and appropriate objects, tabs and icons, and video upload tools, (ii) e-training system that embed pedagogical and instructional-based model (iii) communication tools with the e-training system such as chat programs and video conferencing. The result also indicate that a new framework can be recommended for the design and development of an e-training system to attain effective usage and interaction, between system and end-users.*

**Keywords**

e-learning, system design, online training, applied cognitive task analysis