



Improving e-Learning Course Design with Usability Testing

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Demand for online instruction in higher education has accelerated as new tools tailored to e-learning development have proliferated. Access has increased with learning management systems; development has been made easier with new technologies (authoring programs, animation software, video streaming). Development time has shrunk along with the need for technical expertise, enabling developers to launch more courses in less time.

However, rapidity and ease of course development have not ensured quality of instruction. Now, with usability testing (UT) and quantitative measurement validated for monitoring and elevating user satisfaction with web sites, a means for ensuring quality of elearning is available. As UT has been utilized to measure effectiveness of web sites, web applications, and e-commerce, it can be adapted to measure on-line instruction. [1] By employing either a sophisticated, laboratory approach with specialized equipment or a less formal, observational approach, developers can achieve valuable results since both are founded on observation and documentation of user's interface with the technical application. [2]

UT can lead to insight into both engagement, which promotes learning, and frustration and distraction, which impede it. [3] Unlike traditional software products that anticipate users learning the interface gradually over time, learning interactions are often one-time events. An instructional interface, therefore, has to be mastered quickly - it won't be used for an extended period of time [4]. UT substantiates user interaction immediately. In addition, UT is effective in defining guidelines for format, graphic interface, content placement, and learner interaction and can inform researchers regarding learning outcomes. [5]

This paper is a case study of UT being applied during the development of an elearning course to uncover design flaws before launch. The course was developed at the University at Albany for the US Centers for Disease Control and Prevention and has since been launched to a positive response.