Improving Statistical Literacy in Health Information Management Professionals through a Learning Object

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This research aims to measure the effectiveness of a learning object in improving statistical literacy. The learning object is rooted in statistics education research, specifically in research that identifies a gap students experience in attempting to make connections between data and the distributions they are mapped into. In essence there are three aspects to the research: first, the content - i.e. development and peer review of a pedagogical tool that helps bridge the gap mentioned above; second developing the learning object itself as a stand alone web-site with a game like feel; third, the assessment of improvement (quasi experimental, pre-test-post-test design along with an evaluative survey). If this research shows that a learning object helps the learner bridge a challenging gap, or understand a challenging concept, then one has made a contribution to both the learning object community and the community of teachers of statistics.

A literature review has shown that typically, learning objects are assessed in two ways: participants are observed while interacting with the learning object and their experience is assessed, or experts in pedagogy are relied upon for peer review.

Thus, the proposed quasi-experimental design is unique in assessing the learning object. The results of this research will be important to Health Information Management educators and professionals as we strive to develop clear thinking graduates, but they will also be of interest to researchers and practitioners of learning objects and researchers and practitioners in statistics education as well.

Benefits to GBC: The research will be of benefit to teachers and students as it will assist teachers in the difficult task of teaching statistics to non-mathematicians. Those that participate in the research will also benefit by gaining an understanding of the research process, since they will be studying statistics at the same time.

Benefits to the community: This research will benefit the Health Information Management (HIM) profession as graduates of the program who are more statistically literate are also better able to think critically and analytically. It will further benefit the Learning Object community as this research is unique as it has a built in assessment component (pre-test-post-test). As such it will contribute to the discussion of Learning Objects assessment, and their effectiveness as tools for learning.