ABSTRACT

Among the numerous usages of computers today, e-learning is emerging as an important use for mass education at low costs (Mason, 1998). Internet-based online courses have started facilitating all levels of education, including elementary, secondary and technical, etc. Even online design courses in general and animation design courses in particular, have started. Due to heavy demand from the animation industry, online courses in animation are highly sought after by youngsters seeking job opportunities in the animation industry (Ferdin, 2019, July 12). There has also been reports of high drop off rates of online courses (Woodley, 2004).

This thesis has identified the need to evaluate online learning courses, especially for design courses like animation where tacit knowledge is involved (Belas, 2017). This thesis has identified a gap in the literature that there is a lack of learning evaluation models for online courses and has proposed a new model for the evaluation of online courses. The evaluation model proposed in this thesis consists of six stages. The model starts with an evaluation of attitude towards e-learning, proposes to measure initial reaction towards the e-learning platform design, measure the ease of usage of the learning platform, measure the engagement a learner has felt while exploring and learning from the e-learning platform, measure the learning the learner has undergone and finally evaluate the skill the leaner has acquired. The proposed model has then been used to investigate learners’ attitudes, behaviours, and outcomes through experimental studies.

Learner’s attitude was evaluated through semantic differential scales of 20 bipolar adjectives with 482 participants and it was found that there exists a difference in learner’s attitude towards online and offline methods of learning. Next, e-learning platform was designed and developed with seeded usability problems. Participants were invited in lab experiments to undergo learning using the platform. During the usage of e-learning platform, Galvanic Skin Response (GSR) and behavioural data were collected, also before and after samples of drawing skills were collected. The findings suggest that difficulty in usage of the e-learning platform directly affects the engagement levels of the participants and learning outcomes from the e-learning exercise.

Keywords: e-learning, evaluation model, Information System Design (ISD), HCI, Usability, User Experience Design.