An Innovative Approach to Assessing Student-Learning Outcomes: Utilizing MERLOT Content Builder

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Abstract

Three student-learning outcomes of an online master's degree program at regional University in Texas were assessed in this study. An innovative use of MERLOT's Content Builder provided a platform this study. The Astin Model provided the framework for the evaluation. This study has provided a model for conducting well-informed, instructional and programmatic assessments of student-learning outcomes. The results of this study demonstrated that MERLOT has provided a platform for students to both showcase and preserve their ability to meet programmatic student-learning outcomes.

Key Words: assessment, student-learning outcomes, evaluation, MERLOT content builder

The mission of the online master's program assessed in this study is to equip specialists in adult education for practice in public education, private education, business, industry, and non-profit organizations. The vision of the program is to equip world-class leaders in critical thinking, communication, digital fluency, cultural fluency, global fluency, servant leadership and lifelong learning in the global community of education and industry.

This online master's degree program is taught using a fully interactive online format in a primarily asynchronous delivery model. Asynchronous activities used in the program included: threaded discussion, video and audio presentations, written lecture linked to video and audio presentations embedded into the course management system, Voicethreads, faculty developed MERLOT web pages created using the MERLOT Content Builder, e-Textbooks, etc. The focus of this study was on the assessment of three of the student-learning outcomes utilizing the MERLOT Content Builder (Multimedia Educational Resources for Learning and Online Teaching; www.merlot.org).

The Astin Model (1993) provided a framework for this assessment. In the Astin Model, quality education not only reaches established benchmarks but also is founded upon the ability to transition students from where they are to reach intended competencies.

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Purpose of the Study

The purpose of this study was to assess three of the seven student-learning outcomes in an online master's program at a regional university in Texas utilizing MERLOT's Content Builder. The goal of this study was to help students reach the intended learning outcomes for digital fluency, communication and servant leadership. Definitions of these learning outcomes are provided here. Students will evidence digital fluency in the adoption and integration of appropriate technologies into digital presentations. Students will be able to communicate ideas and content to actively engage participants. Students will practice the principles of servant leadership as espoused by Robert Greenleaf in his work titled, *The Leader as Servant* (1984). According to Greenleaf, "The servant-leader *is* servant first. It begins with the natural feeling that one wants to serve *first*. Then conscious choice brings one to aspire to lead."

Significance of the Study

The ability to digitally capture much of the learning that takes place by students in an online program is significant for conducting well-informed, instructional and programmatic assessments of student-learning outcomes. The process for digitally capturing evidence to assess student-learning outcomes in this study was based on an innovative use of the MERLOT community of resources; specifically educational web pages developed by students with the MERLOT Content Builder.

Overview

Digital education presents many challenges. Barnett-Queen, Blair, and Merrick (2005) identified perceived strengths and weaknesses of online discussion groups and subsequent instructional activities. Programmatic assessment is required for all institutions accredited by the Council of Higher Education Accreditation or the US Department of Education. Walvoord (2003) indicated that good assessment should focus on maximizing student performance. The following questions rise to the forefront: (1) Have graduates mastered programmatic expectations; (2) What relationships exist between student performance and other factors; and (3) How can faculty improve the program based upon the analysis of student performance. Walvoord further stresses the importance of direct assessment in determining student performance. Indirect measures may provide evidence of student-learning, but direct assessment is widely viewed as more valid and reliable.

Brandon et al. (2008) developed a model for embedded formative assessment. The model was collaborative and stressed embedded assessment. Their study stressed the difficulties associated with broad-based collaboration given the difficulties of formally identifying partners and spanning large geographic distances. Price and Randall (2008) demonstrated the importance of embedded direct assessment in lieu of indirect assessment. Their research revealed a lack of correlational fit between indirect and direct assessment of the same aspect of student-learning with the same course in a pre- and post-test design. They documented a difference between student perceived knowledge and actual knowledge. These findings further underscore the

importance of direct assessment of student-learning. Walvoord's (2003) findings further indicated the need for embedded direct assessment of student-learning owned and supported by those who will implement the change. Those implementing change would include program faculty and students.

Gardner (2007) found that education has long wrestled with defining and assessing lifelong learning. Though loosely defined as the continued educational growth of the individual, lifelong learning is rapidly rising to the forefront of 21st century education to assume a more prominent place than that held in the 20th century. Broonen (2002) described the difficulty of assessing the intention to pursue learning beyond the completion of a program. Intention and subsequent performance are affected by many different factors including, but not limited to, normative beliefs and motivation. Educational programs have often been encouraged to avoid assessment of behavior beyond the point of graduation as such behavior as been viewed as beyond the control of program educators (Walvoord, 2003). The question arises as to the importance of future behavior as an indicator of current learning.

Astin (1993) pointed out that educators are inclined to avoid assessment of the affective domain viewing such as too value laden. Accordingly, the cognitive domain became the defacto assessment area though affective assessment more closely paralleled the stated aims and goals of most institutions of higher education. The avoidance of assessment in the affective domain is well documented by Astin. The advent of social media tools coupled with e-portfolios offers some intriguing possibilities in regard to assessment in the affective behavioral domain. Astin pointed out that a change in the affective domain should translate into changed behavior.

Secolsky and Wentland (2010) found many advantages to portfolio assessment that transcend regular assessment practices by providing a glimpse into non-structured behavioral activities. Behavior beyond the classroom can be captured and documented within a properly designed portfolio. Behavior that has not been directly observed by the teacher can be measured in light of portfolio submissions via a broad collection of relevant and targeted information. Established performance criterion can be assessed to measure student-learning and determine specific areas for programmatic improvement. Though Secolsky and Wentland point out that reliability and validity concerns still exist with portfolio measurement, they concur that portfolio assessment potentially gauges authentic student performance outside the educational environment. With the development of a portfolio transportable beyond program enrollment and across the life experience the opportunity exists to assess the impact of the instructional experience upon real time student performance. Evaluation of life-long portfolios promises to provide meaningful insight into the real life impact of the educational experience. Astin (1993) viewed changed behavior over time as the real evidence of affective enlightenment.

As noted above, the program examined in this study promotes the assimilation of an established taxonomy of seven programmatic learning competencies (outcomes) in the Astin Model. The student learning outcomes are provided here. The student will: 1) Evidence Meta-cognition skills; 2) Effective communication; 3) Demonstration of digital fluency; 4) Evidence appreciation of cultural fluency; 5) Develop global fluency; 6) Practice servant leadership; and 7) Engage in life-long learning (see table below).

Student Learning Outcomes

	Cognitive	Affective
Psychological	Meta Cognition: • Analysis • Synthesis • Evaluation <i>Research Paper; Voicethread; MERLOT</i> <i>Web Page; Oral Comp. Exam</i>	Cultural Fluency: • Self-Actualization • Understanding • Socialization Journal; Discussion Board; Class Live Pro; Voicethread; Self-Assessment Surveys Global Fluency: • Knowledge & Comprehension • Application • Evaluation Presentations; MERLOT Web Page; Prezi, Google Site,Discussion Board, Voicthread
Behavioral	Communication: • Writing • Speaking Research Paper; Presentation; Class Live; Discussion Board; Journal; Oral Comp.; Voicethread; Digital Fluency: • Adoption • Integration Class Live Pro; Presentations; MERLOT Web Page; Prezi, MDL2 site	Servant Leadership: • Ethics • Teaming • Leadership Presentation; Group Work, MERLOT GRAPE Camp Life-Long Learning: • Self Vision • Career Goals Self-Assessment Surveys; Presentations; Publications, ePortfolio, MERLOT GRAPE Camp

Specific instructions were provided to students to complete the MERLOT web page assignments. In addition, several examples of MERLOT web pages created by former students were posted for current students to give them an idea of the style and quality they should strive for in developing their web pages.

Findings

An interesting finding from this study was the creative manner in which some of the students layered or nested other web 2.0 technologies into their MERLOT web pages. Examples of layering or nesting included embedded student developed Voicethread presentations, embedded open-ended discussion Voicethreads used to promote participation and feedback, embedded YouTube Videos, embedded Prezis, and the like.

The learning outcome of digital fluency examined a random sample of student developed web pages using MERLOT content builder. The Global eLearning Assessment of Digital Student Presentation Rubric was used to for this assessment. This analysis was conducted by the fulltime bachelor's and master's faculty. Scores were deemed acceptable with an average of 45 on a 50-point scale in the area of technology. The average score for technology was 45.33, meaning the standard was met (see appendix C for a copy of the scores). The faculty noted that some students tended to use more familiar software and avoided the utilization of emerging software. Accordingly, an upcoming course has been modified to include requirements for all students to

utilize at least one Web 2.0 software program to complete their MERLOT web page. The faculty will conduct further assessments in the next annual year evaluation.

Communication was also assessed using the Global eLearning Assessment of Digital Student Presentation Rubric. Working with MERLOT's Content Builder, students were required to develop a web page that demonstrated their ability to effectively communicate educational content to an intended audience. A random sample of student developed web pages were analyzed by the fulltime bachelor's and master's faculty in the program. Scores were deemed acceptable with an average of 42 on a 50-point scale in each of the five areas of purpose, organization, content, language, and voice & tone. The average score for purpose was 45.33. The average score for organization was 46.67. The average score for content was 46.00. The average score for language was 44.00.

Though all standards were met, faculty noted that language scored the lowest. Therefore, the faculty modified an assignment in one of the intercultural courses to provide students an opportunity to develop their language skills. This project was developed to provide students a heightened sensitivity to language that might be offensive in other cultures. The faculty will conduct further assessments in the next annual year evaluation.

Servant leadership was assessed using the Global eLearning Servant Leadership Rubric by the fulltime bachelor's and master's faculty. A random sample of students were selected and scores were deemed acceptable with an average of 40 on a 50 point scale in each of the five areas of servant leadership, strategic insight & agility, building effective teams & communities, ethical formation & decision making. The average score for servant leadership was 41.33. The average score for strategic insight and agility was 39.33. The average score for building effective teams and communities was 44.00. The average score for ethical formation and decision making was 43.33. The standard was not met for strategic insight and agility. Faculty noted problems in the effective feedback of peer-evaluation assignment. Accordingly, the group peer assessment process has been expanded to include MERLOT GRAPE Camp to provide training on conducting peer-evaluations. All students will be required to complete MERLOT GRAPE Camp training. These changes will be enacted in all new course sections.

Conclusions and Recommendations

The explosion in the popularity of online degree programs necessitated the need for a study such as this to be conducted. This study has provided a model for conducting well-informed, instructional and programmatic assessments of student-learning outcomes. An innovative use of MERLOT's Content Builder provided a means for assessing three of the seven student-learning outcomes in an online master's program. The results of this study demonstrated that MERLOT has provided a platform for students to both showcase and preserve their ability to meet programmatic learning outcomes.

Student-learning outcomes are being assessed on an annual basis within the University's Institutional Effectiveness process for instructional programs. Program faculty members regularly and systematically participate in institutional professional development opportunities to maintain currency of technological expertise.

The recent integration of MERLOT GRAPE Camp peer review training into this Master Degree Program has provided an additional platform for further research to be conducted relative

to the assessment of all seven of the programmatic learning outcomes of the program. For example, metacognition may be assessed as it relates to MERLOT'S peer-reviewers serving as content expert in assessing materials that pertain to one's field. Communication may be assessed through interaction with peers and peer-reviews. Digital fluency is obviously what is required to contribute to MERLOT. Cultural Fluency may be demonstrated through peer reviewing submissions of MERLOT's international community of partners. Global Fluency may be measured through the development and contribution of appropriate content for use in a global community of learners. Servant Leadership is the motto of MERLOT, "Give a Gift not a Burden!" (Gerry Hanley, 2010). Finally, the development of students into lifelong learners will help to establish the identity of the program. Student performance outside of the program is one of the best measures of student-learning and the MERLOT Content Builder along with MERLOT peer-reviews is a tremendous platform for measuring student-learning outcomes.

Life long learning may be assessed by current and former students' contributions of materials to MERLOT and by those providing peer reviews of materials contributed to MERLOT. As a benefit of being a MERLOT partner, the dashboard report provides information on contributions made by members of the partner organization. Contributions and/or peer reviews completed by students who have graduated from the program will be recorded in the dashboard report. This is a tremendous tool to measure the commitment to life long learning. Ultimately, this study has demonstrated that the MERLOT platform has been a key component in assessing student-learning outcomes an online master's program at a regional University in Texas. Other online degree programs should seriously consider the MERLOT Content Builder's potential to help them assess student-learning outcomes.

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