CONNECTING EDUCATIONAL TECHNOLOGY TO QUALITY OUTCOMES: THE USE OF QUALITY FRAMEWORKS FOR EFFECTIVE, TECHNOLOGY-ENHANCED DIGITAL LEARNING ENVIRONMENTS

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The Quality Challenge

Change, propelled by affordances of technology and the rapid development of educational technology tools, is coming to institutions and educators accountable for learning processes and student educational outcomes. For many in higher education, this change is already influencing how the educational experience is structured and how, and with what tools and pedagogies, students are taught. The responsibility of educators remains the – same supporting students and improving learning outcomes – but moving from more traditional approaches to education to more innovative, technology-enabled teaching and learning requires a re-thinking of the standards of practice and methods of evaluation.

Identifying quality, and assuring it, is the next imperative as the pace of change in education technology is much faster than educational research on effective learning environments can address. Instructors and administrators with many years of experience in the face-to-face classroom, supported by well-researched, traditional tools for evaluating effective teaching and learning, may feel they understand and can evaluate quality in that setting. New tools and practices for teaching in new ways will require a fresh look at evaluation. What does quality look like in the integrated use of new technologies to form a robust learning experience? The challenge now is to develop and deploy appropriate quality assurance processes to ensure innovation is advancing student learning.

Overview of the current US-based educational technology landscape

According to the 2018 Higher Education Tech Landscape Report by Encoura Eduventures Research, there are over 300 US-based educational service providers and their products, organized into 38 separate market segments according to 4 major categories aligned to the student lifecycle. Examples for the 38 market segments include solutions and systems for: recruitment management, enrolment analytics, system integration, student information, enterprise content management, student retention, learning analytics, online program management, digital courseware, learning management systems, adaptive learning, competency-based learning, and more. As more tools and related technologies continue to be developed, the rates of adoption of these tools and future plans for such adoption need to be better understood.

Quality Matters and Eduventures have developed some insight through the CHLOE surveys – the Changing Landscape of Online Education (Garrett & Legon, 2019). As a maturing eLearning innovation, online education has grown in reach and application – increasingly embraced, by both students and educators. Chief Online Education Officers, the survey respondents, believe that most of the major changes are now behind them, but those that experienced more significant change in the past were more likely to envision significant future change. Institutions operating online programs at scale were most likely to anticipate major change in the future.

Some of this change will include the use of new pedagogies. Most frequently identified (by 45% of respondents in CHLOE 2) were Badging & Micro-Credentials and Simulations/game-based approaches, followed by Competency-Based Education. The new technologies being considered include adaptive learning and the use of learning analytics and student dashboards, as well as virtual reality. The reason for the adoption of these innovations is made clear in the surveys; overwhelmingly, the goal for new technology adoption is to increase student success. How these institutions are evaluating whether these goals are being achieved is another thing altogether.

Use of quality frameworks in online learning in the United States

There is clear support for the efficacy of identifying and applying quality standards for online learning. According to the CHLOE 3 survey, about 85% of respondents in the U.S. indicate they have quality standards for their courses and programs in the areas of faculty development, course design, program design, student outcomes, and student support services. For all metrics, the majority of institutions represented in the survey were not externally validating the standards.

The sources of these standards are varied, with many institutions using more than one source (see Figure 1 in the CHLOE 3 survey, represented below). Overall, internally generated standards are the most prevalent, particularly for faculty development and support services. Of note is that accreditors' standards pertinent for distance education, particularly the Interregional Guidelines for the Evaluation of Distance Education (2011) and the Twelve Accreditation Standards by the Distance Education Accrediting Commission (2016), are not the primary source of standards for any one metric category although accreditor approval at the institutional level is necessary in the U.S. At the program level, the sources of standards are more evenly distributed, with such external sources as the Hallmarks of Excellence in Online Leadership (UPCEA), the OLC Quality Scorecard for the Administration of Online Programs (OLC), and Online Program Review Criteria (Quality Matters).
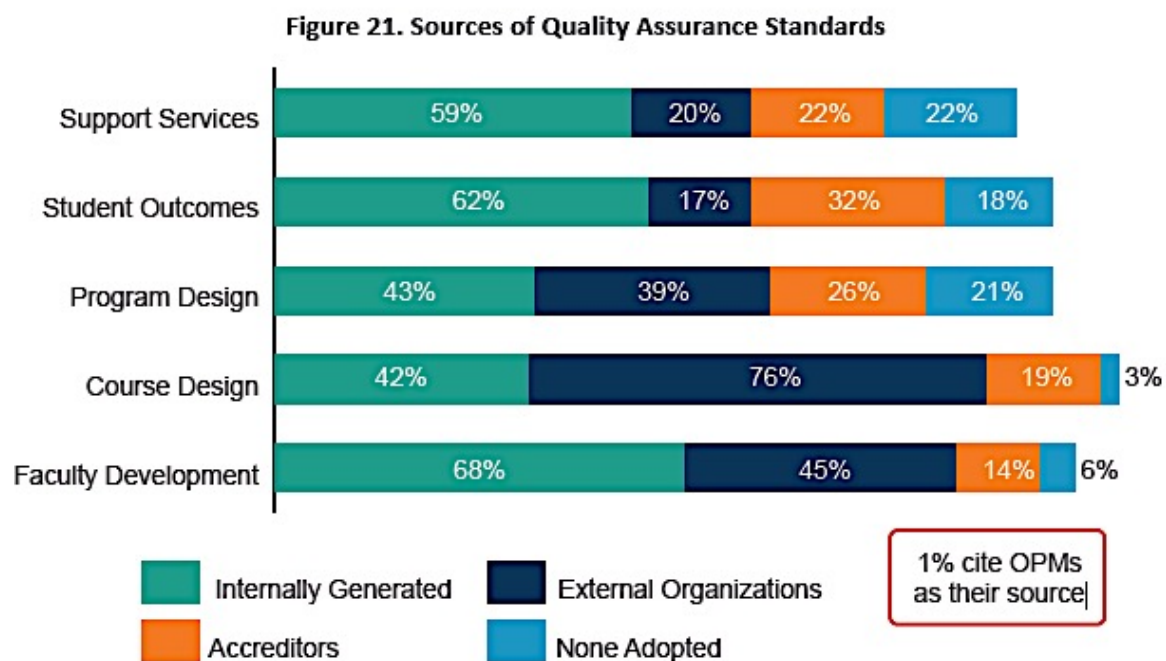
Figure 1. Source of Quality Assurance Standards

At the online course level, external organizations are the most frequently identified source for standards. With over 1400 adopting institutions (1100 in higher education), in all U.S. states and 12 other countries, Quality Matters' Higher Education Standards for Course Design, and its associated review process, is the dominate course evaluation standard in the U.S. Course design, in fact, is the practice most often evaluated whether the standards used are internal, external or a mix of the two. Many options exist for quality standard sets for course design as online learning has matured and instructional design has become a better-known practice. Standards to evaluate student support services have lagged other metrics but have recently grown in popularity.

Institutions in the US are clearly committed to evaluating the quality of their online learning initiatives and do so using a number of standards and benchmarks. Whether these efforts are integrated into a robust quality assurance process, that include external validation of this work, is more difficult to discern. Such processes, however, will be critical for the promise of technology-enhanced education to be achieved. As the pace of innovation continues to accelerate, so must our efforts to assure quality of the teaching and learning experience towards improving student learning outcomes.