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Utilizing Technology to Elevate Online Graduate Education*

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*Literature review – NOT PEER REVIEWED

The transition to a strategic mindset is critical for instructional technologists or instructors working to help organizations succeed in changing environments. As a result, the technology environment is changing, and expectations have been altered based on how people engage in social media: For example, instructional technologists more of an educational-focused role as business organizations continue to embrace technology. Previously, instructional technologists only had to maintain responsibilities, make instructional decisions, and support senior administration policies. Now they are involved in the planning process. Instructional technologists must grasp new trends and organizational direction, foresee potential problems and challenges, and provide solutions and tactics to manage an indefinite future. Furthermore, education bridges the technology gap between older students and younger ones. While graduate online learning fits many adult students' schedules, lack of familiarity and training with technology means that adult students can become frustrated with the tools.

Finally, organizations must use benchmarking as a strategy to improve efficiency through increased strategic alignment (Tepavicharova, 2018). Benchmarking permits instructional technologists to identify acceptable practices, prioritize opportunities for improvement, and enhance workforce productivity. Consequently, benchmarking is used in many organizations as efficiency mechanism to achieve competitive advantage. The expanding dynamics of industrial environments, mixed with the emergence of new technology, increase the likelihood of benchmarking innovative Learning Management Systems (LMS) (Prašnikar et al., 2005).

Literature Review

Choosing an Appropriate Learning Management System (LMS)

Organizations seeking to use a data-driven approach to develop online programs must utilize a chosen LMS to develop and utilize data. A LMS is a software application for the management, certification, tracking, reporting, and delivery of instructive courses, training courses, or education and development programs (Bindon, 2019). Educators must utilize LMS programs as part of an iterative approach to improve course management within the instructional process (analyze requirements, establish learning objectives, improve design, construct a storyboard. develop prototype, advance training, deliver training, and evaluate impact) (CPRE, 1995). Consequently, institutions spend many resources determining what LMS to facilitate learning. Additionally, a complete evaluation of LMS programs is necessary to choose the best system for an institution to streamline educational services and mitigate issues for services provided. For instance, Fort Hays State University has opted to utilize Blackboard as its LMS, although some educators may prefer Canvas LMS for none other than its modern interface and ease of use.

Evaluation of LMS Programs

Undeniably, Sanzo et al. (2014) indicated that evaluation is focused upon intended student and classroom dynamics for a given institution. These standards and practices are essential to classroom evidence-based LMS evaluation and instructional design in the educational environment (Watson, 1981). Progressive educational practices maintain three fundamental issues: students must be committed, dynamic, and deliberative in their success. The educators' job is to

encourage the advancement of free learning practices. Both student and educator become symbiotic in the learning process.

Thus, LMS programs provide instructors a way to promote ideas and systems to reverse systematic pressures by creating equal assessment practices across the curriculum. For instance, utilizing automated grading, class announcements, and methodical course design provides students more objectivity in the learning process. As a result, LMS programs enable instructors to elevate instructional practices. Most importantly, after students review the course's specifics, they are encouraged to take responsibility and increase engagement in their learning. Table 1 provides a comparison of several LMS programs (PCMAG, 2020).

Table 1

Pros and Cons of Specific Learning Management Systems

Learning Management System (LMS)	Pros	Cons
Blackboard	• Large ecosystem of educational tools and services. • Partners with many academic publishers. • Improves legacy courses with responsive design, enables richer new courses with Ultra course view. • Offers large-scale videoconferencing. • Accessibility features.	• Ultra-experience requires cloud-based SaaS configuration. • Ultra-courses lack some features available in legacy courses.
Canvas	• Sophisticated course-assembly tools. • Platforms for sharing class modules, enabling integrations, and publishing courses. • Open API.	• Pricing not as transparent as suggested. • Some idiosyncrasies in the UI.
Moodle	• Free. • Open source. • Modular, plugin-based design enables administrators to add or create features as needed. • Supports myriad activities, including peer assessment workshops, real-time messaging, and wiki forums. • Generous progress tracking and reporting options.	• Setup is by no means turnkey. • UI lacks the visual finesse of paid alternatives.
Google Classroom	• Makes it easy to share materials and announcements. • Simplifies the collection and evaluation of student work. • Integrates some of Google's most popular productivity tools. • Fully responsive design. • Free to use.	• Lacks most features associated with a traditional learning management system (LMS). • Needs tighter integration with Google's own communication tools, including Hangouts. • Lacks Learning Tools Interoperability (LTI) support.

Further, leadership should develop methods by which instructors can improve LMS evaluation measures to improve support and instruction. An iterative cycle of identification, planning, application, assessment, and refinement to establish protocols for identifying, implementing, and executing is needed to demonstrate the comprehensive developmental evaluation practices of LMS programs. The LMS evaluation procedure provides the framework for instructors to apply theory from their training and create connections to build capacity in the classroom or training space (CPRE, 1995). Most aptly, the role of LMS programs is to engage and support students significantly. Additionally, the cycle of developmental, evidence-based evaluations is created and refined following collaboration with educators within an institution.

Focused Construction

LMS applications enable educators to design instructional interventions that directly address difficulties recognized in educational outcomes. However, instructional technologists and instructors must be careful not to design evaluation assessments simultaneously to instruction but must focus on the evaluative tool itself. By eliminating distractions, instructors can focus on the various and needed aspects of evaluation relevant to the issue or program. In this way, the instructional technologists increase the validity of the evaluative tool. Furthermore, instructors must collect and reflect upon survey data regarding the results of instructional competence, and this data should also include information related to the instructional environment and support services.

Data must indicate how students rate innovation and technology in the course or program, which is also helpful. Many tools are available to assist instructional technologists in the cycle of developmental and evidence-based course construction that incorporates large data sets. Finally, educational leaders' roles are to proactively support and facilitate the LMS evaluation process, thus building organizational capacity for a sustained program or course development.

Updating Current Learning Management System (LMS) Communication Tools

This effort also introduces an exploratory discourse on using social media as a replacement for current LMS communication tools such as boards and journals. Learners may be inclined to greater engagement levels if LMS technology and institutions use social media applications to replace traditional modalities such as chat, discussion boards, and email. The need for improvement in education has propelled initiatives, and consequently, the development of information and social technology; these developments have surfaced within the educational process (Labus et al., 2011). An increasing number of institutions establish classes by applying the concept of virtual education. Virtual education is defined as a system that allows interaction between learners and professors, yet physically separated (Labus et al., 2011).

Virtual education is a complex system that includes online instruction and learning in a setting where students and professors are temporally and geographically separated. Virtual education as a phenomenon exists in various forms and include the group/team learning process, seminar, and collaborative work. Further, reciprocal communication between instructors and learners aims to facilitate and support the educational process. Online technologies subsist as potential intermediaries in reciprocal communication. The ease of distributing information to many

users within social networks necessitates an essential role in improving the educational process (Serdyukov, 2017). While interconnecting older modalities with newer options, social networks elevate education. Integrating social networks with education represents a multidisciplinary trend. Likewise, the use of social networks in the classroom may improve relationships among learners.

Learner perspectives of integrated social media technologies (ISMTs) are varied (Smith, 2016). Currently, awareness of learners' perceptions of social media integration and the choices by which instructors purposefully choose to link social media into their curriculum design is an important matter. Learner judgment frames a broader impact. For instance, social media permits instructional technologists or instructors to guide, deter, and assist learners in innovative ways. Likewise, social media may be distracting for some learners and disrupts the learning process. There are relevant connections that exist, underscoring the significance of thoughtful incorporation of social media in education (Smith, 2016). As opposed to adopting a strategy established upon innovative determinism, learning environments, and social media benefits are significant. Learners view educational connections employing social media highlight the noticeable quality of learners-learners and learners-content, instead of workforce learners and organizational learners, which are more apt to comprehend why social media is used as a learning tool (Smith, 2016). Through social media incorporation, a dynamic departure from past educational tools must be considered.

Indeed, Li (2014) acknowledged that social media are tools with exceptional promise to alter conventional methods of how instructors employ methods in Face-to-Face (FTF), online, and hybrid courses. The roles of instructors and learners quickly evolve when social media is employed within educational frameworks. Likewise, social media is utilized to address learning preferences in hybrid and online supervision in advanced education. Instructional technologists and educators must grasp and embrace the role of social networks and social media tools in teaching and learning to improve learner experiences in the classroom via LMS.

Effective Content for Graduate Online Learning

There are many instructional and curriculum design elements that instructors must be aware of in preparation of online graduate courses. For instance, needs-based delivery methods are critical to curriculum design and course management (Vovides et al., 2007). Consequently, graduate instructors must determine if the assignment of videos, recordings, and presentations is the best learning modality for course content and student engagement.
Moreover, graduate education needs powerful scale innovations to produce excellent learning outcomes (Serdyukov, 2017). The essential focal point of educational innovations must be on teaching and learning premise and practice. Learners, learner support systems, educational networks, society, and supportive stakeholders must equally engage. Similarly, assigned technology applications need a strong foundation for deliberate, fundamental research, and reputable teaching methods.

One of the fundamental areas of research and innovation is the cost and time productivity of graduate learning (Serdyukov, 2017). Consequently, building promising technology education innovations via social media acts as a basis for scaled innovations. This helps decrease the time and cost effectiveness of education offerings. Innovations in education must incorporate multimedia and establish cultural supersystems, which indicate interrelations and

interdependencies at all levels. Raising the quality and size of education innovations influences education itself and provide equity in education.

Deciding how to present course content through video, lecture, or presentations is just as important as accounting for the differences in learning styles between online and FTF. Courses (Jose et al., 2019). Learner inclinations toward online or FTF designs are affected by their preferred methods of learning. For instance, self-directed learners prefer online courses because they provide individualistic opportunities to contemplate the material outside of the conventional classroom environment. Additionally, Jose et al. (2019) found no critical contrasts between self-directed learners and traditional learners. Moreover, self-directed learners are more likely to choose online courses over traditional FTF courses. The primary learning style where the contrast between online and FTF designs occurs is amongst dependent learners. Also noted amongst self-directed learners is the propensity to choose an online course because of the limitations of traditional FTF courses (Jose et al., 2019).

Furthermore, learner engagement is critical to effective graduate instruction and learning independent of the instructional method's content and development (Khan et al., 2017). However, connecting with learner preference is a challenge in developing graduate online content. Online courses present unique experiences to FTF courses. Online instruction provides challenges and opportunities in that online instruction is the primary method of communication between the faculty and the learner. Different procedures can be added to online learning courses to encourage an elevated level of learner commitment, dependent on numerous instructional methods (Khan et al., 2017). Supplementary, the job of collaborative learner engagement commitment strategies must be utilized to ensure learning is adaptable. For instance, utilizing online discussion boards provides the learner with opportunities to engage with classmates. To encourage commitment among graduate students, institutions must apply innovative inquiry-based instructional design, such as the Scholarship of Teaching of Learning (SoTL). Most importantly, curriculum design is a crucial tool to ensure positive and robust engagement with learners.

Likewise, Hampton et al. (2017) determined that graduate learner inclinations in online courses illuminated distinctions in the favored teaching and learning techniques for online courses across generations. Further, adopted teaching methodologies (andragogy, self-directed, embodied, narrative, etc.) are more captivating and compelling to various learners compared to other teaching methodologies. The preferential teaching and learning strategies for learners are media files (video, mp3, mp4) or PowerPoint presentations, followed by synchronous online video sessions, journals, and email exchanges with instructors (Hampton et al., 2017). A popular technique recognized by learners as the most empowering and connective was recorded PowerPoint presentations, which provide a contextual analysis of the course. The teaching and learning strategy not overly favored by learners was group projects with other learners, and the technique that was the least compelling for learning was wikis (Hampton et al., 2017).

Further, Hampton et al. (2017) determined that Baby Boomers and Generation X learners have a higher preference for discussion boards when compared to millennial learners. Millennial learners prefer simulations and role-plays. Baby Boomers and Generation X learners enjoy online games as they are stimulating and engaging. Consequently, generational differences correspond with differences in learning preferences. Whether in the classroom or the workforce, instructional

designers need to consolidate different teaching modalities that incorporate both asynchronous and synchronous techniques.

Summary

The purpose of this effort was to present an analytical discourse of the most effective tools for graduate online learning. These tools include but are not limited to: choosing an appropriate LMS, incorporating current communication engagement tools, and determining the best modality for situation learning. Findings indicate that future online education trends are the advancement of dynamic innovations in technology and methods, which leads to increased education effectiveness (Jaggars & Xu, 2016). Additionally, the reduction of challenges concerning implementation issues is needed for many organizations to execute information technology objectives.

Education programs outside of higher education have traditionally been portrayed as a division of an organization firmly centered around a centralized mission. Consequently, graduate online education issues require an interdepartmental approach to remain effective (Kaufman et al., 2001). Effective management of online education requires the intentional development of online education programs. This maintains connections between all stakeholders involved in the process, including incorporating social media tactics via organizational intranets and the internet to promote educator initiatives and student engagement. In this manner, appropriate communication among colleagues and stakeholders is advantageous. Thus, communication is the most critical aspect of maintaining successful online programs. Finally, appropriate course development is viewed as one of the primary methods for executing online graduate programs.

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