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Chapter 7: BlackBoard, Canvas, and Learning Management Systems

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7. BlackBoard, Canvas, and Learning Management Systems

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Key Points:

- Online learning management systems were an innovation that brought standardization and organization to courses and program in education.

- Blackboard in particular grew quickly, first via innovation then through acquisitions and mergers.

- Blackboard has continued to lose market share to Moodle and now CANVAS, who have continued to innovate.

Abstract

Innovation is the application of new tools, techniques, and technology to meet needs. As an instructional innovation, learning management systems filled the need by colleagues and universities to organize course content and communication online, especially for distance learning courses and programs. Blackboard was an initial leader in introducing innovation into this newly created market space, however, a focus on acquiring innovation rather than creating it may be taking Blackboard down a path it can not recover from. In the meantime, learning management systems like CANVAS are introducing new innovations of their own, and are beginning to take market share from Blackboard. Over the next few years it will be very interesting to see where this evolving case study in instructional innovation leads.
First Look at Learning Management Systems

Learning management systems (LMS’s) are defined as a “software application that provides the framework that handles all aspects of the learning process - it’s where you house, deliver and track your training content“ (ShareKnowledge, 2022). From 1924 to the 1960s there have been machines and systems specific to fields such as mechanical engineering and typewriter-like devices with multiple choice question options. In 1969 the U.S Military Defense Commission created, developed, and used the ARPANET (Advanced Research Projects Agency Network), a precursor to today’s Internet. In 1997 the SQL (Structured Query Language) database language was launched, Moodle in 2002, and SCORM (Shareable Content Object Reference Model) in 2004. Together, technology such as SQL, Moodle, and SCORM all set the groundwork for today’s learning management systems that exist within organizations all over the United States and the world (Justin, 2022). The learning management system (LMS) Blackboard soon rose to dominance. The original purpose and needs gap filled by Blackboard was very innovative, to bring online consistency and organization to education. Several of Blackboard’s early acquisitions included WebCT and ANGEL, which resulted in a 65% LMS market share in the United States in the mid to late-2000s (Justin, 2022).

The Emergence of Blackboard and Canvas

Since being founded in 1997, Blackboard has made a name for itself as a leader in the LMS marketspace, specifically in higher education. Blackboard’s early history has been a mix of many mergers and acquisitions. By 2006 Blackboard was being utilized by most college campuses in the United States, and by diffusion and adoption standards they had been extremely successful (Justin, 2022). Despite the strong start, they have also lost many clients in the last decade. Some suggest that they focused more on acquisition than continued innovation. From 2002-2021 there have been a total of 11 acquisitions, and over thirty-plus total transactions since its launch (Justin, 2022).
Founded by two graduate students under the company Instructure, CANVAS has become the newly adopted LMS innovation across college and university campuses. As Blackboard contracts end and the meetings of persuasion take place (one of Rogers’ steps in innovation adoption) many institutions have made plans to phase out Blackboard and sign new contracts with CANVAS due to advantages and features (see Figure 1). Based on user and instructor feedback during testing, early adopters found the platform to be more user-friendly for both students and faculty. It appears to be easier for new adopters to learn and utilize the system with little to no training. While trialability is a top perceived attribute, ease of use and relative advantage tend to be the most important attributes in the decision stage. As a result, the LMS market share between CANVAS and Blackboard is now about 34% and 21% respectively (Hill, 2021).
Figure 1. CANVAS and Blackboard compared

<table>
<thead>
<tr>
<th>Features</th>
<th>CANVAS</th>
<th>Blackboard</th>
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<tbody>
<tr>
<td>Content Editor</td>
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<td>Collaboration</td>
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<td>Gamification</td>
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<td>Self Assessment</td>
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<td>Analytics</td>
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Note. Green boxes indicate which LMS has the relative advantage (Selecthub, 2022)
Higher Education and the LMS

Learning management systems have allowed organizations to close gaps that exist within their organizational structure. While some may have adopted a system based on the perceived attributes (for more on perception and innovation adoption, please see the classic work of Rogers, 2003), there are many that have been able to streamline processes and procedures. During COVID19 many institutions moved course content to Blackboard, CANVAS, Sakai or other online systems to carry out their mission. Blackboard and CANVAS have made it possible for colleges and universities to seamlessly run programs entirely online or with a distance-education component. Therefore, helping campuses increase enrollment by providing work/life balance to students and mimicking the college classroom experience from practically anywhere in the world. Early adopters of learning management systems had a competitive advantage over others in higher education. Now, even most late adopting institutions have an LMS as most students expect some variation of online access to their instructional content (however, it should be pedagogically noted that simply having an online LMS does not constitute having true online classes that foster social presence and learning effectiveness).

For many institutions, the LMS serves as job aids to in-person classes. A one-stop shop where students can view the syllabus, submit assignments, replay lectures, access PowerPoint slides, and view their current grades. A popular application is for the LMS to serve as a scaffold to once or twice a week, in-person lectures over the course of a semester. Samarawickremal and Stacey (2007) pick up from Rogers’ (2003) work on adoption as well as why institutions need the LMS attributes that make sense in their own organization. These researchers specifically mapped the adoption of LMS’s to Rogers adoption models, and describe how Roger’s concepts can be used by institutions to plan for innovation diffusion in their organizations. With student persistence and retention being everyone’s responsibility, assessment features have been instrumental in tracking student retention and key learning outcomes in general education courses. The reporting features available in Blackboard, under the Retention Center, provide data for at-risk students, missed deadlines, grades, course activity, and course access. These analytics support the efforts
of Academic Affairs, and the Office of Financial Aid at colleges and universities, which are responsible for reporting attendance to meet federal funding requirements. For institutions, this affordance has replaced their use of separate retention CRMs (Customer Relationship Management systems) and provides added value to an existing product. Opportunities for the LMS to be compatible with other products and be integrated with them is a win in the innovation adoption decision-making process. For instance, applications built on the Learning Tools Interoperability (LTI) standard can be integrated with various LMS platforms to add functionality and additional features (Clark, 2021).

Motivation to Adopt a Learning Management System

Boland (2020) conducted a case study on the adoption process of two universities: Monash University in Australia and Texas A&M University in the United States. Based on the characteristics of Texas A&M’s motivation, the relative advantage and compatibility of Blackboard Vista was their most important decision criteria. The LMS needed to align with current practices of the institution and provide solutions and advantages to both students and instructors. Based on this strategy they believed that faculty could deliver better content and better engage students, specifically related to discussion and student engagement. Monash University on the other hand took a pilot approach so that the adoption would be motivated by faculty participants rather than a top down approach. The drawback to Monash University’s pilot strategy, without having more systemic support, was limited access to features outside of basic settings and the immediate demand for further training and development on the LMS.

The Decision to Adopt and Implications

Historically the decision to adopt can be top-down at many colleges and universities, as was the case for Texas A&M’s top-down approach. Monash University’s process was bottom up, however, their two pilot programs had mandatory requirements. On one hand the
faculty and students were empowered and on the other hand they were just being told what to do next. In the study the users were required to participate in 15 ‘units’ in the first semester and 80 ‘unit’s in the second semester; they had little power in the decision-making process beyond the pilot study.

Rogers describes three types of adoption processes: innovation diffusion can be driven by an organization's administration, by consensus of its user base, or optionally by users (Rogers, 2003). LMS adoptions are often driven by an organization's administration, and so user buy-in has to be carefully considered and approached. Boland (2020) also discusses the implications of adoption in this study and references Rogers’ (2003) work regarding the absence of advantages and benefits. When these advantages and benefits are not definite it can lead to users rejecting the innovation. For both institutions the advantages and benefits met the needs of students and faculty.

Learning Management Systems in the 21st Century

Post global pandemic, the need for a learning management system has become a priority for organizations within and outside K-12 and higher education. Having an effective learning management system is now a critical means to connect students to peers, faculty, and the campus community, as well as an opportunity for other organizations to provide remote staff professional development on demand. New LMS entries such as Unboxed are interesting examples of instructional technology innovation. According to market research conducted by Unboxed Training and Technology, see Figure. 2, there are five trends that we can expect clients to look for when choosing an LMS in 2022 and beyond (Purcell, 2022). Taking into consideration what Rogers (2003) describes as positioning, the company “Unboxed” is looking to share its own LMS, called “Spoke”, with the world by directly applying the components deemed needed for early adopters when selecting a new LMS. Based on demonstrations shared on their website, they may be well suited for businesses who are looking to do more with employee retention, professional development, and supporting remote employee connections outside of other platforms such as Microsoft Teams. To compete in a crowded market space with much larger and established competitors, newcomer Unboxed and
their new Spoke LMS platform must attract early adopters. To drive growth and success, they must also build towards a tipping point that could lead to early majority and late majority clients.
Figure 2.
Five trends we can expect clients to look for when choosing an LMS

1. Customizable Configurations
   a. Onboarding
   b. Product and Systems Training
   c. Sales Enablement
   d. Coaching and Leadership
   e. Industry and Company Language
   f. Upskilling
      i. Recruit and retain expert-level employees

2. Microlearning
   a. Factoring in the attention span of learners of 8 seconds and creating videos with a 3–5-minute length

3. Gamification
   a. Keeping score, comparing scores, levels of success or achievement, adaptive difficulty

4. Collaborative Coaching Compatibility
   a. Easy ways for teachers and instructors to coach learners as they progress

5. Real-Time Analytics
   a. Data collection and data analytics to be able to identify at-risk students and intervene

Note. Modified from Purcell, 2022
Given the resources that organizations are investing into learning management systems, we can expect the return on investment to be requested in product deliverables. The ability to customize to the needs of the organization is critical to the product’s ability to close existing gaps and prepare for the growth of the organization. This growth can be in size or even services offered which is a key strategy considering many contracts require a minimum of five years. The product needs to meet the needs of stakeholders and users, and ensure sustainability as outlined in the organizational strategic plan. In short, learning management systems are here to stay and companies providing them will need to have the gift of persuasion and applied innovation to acquire lucrative contracts.

Rogers describes an innovation diffusion cycle where innovators adopt the new technology first, followed by early adopters, the early majority, late majority, and finally laggard or late adopters (Rogers, 2003). At this point, especially after the observable results of institutions and classes forced online during the pandemic, even late adopters now recognize the need to have a learning management system to efficiently manage and organize resources online for students.

Conclusion

Learning management systems (LMS) have become an integral part of organizations and educational institutions. This integration ranges from delivering courses for degree completion, to the onboarding of new employees, to the continuous development of current employees. COVID19 may have increased usage and served as a reason for non-users to consider adoption, but the question remains, without a global pandemic does the software application fill enough gaps for the organization to receive a return on investment? Although having a learning management system (LMS) as a job aid to in-person instruction does not make a course an online or distance-education course, it is a direct integration of technology. With a call to action for digital literacy, this is one way for educational institutions to meet the needs of their district or department. For instance, Helmahdy (2021) believes that even beyond COVID19, that schools need to adopt a learning management system (LMS) in order
to pivot, when necessary, stay current, and track student progress. With systems constantly evolving there will always be a benefit(s) to the organization, however, the decision-making process will be filled with different audits on what matters most to the organization.
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