

LMS Evaluation and Selection

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The purpose of this chapter is to define stakeholders and process surrounding the selection and adoption of a Learning Management System (LMS). Stakeholders are those individuals or groups that will have an interest in participating in the decision. These groups and individuals will be involved in the funding, use, support, and management of the new system. Prior to selection, the LMS options must be evaluated by the stakeholders to determine the best fit solution for the institution. This evaluation should involve representation of all stakeholders which will vary depending on the type of institution selecting an LMS.

Stakeholders and Roles

The LMS is the centerpiece of software for delivering electronic learning at any institution including k-12, higher education, corporate or military. Electronic learning may be present in face-to-face training or courses, hybrid training or courses, and fully online training or courses that are delivered for academic credit, professional development, or continuing education. Therefore, there are more stakeholders involved than the leadership, learners, and instructors or training facilitators. This section of the chapter will identify and define the major LMS corporations in addition the LMS stakeholders in and around an institution of higher education. Types of LMS software such as proprietary or open source, cloud based or local installation, in addition to other needs such as support options,

functions and features will be discussed.

Proprietary LMS software is distributed by for profit corporations whereas open source LMS software is distributed by non-profit organizations. The choice between these two is often based on the resources available. For example, proprietary software is often harder to customize; but if the institution does not employ programmers that are able to write code to customize the system, then proprietary might be the better option. Conversely, if the institution does employ programmers that are able to customize the system, then open source might be a better option.

Cloud-based LMS software is hosted as a web service, while locally installed LMS software is installed on a local server machine either at the institution or with the corporation that agrees to house and manage the server. The choice of these two options depends on the level of control and information security the institution wishes to have. Cloud-based is less secure but minimizes downtime for software upgrades. Locally installed is more secure but less stable as a far as downtime.

- How will the LMS be hosted, supported, and updated? Types of hosting was discussed previously. However, costs can also vary with different hosting scenarios. Support can be outsourced or done in-house. Many vendors offer tiered support packages that come at an additional cost to the software license, which is also tiered based on the level of service. Updates to the software are usually included for the duration contract unless the vendor releases a new version and the client (institution) wants to upgrade prior to the contract expiration.
- What plugins or customizations can be done and how? Many services such as Dropbox, Google Drive, YouTube, and other third-party applications can be integrated into an LMS so a user would have access across platforms with a single sign-on. Some vendors allow programming customizations such as

porting grades from the LMS to an institutional system for reporting purposes.

- How will the content form the existing LMS (if applicable) be imported into the new one? If the institution has an existing LMS, this is one of the most important questions. Can the content be moved and what functionality will be lost or need to edit after the move? For example, if a higher education campus was moving from Blackboard to Canvas, Canvas does not have the same Blog tool that Blackboard has.
- Can publisher produced materials be integrated? Many publishers are creating electronic materials to coincide with their textbooks. They also have their own LMS systems.
- What reporting options are available? Data-driven decision making is essential as we have access to more and more data. However, mining that data and being able to generate a meaningful report becomes the important feature. Different stakeholders will have needs for different kinds of reports.
- Is the LMS compatible with mobile devices? More and more mobile devices are being used to access content via the LMS (Hu et al., 2016). Therefore, this is an increasing need.

List of Stakeholders

1. Instructors - The instructors drive the use of the LMS by learners. If the instructors use the LMS efficiently and effectively, displays a positive attitude, and is confident with the LMS, the more likely the learners will have a positive experience. This requires instructor buy in, effective training, and a good change management plan for an LMS transition. Reporting functions are important for instructors to track learner progress and address issues when necessary.
2. Learners - Learners are the end users. They rely on the LMS for instructional material and progress reports. The stability of the LMS and support provided are key issues for learners.
3. Leaders- Leaders have a stake in the LMS as far as cost both

initial and recurrent; personnel needed for management, support and training; and integration with other institutional systems.

4. Support personnel - support personnel will be involved with supporting the LMS regardless of whether the LMS vendor provides a support package or not. The transition will also require additional personnel and time. The people include the technology support personnel such as the information technology office or educational division such as instructional designers.
5. Administrative personnel - There is usually an LMS administrator if an LMS existed prior to the new selection. There may be a team that is involved with the administration and support of the LMS depending on the size of the institution and the level of use of the LMS.

Selection Philosophy and Considerations

The governance of information technology (IT) services and support is an important consideration in how an LMS is selected. The amount of shared governance around the selection of academic technology tools is a reflection of the institution's culture, the levels of IT staffing available, and the amount of stakeholder's involvement in institutional decision making in general. Some institutions involve various levels of stakeholders a great deal in the design and selection of all kinds of services, while other institutions have clearly defined roles for stakeholder involvement in only portions of the selection of services; yet other institutions may not include various level of stakeholders at all IT decisions. For example, a smaller institution with limited IT staff capacity may typically choose IT services at the CIO or leadership-only level from full-service vendor partners who offer a complete "turnkey" service offering. Larger, well-resourced institutions may have more of a "DIY" culture, where the expectation is that IT services will be more centrally managed by the institution itself. Most

institutions fall somewhere in-between and are seeking IT solutions which best fit their needs, regardless of support structures required, levels of existing or future staffing levels, amounts of vendor support, and so forth: in other words, the institutional needs are placed first and strategic decisions are made in light of those needs. Therefore, such institutions must weigh all of these considerations in selecting the right LMS.

Given that the LMS is a mission critical system that affects the heart of the learning enterprise for the institution, it is best to seek as much input from all stakeholders as possible in determining which LMS to deploy. Switching from one LMS to another is an arduous process with many complex aspects for staffing, IT resources, stakeholder time and effort, and so forth, which makes picking the right one an important task that deserves quite a bit of visibility within the institution. The criteria for this selection will be discussed later in this chapter. At the end of the process, everyone involved should strongly feel a sense of ownership in the decision, that there was truly a theme of openness, transparency, and shared governance. To accomplish this successfully, an LMS selection committee with fair representation of all stakeholders will need to be established.

Establishing the Selection Committee

The Role of the Chairs. When determining how the selection committee should be chosen, there must be a project sponsor or leader who will coordinate most or all of the activities of the selection process. These activities will include soliciting the members, working with IT staff, contacting vendors, assembling documentation, and leading the communications strategies. The committee chair, therefore, should be someone who is well connected to leadership and to instructors, such as director of the IT unit in charge of the LMS or the training unit. In the interest of shared governance, an influential member of the institution should serve as co-chair to ensure that

institutional interests are always kept at the forefront. These two co-leads, ideally, will have the trust of the institution to lead the process in a fair and open manner.

Committee Membership. Depending on how big the institution is, the committee membership will vary in size, but the important factor is that the major stakeholders are adequately represented. These would include:

- Instructors
 - Different departments ensuring each major unit is represented with representation equating to size of the unit
 - Range of usage types, from those who are LMS super users who create and deliver fully online instruction to the casual users who leverage the most basic features to support face-to-face instruction
 - Mix of comfort levels, from innovators and early adopters through late-majority and laggard temperaments (Rogers & Shoemaker, 1971)
- IT Staff
 - Instructional technologists
 - Support personnel
 - Security and server professionals
- Professional Development Staff
 - Instructional designers
 - Online learning specialists
 - Pedagogy consultants/experts
- Support Services Staff
 - LMS Administrators
 - Personnel that support the LMS
- Learners

A representative sample of end users of the LMS. In all, it would not be unusual but highly advisable to have a committee comprised of 20-30 people. Understandably, this can make scheduling difficult, but the selection of the LMS is so important that members will make meetings a priority. Administrators receive the recommendations and reports from this committee and are represented by the chair and co-chair, if they do not elect to serve on the committee.

Recruiting the Committee. There are two main options for recruiting the members of the committee. The first is for the chairs to directly solicit members personally. The second is for the chairs to ask a senior leader to appoint the members to the committee. Depending on the institution's culture, the latter can be a fruitful way to get involvement established quickly and raise the visibility of the work. If that option is not a viable, the appointment option can also be filtered through the next layers of leadership such as the department chairs.

Timeline of Committee Activity & Length of Service. In order to maximize committee members' participation, they will need to know exactly what they have signed up for. First, the chairs must determine what the "drop dead" decision date is for making the selection and work backwards from there. This date is usually determined by considering the academic calendar, the IT staff capacity to ramp up a new system, the instructor training required, funding deadlines, and so forth. A suggested way to simplify this is to establish that the new LMS will be rolled out at the beginning of the next academic or fiscal year, like August 1 for academic, and determine every step or milestone leading up to that date. In this academic example, the system would need to be purchased and in place by March 1, to allow time for training and migration, which means that contracts and licensing processes would need to be completed by February 1, which means that the decision would have need to have been made and widely vetted by all stakeholders by December 15 and so on. This is an aggressive timeline. Many institutions elect to have a year overlap of the two LMS systems to ease transition and training timelines.

Whatever the rollout date is, the major operational and implementation milestones must be determined so that the selection committee can complete its process plenty of time. Considering these factors and timetables, the committee should start and finish its work within as a short timeframe as is practical. When conducted correctly, a single semester or fiscal quarter should be sufficient. This may seem like an accelerated pace to many academic stakeholders, since academic committees are often long, slow, infrequent, and lacking in clear mandates or deliverables. If the institution has a longer horizon until adoption, the process could be extended by the committee meeting less frequently. However, the danger is that the committee may never establish momentum, create fatigue, suffer participant mortality through scheduling conflicts, and other issues that might arise. Thus, meeting weekly or bi-weekly for three months is short, simple, and to-the-point.

Communication Strategies

The activities of the selection committee need to be communicated widely and frequently to a variety of audiences. It is recommended to establish a simple communication channel for all activities to be noted, such as a website that is frequently updated and shared with constituents. This website should contain the names of the committee members, the charge from the leadership, the meeting minutes, and all supporting documentation such as summaries of data collection.

The committee members should also serve as personal communicators within their departments, in committees, and so forth. They are ambassadors for their colleagues' needs and ambassadors for the selection process itself. Likewise, the co-chairs need to regularly communicate to leadership about the progress of the committee through written and oral reports, both formal and informal.

Selection Criteria

Research

A quality committee is a well-informed committee. Prior to gathering data about the infrastructure and culture of the institutions and the needs of the stakeholders, the committee must first conduct some research in order to be well informed about the charge. How this research takes place is up to the chair and or a collaborative committee decision. However, the committee members should all become informed about LMS vendors, features, transitions at other institutions, and support issues. A variety of sources should be evaluated such as industry publications, professional organization publications, research publications, and published LMS transitions reports and surveys. A large committee can be helpful in this area because the research effort can be divided, conquered, and reported back to the committee. Sometimes, sub committees responsible for different research topics are formed.

IT Staff Capacity & Service Model

One of the first things that needs to be determined is what the institution's IT service model is for providing and supporting the LMS. A large IT staff may be able to self-host the LMS, but a smaller staff will require vendor hosting. There are other considerations beyond hosting, too, such as who will do the integrations, upgrades, security patching, and so on. And not to be overlooked is to determine who will provide 24/7 tier I helpdesk support. Support is often defined in tiers based on the ease of solving the issue. A tier I issue would be a simple one such as a forgotten password. The bottom line is to know what the right mix will be between IT and vendor service provision. Without ever digging into the desired instructional features, one or more LMS offerings could be removed from committee consideration based on IT capacity alone. And even if self-hosting is desired by institutions with

smaller IT staffing, this may limit LMS customizations that instructors and learners may need. Institutions must carefully weigh the opportunity cost of such decisions.

Stakeholder Needs

In order to understand the needs of the different stakeholder groups, the selection committee should establish some data collection methods to garner input. This helps ensure the feeling of inclusion and a quality selection process. An electronic survey to all stakeholders, committee listening sessions, and selected or random interviews could all be viable options to gather input regarding preferences of features, desired support, and integration of other instructional tools. The committee should take into consideration time constraints, leadership preferences, and data analysis/reporting techniques when selecting these methods of data collection. Careful consideration should also be taken with the content of the data collection instruments used. Some key issues to consider in the content of the questions are reliability (downtime), extensibility (integrating external tools), usability (ease), and mobile friendliness. LMS evaluations and selections of the past also included desired features. However, as LMS software has evolved the major players tend to have the popular features needed. Therefore, this might not be as needed as it was previously. The committee needs to gather a clear picture of the stakeholders needs to make the selection of the best fit LMS.

Gather data

Once the committee has the data collections plan in place, the plan should be followed. Data analysis should take place and a needs assessment report generated. This report will be reviewed and submitted to chair of the committee and administrators. The data will be used to write the RFP (Request for Proposals) that is then sent out to vendors. The vendors will respond with their proposals based on

the RFP. The RFP should include the following details: Company information, LMS needs, desired or projected usage statistics, and a draft project timeline.

Conduct Cost Benefit Analysis

Determine the Total Cost of Ownership

Cost is an important part of any IT service offering. To make a true comparison of costs between possible LMS offerings, decision-makers need to look beyond only the direct cost of buying the service itself to find out the total cost of ownership. For example, open source IT products are often touted as “free,” though the cost of hardware, staff, support, and others could all add up to a hefty price tag. Furthermore, costs should be calculated on a three- to five-year basis to get a clearer picture of ongoing costs, since the ramp-up costs in the first year are typically greater than the subsequent years. Vendors often present tiered pricing for years or lengths of contracts.

The following items comprise the direct and indirect costs that make up the total cost of ownership:

1. LMS licensing fee - usually the largest single cost item; could be hundreds of thousands of dollars; often calculated on learner usage at the institution.
2. Hosting - vendor hosting versus self-hosting; self-hosting involves hardware (and hardware replacement cycles), file storage servers, staff costs for patching and upgrades, and more.
3. Support - in-house versus outsourced or a combination of both; consider staffing levels and needs, including salary and benefits (when thinking about outsourcing, compare with current cost of each call to your university IT help desk, e.g., determine how many calls are LMS related, how many calls a staff member can

- answer annually, etc.)
4. Training - initial training during migration and ongoing training needs in year two and beyond.
 5. Technical integrations - staff time and costs to integrate other systems with LMS, such as video streaming, authentication, and other needed systems

Some costs will be one-time costs, though most should be considered on an annual, recurring basis. A special note should be paid to instances where straight “apples-to-apples” comparisons are not possible and whether the cost differential in such instances is justified or provides a new service level offering. For example, some LMS providers offer 24-hour/7-day support. If the current IT support environment is not 24/7, then this is not just a new cost but truly a new service, an expansion beyond the old capability. This should be considered as a benefit and have a different justification tied to it when doing cost comparisons.

Concluding Actions

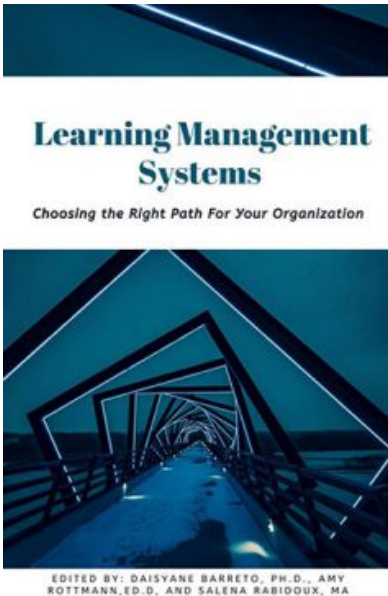
Once the vendors have been solicited through the RFP process, which is handled through the purchasing department, the committee will review the proposals received and select a small number of vendors (1-3) to come and present/demo the product to the committee and invited stakeholders. These presentations are usually sales pitches that highlight the positive statistics and testimonials of the LMS, but there is a question and answer period at the end of the presentation for stakeholders to determine if the LMS will suit their institutional needs. The committee should be ready with questions for the vendors that relate to the specific institutional needs. If other stakeholders, who are not on the committee, were present, then feedback should be solicited from them to inform the committee. This can be done informally or formally through electronic survey. Once presentations are complete and all data has been gathered, the committee will make

a selection and develop a recommendation report. If the leadership agrees with the recommendation, then the LMS will move into a pilot phase in which support personnel will gain access and training followed by a select group of stakeholders who will pilot the system before it is widely released to the institution.

References

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