

Information and Communication Technologies in Education



Learning Management Systems Critical views

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LMS: Critical Views

- LMS critical views
- Challenges for LMS
- LMS & Pedagogy
- LMS influence on learning
- Web 2.0 technologies for LMSs
- LMS and mobile devices.



Critical views

- The principles of today LMSs have not changed much from mid 1990s.

- General agreement among eLearning researchers:

the quantity and quality of learning occurring within LMS remains limited.

- It is about a teacher-centered environment:

- *The pedagogical model used mimics traditional classroom (instructor-delivered) that emphasizes linear learning.*
- *LMSs tend to meet rather the needs of the organization and the instructor than the learner.*

- Despite additions concerning collaborative, and synchronous features, LMS still tend

to lead instructors towards a particular pedagogical approach.



Issues with LMSs

- Lack of flexibility:
 - *An LMS, by its nature, is structured and it is not customizable for instruction aimed at a specific audience with specific content.*
 - *Usually LMS delivers generic, not personalized learning.*
- Usage patterns suggest that the LMS is primarily a tool set for administrative efficiency rather than a platform for substantive teaching and learning activities.
- There are limited informal learning possibilities.
- Lack or poor Web 2.0 features.
- Uncertain effects on student engagement.
- Supporting ubiquitous learning:
 - *Limited support of mobiles devices to enhance ubiquitous learning.*



Flash Activity

Αναφερθείτε σε
προκλήσεις / ζητήματα
που αφορούν στη
λειτουργία ενός LMS.



<http://www.zahncenternyc.com/>



LMS - challenges

- The future of LMS should be agile, integrated and interoperable.
- Challenging improvements:
 - Customization / personalization (to cover individual needs).
 - Learning analytics (provision of data on student course activity, progress and achievement).
 - Assessment (needs for more flexibility, cheating issues)
 - Integrating LMS with other campus systems and tools and data (both for routine and strategic endeavors).
 - Demands for mobile capabilities.
 - Need for cloud-based services.
 - Acquisition strategies^(*)
 - Adapting LMSs to local needs^(*)
 - Managing rising costs^(*)
 - Maintaining system stability and integrity^(*)



en.wikipedia.org

^(*) <http://www.educause.edu/ero/article/envisioning-post-lms-era-open-learning-network>

LMS and pedagogy

- There is a growing trend to critique existing LMS for their pedagogical limitations.
- LMS are not pedagogically neutral
 - *through their design they ultimately influence and guide teaching.*
- Pedagogical differences exist between LMS though:
 - *Moodle (OSS) was developed based on social constructivism.*
 - *Blackboard (proprietary) positioned itself as pedagogically neutral.*
- In order to maximize the potential of an LMS significant pedagogical support is likely to be required.
- Educators should be confident and competent with LMS's capabilities in order to have positive outcomes for learners:
 - *the effective use of LMS by engaged teachers supports engaged learners, and*
 - *engaged learners have better learning outcomes.*



pixabay.com



What 's the influence of LMS on learning? (engagement and learning outcomes)



er.educause.edu

- Obviously, LMSs are affecting student habits and teaching.
- Little is known about the degree to which LMS induce student engagement.
- The quantity and quality of teacher presence are influential factors in developing student online engagement.
- Some findings indicated a positive correlation between the number of student clicks on LMS courses and their grade.
- Other data (*log-ins, usage periods, uploads, downloads, participation to activities etc.*) provide opportunities for instructors to identify patterns of learner behaviour, periodically – *Learning Analytics*.
- On average, students in online learning conditions performed modestly better than those receiving face-to-face instruction.



LMS and flexibility



- Flexibility in an LMS:
 - *The adaptability to varied learner, instructor and subject requirements for achieving the best possible learning outcomes.*
 - *The ability to easily move learning content in and out of the LMS and to customize applications to meet specific needs of learning.*
- LMS's features and capabilities (*conferencing, forums, test engines, group workspaces, gradebooks, etc.*) are making the virtual classrooms smarter, but these features do not add to their flexibility
 - *LMSs are not efficient in teaching particular subjects to particular learners.*
- Inflexibility may cause institutional processes to be modified to align with the system, rather than the software meets the learning needs.
- It is necessary to gauge whether all these tools employed by the LMS satisfy the flexibility criteria.



Inclusion of Web 2.0 technologies (1)



- LMS are instructor-centric. *Instructors create courses, upload content, initiate threaded discussions, and form groups.*
- Opportunities for student-initiated learning activities in traditional LMS are severely limited.
- Also, parameters and boundaries of LMS limit opportunities for informal learning.
- LMS should be a student-centered application (*by giving students greater control over content and learning*).
- Hence integration of LMS with Web 2.0 technologies is a challenge for traditional LMS models. Web 2.0 tools support opportunities for:
 - learner interactions and collaboration, as well as
 - supporting the personal conceptualization of knowledge, engagement with knowledge in new ways (personalized learning).

Inclusion of Web 2.0 technologies (2)



- Web 2.0 technologies can support the transformation of formal education contexts.
- At the same time, they could provide a significant challenge for existing models of LMSs.
- Some commentators suggest there is limited value in attaching Web 2.0 tools to current models of LMS,

as their pedagogical and architectural structures are inherently Web 1.0 and therefore incompatible with the principles and practices of Web 2.0

- eLearning 2.0:
 - *In spite of some unresolved issues concerning security and incorrect information, eLearning 2.0 that has emerged from the development of Web 2.0, is a dominant theme in discussions of the future of eLearning environments.*



Support of mobile devices

- Mobile devices are not well suited to traditional courseware delivery.
- They are rather for information delivery and performance support.
- But they also are personal, private, pervasive and familiar.
- Particularly useful for social media functions related to eLearning
 - *view content, participation to discussions, postings, commenting on blogs etc.*
- They are ideal tools for ubiquitous learning
 - *Learning that develops in response to personal learning demands and that can happen everywhere and at anytime.*
- Most suitable for small chunks of learning objects (test, videos, etc.)
- Games for learning can also work on mobile devices.
- Fit learning into learner's life, including "dead" time such as traveling, queuing, etc.



LMS and mobile devices

- Responding to the rise of mobile computing, all major LMS vendors are demonstrating or marketing mobile access.
- Two competing visions:
 - *Engagement with mobile devices and application (native applications). Fast and lightweight but device specific and with high costs.*
 - *Interaction with a browser (m-site). Ubiquitous, mature, and device independent, but slower, inflexible, misses out on some hardware features, and is harder to access for some smart phones (responsive design).*

Mobile learning combined with cloud computing makes virtually limitless amounts of content instantly available to limitless numbers of users.

Competing visions of mobile LMS

