

How to decrease teaching administration while maintaining learning outcomes by using CALL without LMS

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abstract

This presentation is for computer system administrators seeking to reduce LMS (learner management system) costs while maintaining learning outcomes. LMSs track when and what students learn. For each student and learning task, the LMS reports variables such as the length of time spent on the task (time on task), the number of renditions of the task (practice count), correctness of the renditions (response accuracy), and the tasks preceding and following the task (task order). These statistics are valuable yet too voluminous and detailed to be analyzed while learning is taking place. LMSs are costly to install and administer. Some features are rarely used, either because there are extraneous features, or because there is insufficient personnel to use them. By contrast, web servers that merely ask questions and provide answers to users are almost as effective as LMSs. Adaptive testing increases learning efficiency. Opening the system to the public showcases the institution's capability. Not tracking the learners' learning history reduces costs. At my institution, the leading use of LMS is enforcing the completion of assignments. Among our CALL-based courses, Chinese language courses ceased using LMSs, and English language courses are transitioning away from LMSs. The reasons are (a) tracking individual students is not practical when the student-to-instructor ratio exceeds roughly 100 to 1, (b) enforcing task completion is unnecessary when task items comprise a question pool from which midterm or final exam questions are drawn, and (c) learning opportunities increase when students are not required to log in.

take-away message

- LMSs track learners individually, and help grading students and improving courseware
- improving learning during the course is impractical due to data overload
- if you do not need to measure the online activity of each student then LMSs are unnecessary
- cut costs by using a web server that asks questions and gives answers without tracking students individually
- ask students to say or write responses; consider asking students to state their name and student ID number; stating names is particularly effective with spoken responses
- during each login session, adaptive testing is feasible
- across separate login sessions, stratified (i.e., level-graded) tasks are feasible
- consider pairing online tasks with paper-based quizzes, midterms, finals
- if you design paper-based exams that directly benefit from online tasks (particularly language production tasks) then students tend to study online even if nobody tracks their learning

tracking learners reveals

- learner-dependent variables
e.g., inter- and intra-learner correlation
essential for grading assignments or exams
- task-dependent variables
e.g, mean and variance of time on task,
response accuracy)
task-dependent analyses do not require LMS

analyses are costly

- feasible for small groups of learners
perhaps up to 100 learners per instructor per class
- impractical for large groups of learners while course is underway
- cause and effect often unprovable
data of limited research value

data overload

日時	アクティビティ
2019年10月9日(水) 10:58	2. freestyle conversation を開始しました
2019年10月9日(水) 10:58	3. freestyle conversation を完了しました
2019年10月9日(水) 10:58	3. freestyle conversation を完了しました
2019年10月9日(水) 10:50	3. freestyle conversation を開始しました
2019年10月9日(水) 10:49	2. amateur radio を完了しました

study without tracking

- learners study as long as they are rewarded
my colleagues and I used to believe that students need prodding (and some always will) but we found they require less than we feared
- web servers that merely ask questions and provide answers to users are almost as effective as LMSs
- obtain analytical data of task-dependent variables
- students study if untracked online tasks are linked to individual assessment
- encourage study without tracking
- production tasks (students state their name)
- paper exams based on online tasks
- multiple-choice adaptive drills (feasible within each login session)
- stratified, level-graded tasks (feasible across multiple login sessions)

examples of web servers

- some apps or services for surveys can replace LMSs
- Microsoft Forms (free)
<https://forms.office.com/>
- ClassMarker (inexpensive)
<https://www.classmarker.com/>