

Review of: "Enhancing Science Education with Learning Management System for Effective Learning Outcomes"

Lisa Elfring¹

¹ University of Arizona

Potential competing interests: No potential competing interests to declare.

It was not clear to me whether this article is intended to be a research article on how LMS use supports learning, or a resource guide; the first two sections seem to be a sort of literature review, whereas the last several sections read as bulleted lists or an outline. Therefore, I'm providing the following recommendations for either case:

- If intended as a research article, several prior works are cited that are not peer-reviewed publications (for example, Adebiyi 2019); remove and replace with appropriate academic citations. The article also uses hyperbolic language (for example, science scores are “deplorably low”) when simply saying they are consistently low is sufficient. Beyond the first two sections, the remainder of the sections read as bulleted lists; there is no narrative that provides a compelling connection to describe an intervention with results, nor what features of the LMS are important in supporting science learning.
- If intended as a resource guide, I would suggest revising the title to indicate this; removing the “science” thread because a LMS can support learning in any discipline and nothing reported here is specific to science learning; and providing links where specific products or vendors are named. I would also recommend deleting or greatly shortening the section Learning Management System, although I learned some interesting history from this section.

It was also not clear to me whether the intended audience is secondary or post-secondary educators or instructional-technology specialists. Being up-front about the purpose and intended audience for this work would be helpful, as would including more context about what aspects of the LMS has best supported learning (using peer-reviewed work).

Regardless of whether this publication is intended as a research paper or a resource guide, I did not find the information in the section entitled How Does Education Take Place to be compelling, and it also lacked appropriate citations. I would recommend removing and replacing with a link to a comprehensive guide to learning such as How People Learn (National Academies Press, 2000), available freely at <https://nap.nationalacademies.org/catalog/9853/how-people-learn-brain-mind-experience-and-school-expanded-edition>.