

Vol.4 No.1 (2021)

Journal of Applied Learning & Teaching

ISSN : 2591-801X

Content Available at : <http://journals.sfu.ca/jalt/index.php/jalt/index>

The Use of Learning Management System (LMS): Are we 'using' it right?

Kwong Nui Sim^A

A

Senior lecturer/learning and teaching consultant at AUT Learning Transformation LAB, Auckland University of Technology, New Zealand

Keywords

Blackboard;
blended learning;
higher education;
learning management system;
teaching and learning;
university.

Abstract

Due to the rapid progress of the use of technologies in academic practices, higher education institutions around the world are investing heavily in various learning management systems (LMS). LMS, such as Blackboard, is considered among the most commonly used in the process of teaching and learning. This pilot study aimed to identify the academics' assumptions and expectations of Blackboard use that had influences on their practices at a New Zealand university. Data were gathered through class observation sessions with photograph and video capture as well as individual discussions for a trimester (13 weeks). Focus of the thematic analysis was on the viewpoints expressed by the academic participants on their Blackboard courses and in their discussions, as well as in their classes about their ideas, practices, and beliefs in relation to their Blackboard use. The major findings that emerged from the data were the diverse perspectives of the roles of Blackboard in the process of teaching and learning that led to the questionable use of Blackboard in terms of "efficiency" and "effectiveness". It is evident that explicit support needs to be provided to academics in order for them to understand the affordances of Blackboard and thus to use Blackboard pedagogically in the process of teaching and learning. The study advocates for a shift of Blackboard use in relation to a new understanding of teaching and learning schemas in higher education.

Article Info

Received 11 January 2021
Received in revised form 12 March 2021
Accepted 23 March 2021
Available online 23 March 2021

DOI: <https://doi.org/10.37074/jalt.2021.4.1.8>

Background

Twenty-first century higher education is increasingly incorporating “e-elements” into teaching and learning contexts. Learning management systems (LMS), such as Blackboard, play a vital role in this process as institutions explore more complex methods in the quest to create digital institution and digital students. The basic role of an LMS is to plan, implement and assess a specific learning process (TechTarget, 2019) as it provides the backbone for the workflow of a teaching and learning process. Thus, LMS use leads to a paradigm shift in the process of teaching and learning from the conventional method, which in a way forms the basis of blended learning and even to ensure the student success in this mode (Buschetto et al., 2019). However, it is unclear to what extent the LMS has played a role within the process of teaching and learning, especially in the context of blended learning.

Rationales

The existing literature seems to only focus on “what” tools are on Blackboard that could be used to benefit the process of teaching and learning that includes distance education (e.g., Bradford et al., 2007; Liaw, 2008; Mahnegar, 2012; Walker et al., 2016). In addition, the literature on innovation and adoption of educational technologies (i.e., Technology Acceptance Model proposed by Davis 1986) suggests that many academics implement a constrained or limited view of the capabilities and potential of a digital tool including an LMS. Typically, academics tend to adopt a conservative or “sustaining” approach where the tool is used in ways that complement existing activities without stimulating any substantive changes.

A recent study reveals that the majority of faculty and the students were satisfied with the basic operational functions and features of an LMS (Dahlstrom, Brooks & Bichsel, 2014). While there is an expectation and/or assumption that the use of the LMS enhances the process of teaching and learning (e.g., Simanullang & Rajagukguk, 2020), the pedagogically efficient and effective use could have been overlooked. There are also issues that hinder the perceived use of the LMS in relation to engaging with students’ experiences in academic practices (Venugopal & Jain, 2015), particularly within the notion of blended learning. As this article will show, one way to make LMS use more efficient and effective would be to promote the development of new learning schemas that are incorporating a high level of production leading to broadcasting/open-sharing using LMS.

This study

This pilot study investigated the use of the tools on Blackboard in the process of teaching and learning among academics at a public university in New Zealand. The study examined academics’ beliefs and practices regarding Blackboard use in order to support more extensive and ambitious use of Blackboard in the teaching and learning process. This study was proposed in conjunction with the introduction of the minimum online presence policy at the institution, where

all the courses have to adopt the use of Blackboard to a “minimum” level (the scope is yet to be defined). At the same time, the author advocated to transform the current teaching approaches, such as blended learning and flipped classrooms, within Blackboard.

Data sources included class observation sessions with photograph and video capture, as well as individual discussions with each academic participant (a total of 6) over a trimester (13 weeks). The academic participants consist of volunteered academic participants representing different seniority as well as discipline backgrounds at the university. The focus of the data was to determine the alignment between specific features or affordances of Blackboard, the learning objectives of the courses, and the beliefs held by the academics responsible for the design and operation of the courses that affect the use of various tools. Through observing the participants in the classes as well as on their Blackboard courses, the study captured how these academic participants incorporated Blackboard in their process of teaching and learning. The follow-up individual discussion sessions revealed the understanding of Blackboard use among the participants, and therefore the findings provided insights into ideas about how institutions could develop a shared sense of the LMS use. An understanding of the ways academics involve their students with Blackboard or other technological platforms in the teaching and learning process was gained throughout the trimester.

It was envisioned that the data would link into course design at the end of the trimester in order to produce a Blackboard use guideline in teaching and learning process for academics at this particular institution and beyond. The study adopted an interpretive, naturalist enquiry and analysis approach proposed by Guba and Lincoln (1989), and was framed by the question “How do the assumptions and expectations of Blackboard use held by academics influence their practice and vice versa?”

Findings

Two themes emerged from the data:

- (a) The perspectives of the role of Blackboard lead to practices
- (b) The questionable use of Blackboard, in terms of “efficiency” and “effectiveness”

(a) The perspectives of the role of Blackboard lead to practices.

The discussion data indicated that some academic participants had a positive attitude about their use of Blackboard in the process of teaching and learning when they thought they were familiar with certain tools on Blackboard. For example, they talked about the commonly used discussion tool and Blackboard as a place to post their lecture slides.

"I use the discussion forum... [the class is] quite large; a lot of stuff is answered through groups."

"With the slides... [the students] don't need to copy off the whiteboard... so they pay more attention to the course... allows the opportunity to ask questions... interaction."

The majority felt positive about Blackboard use due to the daily convenience instead of utilising this platform to enhance students' learning experiences. The participants thought it was a good idea to have:

"one place for students that has all the links for the course materials, slides, links to videos, etc."

"pre-recorded lectures which are shorter and more to the point rather than the lecture where I stand up in front of the class."

"[the convenience]... students have easy access ... Video recording links."

"[the convenience] to use Blackboard now... good to publish slides & homework ... can reuse this next year... for same assignments"

"more time to prepare the class for the first time [on Blackboard], then it's easier for the second time."

"[Blackboard] for practical reasons ... don't have to go to the office to pick [the assignments] up ... can download and print them in my office – filter through Turnitin."

"some ways it does make my life easier ... I don't have to print work sheets for [the students] to take to the lectures... students grab them [via Blackboard] beforehand."

Similarly, another participant said the tracking ability on Blackboard allows him to know "what is going on in his class" even though the tracking function only gives a general overview instead of individual students' tracking per se, for instance:

"I can check the students are using Blackboard or not... in terms of the student engaging or not... if I saw them in a lecture or not, I can see if they've been on Blackboard or not... Or if they've had a look at a particular item on Blackboard... that's nice to know."

Simultaneously, there are negative perspectives of Blackboard use among the academic participants, derived from their personal assumptions and expectations of technological use (Blackboard in this circumstance) in

teaching and learning. For example, some said:

"Blackboard is clunky."

"Announcements are not very helpful – students don't read them."

"Online [Blackboard] feedback is ineffective."

A few participants were discouraged by the 'dehumanising' aspect of Blackboard use that was believed to have an impact on their teaching and learning process. The examples were:

"Communication via email or in person ... not through Blackboard."

"Challenging to make [Blackboard activities] interactive."

"Online discussions are great but forums can be a bit of a cumbersome way... whereas a two minute conversation can be [more useful]"

Some participants were concerned about Blackboard being a safe space for both teachers and students, especially when it comes to discussion activity. Such views included:

"especially exposing yourself with your opinion and answers on a semi public discussion forum like Blackboard is scary and students don't like that."

"The online feedback forms on teaching... [I] won't go online & do what's not seen as necessary... some [of us] are afraid... [there is] fear [that] there will be consequences if [we] make a negative comment."

There were also negative perspectives that showed the lack of understanding of what Blackboard could offer:

"how students use Blackboard is only for Slides."

"There's lots of features we never use in [our discipline] – blogs, or discussion forums, they are never ever used."

Lastly, several participants used Blackboard as a method of compliance. They believed that:

"If we didn't have Blackboard and online access to learning materials, the students would very quickly get upset with us"

"[I use Blackboard] to appease the students."

This theme signals the concern that LMS use is not weaved into pedagogical planning when LMS is believed to be able to enhance a teaching and learning process. Furthermore, the discussions, as well as the classroom observations, over a trimester period revealed the lack of linkages between the

activities in the classroom and on the Blackboard course. For example, the students were busy taking notes during the class (Figure 1) as there was nothing on the Blackboard course before, during, or after the session that was relevant to what was taught in the class. Being on the participants' Blackboard course as well as from the students' viewpoints, what was shared on Blackboard was purely a "repetition" (e.g., a set of identical slides or a recording of the session) instead of a "link" between in-class teaching and pre- or post-class activity.



Figure 1: An example of the scenes when the students were busy taking notes in the class.

Additionally, this theme showed academics' limited understanding of how Blackboard can actually be beneficial in the process of teaching and learning. One can never know what they do not know, so while academics are expected to and could learn through their experiences and via peer sharing, the limited understanding in this regard could have an effect on the LMS use in a bigger picture as discovered in this study.

(b) The questionable use of Blackboard, in terms of "efficiency" and "effectiveness".

The academic participants' Blackboard courses in this study led to the question on the notion of efficiency and effectiveness of the LMS use. Overall, the courses of this cohort of participants illustrated their use of Blackboard as a repository as demonstrated in Figure 2 and Figure 3 below.

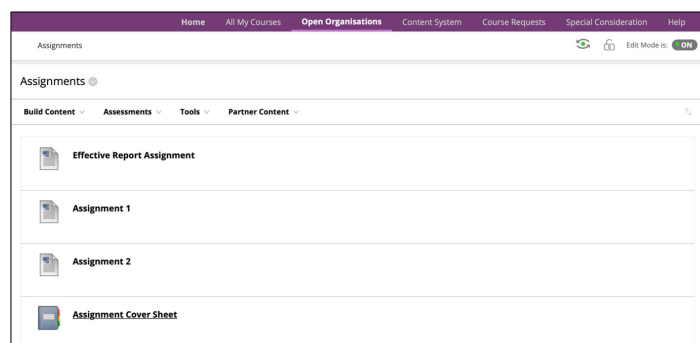


Figure 2: Repository for assignments. (The site is renamed in order to protect the anonymity of the participant.)

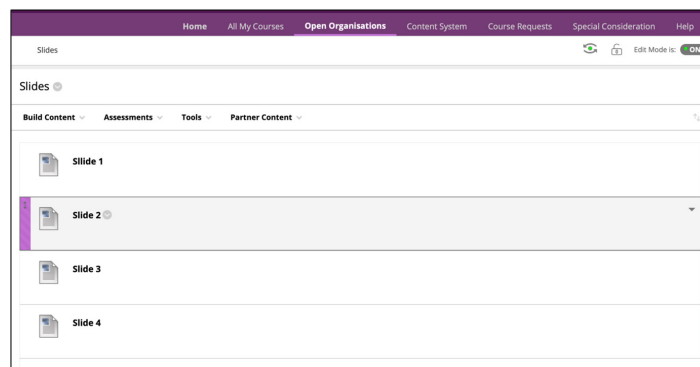


Figure 3: Repository for slides. (The site is renamed in order to protect the anonymity of the participant.)

It is legitimate to use Blackboard as a repository but this only restricts the interactivity between the teacher and the students as well as among students due to the one-way communication structure. Interaction is significant in the teaching and learning process, either in the class or outside the class, in order to enhance the learning experiences and the learning outcomes. On the other hand, Blackboard provides various built-in tools for interactivity, such as Discussion Board, Journal, and Blog that appear to be under-used, as seen in this study. The participants' Blackboard courses show that and there is no difference of use across different disciplines. The commonly adopted tools are the announcement (a one-way communication channel), the folders with an abundance of information about the course (an overwhelming resource platform), and the grade centre (a strategy to keep the students' interest to log into Blackboard). Not only is the tools selection narrow, but some of the Blackboard courses also seem to be less user friendly in terms of being less systematic and organised, lack a sense of intuitive navigation, and inadequate visual effect (e.g., the choices of colours and fonts). For instance, Figure 4 below presents an example of a rather confusing reading list that has no instruction to support the students' learning in this regard.

Besides, it is worth noting that through class observation sessions, with photograph and video captures as well as individual discussions with individual academic participants for a trimester, also identified the academics' perspectives of digital technologies in general that influenced their Blackboard practices, specifically in terms of efficiency and effectiveness. Examples of the academics' reflections in this aspect are:

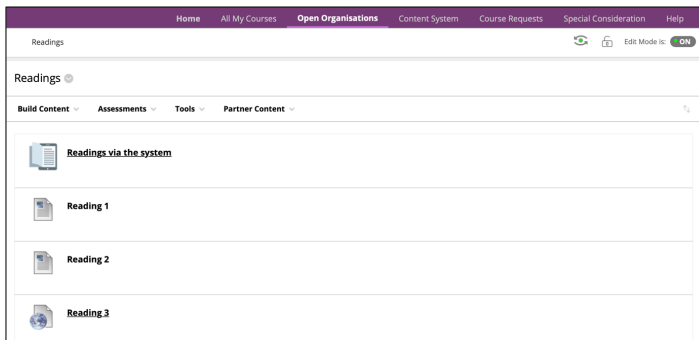


Figure 4: An example of substandard Blackboard course design. (The site is renamed in order to protect the anonymity of the participant.)

"[Blackboard is] not as intuitive as a YouTube clip – that's probably what you get used to – students are used to Facebook – one click and then you see things."

"I usually google my assignment questions to make sure someone else doesn't have the perfect model answer and I quite often find something that is very similar on Yahoo."

" Yes – [Wikipedia] demonstrates you can always find an answer – the importance of material."

As noted in these quotes, the academics distorted the differences between an LMS (i.e., Blackboard) with a social media platform (e.g., Facebook), a search engine (e.g., Yahoo) and/or an online reference source (e.g., Wikipedia). While it is possible to integrate these digital tools/platforms onto Blackboard in a pedagogical manner, the academics need to be aware of each of their key functions, especially in the teaching and learning process. Ignorance or uncertainty of these digital environments has an impact on the efficient and effective way of using LMS as proven in this study.

In summary, the findings from this study exemplified that the assorted perspectives on the use of LMS in higher education appear to be the barriers for the effective and efficient use of the LMS in the process of teaching and learning. This is particularly the case when academics seem to be satisfied with their existing use. It would be ideal if academics could develop more confidence and be more positive about the use of LMS in a more creative and innovative manner (e.g., think outside the box). For instance, academics could be more proactive in discovering the advanced use of the tools on LMS instead of being restricted in their understanding of the roles of LMS, especially in today's higher education.

In addition, the diverse perspectives of the roles of Blackboard in the process of teaching and learning exposed the limited pedagogical aspect that is underpinned in its use. It appears that the academics used Blackboard based on their assumptions of what it is used for, and their use of Blackboard in teaching and learning only uses a certain degree of embedded pedagogical reasoning. Academics may not be aware that LMS does not just have the ability to deliver the curriculum but also to advance the learning practices of students. These assertions align with Macharia

& Nyakwende's (2010) study on academics' intentions to use LMS for teaching and learning where they stated,

Universities world over are increasingly deploying learning management systems to enhance the quality of teaching and learning as well as to increase access to higher education. However, since technology rejection is common, the future of universities depends on their instructor's capacity to adopt and diffuse such technologies to meet the intricate needs of the academic masses. (p. 220)

This could be exemplified when an LMS is implemented in an institution but there are limited guidelines to show academics on how to use it could be pedagogically sound in actual practice, at least in this institution where the study took place. It would be worthwhile for academics to be informed about what the LMS tools are so they can use them effectively and efficiently to enhance their teaching and learning processes.

Discussions

As mentioned earlier, the institution where this study took place introduced the minimum online presence policy in 2015 with Blackboard as the preferred LMS. This has echoed the results of the most recent survey on LMS use in higher education where Blackboard is recorded as the most popular LMS (Edutechnica, 2016). Nevertheless, the high use of an LMS is not in parallel with the academics' understanding of how an LMS could fit into the higher education study context.

In the higher education setting, especially for undergraduate study, student workloads are split between contact time (class teaching time) and non-contact time (independent learning time). Much of our understanding of teaching & learning has traditionally been focused on contact time (e.g., lectures, labs, and tutorials). As a result, the role of LMS systems, such as Blackboard, have been focused on supporting contact-time activities (e.g., a duplication of class teaching activities on Blackboard such as the same set of slides). From this study, it is clear that the real benefit of digital teaching and learning environments is their ability to promote and enhance learning activities within the non-contact spaces. Some previous studies have shown that many students struggle to structure their independent learning time and struggle with the act of studying (Sim, 2012, 2015). It appears that students have a desperate need to access relevant, useful, and challenging learning opportunities via digital devices 24/7 (LMS in this context). Learning opportunities include a variety of sophisticated, structured, and modulated activities that incorporate various levels of shared interactions from the teaching activities. In other words, it would be constructive to make use of LMSs that promotes the fusion of both contact and non-contact time in order to produce meaningful and authentic teaching and learning experiences.

A further ideal possibility is that we develop a shared understanding of LMS use in the process of teaching

and learning with an approach that embraces a fusion of both consumption and production activities. Such fusion incorporates new learning schemas that are self-organising, activity-based, network-centric, and incorporating a level of production leading to broadcasting/open-sharing. This approach has the potential to cultivate a hub of teaching and learning that promotes the development of new knowledge. However, the complexity is that the idea of teaching and learning has to be in parallel with the knowledge of the affordances of LMS in order to create a new teaching and learning approach. Therefore, the in-line possibility is to structure a support system within an institution, where the academic developers support academics to enhance the pedagogical use of educational technologies (e.g., LMS) and the presence of learning and teaching technology specialists/learning designers based in each faculty/school will provide hands-on technological practices to the academics, as presented in Figure 5 below.

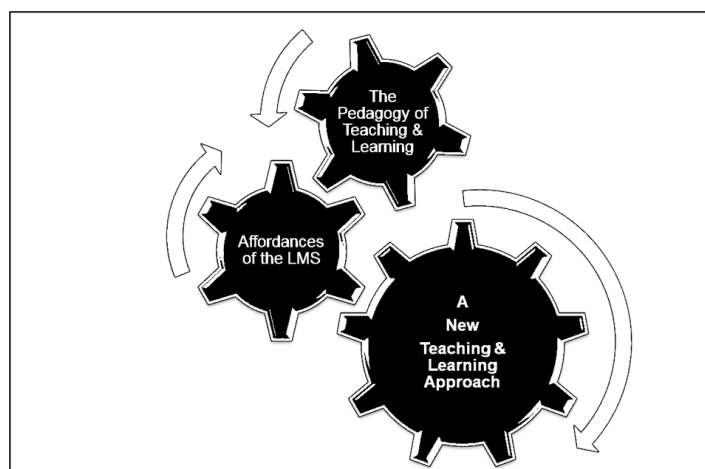


Figure 5: A Prospect to Develop Shared Understanding of LMS Use.

The support could be significant as highlighted by Missula (2008), “staff training has had impact on the usage of Blackboard as more than half participants have taken training and expressed their improvement of Blackboard usage for their courses. Ongoing training therefore increases usage [and innovative use]” (p. 79). Missula further concluded that “[LMS] is a beneficial tool that enhances student learning and mostly used as a management tool. Ways of improving usage and effectiveness with increased use of staff training have been highlighted ...” (p. 79). Furthermore:

staff and students must feel comfortable with the Blackboard LMS so that they can focus more on teaching and learning and less on acquiring the technical skills to use the system... Issues like designing course interfaces, navigation, and content delivery options and features in Bb surfaced as potential satisfaction risks that have to be addressed immediately (Al-Malki et al., 2015, p. 39)

In summary, it is time for a shift from the use of educational technologies, such as LMS, as an option to support learning to develop a hub of teaching and learning that is augmented

by physical teaching practices. LMS is not “a given”; it is flexible and can be what it is not yet. We should claim ownership on the LMS use to make it what we want it to be in favour of effective and efficient teaching and learning process.

Conclusion

This paper contributes to the emerging area of exploring and repositioning current teaching approaches, such as blended learning and flipped classrooms, from the perspective of the students. Nevertheless, the findings of this pilot study could be specific to the particular cohort involved, as well as being particularly targeted at the use of Blackboard only, and therefore not generalisable to all academics or the use of other ICT tools. The results, however, offer new understandings and insights into the use of LMS (Blackboard in this case) to support the teaching and learning process for tertiary students.

- (a) The perspectives of the role of Blackboard lead to practices and
- (b) The questionable use of Blackboard, in terms of “efficiency” and “effectiveness”

The themes signal further research into academics’ digital capabilities and/or indicate the implications for the acceptance of adopting LMS in teaching and learning (e.g., Garone et al., 2019). These possibilities are significant when LMS use in teaching and learning processes is now mandatory at some universities, such as the institution where this study took place, and it would be desirable to have recommended Blackboard practices that would promote effective and efficient teaching and learning processes for the benefit of both academics and students.

In conclusion, this study helped to engender awareness about academics’ LMS practices and behaviours with LMS, which will prompt thoughts about the extent of the role that LMS plays in the teaching and learning process.

Acknowledgements

1. Different parts of this study have been presented at the following:

Sim, K. N. (2018). Learning Management System (LMS): A Hub for teaching and learning. EdMedia, Amsterdam, The Netherlands.

Sim, K. N. (2017). Use of Learning Management System: Pedagogical or technological? 2017 TERNZ Conference, Massey University, Palmerston North, New Zealand.

Sim, K.N. & Butson, R. (2016). Blackboard: Its future as an agent of change. Paper presented at the Teaching and Learning Conference by Blackboard 2016, Sydney, Australia.

2. The generosity of the author's institution for the Research Establishment Grant 2017 in supporting this pilot study.

References

Al-Malki, N., AbdulKarim, A. H., & Alallah, F. S. (2015). Teaching staff's and students' initial perceptions and satisfaction with teaching and learning via the Blackboard LMS. *International Journal of Advanced Corporate Learning*, 8(2), 37-41.

Bradford, P., Porciello, M., Balkon, N., & Backus, D. (2007). The Blackboard learning system: The be all and end all in educational instruction? *Journal of Educational Technology Systems*, 35(3), 301-314.

Buschetto, M. L. A., Cechinel, C., Batista, M. M. F., Faria, C. R. V., & Munoz, R. (2019). Predicting students success in blended learning— evaluating different interactions inside learning management systems. *Applied Sciences*, 9(24), 5523. <https://doi.org/10.3390/app9245523>

Dahlstrom, E., Brooks, D. C., & Bichsel, J. (2014). *The current ecosystem of learning management systems in higher education: Student, faculty, and IT perspectives*. Research report. Louisville, CO: ECAR. <https://library.educause.edu/-/media/files/library/2014/9/ers1414-pdf.pdf>

Edutechnica. (2016). LMS data – Spring 2016 updates. *Edutechnica: ED Talk and analysis*. <http://edutechnica.com/2016/03/20/lms-data-spring-2016-updates/>

Garone, A., Pynoo, B., Tondeur, J., Cocquyt, C., Vanslambrouck, S., Bruggeman, B., & Struyven, K. (2019). Clustering university teaching staff through UTAUT: Implications for the acceptance of a new learning management system. *British Journal of Educational Technology*, 50(5), 2466-2483. doi:10.1111/bjet.12867

Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage.

Liaw, S. (2008). Investigating students' perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard system. *Computers & Education*, 51(2), 864-873.

Macharia, J., & Nyakwende, E. (2010). Vice-Chancellors influence on academic staff intentions to use learning management systems (LMS) for teaching and learning.

Journal of Language, Technology & Entrepreneurship in Africa, 2(1), 220-230.

Mahnegar, F. (2012). Learning Management System. *International Journal of Business and Social Sciences*, 3(12), 144-150.

Missula, S. (2008). *Staff perceptions of Blackboard as an online teaching tool in tertiary education*. Master of Computing thesis, Unitec New Zealand, New Zealand.

Simanullang, N. H. S., & Rajagukguk, J. (2020). Learning management system (LMS) based on Moodle to improve students learning activity. *Journal of Physics: Conference Series*. <https://doi.org/10.1088/1742-6596/1462/1/012067>

Sim, K. N. (2012). *The role/importance of personal computers to support learning in higher education*. Master of Arts thesis, University of Otago, Dunedin, New Zealand.

Sim, K. N. (2015). *An investigation into the way PhD students utilise ICT to support their doctoral research process*. PhD thesis, University of Otago, Dunedin, New Zealand.

TechTarget. (2019). *Learning management system (LMS)*. <https://searchcio.techtarget.com/definition/learning-management-system>.

Trist, E. L., Higgin, G. W., Murray, H., & Pollock, A. B. (1963). *Organisational choice: Capabilities of groups at the coal face under changing technologies, the loss, re-discovery and transformation of a work tradition*. London: Tavistock.

Venugopal, G. & Jain, R. (2015). Influence of learning management system on student engagement. Innovation and Technology in Education (MITE). *In Proceedings of the 2015 IEEE 3rd International Conference in MOOC, Innovation and Technology in Education (MITE)*. Amritsar College of Engineering and Technology Amritsar, Punjab.

Walker, D., Lindner, J., Murphrey, T. P., & Dooley, K. (2016). Learning management system usage: Perspectives from university instructors. *The Quarterly Review of Distance Education*, 17(2), 41-50.

Copyright: © 2021 Kwong Nui Sim. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.