e-ISSN 2963-2870
Vol 3 2022

THE CONCEPT OF E-LEARNING MANAGEMENT INFORMATION SYSTEM (SIM ELEARNING-UT) IN LEARNING AT UNIVERSITAS TERBUKA

Dwi Putranto Riau[1], Abdurrahman Rahim Thaha[2], Setyo Kuncoro[3]

[1]*Universitas Terbuka (INDONESIA)*

Abstract

In Universitas Terbuka e-learning, there is already a schedule for eight sessions for undergraduates and twelve sessions for postgraduates. So far, e-learning is complete regarding learning schedules, discussions, assignments, and webinars, but it is not integrated, and tutors don't know if they don't see e-learning. The research aims to develop the concept of Universitas Terbuka E-Learning Management Information System (SIMelearning-UT), so that the learning process is more orderly and effective to inform and integrate web- or mobile-based e-learning for tutors to quickly identify e-learning activities for students to be carried out. This study uses qualitative methods using primary data based on the author's experience in carrying out e-learning activities and secondary data based on literature and journal studies. This study uses a requirement analysis and design feature. The results of this study are SIMelearning-UT concept with the expectation e-learning activities can run smoothly because tutors quickly know the schedule and carry out activities via mobile and the web.

Keywords: integrated, e-learning activities, effective

1 INTRODUCTION

E-learning is the practice of providing knowledge and instructions to people through computer networks, typically the internet (Wang et al., 2010). Since the pandemic, distance learning using e-learning has become the best alternative in various learning activities at multiple levels of education (Alqahtani & Rajkhan, 2020). On the other hand, Universitas Terbuka (UT), as an open and distance university, have been running e-learning-based education for a long time and has become an example for other universities during the pandemic.

E-learning at the Universitas Terbuka (UT) consists of 8 sessions for undergraduates and 12 sessions for postgraduates. Monitoring e-learning for each session for undergraduate and postgraduate has a different approach. Monitoring of postgraduate e-learning programs by observing the implementation of web tutorials includes class and material management by tutors, interactions between tutors and students, student activity in web tutorial (tuweb) classes, mastery of learning media, giving tutorial assignments, ability to use tutorial web applications such as Microsoft Teams, as well as other supporting facilities.

During the tuweb monitoring, the monitor observed the implementation of the tuweb related to class management and mastery of tutor materials; giving tutorial assignments; interactions between students and between tutors and students; knowledge of tutors in using learning media;

the skill of tutors in the use of tuweb applications and student activity in meetings. Monitors also get various information through interviews with tutors to get impressions and messages, as well as including problems found in implementing the tuweb. This provides information on the implementation of the tuweb to UT as well as feedback to UPBJJ for the upcoming tuweb.

Universitas Terbuka e-learning tutors can administer up to four courses, including undergraduate or postgraduate. A large number of e-learning courses causes the need for e-learning learning management through an integrated information system and makes it easier for tutors. The form of e-learning management is viewing and providing value for discussions, assignments, tutoring, and monitoring student e-learning activities. Sometimes, tutors forget to open e-learning to assess discussions, formative questions, and student assignments. On the other hand, students do not carry out e-learning activities on time, so many incidents of missing student activity checks, especially asynchronous activities.

Besides assessing e-learning asynchronously, tutors should also monitor webinars in graduate and undergraduate programs. From e-learning and webinar monitoring, it is necessary to develop an application that combines the two applications so that tutors can remember the activities of the e-learning session and monitor activity updates. System application development can mean compiling a new system to replace the old system or improving an existing one (Nur, 2019). The compiled application unites or synergizes and is a reminder for tutors to manage e-learning.

This study conducted a literature review of three studies related to e-learning at Universitas Terbuka. According to research by Rahmat et al. (2019), information, system, and service quality positively and significantly influenced user satisfaction. UT has implemented comprehensive e-learning with high success rates. This success was from the technical aspects of system quality and service quality. Effectively, this success came from system usage, user satisfaction, and net results. Research conducted by Suhardi & Hariawan (2020) regarding the use of e-learning in universities shows: (1) The Open University has long been known for distance learning, and the e-learning platform makes the Open University very able to adapt to changes, both when dealing with the future or the covid-19 pandemic; (2) the e-learning evaluation process involves the Universitas Terbuka academic team during the lecture process by becoming a guest account and monitoring to ensure the lecture process has been carried out correctly; (3) some students have not taken full advantage of e-learning because the network access in their area is not well connected to the internet, and some students use low-spec gadgets; (4) Constraints are accessing

a slow network because the LMS server is congested. Research conducted by Zuhairi et al. (2019) about Supporting students to succeed in open and distance learning at the Open University of Sri Lanka (OUSL) and the Universitas Terbuka (UT) Indonesia. Success in distance learning is one major challenge for open universities to respond to the expectations of students and stakeholders. The study is expected to improve our understanding of student support in distance learning, in which analysis is based on good practices, challenges, and room for improvement of both OUSL and UT.

The three studies above discussed the impact of e-learning on the distance learning process and opportunities to improve e-learning. This study will discuss improvements in how tutors manage and monitor e-learning. This research is expected to analyze and crate features to facilitate tutors to manage e-learning with SIMelearning-UT.

2 METHODOLOGY

The research method used is descriptive and qualitative with a case study method. Sugiyono (2017) explains that qualitative research is descriptive because the data is in words or pictures and does not emphasize numbers. Based on the opinion of Yin (2012), the case study is a suitable method if the main question of the research relates to how and why. In addition, case studies are also used if the researcher has only a few opportunities to control the events to be investigated and if the research focuses on contemporary phenomena in real-life contexts (Noviyanti & Djunaedi, 2021).

The study of primary data through data collection techniques with observations and interviews with e-learning tutors was supported by the study of secondary data through literature studies. The data obtained are then used in system development with requirements analysis and feature design. The phenomenon to be studied is the problem of e-learning management and tutor monitoring. Problem phenomena will be described systematically, factually, and accurately.

3 FINDINGS AND DISCUSSION

3.1 Requirement Analysis

E-Learning at UT is divided into two types: online tutorials (tuton), which are carried out asynchronously, and web tutorials (tuweb), which are carried out synchronously by utilizing third-party applications such as Zoom, Microsoft Teams, or Google Meet.

Postgraduate e-learning consisting of 12 sessions with each session starting from: An introductory session containing greetings, introduction forums, tutorial activity designs and tutorial activity units; Session 1 consists of an introduction forum, session 1 attendance, material and discussion 1; Session 2 which consists of channeling forums, materials and discussions 2; Session 3 which consists of an introduction forum, the material includes practice questions 3, Tuweb 1 activities which consist of attendance, discussion and Tuweb links; Session 4 consisted of introductions, attendance, material and practice questions 4, discussion 4 and assignment 1; Session 5 consisted of introductions of tutors greeting and explanation of material, attendance, material and practice questions 5 and discussion 5; Session 6 which consisted of the tutor greeting and briefly explaining about the material, materials and exercises for Question 6, Tuweb 2 activities, namely the presence of Tuweb 2, discussion 6 and Tuweb links; Session 7 consisted of the tutor greeting and briefly explaining the material, material and practice questions 7, discussion 7 and task 2; Session 8 consisted of the tutor greeting and briefly explaining the material, attendance, material with 8 practice questions, and 8 forum discussions; Session 9 which consists of the introduction of the tutor and a brief explanation of the material, attendance, materials and practice questions for the 9th, Tuweb 3 which consists of attendance, discussion 9 and link to the Tuweb meeting; Session 10 which consists of introduction of the tutor and a brief explanation of the material, 10 practice materials and questions, 10 discussions and 3 assignments; Session 11 which consists of introduction of the tutor and a brief explanation of the material, attendance, material and practice questions 11, forum discussion 11; Session 12 consisted of introduction of tutors and brief explanation of attendance, materials and practice questions 12, tutor evaluation questionnaire, Tuweb 4 activities consisting of attendance, discussion 12 and link to Tuweb meetings.

E-Learning for undergraduate programs which is less than postgraduate only consists of 8 sessions, namely: An introductory session consisting of an introduction forum and publication system for students; Session 1 consisted of the introduction of the tutor and a brief explanation of the material, attendance, initiation material, enrichment material, discussion 1 and formative test 1; Session 2 which consists of an introduction forum, audience, initiation material, enrichment material, discussion 2 and formative test 2; Session 3 which consists of a tutor introduction forum and a brief explanation of the material, attendance, initiation material, enrichment material, discussion 3, task 1 and formative test 3; Session 4 consists of introduction, attendance, initiation material, enrichment material, discussion 4 and formative test 4; Session 5 consisted of introductions of tutors greeting and explanation of material, attendance, initiation material,

e-ISSN 2963-2870
Vol 3 2022

enrichment material, discussion 5, task 2 and formative test 5; Session 6 which consists of the tutor greeting and briefly explaining the material, initiation material, enrichment material, discussion 6 and formative test 6; Session 7 consisted of the tutor greeting and briefly explaining the material, a Tutot evaluation questionnaire for initiation material, enrichment material, discussion 7, assignment 3 and formative test 7; Session 8 consisted of the tutor greeting and briefly explaining the material, attendance, initiation material, enrichment material, discussion 8 and formative test 8. This semester, specifically for the course of scientific work (karil), UT conducted tuweb four times out of eight sessions. The recapitulation of e-learning activities for postgraduate and undergraduate programs is described in table 1.

Table 1. Recapitulation of UT e-learning activities

Program	Discussion	Assignment	Tuweb	Formative Test
Undergraduate & Diploma	Session 1-8	Session 3,5,7	Session 2,4,6,8 (karil)	Session 1-8
Postgraduate	Session 1-12	Session 3,5,7,8	Session 3,6,9,12	Session 1-12

In general, e-learning command arrangements already exist in each course consisting of an e-learning system, namely dashboard, home site, current, turn editing, course management, and administration, which consists of course administration to manage tutorial activities. The current e-learning and course management menus are presented in Figures 1 and 2.

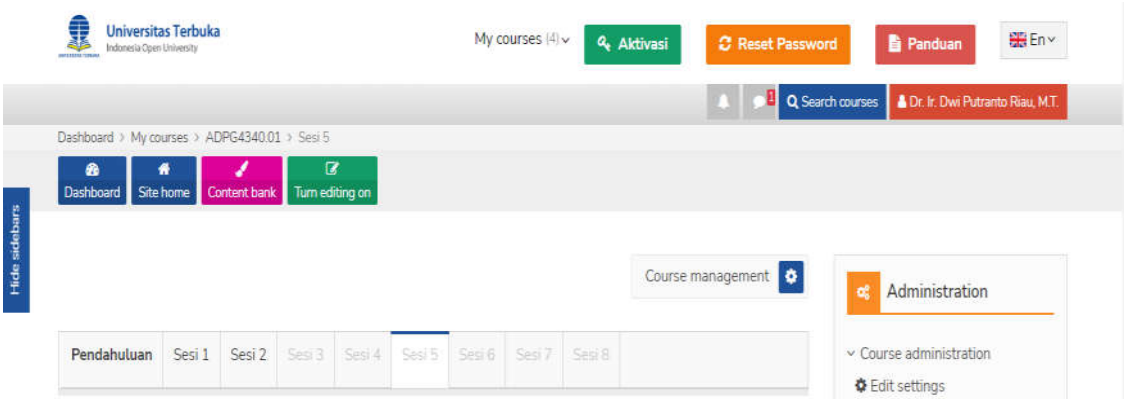

Figure 1. UT e-learning menu

e-ISSN 2963-2870
Vol 3 2022

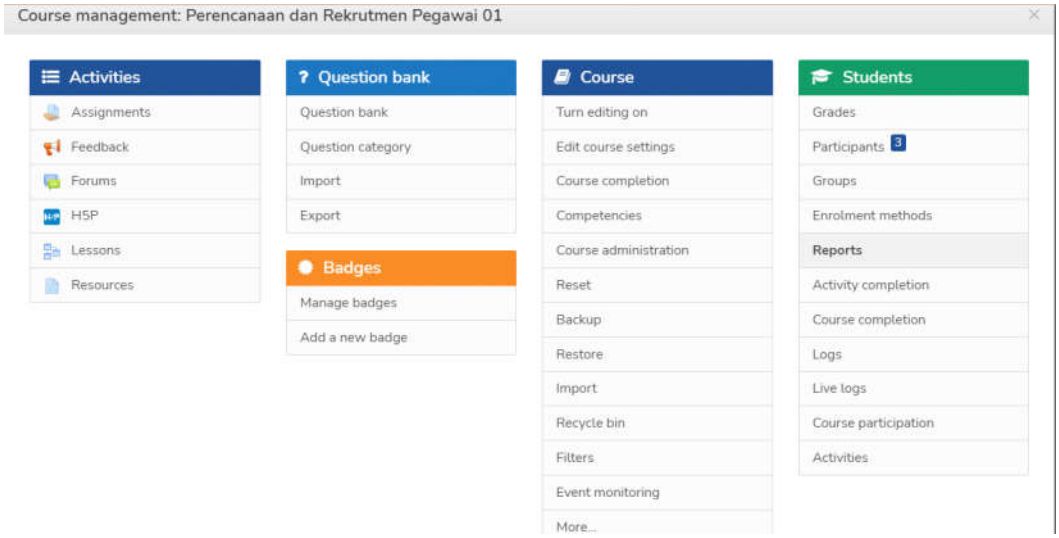

Figure 2. Course Management Menu

E-Learning for lecturers who work as online tutorial tutors or dual tutors (tuton and tuweb) is given a maximum of four courses for each undergraduate, diploma, and postgraduate level. Lecturers are also tasked with monitoring the implementation of tutorials for a course in postgraduate and undergraduate programs at UPPBJ throughout Indonesia.

3.2 SIMelearning-UT features based on requirement

The implementation of tutors and monitoring requires a management information system for lecturers so that the implementation can be remembered and clicked on a system to be directly connected to the UT e-learning and monitoring system. The management information system concepts that can be proposed in table 2 are as follows:

1. The UT E-Learning Management Information System (SIMelearning-UT) integrates UT e-learning and tuton monitoring in undergraduate/diploma, postgraduate, or combined tuton monitoring programs.
2. The menus in the SIMelearning-UT program are the four courses in the e-learning for each tutor and the tutor monitoring course.
3. There is a reminder menu for tutors who have not done assessments in discussion sessions, assignments, or formative tests.
4. The e-learning and monitoring system will include a list of course tables containing attendance, discussion of assignments and tutor tutors that have not been filled in, and reminders for tutors to do.

Table 2. List of proposed e-learning and monitoring features for each course

Program	Student Attendance	Discussion	Formative Test	Tasks	Tuweb	Monitoring
Undergraduate - ADPU4338 - etc	√	√	√	√	√ (karil)	√
Postgraduate - MAPO5303 - etc	√	√	√	√	√	√

A more detailed description of SIMelearning-UT activities is in table 2, and use case in Figure 3. Use case describe activities and information that tutors can do on SIMelearning-UT. Tutor pada SIMelearning-UT mendapatkan informasi hasil rekapitulasi aktivitas tiap mahasiswa di e-learning. SIMelearning-UT features include: view student attendance report, view student discussion activity, view student test result, view student assignment report, view student tuweb activity, and monitoring resume activity. These features are expected to increase the awareness and effectiveness of tutors in running synchronous and asynchronous tutorials.

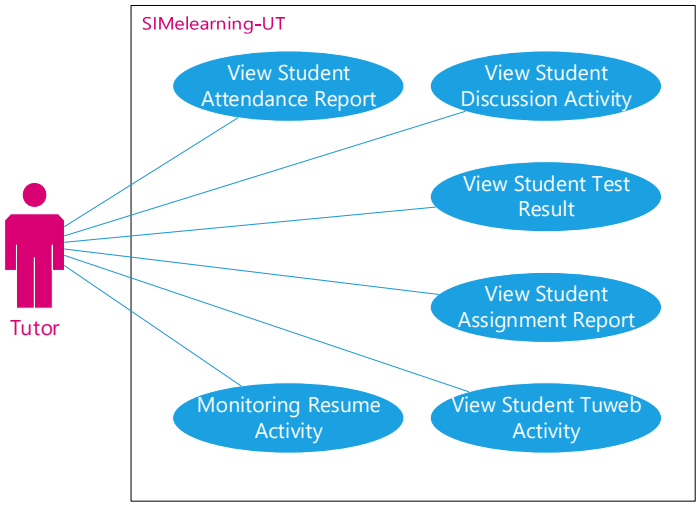

Figure 3. Use case SIMelearning-UT

4 CONCLUSION

SIMelearning-UT is designed to assist tutors in checking and reminding absent students, discussions, formative tests, assignments, tutoring, and monitoring schedules. The concept of SIMelearning-UT use case describes activities and information tutors can do: view student attendance reports, view student discussion activity, view student test results, view student assignment reports, view student tuweb activity, and monitor resume activity. These features are expected to increase the awareness and effectiveness of tutors in running tuton and tuweb for undergraduate and postgraduate in UT.

ACKNOWLEDGEMENTS

This study was supported by lppm and upp universitas terbuka. Thanks to universitas terbuka colleagues for their assistance and completion of this article.

REFERENCES

Alqahtani, A. Y., & Rajkhan, A. A. (2020). E-learning critical success factors during the covid-19 pandemic: A comprehensive analysis of e-learning managerial perspectives. *Education Sciences*, *10*(9), 216.

Noviyanti, F., & Djunaedi, A. (2021). TIPOLOGI PELAKSANAAN KEGIATAN SMART CITY DI MASA PANDEMI COVID-19 (KASUS: KOTA YOGYAKARTA). *Jurnal Ilmu Administrasi: Media Pengembangan Ilmu Dan Praktek Administrasi*, *18*(2), 225–236.

Nur, H. (2019). Penggunaan Metode Waterfall Dalam Rancang Bangun Sistem Informasi Penjualan. *Generation Journal*, *3*(1), 1–10.

Rahmat, A. B. D., Seminar, K. B., & Suroso, A. I. (2019). Evaluasi keberhasilan e-learning dalam perspektif sistem informasi (studi kasus Universitas Terbuka). *Jurnal Aplikasi Bisnis Dan Manajemen (JABM)*, *5*(3), 373.

Sugiyono, P. D. (2017). Metode penelitian bisnis: pendekatan kuantitatif, kualitatif, kombinasi, dan R&D. *Penerbit CV. Alfabeta: Bandung*, *225*.

Suhardi, M., & Hariawan, R. (2020). PENGGUNAAN LEARNING MANAGEMENT SYSTEM (LMS) DI PERGURUAN TINGGI. *JOURNAL TRANSFORMATION OF MANDALIKA (JTM) e-ISSN 2745-5882*, *1*(4 Desember), 376–383.

Wang, M., Ran, W., Liao, J., & Yang, S. J. H. (2010). A performance-oriented approach to e-learning in the workplace. *Journal of Educational Technology & Society*, *13*(4), 167–179.

Yin, R. K. (2012). *Case study methods.*

Zuhairi, A., Karthikeyan, N., & Priyadarshana, S. T. (2019). Supporting students to succeed in open and distance learning in the Open University of Sri Lanka and Universitas Terbuka Indonesia. *Asian Association of Open Universities Journal*, *15*(1), 13–35.

e-ISSN 2963-2870
Vol 3 2022