# Online language learning in higher education: An overview on Students'digital Competence

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**Abstract**

This study explores the importance of digital competence for students at higher education institutions in language learning during and after the Covid-19 Pandemic situation. In doing so, the researchers addressed several dimensions of digital competence that the students gained when attempting to face online learning in using the Moodle-based system at Universitas Terbuka (UT). The researchers drew on research into the experiences of students studying English language at UT using the Moodle platform to show how their progress of digital competence before, during, and after pandemic, and furthermore to have inspired learning sample to other institutions facing the similar challenges during the Covid-19 outbreak.

**Keywords:** *Covid–19 outbreak; Digital Competence, Higher Education; Online Learning*

## INTRODUCTION

As highlights from World Health Organization (WHO, 2020), the Indonesian Government announced 180.646 (3.075 new) confirmed cases of COVID-19, 7.616 (111 new) deaths and 129.971 recovered cases from 488 districts across all 34 provinces, the government put a big effort to solve the educational issue this time. Since pandemic has replaced all academic activities and face-to-face lectures in class with virtual learning, the overload school work has changed onto various online platforms which probably help students manage their disturbed academic lives (Lautenbach, 2020). Consequently, e-learning has significantly grown as an educational tool just like other technology which has developed and progressed over the years(Abou El-Seoud, Taj-Eddin, Seddiek, El-Khouly, & Nosseir, 2014). One of the learning management system (LMS) which is most widely used as ICT-based educational tools is the modular object-oriented dynamic learning Environment (Moodle). It supports an extensive set of educational features, such as interaction, feedback, conversation, and networking(El-Bahsh & Daoud, 2016). Moodle has developed many

features on it which extremely customisable core and can be accessed in a web or application(DOCS, 2019).

Universitas Terbuka (UT) with its history of distance learning has been ready to overcome the issue of Covid-19. Since UT applies open and distance learning (ODL) system with the total student number more than 300,000 all over Indonesia and various parts of the world(Wikipedia, 2019), e-learning is the appropriate mode of learning for its students. Therefore, Moodle is adopted as the main learning platform by UT. In addition, currently more than 4000 students are taking their study in the Language Department at the Faculty of Teacher Training and Education. This learning enables those living in isolated and rural areas to access the learning process easier, which is provided with a good platform for their independent learning during the pandemic. This study then aimed to explore the importance of digital competence for students at higher education in language learning during and after the Covid-19 Pandemic situation.

**Students' digital competence and its benefits in language online learning**

Digital competence is defined as the general term used to describe or explain the ability (of a citizen, students, a teacher, etc.)to use Information Technology (IT) in a specific context (Spante, Hashemi, Lundin, &Algers, 2018). As it holds an important role in assuring students' achievement in doing their online learning, the researchers focused on three dimensions categorized in the digital competence, namely technological competence, cognitive competence, and ethical competence. The digital competence is needed in order to maximize the use of Moodle platform as a course media (Chourishi, Buttan, Chaurasia, & Soni (2012). Furthermore, Calvani, Cartelli, Fini, & Ranieri(2008) stated that digital competence has been pertained as rapid means of assessment, and can be administered by scholastic institutes (Calvani et al., 2008).

Technological competence integrates several aspects to explore and face problems and new technological contexts in a flexible way. In addition, the aspect of this dimension can be classified into several key points, for example recognizing the technological troubles, identifying interfaces, selecting the most suitable technological solution, dealing with logical operation, charting out processing, and distinguishing reality from the virtual world.

The cognitive dimension dealings with summarizing, analyzing and representing the ideas, organizing data, and the capability of evaluating relevant information. Then, it can be mentioned that cognitive engagement in this dimension is study which therefore clarified as attention to related readings and effort in analyzing and synthesizing all

context which obtain from readings demonstrated in discussion messages or any recording tool applicably in the learning system.

Ethics can be mentioned as a set of values that you adhere to with regard to determining right from wrong. It indicates the practice of right action and the greater good(Smith, 2012). There is a code of ethics in a certain institution which is a set of guidelines that governs the rules to be followed for an organization and the behavior of its members. In an online classroom, it can be found that students with diverse backgrounds and differing opinions of what is right or wrong. It stressed to many aspects, several things which elaborate self –directed learning, processing thoughts or critical thinking, rules of plagiarism, ethical dilemmas in communication and responses, also other dilemmas in ethical expectation.

## RESEARCH METHODOLOGY

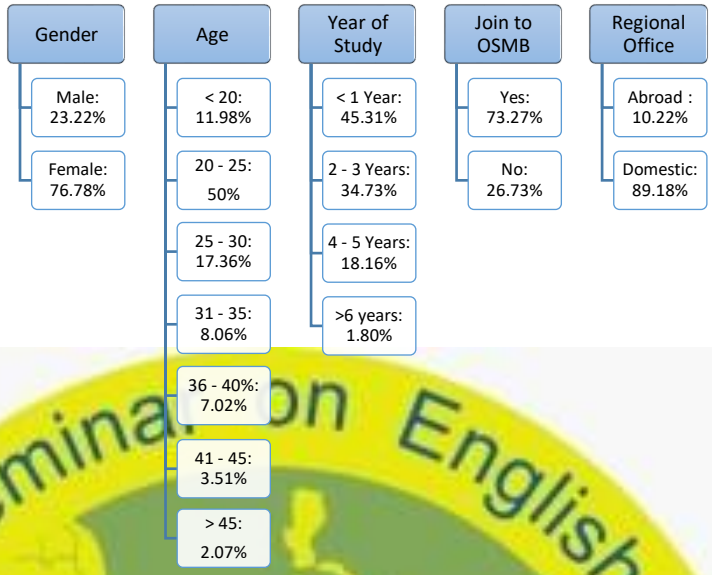
This research employed a qualitative approach. This approach is intended to describe and analyse the students' digital competence in their online language learning activities. The study carried out an online survey that reveals the dimensions of the digital competence, such as technologycal, cognitive, and ethical, towards students of the English Language Study Program of UT. Moreover, the study also investigated students' perspectives of using the Moodle application for the media of distance learning before, during, and after the Covid–19 outbreak.

To obtain the data, the online questionnaire implemented in the study was a close ended questions(Khotari, 2002)drafted based on the framework and theories in the study of Guo, Chen, Lei, & Wen (2014).The advantage of web technology has come in handy in designing, developing and obtaining users' response in a simpler way(Vasantha Raju & Harinarayana, 2016).Technique of data analysis was conducted following the guidelines of the qualitative data analysis that includes stage data reduction, data display, and conclusion drawing, as presented by Milles and Huberman (1992).

## FINDINGS AND INTERPRETATION

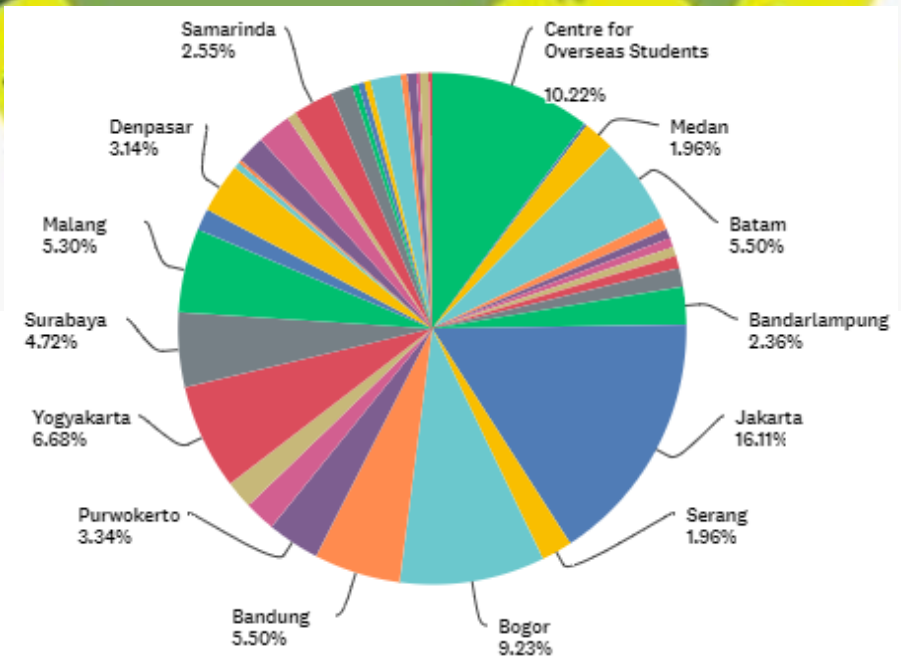
A total of 509 respondents responded to the survey. Only 358 usable sets of questionnaire were analyzed. A summary of the demographic informationsurvey is described in the following table:

Figure 1: Respondents' Demographic Profile




In detail, 23.22% are male and 76.78% are female students which came from various places and registered in different regional offices. With different ages and years of study, they decided to join on student orientation (OSMB) and follow training on distance learning. 73.27% answered that they involved in training, showing their enthusiasm in understanding the learning system provided by UT, though 26.73% students prefer not to join the orientation before the semester begin. Next following figure describes spread of students in several regional offices in Indonesia and Overseas.

Figure 2: Spread of students in UT's regional offices

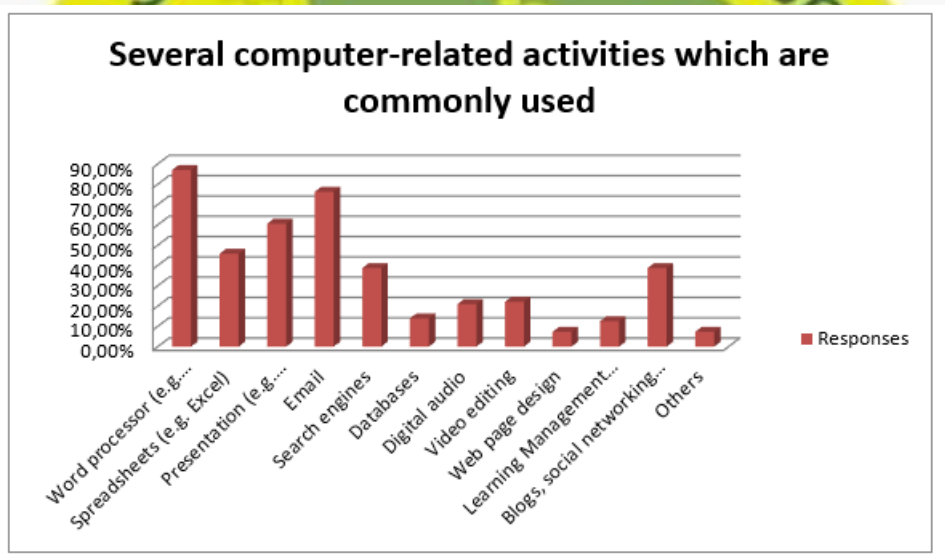


The chart shows specifically the regional offices where the students enrolled their study. The students who responded the survey were 10.22% from overseas and the rest were from 13 regional offices, dominated by Jakarta and Bogor. Portrayed in the chart, UT needs to optimize its services to students in 39 regional offices which are spread all over Indonesia and under the management of the center for overseas students.

**Technological Competence as part of Digital Competence on the use of Moodle as an LMS provided by UT to facilitate students learning**

The data below illustrates the dimension of technological competence that the students had during the exposure of Moodle as an LMS provided by UT.

Figure 3: Capability in Operating Computer




The chart reveals that more than 80% students understand to use word processor. Approximately 45% can operate Spreddsheets program like Excel Program and 60% capable of using Presentation. However, less number of students concern on using the search engines, only 13% use databases, 20% work on digital audio, 22% use video editing, 7% able to use web page design, 12% common to learn with LMS, and 38% often use social networking or sharing tools. But, referring to other point, 7% students mentioned they can operate other complicated tool such as Corel draw, Photoshop, Drawing and Animation Graphic Design and 3D Modelling Software, Script Writer, Design graphics and Translation Program. In detail, the next table provides the information towards the technological competence that the students had during studying at UT before the Covid–19 outbreak happened and while the pandemic spread in Indonesia.

Figure 4: Distribution of students' answers related to Technological Competence


The figure demonstrated the experiences of students in using Moodle as a platform provided by UT in facilitating distance learning program. It substantially informs us a good learning system offered by UT before the pandemic Covid -19 spread widely. That is because it is clearly acknowledged by approximately three out of four percent of students agrees that the learning system is already good. Firstly, 69.93% of students agree that they can access the discussion forum easily, 72.89% prefer to agree by choosing that it is easy to participate in an online chat room. Second, 67.20% said that they are active in using instant messages with their tutor and friends, and 76.99% agree that the layout of Moodle platform is well – structure and easy to navigate. Third, 76.54% the students agree that it was helpful to undertake online exercises and quizzes on Moodle. Fourth, 76.04% of students mentioned that they use previous skills in submitting the tasks or assignment. Next, it was helpful to download or read online written class resource from Moodle, it was confirmed by 74.26% agree with that point. Fifth, 71.07% agree that they could access the material in the form of audio and video files easily. Then, 63.78% said agree that they always received alerts about course information, not only from their tutor but also any news from the department such as schedule, the releases of a new learning resource, changes in assessment and etc. Henceforth, they agree that learning through Moodle as an online platform is fast and reliable which came from 74.03% agree with that point. Subsequently, for the point of video conference on Moodle platform, 43.54% said they disagree and 45.10% agree that video conference has been used to support learning practice.

Regarding to the experiences of students in using Moodle as a platform to support distance learning program, the open – ended question were also given to reveal the technological competence that

students had during their study at UT, both before and during Covid -19. From a bunch of answers, the researchers recapitulated that the most significant responses from the student's perception can be concluded that some students are already satisfied with the system given by UT, indeed while the pandemic Covid – 19 spread in many places in Indonesia or oversea. However, some also mentioned that they still wish a big improvement from the platform, specifically for offline mode of Moodle, the push notifications and reminders that do not work very well, chat room to be more like instant messenger. A complaint also explained when they tried to input their answers in the discussion, the text formatting is bad and would display large-sized or (too) small-sized texts suddenly in the middle of your answers that they had to edit it again.

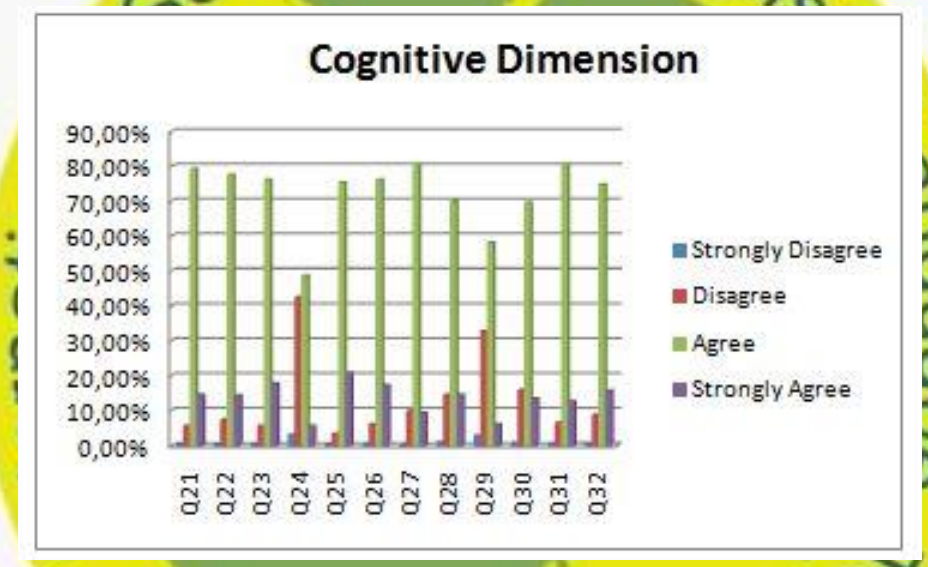
Then, since the purpose of this research is to explore students' digital competence on the use of Moodle-based at higher education to support their online learning, the result already highlights that three – quarters of students studying at UT are able to mingle with several computer – based activities as explained in figure 3. Moreover, it is also described from figure 4 that three out of four percent of students are able in operating Microsoft office. Hence, the aspect of technological competence for recognizing technological tools, identifying interfaces as mentioned before is proved to be good due to most students are common with those technological tools.

Nevertheless, it is worth discussing these interesting facts revealed by the results of the range of capability of students on the aspect of identifying interfaces. Contrary to other key findings from figure 4, in one open-ended question from the last section of questionnaire, most students gave a various argument towards the use of Moodle. In conclusion, the point of accessing the forum, few still mention that it is difficult to access the assignment, and take a hard time in submitting the task. So, it must have been something related to the system, or matters probably coming from students understanding themselves because not many students complaining similar issues. In addition, some features of Moodle platform seemed to be improved, but, they wish that chat room need to be more comfortable for students to interact with other friend or tutor just like in the instant messengers. Further, some mentioned that they like the system even though they were not really satisfied with mobile Moodle app features. Then, all those responses can be summarized as a proved to develop any features needed on Moodle system. Moreover, positives statements also exist that many students elaborated that learning at UT is a good choice while facing a pandemic situation. It is in line with the previous study explained in (Coates, James, Baldwin, & management, 2005)that system is constructed to simplify the development of basic online materials and make possible creation of virtual content particularly to support the virtual learning process.

**Cognitive Dimension as part of Digital Competence on the use of Moodle as an LMS provided by UT to facilitate students learning**

Cognitive dimension as a part of digital competence highlights the factors that may cause differences in interaction and implication of learning and teaching online. The online survey provided twelve indicators under this dimensions, including students' understanding of learning goals and learning activities referring to principles or theories discussed in each session, students' ability of expressing their opinions clearly and concisely, students' responses to the given topics, and students' motivations to actively engaged in the discussion forums. The following figure illustrates the students' responses about cognitive dimensions.

Figure 5: Distribution of students' answer related to Cognitive Dimension




The cognitive dimension deals with students' abilities in summarizing, analyzing and representing the ideas, organizing data, and their capability of evaluating relevant information. The result shows that more than 75% students agree that they understood the goals and learning activities with the principles/theories discussed in each section, express their opinions clearly and concisely, and create their own logical arguments with premises, reasons, and conclusions(questions 21 to 23). However, 48.70% stated agree to give their opinions without explanations (question 24). It means that the tutors need to deliver some learning activities that encourage students to draw more explanations on their arguments. This was in line with Zhu (2006) that managing face-to-face discussions, the online tutor takes the responsibility of keeping discussions on track, contributing knowledge and insights, weaving together various discussion threads and course components, and maintaining group harmony. In relation to Zhu's opinion, the results of the survey show that

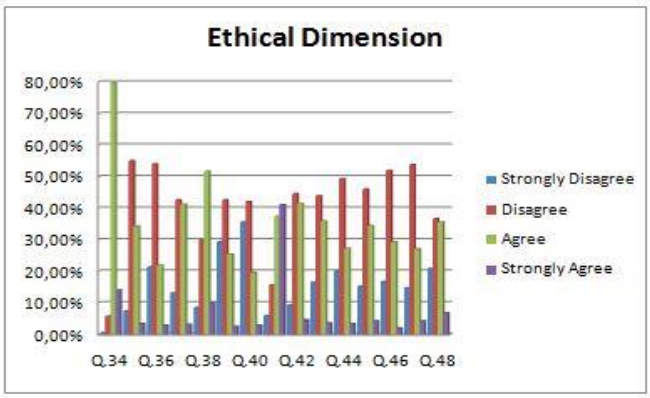
most students agree to using references to support their opinions and optimizing the skills of synthesizing the materials in the discussion forum as well as responding to others' opinions (questions 25 to 29). The last three questions (questions 30 to 32) were related to the benefits of Moodle in enhancing students' cognitive skills. 69.79% agree to the statement that after reading the materials from the Moodle system, they could do the assignment easily. Moreover, 80.52% agree that they could understand the points of postings/comments given by the tutor and other students, and 74.87% agree that Moodle motivates and facilitate them to explore new topics of the learning materials.

During the pandemic, the students inevitably learnt how to enhance their own skills more independently in relation to cognitive competence, such as elaborate some ideas from the reading activities, state their opinions or arguments with sufficient and relevant explanations, and optimize the use of Moodle to motivate and facilitate their autonomous learning activities. Therefore, it is expected that after the pandemic Covid-19, the students increase their 4Cs, i.e. creativity, critical thinking, communication, and collaborative skills (Chidiac & Ajaka, 2018).

**Ethical dimension as part of digital competence which performed by students while pursuing their degree at UT**

Researchers developed an ethical dimension survey in order to analyze the indicators of ethical dimension related to students' skills of analyzing the materials and processing thoughts gained from the discussion forum, rules of plagiarism, ethical dillemas in communication, and responses to others' dillemas in ethical expectations during and after Pandemic covid-19. From a total of 509 respondents responded to the survey, only 358 respondents were willing to complete the survey.The findings of the 15 questions on ethical dimension then were analyzed. Furthermore, It can be described in the next chart.

Figure 6: Distribution of students' answers related to Ethical Dimension



The bar chart indicates moderate and high level of students' ethical in digital competences. It illustrates the student's digital competence on ethical understanding and experience in online learning at UT through Moodle platform. Morethan three-quarters students can express their opinions in a clear and concise manner with a strong connection based on the given topics or readings in the discussion forum. Whereas less than one percent experienced difficulties in expressing their own opinions(question 34). Furthermore, regarding students' experiences of doing assignments, from questions 35 to 40, it can be seen that over a half respondents never got assignments or tasks which do not reflect the materials discussed during the period of the tuton and less than fourty percent rarely found a sharp command from friends or tutor and have never read a sharp writing when sending the message to tutors or friends.Afterwards, nearly fifty two percent respondents agrees that they ever received a lower grade without an explanation from their tutor. However almost a half respondents rejected that they have ever reported their tutor with poor grading abilities and never reported their tutor for having too little interaction with class. In completing an essay, more than a fifth respondents did not maka a copy-pasted method when they stated their ideas unconsciously. Just over a quarter decided to take some of their friends' ideas because of a limited time. It's hard to believe that similar result found in question 37 in which approximately a fourth agree not to put the citation in the essay and on the reference list to avoid plagiarism when they are too busy to check the online class. On the other hand, the same percentage of disagree and prefer to put the corresponding citation.

Moreover, students also share their experiences concerning communication with their friends and tutors (questions 41 to 48). Nearly fourty two students agree to avoid sending a rude message to their friends and tutors. Just over a half never felt offended by the tutor's comments on the discussion forum and never misunderstood the tutor's comments sent via chat messages. As regards tutor's messages, more than a third students received several out of topic questions from tutor and the other third did not. Ethics represent way of thinking and motivation behind behaviour. Therefore, it has a crucial influence on student's digital competences. Ethics can be seen from someone's attitude toward digital activities, digital communication, and digital information. Al Khateeb (2017). Students expressed three main indicators that encourage them to own a good self-directed learning, implemented rules of plagiarism, and ethical dilemmas in communication with friends and tutor during and after pandemic.

From students' ethical competence, there are three points to be taken as lessons learnt after the pandemic Covid-19, i.e. students self-directed learning, students' awareness on plagiarism rules, how to help students overcome their dilemmas in communication. First, taking online

learning has given students a vast freedom of learning as they can learn in unlimited classroom and unspecific schedules. Kuama and Usa (2016) stated that to monitor the completeness of lessons, students need self-regulate their learning by setting up a learning schedule. Moreover, Moodle could increase student's reflection on the material discussed, helped them state their ideas concisely, and built their performance in completing the tasks and assignments on timeduring the period of tuton in pandemic covid-19. However, network system and internet anxiety may cause students feel frustrated due to their lower internet skilled students (Kuama and Usa,2016).

Second, students believed that the awareness of the rules of plagiarism very important moreover integrating digital curriculum in online tutorial. Anney & Mosha (2015) state that student plagiarism is a known problem facing in higher education accross the globe. It has rapidly growing in technology era which make students acquire someone's work and recognize it as their own work easily. Jereb et al (2018) discuss several factors influencing cheating behaviour such as; individual,institutional, and contextual factors. They point out students do not have a clear understanding of what constitutes plagiarism and how it can avoided. Furthermore, in relation to students' inadequate skills on quoting, paraphrasing, citing, and referencing, Al Khateeb (2017)discusses that the computer's digital reproduction capability that open wide copy-pasted chance is a challenge for students to construct knowledge and critically evaluate in assessing the quality of digital information.The results of the survey show that less than seventy percent of the students were consistent to avoid a copy-pasted method and always put the citation in the essay and on the reference list.

Third, the vast majority of respondents have good communication skills. 189 respondents can easily understand their tutors comments sent via messages and 183 respondents never felt offended by the tutor's comments on the discussion forum. As DG Connect (2014) states interaction can be vary in digital devices and applications. Students need to understand appropriate ways of communicating through digital means and strategies to specific audience. A sharp comments and writing almost never be read by students either in sending or receiving messages from their tutors and friends. Just over a half respondents coincided never having offended and meeting out of topic questions from their tutors.DG Connect (2014) then argues that students need to have knowledge of behavioural norms in virtual interactions to protect self and others from possible online dangers like cyber bullying.

## CONCLUSION AND SUGGESTIONS

The use of Moodle as a platform at UT in facilitating the students has created abundance of advantages before and during Pandemic Covid-19 spread. While pandemic gradually arise and expand in many places, the method to adopt online learning system becomes an option

in education. Previously students at UT opt to take online learning due to their limited access of face to face learning. This time, online learning is the only alternative in continuing the progress in education. Students at UT and definitely the institution itself have been ready with these issues and steadily improve their quality in all aspect of system. In this study, digital competence on students is part of a continuous development to uncover a quality of system. Hence, it could be revealed that most students are competent in operating the platform; specifically, they are good in term of technological competence, cognitive and in ethical dimension. In this period of time, even before pandemic, the finding depicted that they do not need to struggle anymore to understand the system, though some improvement definitely still needed on making a progressive convenience on system, which then is part of responsible of the authorities at UT.

Finally, some specific research suggestions that emerged from this investigation include; 1) further studies using the same methodology at any target university to examine the implications of the similar method to their online learning program which exist during pandemic, 2) further studies of many types of service encounters, including service failures and recoveries, present for distance learning program in higher education, 3) an examination of the linkages between service quality measures, quality of instruction especially in measuring the English language instruction, and 4) expansion of the study to include all public and private institutions of higher education in any State to establish competitive benchmarks, track student defections to other institutions.

**REFERENCES**


Abou El-Seoud, M. S., Taj-Eddin, I. A., Seddiek, N., El-Khouly, M. M., & Nosseir, A. (2014). E-Learning and Students' Motivation: A Research Study on the Effect of E-Learning on Higher Education. *International Journal of Emerging Technologies in Learning, 9*(4), 20-26.

Al Khateeb, Ahmed Abdulteeef M. (2017).Measuring Digital Competence and ICT Literacy: An Exploratory Study of In-Service English Language Teachers in the Context of Saudi Arabia. International Education Studies; Vol.10, No. 12 Published by Canadian Center of Science and Education.

Anney, Vicent Naano & Mary Atanas Mosha. (2015). Student's Plagiarism in Higher Learning Institutions in the Era of Improved Internet Access: Case Study of Developing Countries.Journal of Education and Practice. Vol.6 No.13.

Calvani, A., Cartelli, A., Fini, A., & Ranieri, M. (2008). Models and instruments for assessing digital competence at school. *Journal of E-learning Knowledge Society, 4 (3), 183-193.*

Chidiac, R.S. &Ajaka, L. (2018). *Writing through the 4Cs in the Content Areas - Integrating Creativity, Critical Thinking, Collaboration, and*

*Communication*. Paper presented at the Proceedings of the 12th International Scientific Forum.

Chourishi, D., Buttan, C. K., Chaurasia, A., & Soni, A. (2012). Effective E-Learning through Moodle. *International Journal of Advance Technology & Engineering Research (IJATER), 1*(1).

Coates, H., James, R., Baldwin, G. J. T. e., & management. (2005). A critical examination of the effects of learning management systems on university teaching and learning. *11*, 19-36.

DG Connect. (2014). Measuring Digital Skills across the EU: EU Wide Indicators of Digital Competence.

DOCS, M. (2019). Retrieved from https://docs.moodle.org/37/en/Main_page

El-Bahsh, R., & Daoud, M. (2016). *Evaluating the use of Moodle to achieve effective and interactive learning: A case study at the German Jordanian University*. Paper presented at the Proceedings of the 35th Annual IEEE International Conference on Computer Communications.

Guo, W., Chen, Y., Lei, J., & Wen, Y. (2014). The effects of facilitating feedback on online learners' cognitive engagement: Evidence from the asynchronous online discussion. *Education Sciences, 4*(2), 193-208.

Jereb Eva, Matjaz Perc, Barbara Lammlein, Janja Jerebic, Marko Urh, Iztok Podvregar, Polona Sprajc. (2018). Factors Influencing Plagiarism in Higher Education: Acomparison of German and Slovene Students. PloS ONE 13(8): e0202252 https://doi.org/10.1371/journal.pone.0202252

Khotari. (2002). *Research Methodology Methods and Techniques*. New Delhi: New Age International.

Kuama, Settha and Usa Intharaksa. (2016). Is Online Learning Suitable for All English Language Students?. PASA Volume 52. Prince of Songla University.

Lautenbach, G. & Randell, N. (2020). World, interrupted: Online learning in the time of a pandemic. In *Proceedings of EdMedia + Innovate Learning* (pp. 65-72). Online, The Netherlands: Association for the Advancement of Computing in Education (AACE). Retrieved September 9, 2020 from https://www.learntechlib.org/primary/p/217286/.

Milles, M. B., & Huberman, A. M. (1992). *Analisis Data Kualitatif: Buku Sumber Tentang Metode-Metode Baru* (Rohidi, Trans.). Jakarta: Universitas Indonesia.

Smith, C. (2012). *Ethical behaviour in the e-classroom: What the online student needs to know*: Elsevier.

Spante, M., Hashemi, S. S., Lundin, M., & Algers, A. (2018). Digital competence and digital literacy in higher education research: Systematic review of concept use. *Cogent Education, 5*(1), 1519143.

Vasantha Raju, N., & Harinarayana, N. (2016). *Online Survey Tools: A Case Study of Google Forms1*.

Wikipedia. (2019). Universitas Terbuka. Retrieved from https://en.wikipedia.org/wiki/Indonesia_Open_University
(WHO, 2020)*https://www.who.int/indonesia/news/novel-coronavirus/situation-reports.* (Accessed on 9 september 2020)