Effectiveness of a Moodle based Life Skills Education (LSE)
Module for Prospective Teachers

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Abstract

Moodle is a learning management system which is designed to enable the educators to create effective online courses using its free and open source software. In the present study, Moodle was used as a platform to develop an online Life Skills Education (LSE) course. Life skills education focuses on the overall personality development of the child by enabling them to handle any kind of life situation. It also encourages them to face their struggles to achieve their targets. The main aim of the present study is to develop a moodle based life skills education module for prospective teachers and investigate its effectiveness on attitude and awareness of teachers regarding life skills education. The study was conducted following a quasi experimental research design on a cluster sample of 100 prospective teachers. The sample of the study was taken from the intact classes of M.Ed. first and second year students from Department of Education, Punjabi University, Patiala using cluster sampling technique (N=100). Attitude towards life skills education scale and life skills awareness test along with an online course on life skills education using Moodle platform based on the 10 life skills as identified by World Health Organisation were prepared by the investigator to conduct the present study. The data was analysed with the help of analysis of covariance technique. The results revealed that moodle based life skills education module has a significant and positive effect on attitude and awareness of prospective teachers regarding life skills education as compared to traditional method of teaching. Implications of these results are discussed in the context of teacher education.

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Introduction

During the last two decades, there has been rapid advancement in the field of educational technology and online teaching. The era of pandemic further provided more opportunities for the application of new online tools, approaches, frameworks and innovative pedagogies in order to facilitate online teaching and learning.

There has been a significant impact of technology on our lives in terms of our ways of doing things and interacting with others. Certainly, it helps in improving our lives and provides us new opportunities. At the same time, it dominates our lives and leads to wastage of our time as well. It acts as a powerful distractor particularly for the young generation. In a similar vein, the scenario of higher education has also undergone a sea of change with the advent of various types of technological innovations. During the pandemic period, we have witnessed enormous changes in the teaching-learning process. Offline teaching shifted to online teaching and there was no face-to-face contact of the teacher with the students. Teachers taught in a virtual environment and students also learnt in the online mode. The traditional mode of teaching where teachers interact with the students in face-to-face mode will always be the backbone of any education system but can be supplemented by using different innovative pedagogies and interactive online tools. Creating many more such opportunities to learn in online mode and more number of such providers can help the students in today's era of online learning.

Twenty-first century learners are techno-savvy and they like to learn using different types of technologies. Also, the 21st century teachers are also expected to possess digital skills to teach their students using different types of online and interactive tools. Holtham et al. (2012) in a position paper stressed upon the need to design a next-generation learning environment which will be based on semantic web-based technologies and pedagogies of the mid 21st century, rather than non-semantic technologies derived from the end of the 20th century, and pedagogic mindsets derived from the nineteenth century. For this purpose, teachers are expected to continuously learn and update themselves to meet the expectations of 21st century learners. The pandemic situation further gave impetus to the professional development of teachers for building their competence for teaching in the virtual environment.

In a similar vein, technology is an enabler and a valuable tool for executing the life skills programmes as well. Integration of information and communication technology helps in acquiring life skills that aid in the process of development in the present context of ongoing economic and information order. A variety of digital technologies such as internet,

cameras, video and audio-recording tools, different types of computer software and even mobile phones can be effectively used in implementation of life skills programs. Youngsters find it easy to work with these media technologies. They use the technology and media in exciting and creative ways. Present day technologies help youth in connecting though social media communities and expressing themselves along with developing certain technical skills such as being more proficient in using audio and video-recording equipment and better computer literacy. Certain other life skills which can be developed among youngsters through such technology-integrated programmes are soft skills such as communication, self-confidence, decision making and teamwork.

A variety of Learning Management systems (LMSs) and online tools can be used to develop online courses which may supplement the face-to-face teaching. Researches reveal that Moodle is an adequate and complete online platform that can be used for the higher education students. A number of features are available on the Moodle platform such as discussion forums, quizzes, big blue button and assessment, etc. which are user-friendly and can be easily used by the teachers for the purpose of online teaching and assessment.

Over the last decade there has been an increased interest among mental health professionals in the area of life skills. Although the exact nature and descriptions of life skills are likely to differ across social and cultural contexts, an analysis was made and a core set of skills for successful living was identified by World Health Organisation (1997). Accordingly, life skills are defined as abilities for adaptive and positive behaviour that enables individuals to deal effectively with the demands and challenges of everyday life. There are innumerable life skills. Some are specific to certain situations while others are of a generic in nature. Based on various theoretical perspectives, as well as intervention and training in this area across cultures, a core set of ten generic life skills are identified which are basic to every culture and can be used for promotion of psychosocial health in children and adolescents.

The basis of developing module for Life Skills Education (LSE) using Moodle platform is interdisciplinary focusing on the ten core life skills namely problem-solving, critical thinking, creative thinking, decision making, effective communication, interpersonal relationship, self-awareness, empathy, coping with emotions and coping with stress as identified by World Health Organisation (1997). The process of course development followed the design methodology for an online course. Online course is developed in four phases. In the first phase, needs analysis is done followed by designing the course curriculum, course content development and evaluation

which is usually done at the end of the course. Online course includes both the components: course content and the online platform having inbuilt interactive tools. Various ICTs can be integrated with LSE using a variety of online tools in three different ways: i) the learners are provided with opportunities for doing reflective practice; ii) life skills related online learning objects using open source tools that are already available on the internet and; iii) creating interdisciplinary and interactive LSE related learning activities by integrating ICTs.

Review of Related Literature

The overview of the review of related literature indicates that Moodle platform is generally used for delivering course content, course progression plan, grading, creating activities, collecting course feedback and communicating with course participants. Lasić-Lazić et al. (2017) found it to be an effective interactive learning platform by which students high-quality learning can be achieved. However, Hasan (2019) raised certain issues regarding the usability of Moodle platform. It was observed that a large number of students identified nine usability problems on Moodle interface and a large number also identified and suggested nine improvements to the design of Moodle interface. During the COVID-19 pandemic period, Rachmadtullah (2020) indicated that the use of the Moodle based blended-learning model in elementary school education is effective and can be used as a network-based learning solution. In another study by Sharma et al. (2020), it was interesting to note that web-based teaching and traditional teaching, both were effective in improving knowledge of students. Web-based teaching programme designed on Moodle is accepted by the students. Gudkova et al. (2021) observed that Moodle facilitates student-centred learning allowing students to complete tasks anywhere and anytime. Both students and instructors expressed positive opinions towards learning English via Moodle.

In a similar vein, Thaila et al. (2021) confirmed that Moodle/VLE is an effective tool and the easiest device for continuing distance education at South Eastern University in Sri Lanka. In a recent study, Gamage et al. (2022) showed that Moodle is increasingly being used as a platform for adaptive and collaborative learning and used to improve online assessments. In another interesting research, Al-kreimeen and Murad (2022) observed that implementing Moodle technology into teaching had a positive impact in reducing future anxiety and increasing psychological happiness among university students. The researcher reviewed a plethora of researches on effectiveness of Moodle across varied disciplines. However, the researcher could not locate any study in the context of LSE. Moreover, there has been dearth of such studies

in Indian context as well. In the light of inconclusive research evidence, the present research was an endeavor to develop a Moodle based LSE module and to investigate its effectiveness on attitude and awareness of prospective teachers regarding LSE.

SIGNIFICANCE OF THE STUDY

The higher education landscape has undergone significant change as a result of technological innovations during COVID-19 period. A variety of pedagogical innovations were witnessed in the teaching-learning process during the pandemic period. Now a days, ICTs are important tools for reaching greater numbers of learners as well as facilitating new ways of learning and understanding that will be required to implement the complex solutions. The continued expansion of network technologies, bandwidth, and computer capacity, coupled with increasing user familiarity with the tools, social networking applications, and the acceptance of innovative pedagogical methods in the educational system offer new and exciting possibilities for LSE. In further exploration of the connection between ICTs and LSE it has been observed that there is little research available that demonstrates and confirms the synergies between these areas of practice. Although there is a wealth of research on educational technology, a further step needs to be taken to link ICTs for LSE. Finally, there is a need to devise new measures for learning outcomes in an ICT-supported and connected learning environment, as well as to determine whether educational pedagogies, tools and learning environments are really helping to educate citizens to live peacefully.

The link between ICTs and LSE is being addressed by extensive debates and research which recognise the challenge ICTs bring to the reorientation of LSE to learn to live upto one's full potential. ICTs can help learners explore concepts, engage in problem-based and authentic learning, enhance meta-cognitive skills and present information using multiple media. The review of related literature revealed that most of the studies focussed on the cognitive aspect of use of the Moodle based virtual learning environment. The present study focussed on assessing the effectiveness of Moodle platform on affective aspect of teacher educators in terms of attitude and awareness regarding LSE. Hence, to recognise the alarming need for enhancing awareness of LSE among prospective teachers, the present study focuses on the development of a module for LSE using Moodle platform; and to test the effectiveness of this module on attitude and awareness of prospective teachers towards LSE.

OBJECTIVES OF THE STUDY

The objective of the paper is to study the impact of a Moodle based module on attitude and awareness of prospective teachers towards LSE.

METHOD AND PROCEDURE

The study was conducted through quasi-experimental method of research to investigate the effect of a module for LSE using Moodle on awareness of prospective teachers regarding LSE. In the present study, two groups, pre-test, post-test, quasi-experimental research design was employed.

Sample

The study followed a quasi-experimental research design on a cluster sample of 100 prospective teachers. The sample of the study was taken from the intact classes of first and second year M.Ed. students from the Department of Education, Punjabi University, Patiala using cluster sampling technique (N=100). Out of the two groups of M.Ed. Students, i.e., M. Ed. first semester students taken as experimental group were taught through Moodle platform as learning management system and M. Ed. third semester students were taken as control group who were taught through traditional method. The two groups in the study are experimental group on which LSE module was introduced using Moodle platform and lecture method was used as method of teaching for the control group.

Research Tools Used

Attitude towards LSE scale: This attitude scale was developed for the purpose of the present study. The final draft of the scale contains 23 items on a five-point scale. The respondents are required to indicate their response to each statement on a 5-point continuum ranging from 'strongly agree' to 'strongly disagree'.

Construction and Standardisation of the Attitude Scale

Initially, a pool of 30 items was prepared for the preliminary draft of attitude towards LSE scale. A sample of 100 M. Ed. students from teacher education colleges affiliated to Punjab; University, Patiala was drawn for the purpose of try-out of the preliminary draft of this scale. The respondents were requested to respond to all the 30 items of the preliminary draft of the scale on a 5-point continuum. Thus, the range of scores on the preliminary draft of attitude towards LSE scale was 30–150. There were 13 positively worded statements and 17 negatively worded statements in total.

Reliability

The relationship between two halves of the scale (r_{hh}) came out to be 0.93. When corrected by applying Spearman-Brown Property formula, the correlation (r_{tt}) turned out to be 0.93, significant at 0.01 level. This indicates that the attitude towards LSE scale may be considered internally consistent and reliable.

Validity

In the present study, content validation of the attitude towards

LSE scale was done while preparing the preliminary draft of the scale and with the help of expert opinion of 5 teacher educators and 5 language experts with regard to the relevance of each item in the scale. Hence, the scale has high content validity.

Awareness of LSE Test: This test was developed by the investigator herself, containing 33 items. Awareness of LSE test is a Yes/No questionnaire. Each question was followed by four options, out of which only one option was correct, while the other three options were distractors. The respondent was awarded one mark if selected the correct option and a score of zero was awarded for every incorrect response.

Construction and Standardisation of the Awareness Test

The preliminary draft of the awareness of LSE test was a Yes/No questionnaire. There were 38 questions in total and each question was followed by four options, out of which only one option was correct, while the other three options were distracter. Preliminary try-out was done individually to improve and modify the language difficulties and ambiguity of the items. This try-out was done on 100 M. Ed. students of different teacher education colleges affiliated to Punjabi University, Patiala.

Reliability

The relationship between two halves of the scale (r_{hh}) came out to be 0.75. After correction using Spearman-Brown Prophecy formula, the correlation (r_{tt}) turned out to 0.75, significant at 0.01 level. This indicates that the awareness test of LSE scale may be considered internally consistent and reliable.

Validity

The adequacy of all the questions of the test was checked with the available resource material on LSE and allied issues. Secondly, the help of expert opinion of 10 teacher educators and 10 language specialists with regard to the relevance of each question in the test was sought. Hence, content validity of the test was established.

Development of LSE Module using Moodle Platform

The module for LSE using Moodle platform was prepared by the investigator herself. This module was based on the concept and significance of LSE along with the theoretical framework and activities related to ten life skills as identified by WHO (1997). The e-content, resources and the activities pertaining to all these ten life skills were made part of the LSE online course which was delivered using the Moodle platform. Developmental phase of the research design include the developmental process of module for LSE using Moodle platform which was developed on the basis of the 4 quadrants of

SWAYAM, i.e., E-tutorial, E-content, Assessment and Discussion Forum. It includes the steps taken for developing a free online course with the help of different software and applications such as Moodle, Screencast-O-Matic v2.0 and Microsoft PowerPoint presentation.

An introductory class was conducted with the M. Ed. students regarding the objectives and conduct of the study. Further, only experimental group was introduced with the module of LSE using Moodle platform. Students in the experimental group were asked to download the Moodle application from the play store on their mobile phones. All students are provided with their particular 'user name' and 'password' and asked not to share them with others. After that students are instructed all the steps needed to follow to start learning online with the help of smartphone. Students are also instructed the steps to access the course from a laptop.

Conduct of the Study

The study was conducted in three phases.

(i) Pre-experimental Testing: Pre-testing was done with the help of attitude scale and awareness test regarding LSE. Prior to the pre-test, an informal session with the students was carried out, with the purpose of building the rapport and introducing them with the Moodle based LSE module.

(ii) Treatment: The sessions were carried out with the prospective teachers within their respective classes at Department of Education, Punjabi University, Patiala. The module for LSE pertaining to concept and significance of LSE along with the theoretical framework of ten life skills as identified by WHO (1997) was developed in the form of an online course using Moodle platform. This Moodle based LSE module was executed for 10 weeks (approx. 50 working days) on the experimental group of prospective teachers. The major techniques used to impart LSE through Moodle platform included blogs, chats, database activities, glossaries and support systems enabling the functioning in multiple languages, content management along with evaluation. The control group was taught the same content of LSE through traditional method of teaching.

(iii) Post-experimental Testing: Post-experimental testing was done after the completion of the Module for LSE with the help of attitude scale and awareness test regarding LSE on both the groups, i.e., experimental as well as control group.

RESULTS AND DISCUSSION

To study the effectiveness of the module for LSE using Moodle platform on attitude and awareness of

prospective teachers regarding LSE, ANCOVA was employed on the post-test awareness scores of prospective teachers keeping pre-test awareness scores as a covariate. The means and SDs of pre-test and post-test awareness of experimental group and control groups are shown in Table 1.

Table 1 presents the means and SDs of the experimental and control group on pre-test and post-test attitude and awareness of LSE scores. In order to see whether module for LSE with using Moodle had any significant effect on attitude and awareness of prospective teachers regarding LSE, ANCOVA was employed on attitude and awareness scores of prospective teachers. Table 2 shows the summary of analysis of covariance.

The perusal of Table 2 shows that F-value, testing the effect of module for LSE with Moodle usage on

adjusted mean scores of attitude and awareness of both the experimental group and control group came out to be 25.11 and 84.56, respectively, which are significant at 0.01 level. This indicates that the treatment given to the experimental group has a significant effect on attitude and awareness of prospective teachers regarding LSE. Table 3 shows the results of post-hoc analysis for the adjusted mean attitude and awareness scores of prospective teachers of experimental and control groups along with pre-test and post-test mean scores.

It may be observed from the Table 3 that the calculated t-value testing the significance of mean difference in adjusted attitude and awareness scores of experimental and control groups came out to be 3.69 and 5.62 respectively which are

Table 1: Means and SDs of the Pre-test and Post-test Attitude and Awareness Scores of Prospective Teachers towards LSE

Variable	Group	Experimental Group			Control Group		
		N	Mean	SD	N	Mean	SD
Attitude towards LSE	Pre-test	50	85.94	12.88	50	82.96	9.57
	Post-test	50	94.42	10.93	50	84.08	8.75
Awareness regarding LSE	Pre-test	50	18.22	5.24	50	16.64	4.74
	Post-test	50	23.28	4.51	50	16.98	4.64

Table 2: Summary of the Results of analysis of Covariance of attitude and Awareness of Prospective Teachers towards LSE

Variable	Source	SS	df	MS	F-Value
Attitude towards LSE	Pretest	4703.553	1	4703.55	93.07**
	Treatment	1269.149	1	1269.15	25.11**
	Error	4902.307	97	50.54	
	Total		99		
Awareness regarding LSE	Pretest	1313.63	1	1313.63	172.33**
	Treatment	644.59	1	644.59	84.56**
	Error	739.43	97	7.62	
	Total	3045.31	99		

**p$\leq$ 0.01

significant at 0.01 level. It indicates that there is a significant difference in the adjusted mean attitude and awareness of LSE score of prospective teachers of experimental group and control groups on post-test. Thus, it can be concluded that module for LSE using Moodle platform plays a significant and positive role in enhancing attitude and awareness of prospective teachers regarding LSE as compared to traditional method of teaching. It may be attributed to the fact that online learning fascinates and motivates the techno-savvy 21st century learners of today. They are much interested in the use of various digital devices, new technologies and online courseware for learning as it tends to break the monotony of the traditional classroom. The researcher witnessed the enthusiasm among the prospective teachers in the experimental group for the online courseware. COVID-19 pandemic further gave impetus to online learning among students.

In a similar vein, the researches indicate Moodle to be an effective

Table 3: Mean Attitude and Awareness Scores of Prospective Teachers of Experimental and Control Group and t-value

Variable	Group	N	Pre-test Mean	Post-test Mean	Adjusted Mean	t-value
Attitude towards LSE	Experimental	50	85.94	94.42	92.90	3.69**
	Control	50	82.96	84.08	85.60	
	General Means		84.45	89.25	89.25	

Awareness regarding LSE	Experimental	50	18.22	23.28	22.70	5.62**
	Control	50	16.64	16.98	17.56	
	General Means		17.43	20.13	20.13	

**$p \leq 0.01$

interactive learning platform by which students can achieve high-quality learning (Lasić-Lazić et al., 2017; and Zabolotniaia et al., 2020).

Further, it was observed that Moodle platform helps the learners in better learning, revision and understanding of the course content with the help of online course launched through Moodle platform (Umek et al., 2017; Popovic et al., 2018; Susanti et al., 2019; Dol and Halkude, 2020; Duangjai and Rutaikarn, 2020; and Gudkova et al., 2021). In few recent studies by Gamage et al. (2022) and Sibgatullina et al. (2022), Moodle has been found to effectively improve student performance, satisfaction, and engagement across STEM and distance education courses. Furthermore, Al-kreimeen and Murad (2022) found Moodle based learning to have a positive impact on anxiety and happiness of university students.

However, Al-Hawari et al. (2021) in a survey confirmed the wider acceptance among instructors and students to use an in-house e-learning system named MyGJU as a first point of contact, as opposed to Moodle, for basic e-learning tasks. Also, Rajan and Manyala (2021) indicated that despite Moodle's

great potential, majority of the students mainly use it to access repository course materials. It was further suggested that efforts must be focused on bridging this digital divide and orienting the learners for getting the maximum benefit from such e-learning technologies. Taking a step ahead, Dhika et al. (2021) suggested that future researches should focus on the use of Moodle platform for creating blended virtual learning environment.

Implications

The results of the present study have far reaching implications. The results of the present study demonstrated a positive and significant effect of LSE module using Moodle as learning management system (LMS) on attitude and awareness of prospective teachers regarding LSE. The module for LSE using Moodle platform was prepared especially for prospective teachers. These results indicate towards the expanding use of Moodle in the educational process, particularly by employing its interactive learning tools to achieve an effective and interactive learning environment. The study highlighted the effectiveness of Moodle platform for developing a favourable attitude

and enhancing awareness of prospective teachers towards LSE. Hence, it is suggested that Moodle can be successfully integrated into online teaching in order to focus on affective development of prospective teachers. The need of the hour is to make the teacher educators and prospective teachers aware about the concept of LSE that can further kindle the flame among the future generations.

REFERENCES

AL-HAWARI, F., H. BARHAM, O. AL-SAWAEER, M. ALSHAWABKEH, S. ALOUNEH, M. I. DAOUD AND R. ALAZRAI. 2021. Methods to achieve effective web-based learning management modules: MyGJU versus Moodle. *Peer Journal of Computer Science*. Vol. 7. e498. https://doi.org/10.7717/peerj-cs.498

AL-KREIMEEN, R. AND O. MURAD. 2022. Using Moodle in university courses and its impact on future anxiety and psychological happiness. *The Electronic Journal of e-Learning*. Vol. 20, No. 2. pp. 171–179.

DHIKA, H., F. DESTIAWATI, SURAJIYO AND M. D. JAYA. 2021. The effectiveness of learning management system in learning media using Moodle with the blended learning concept. Psychology and Education. Vol. 58, No. 2. pp. 7279–7286.

DOL, S. M. AND S. A. HALKUDE. 2020. Use of online Moodle to create the course to improve students' fundamental understanding. *Journal of Engineering Education Transformations*. Vol. 33. pp. 384–391.

DUANGJAI, W. AND S. RUTAIKARN. 2020. Effectiveness of Moodle e-learning for students enrolment of GENL 1101 'learning resources and skills' at Asia-Pacific International University. *Abstract Proceedings International Scholars Conference*. Vol. 7. No. 1, pp. 1661–1676. https://doi.org/10.35974/isc.v7i1.1776

GAMAGE, S. H. P. W., J. R. AYRES AND M. B. BEHREND. 2022. A systematic review on trends in using Moodle for teaching and learning. *International Journal of STEM Education*. 9, 9. https://doi.org/10.1186/s40594-021-00323-x

GUDKOVA, Y., S. REZNIKOVA, M. SAMOLETOVA AND E. SYTNIKOVA. 2021. Effectiveness of Moodle in student's independent work. *Proceedings of E3S Web Conference*. pp. 273, 12084. doi: 10.1051/e3sconf/202127312084

HASAN, L. 2019. The usefulness and usability of Moodle LMS as employed by Zarqa University in Jordan. *Journal of Information Systems and Technology Management*. Vol. 16. pp. 1–19. https://doi.org/10.4301/S1807-1775201916009

HOLTHAM, C., M. RICH AND L. NORRIS. 2012. Moodle 2020: A position paper. Proceedings of the First Moodle Research Conference held at Heraklion, Crete-Greece from September 4-15, 2012. https://research.moodle.org/40/1/31%20-%20Holtham%20-%20Moodle%202020-%20A%20Position%20Paper.pdf

LASIĆ-LAZIĆ, JADRANKA, IVANJKO, TOMISLAV AND I. GRUBJEŠIĆ. 2017. Using Moodle in English for professional purposes (EPP) teaching at the University North. *40th International Convention on Information and Communication Technology, Electronics and Microelectronics* (MIPRO), May 2017. DOI: 10.23919/MIPRO.2017.7973553

POPOVIC, N., T. POPOVIC, I. D. ROVCANIN AND O. CMILJANIC. 2018. A Moodle-based blended learning solution for Physiology education in Montenegro: A case study. *Advances in Physiology Education*. Vol. 42, No. 1. pp. 111–117.

Rachmadtullah, R. 2020. Use of blended learning with Moodle: Study effectiveness in elementary school teacher education students during the COVID-19 pandemic. *International Journal of Advanced Science and Technology*. Vol. 29, No. 7. pp. 3272–3277. Retrieved from http://sersc.org/journals/index.php/IJAST/article/view/18956

Rajan, R. and R. O. Manyala. 2021. Effectiveness of Moodle in the learning of introductory Physics during COVID-19 pandemic: A case study at the University of Zambia. *International Journal of Innovative Science and Research Technology*. Vol. 6, No. 2. pp. 1124–1131.

Sharma, M., S. Arora, V. Thada and J. H. Naveena. 2020. Effect of a web-based teaching program on Moodle on Psychopharmacology for B. Sc. Nursing Students. *Indian Journal of Psychiatric Nursing*. Vol. 17. pp. 33–38.

Sibgatullina, A., R. Ivanova and E. Yushchik. 2022. Moodle learning system as an effective tool for implementing the innovation policy of the university. *International Journal of Web-Based Learning and Teaching Technologies*. Vol. 17, No. 1. pp. 1–12. http://doi.org/10.4018/IJWLTT.298683

Susanti, R., M.D. Bahtiar and S. Rohayati. 2019. The effectiveness of Moodle as e-Learning in Accounting Education Program. Proceedings of the 1st International Conference on Education Social Sciences and Humanities (ICESSHum 2019), Atlantis Press, 340–344. https://doi.org/10.2991/icesshum-19.2019.55%F 2019/08

Thaila, T. F. F., M. N. P. Rumana, K. Suhaila and A. C. M. Nafrees. 2021. Effectiveness of Moodle for e-Learning to the undergraduates during the COVID-19: Special reference to South Eastern University of Sri Lanka. Proceedings of 8th International Symposium 2021, Faculty of Islamic Studies and Arabic Language, South Eastern University of Sri Lanka.

Umek, L., D. Keržič, A. Aristovnik and N. Tomaževič. 2017. An assessment of the effectiveness of Moodle e-learning system for undergraduate public administration education. *International Journal of Innovation and Learning*. Vol. 21, No. 2. pp. 165–177.

World Health Organisation. 1997. LSE for children and adolescents in schools: Introduction and guidelines to facilitate the development and implementation of life skills programme. Geneva, Switzerland: WHO Programme on Mental Health.

Zabolotniaia, M., Z. Cheng, E. Dorozhkin and A. Lyzhin. 2020. Use of the LMS Moodle for an effective implementation of an innovative policy in higher educational institutions. *International Journal of Emerging Technologies in Learning*. Vol. 15, No. 13. pp. 172–189. https://doi.org/10.3991/ijet.v15i13.14945