Journal of Information Systems Engineering and Management
2025, 10(24s)
e-ISSN: 2468-4376
https://www.jisem-journal.com/

Research Article

The Effect of MOOCS on Participants' Satisfaction During the Covid-19 Pandemic

Mohammed Salah-Eldin Abdel-Aziz Hassanein[1] , Abdellah Ibrahim Mohammed Elfeky[2*], Marwa Yasien Helmy Elbyaly[3], Ayman Fawzy khttab Madkour[4]

[1]*Department of Administrative Sciences, Applied College, Najran University, Najran, Saudi Arabia*
[2]*Department of Curriculum and Instruction, College of Education, Najran University, Najran, Saudi Arabia*
[3]*Department of Home Economics, Faculty of Specific Education, Kafrelsheikh University, Egypt*
[4]*Department of Media and Instructional Technology, College of the Arab East for Graduate Studies, Riyadh - 13544, Kingdom of Saudi Arabia*
mshassanein@nu.edu.sa[1], abdalah.elfeqi@spe.kfs.edu.eg[2] and Marwa.mohamed1@spe.kfs.edu.eg[3], afmadkour@arabeast.edu.sa[4]
Corresponding author: *Abdellah Ibrahim Mohammed Elfeky, Faculty of Education, Najran University, P.O. Box: 1988, Najran, Saudi Arabia*

ARTICLE INFO

Received: 24 Dec 2024

Revised: 09 Feb 2025

Accepted: 19 Feb 2025

ABSTRACT

Investigating the Impact of MOOCs on Participants' Satisfaction During the COVID-19 Pandemic was the aim of this study. All third-year College of Education students took part in the activities. They were split up into two experimental groups at random. To this end, a single primary tool—a satisfaction measure for participants with the computer-related course material—was created. The results indicated that, based on participant satisfaction, there was a statistically significant difference between the first experimental group, which received instruction through MOOCs, and the second experimental group, which received instruction via the Learning Management System (Blackboard). This difference was favorably associated with the first experimental group.

Keywords: MOOCs, Satisfaction, Learning Management System, and blackboard.

INTRODUCTION

MOOCs have become a well-liked method for people to learn new things and expand their knowledge [1-3]. Thus, giving people the chance to learn is one of MOOCs' main objectives [4-6]. MOOCs are distinct from the majority of other forms of higher education online learning. They are financed by prestigious universities and are free, giving them a reputation that has never been attained by online learning [7-10]. When compared to students enrolled in traditional courses, MOOC participants have more autonomy because they are encouraged to study whenever and wherever they wish [11-15]. MOOCs are an increasingly popular way to deliver education [16-18]. In terms of scalability and free access to courses, they can be viewed as an extension of existing online education strategies [19-21]. According to Elfeky [22], the course structures comprise of lecture videos, online discussion forums, and auto-graded tests. Stated differently, they are designed to serve as a substitute for the majority of conventional online learning methods, which distribute content via a solitary or centralized platform [23-25]. Therefore, it is anticipated that MOOCs will become increasingly important to undergraduate students' education in the years to come.

Furthermore, the sense that a student has that an educational institution satisfies a need, desire, or other need and that this fulfillment is enjoyable is another indicator of student satisfaction with the educational services provided by an educational institution [26-30]. Another commonly used indicator of good learning is student satisfaction [31, 32]. It is commonly acknowledged that satisfaction is a crucial indicator of the caliber of educational services and the effectiveness of online learning, which has drawn the greatest attention from universities pursuing competitive advantages [33-37]. Additionally, studies have revealed that highly satisfied students get a variety of favorable results from their studies, and research has shown the influence of student satisfaction on the teaching and learning processes [38-40]. This is supported by scientific evidence. However, there is also a lack of knowledge regarding the potential effectiveness of MOOCs in fostering student satisfaction. Up order to fill up these gaps, we are investigating how the COVID-19 epidemic affected academic happiness through the use of MOOCs in this study.

METHODOLOGY

One of the researchers invited participants via the Zoom platform to participate in a MOOC. During a 15-minute MOOC orientation presentation, it was explained how to use MOOC as a resource for creating research papers. Through the Zoom platform, assistance was provided as needed to finish the MOOC sign-up process. The research team—that is, the teaching team for the course—promoted and encouraged voluntary, free participation. Six weeks passed during the MOOC. Two blocks covering similar themes were added each week. Each block has two parts and 45 minutes allotted to reviewing background information. Assignments and tasks took up the first thirty minutes, with the remaining twenty-five minutes dedicated to watching videos.

INSTRUMENTS OF DATA COLLECTION

A scale of participant satisfaction was created. There were thirty-two items total; sixteen of them were positive and sixteen of them were negative. Five responses—strongly agree, agree, neutral, disagree, and strongly disagree—were connected to each question in the Likert model. As soon as it was finished, it was submitted to a panel of arbitrators who were all authorities on instructional techniques and educational technology in order to verify its legitimacy. By using the scale on a pilot sample of twelve students who were not presumed to be part of the study's main sample, the internal consistency of the scale was also examined. The scale's coefficient was also determined using Cronbach Alpha, and the result was (0.91), indicating that the results would be reliable when applied to the study sample.

FINDINGS

T-test for independent samples was employed after participant grades in both experimental groups were recorded on a satisfaction scale both before and after the experiment. Table (1) displays the significance of the adjusted gain ratio of the participants' grades in both groups.

Table 1: Importance of the two experimental groups' modified gain ratios on the participants' satisfaction scale

Group	N	M	SD	Mean Difference	T. Ratio	Sig.
Experimental Group 1	35	89.7	6.14	18.2	6.2	0.041
Experimental Group 2	35	71.5	7.62			

The difference in the modified gain ratio of students' grades in both experimental groups on the higher order thinking skills test was significant, as shown by Table 1's T. ratio (6.2). Students in the first experimental group had a mean score of (89.7), whereas their classmates in the second experimental group had a mean score of (71.5). Stated otherwise, the modified gain ratio of the students in the first group, who were taught through MOOCs, was superior to that of their peers in the second experimental group, who were taught using the Blackboard system. Consequently, it can be said that students in the first group were more satisfied with MOOCs than those in the second. This, of course, shows how crucial it is to use MOOCs to raise third-level students' happiness at Najran University's college of education.

DISCUSSION

The objective of the research was to determine how MOOCs affected participants' satisfaction during the COVID-19 pandemic. The usage of MOOCs rather than the Blackboard system proved to be more effective in teaching the course material, according to the results. Participants in the first experimental group, who learned the course material through MOOCs, had mean scores that were greater than those of their peers were in the second experimental group, who received instruction via the Blackboard system. These kinds of findings might be ascribed to numerous facts or causes. The reality that e-learning management system services and content are typically only accessible to logged-in users. Experts and specialists in fields like graphic design, instruction design, programming, etc. typically create the instructional materials. LMSs also have a restricted range of tools and services. They are unable to adapt to advancements in web technology as quickly as MOOCs do. The findings of Masada [41] provide support for this view. It is true that students were largely content with Facebook's affordances because the basic features of an LMS could be readily included into a Facebook group. Nevertheless, the debate was not threaded and

the LMS did not allow direct uploads of files in other formats. However, because they were worried about their privacy being compromised, the pupils did not feel secure or at ease. Thus, it's critical to have backup options that deliver comparable services at the required pace using a suite of tools that respond quickly to new technological advancements, like Google Books, Photos, Videos, Blogs, Wikis, email, Facebook, RSS, and Tags. Additionally, MOOCs enable the concept of lifelong learning, also referred to as ongoing education, and allow for tailored learning to meet the needs of each learner. Though the definition of MOOCs makes no mention of this capability, LMSs are able to register and monitor students' records.

This result supports the conclusion reached by Masadeh and Elfeky [42], which claims that despite their acceptability, LMS have not improved as anticipated for the following reasons:

1. The user should be the center of learning, not the organization or the course.
2. Learning settings must provide support for lifelong learning.
3. It is crucial to take into account both the support provided by 2.0 tools and informal learning when promoting this learning paradigm.

ACKNOWLEDGMENT

The authors are thankful to the Deanship of Graduate Studies and Scientific Research at Najran University for funding this work under the Growth Funding Program grant code (NU/GP/SEHRC/13/49-5).

REFERENCES

[1] Ahmed, E.S.A.H., S.M. Alharbi, and A.I. Elfeky, *Effectiveness of a proposed training program in developing twenty-first century skills and creative teaching skills among female student teachers, specializing in early childhood*. Journal of Positive School Psychology, 2022: p. 4316-4330.

[2] Alharbi, S.M., A.I. Elfeky, and E.S. Ahmed, *The effect of e-collaborative learning environment on development of critical thinking and higher order thinking skills*. Journal of Positive School Psychology, 2022: p. 6848-6854.

[3] Almalki, A.D.A. and A.I.M. Elfeky, *The effect of immediate and delayed feedback in virtual classes on mathematics students' higher order thinking skills*. Journal of Positive School Psychology, 2022: p. 432–440-432–440.

[4] Elbourhamy, D.M., A.H. Najmi, and A.I.M. Elfeky, *Students' performance in interactive environments: an intelligent model*. PeerJ Computer Science, 2023. **9**: p. e1348.

[5] Elbyaly, M. and E. El-Fawakhry, *Online teaching course to develop STUDENTS'CREATIVITY in handmade embroidery*. British Journal of Education, 2016. **4**(13): p. 30-51.

[6] Elbyaly, M.Y.H., *Heritage Revival by the Use of Saudi Bedouin Textiles in the Gulf Mantle*. Journal of Home Economics, 2016. **26**(4): p. 127-143.

[7] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The role of metacognition in promoting deep learning in MOOCs during COVID-19 pandemic*. PeerJ Computer Science, 2022. **8**: p. e945.

[8] Elbyaly, M.Y.H. and A.I.M. Elfeky, *Investigating the effect of vodcast to enhance the skills of the Canadian smocking and complex problem solving*. Current Psychology, 2022. **41**(11): p. 8010-8020.

[9] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The Effect Of A Simulation Program On Students At The College Of Education's Acquisition Of Hand Embroidery Skills*. European Chemical Bulletin, 2023. **12**: p. 6575-6580.

[10] Elbyaly, M.Y.H. and A.I.M. Elfeky, *Flipped Classroom: Enhancing Fashion Design Skills For Home Economics Students*. learning, 2023. **4**: p. 7.

[11] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The Impact of Problem-Solving Programs In Developing Critical Thinking Skills*. European Chemical Bulletin, 2023. **12**: p. 6636-6642.

[12] Elbyaly, M.Y.H. and A.I.M. Elfeky, *Collaborative E-Learning Environment: Enhancing The Attitudes Of Optimal Investment Diploma Students Towards The Digital Skills Course*. European Chemical Bulletin, 2023. **12**: p. 6552-6558.

[13] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The Effectiveness of Using Advanced Organizations Within The Virtual Classroom To Enhance The Acceptance Of Technology During Disasters*. European Chemical Bulletin, 2023. **12**: p. 6603-6612.

[14] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The Efficiency of Online Learning Environments In Fostering Academic Motivation*. European Chemical Bulletin, 2023. **12**: p. 6622-6628.

[15] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The Effectiveness Of Project-Based Learning On Enhancing The Critical Thinking Skills Of Optimal Investment Students*. Annals of Forest Research, 2023. **66**(1): p. 1595-1606.

[16] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The Efficiency of Instructional Gaming Programs In Stimulating Creative Thinking*. European Chemical Bulletin, 2023. **12**: p. 6613-6621.

[17] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The Effectiveness of Employing Motivational Designed E-Learning Situations On Developing Achievement In Computer Science Curricula For Optimal Investment Students*. European Chemical Bulletin, 2023. **12**: p. 6595-6602.

[18] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The effectiveness of a program based on augmented reality on enhancing the skills of solving complex problems among students of the Optimal Investment Diploma*. Ann. For. Res, 2023. **66**(1): p. 1569-1583.

[19] Elbyaly, M.Y.H. and A.I.M. Elfeky, *The impact of blended learning in enhancing the skill performance of producing digital content among students of optimal investment*. Ann. For. Res, 2023. **66**(1): p. 2031-2043.

[20] Elfeky, A. *Social Networks Impact factor on Students' Achievements and Attitudes towards the" Computer in Teaching" Course at the College of Education*. in *International journal on E-learning*. 2017. Association for the Advancement of Computing in Education (AACE).

[21] Elfeky, A.I.M., *The use of CSCL environment to promote students' achievement and skills in handmade embroidery*. Journal of Home Economics, 2016. **26**(3).

[22] Elfeky, A.I.M., *The effect of personal learning environments on participants' higher order thinking skills and satisfaction*. Innovations in Education and Teaching International, 2018.

[23] Elfeky, A.I.M., S.M. Alharbi, and E.S.A.H. Ahmed, *The effect of project-based learning in enhancing creativity and skills of arts among kindergarten student teachers*. Journal of Positive School Psychology, 2022. **6**(8): p. 2182-2191.

[24] Elfeky, A.I.M. and M.Y.H. Elbyaly, *The impact of learning object repository (lor) in the development of pattern making skills of home economics students*. British Journal of Education, 2016. **4**(2): p. 87-99.

[25] Elfeky, A.I.M. and M.Y.H. Elbyaly, *Multimedia: different processes*. Interactive multimedia-multimedia production and digital storytelling, 2019.

[26] Elfeky, A.I.M. and M.Y.H. Elbyaly, *Developing skills of fashion design by augmented reality technology in higher education*. Interactive Learning Environments, 2021. **29**(1): p. 17-32.

[27] Elfeky, A.I.M. and M.Y.H. Elbyaly, *The Effect Of E-Tutorial Programs On Improving The Producing Digital Content Skill*. European Chemical Bulletin, 2023. **12**: p. 6581-6587.

[28] Elfeky, A.I.M. and M.Y.H. Elbyaly, *The use of data analytics technique in learning management system to develop fashion design skills and technology acceptance*. Interactive Learning Environments, 2023. **31**(6): p. 3810-3827.

[29] Elfeky, A.I.M. and M.Y.H. Elbyaly, *The Impact of Mobile Learning On Developing The Skills Of Integrated Science Operations Among Students Of The Optimum Investment Diploma*. European Chemical Bulletin, 2023. **12**: p. 6629-6635.

[30] Elfeky, A.I.M. and M.Y.H. Elbyaly, *The Effect of Simulation Programs On Enhancing Skills Of Digital Applications*. European Chemical Bulletin, 2023. **12**: p. 6588-6594.

[31] Elfeky, A.I.M. and M.Y.H. Elbyaly, *MANAGING DRILL AND PRACTICE PROGRAMS WITH A MOTIVATIONAL DESIGN AND THEIR EFFECTS ON IMPROVING STUDENTS'ATTITUDES TOWARD INFORMATION AND COMMUNICATION TECHNOLOGY COURSES*. European Chemical Bulletin, 2023. **12**: p. 6567-6574.

[32] Elfeky, A.I.M. and M.Y.H. Elbyaly, *The Impact Of Project-Based Learning On The Development Of Cognitive Achievement In The Course Of Applications In Educational Technology Among Students Of The College Of Education At Najran University*. European Chemical Bulletin, 2023. **12**: p. 6643-6648.

[33] Elfeky, A.I.M. and M.Y.H. Elbyaly, *Examining The Effects Of Virtual Classroom Use Inside Learning Management Systems On Enhancing Student Satisfaction*. Ann. For. Res, 2023. **66**(1): p. 1980-1990.

[34] Elfeky, A.I.M. and M.Y.H. Elbyaly, *The Impact Of Virtual Classrooms On The Development Of Digital Application Skills Among Teachers Of Digital Skills In Najran Region*. Ann. For. Res, 2023. **66**(1): p. 2044-2056.

[35] Elfeky, A.I.M. and M.Y.H. Elbyaly, *The effectiveness of virtual classrooms in developing academic motivation across gender groups*. Ann. For. Res, 2023. **66**(1): p. 2005-2020.

[36] Elfeky, A.I.M. and T.S.Y. Masadeh, *The Effect of Mobile Learning on Students' Achievement and Conversational Skills*. International Journal of higher education, 2016. **5**(3): p. 20-31.

[37] Elfeky, A.I.M., T.S.Y. Masadeh, and M.Y.H. Elbyaly, *Advance organizers in flipped classroom via e-learning management system and the promotion of integrated science process skills*. Thinking Skills and Creativity, 2020. **35**: p. 100622.

[38] Elfeky, A.I.M., A.H. Najmi, and M.Y.H. Elbyaly, *The effect of big data technologies usage on social competence*. PeerJ Computer Science, 2023. **9**: p. e1691.

[39] Elfeky, A.I.M., A.H. Najmi, and M.Y.H. Elbyaly, *The impact of advance organizers in virtual classrooms on the development of integrated science process skills*. PeerJ Computer Science, 2024. **10**: p. e1989.

[40] Elfeky, A.I.M., A.H. Najmi, and M.Y.H. Elbyaly, *Effects of Big Data Analytics in Learning Management Systems for Improving Learners' Academic Success*. Profesional de la información, 2024. **33**(1).

[41] Masada, T.S.Y., *Immediate versus delayed feedback in promoting student teachers skills for lesson plan implementation*. Thouqan Saleem Yakoub Masadeh and Abdellah Ibrahim Mohammed Elfeky (2017) Immediate Versus Delayed Feedback in Promoting Student Teachers Skills for Lesson Plan Implementation, British Journal of Education, 2017. **5**(8): p. 43-58.

[42] Masadeh, T.S.Y. and A.I.M. Elfeky, *Efficacy of open-source learning management systems in developing the teaching skills of English language student teachers*. American Journal of Educational Research, 2016. **4**(4): p. 329-337.