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Capabilities of Blended Learning as a Teaching and Learning Tool in Tikrit University

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ABSTRACT

In early 2022, After the COVID-19 pandemic, many universities around the world, especially Iraqi universities, continued offering online courses based on a blended learning approach that supporting by traditional learning. The growing demand and popularity of mixed-learning models in higher education has made them a widespread educational phenomenon. However, most of the literature focus on blended learning design techniques only without considering interrelated key components for user needs and how to design blended learning based on user interaction (UI), user experience (UX), and different cultures and languages of learners. Therefore, this research aims to the evaluation of BL at Tikrit University based on the needs, and interactions of students in the learning process. Therefore, This study is an experimental study based on questionnaires distributed to 180 students from different colleges at Tikrit University. Finally, the results show that learning and acquiring skills and knowledge through BL is preferable to learning through traditional classrooms.

قدرات التعلم المدمج كأداة للتدريس والتعلم في جامعة تكريت

الملخص

في أوائل عام 2022، بعد جائحة COVID-19، واصلت العديد من الجامعات في جميع أنحاء العالم ، وخاصة الجامعات العراقية ، تقديم دورات عبر الإنترنت بناءً على نهج التعلم المدمج الذي يدعمه التعلم التقليدي. الطلب المتزايد وشعبية نماذج التعلم المدمج في التعليم العالي جعلها ظاهرة تعليمية واسعة الانتشار. ومع ذلك، تركز معظم الأدبيات على تقنيات تصميم التعلم المدمج فقط دون النظر في المكونات الرئيسية المترابطة لاحتياجات المستخدم وكيفية تصميم التعلم المدمج بناءً على تفاعل المستخدم (UI) وتجربة المستخدم (UX) والثقافات واللغات المختلفة للمتعلمين. لذلك، يهدف هذا البحث إلى تقييم BL في جامعة تكريت بناءً على احتياجات وتفاعلات الطلاب في عملية التعلم. لذلك فإن هذه الدراسة هي دراسة تجريبية مبنية على استبيانات وزعت على 180 طالبا من كليات مختلفة في جامعة تكريت. أخيرًا، أظهرت النتائج أن التعلم واكتساب المهارات والمعرفة من خلال BL أفضل من التعلم من خلال الفصول الدراسية التقليدية.

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Introduction

Students in universities are needs for a new learning technology in their learning process to support their reintegration into learning process and to cthe ontinue their education as needed [1]. In addition to, traditional approaches Universities in Iraq face many challenges in learning management, activities, teaching, and learning methods [2, 3].

In the same context, IT facilities (computers, internet labs, learning facilities, and multimedia tools) are available at all Iraqi universities. Therefore, universities need to develop an effective learning environment to reduce resources related to traditional learning and conceconcen on the BL environments [2, 4, 5].

Indeed, the BL method refers to the integration of classroom (face-to-face) with online learning (learning based on technology). This improves the needs and interaction of students in the learning process [5,6].

Researchers such as [7] confirmed that although the focus on BL is important in worldwide, efforts are being made to integrate and apply theory to the BL field [7,8]. Early research in the field of BL investigated the best results for learner interactions in the BL [9]. Online learning systems have been combined with traditional teaching materials (classrooms) [10]. In addition, these studies, identified the role of learning-based technologies in facilitating different types of learning knowledge [11, 12,13].

Moreover, despite efforts to understand user experience (UX) [14], how these courses There are still doubts about meeting people's needs. Students can be satisfied based on (UX), as evidenced by very high dropout rates (e.g. understanding of student needs and motivations in addition to learning perception and user experience during the learning process) Therefore, it is important to understand her UX and students' motivations and perceptions of BL. Despite this, needs to more in-depth research is needed to understand students' needs and requirements in BL during the learning process [15].

1. RELATED WORK

According to [16], traits that influence acceptance of BL in different educational institutions have been studied in continuing education. The aim of this study about explore further the components that affect the use of BL in university research.

According to the authors, gender, age, habits, effort expectations, experience, social influence, achievement, behavioral intentions, and favorable environment are just a few of the numerous factors driving BL adoption.

In designing and implementing instructional decisions based on BL, educators can apply guiding principles that not only define course content but also help develop a solid method on which to design technology, [17] . The BL was divided into five parts and was developed according to BL principles of teaching. This shows educators how to develop appropriate learning methods and preferences according to the learning needs of their students. According to [18,19], the aim of this project was to develop a blended learning module for higher education. An exploratory design study was conducted with teachers from 69 different academic programs. Data were collected through intensive group discussions, observations, a series of pilot projects, and debriefings. The conclusions relate to basic standards, regulations, and quality control. Working techniques and results are also described in this publication. When creating a blended learning module, consider the nature of the BL course, the capabilities of the learning management, the supporting components, the instructor's responsibilities in supporting the course, and the behaviors and perspectives of the students. This study presents a new method for creating online models for BL in higher education universities [19].

In addition to these studies, [20] stated in their study that the purpose was to build and evaluate BL-based global expert development programs for gifted educators. says there is. Design-based research was used to test a prototype of this program. The research focus of this study is on blended learning design. A survey of trainees found that responses in mixed learning were significantly more satisfied with their learning. It was helpful to have a well-designed learning with excellent training, active involvement, and instructors who could provide useful feedback. Data shows that online students want synchronous and asynchronous online activity and feedback. The use and flexibility of asynchronous discussion forums appear to be the two most commonly cited benefits of BL. Other episodes are also rumored [20].

In another study, [13] is to consider high-quality BL models using (Moodle) or (ADDIE) development stages. This study resulted in the development of a BL model with tools and learning model components and an e-learning model guide

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for teachers and learners. Expert tests show that the finding of mixed-learning models is of high quality. This blended learning method helps teachers overcome challenges in BL. A process of integration through new method learning activities while aiming to encourage, prepare for and support learning, including mixed between online with face-to-face activities. Blended learning solutions are also being developed to help faculty integrate blended learning into their pedagogies and make it easier for students to interaction in BL activities [13].

The research is conducted in different colleges at Tikrit University (College of Arts, Administration and Economics, Education for

Humanities, Education for pure sciences, Engineering, and Agriculture). At the end of the semester of 2022, a researcher distributed a questionnaire to all university students. Because learners are students and should be uniform in level and education. The students represent different undergraduate levels (classes) at Tikrit University as in table 1 and figure 1.

2. METHOD

Table (1) Colleges Samples

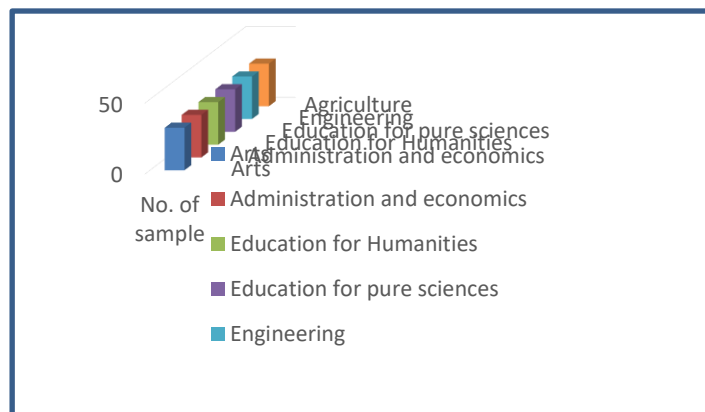| College	Sample
Arts	30
Administration and economics	30
Education for Humanities	30
Education for pure sciences	30
Engineering	30
Agriculture	30
Total	180

Figure 1: Colleges Samples

3. RESULTS AND DISCUSSION

The BL evaluation is based on six Dimensions: usability performance, flexibility performance, quality content performance, learning performance,

openness performance, and lifelong learning performance. Therefore, user-centered evaluation methods are chosen to test BL as in table 2.
Obviously, the participants' Awareness of dimensions in capabilities BL is high according to

the capabilities of BL (4.108) and the relative importance ratio between (79.7%-81.9%). Thus, the mean value exceeded the standard mean (3) for every dimension. Shows that, More Consensus on the usability performance dimension (4.23), followed by flexibility performance (3.14), Equality content performance (4.76), learning performance (3.83), and openness performance (4.43). The final dimension concerned achieving lifelong learning performance (4.26).

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Table (2): The results of BL Dimensions

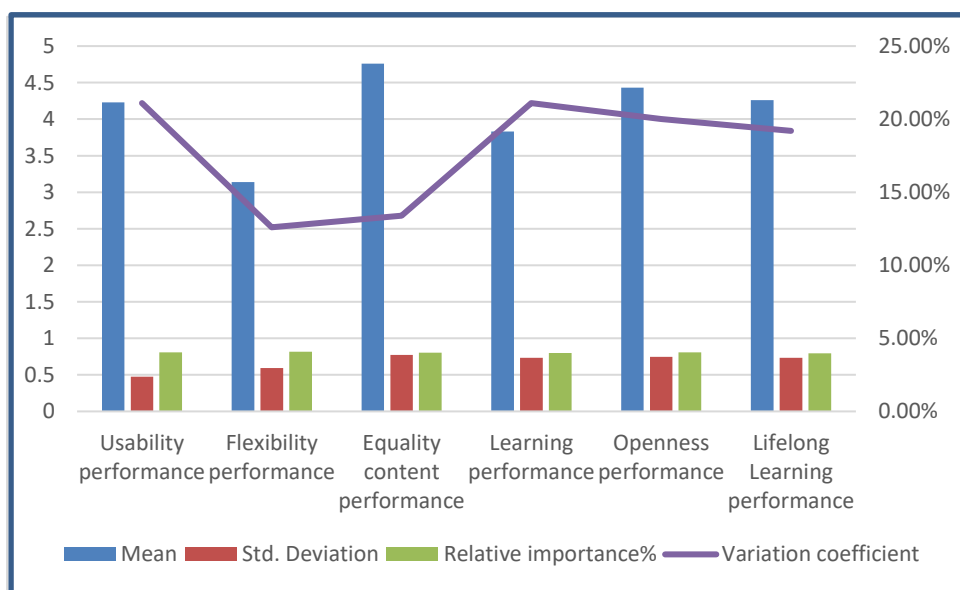| Dimensions	Mean	Std. Deviation	Relative importance%	Variation coefficient
Usability performance	4.23	0.475	80.7%	22.1%
Flexibility performance	3.14	0.593	81.9%	12.6%
Equality content performance	4.76	0.774	80.2%	13.4%
Learning performance	3.83	0.735	79.8%	21.1%
Openness performance	4.43	0.745	80.6%	20.0%
Lifelong Learning performance	4.26	0.733	79.7%	19.2%
Capabilities of Blended learning	4.108	0.675	80.48%	17.90%

Fgure 2: Results of Mean, Std. Deviation, Relative importance, and Variation coefficient

In addition to, figure (2) also indicate to the means for the six dimensions and their total values It is also showed that there is no dispersion in the opinions of the participants' for the capabilities of BL in different colleges at Tikrit University in terms of the standard deviation with the coefficient of variation. Moreover, all dimensions were recorded a less than (50%), which confirms the existence of consistency in opinions about the capabilities of BL in the learning and teaching process.

4. CONCLUSION

In conclusion, the researcher was able to conclude that BL is indeed a powerful teaching and learning tool for higher education learners. The results also showed that learning and acquiring skills and knowledge through BL is preferable to learning through traditional classrooms. This shows, by providing opportunities for students to connect with others learners in the learning environment. All this will improve the learning process of Tikrit University students and further develop traditional learning at the university. This relies on a wealth of learning needs that can be achieved based on student-faculty interaction and can be utilized simultaneously in blended and traditional learning environments. As a result, researcher were able to conclude that BL is the best learning method can use in Iraqi higher education.

5. REFERENCES

[1] A. O. Ismail, A. K. Mahmood, and A. Abdelmaboud, "Factors Influencing Academic Performance of Students in Blended and Traditional Domains," *International Journal of Emerging Technologies in Learning,* vol. 13, 2018.

[2] ALI, Q.A.: 'USER INTERACTION IN IRAQI BLENDED MASSIVE OPEN ONLINE COURSE MODEL'

[3] D. D. Prasetya, A. P. Wibawa, T. Hirashima, and Y. Hayashi, "Designing Rich Interactive Content for Blended Learning: A Case Study from Indonesia," *Electronic*

Journal of e-Learning, vol. 18, pp. pp276-286-pp276-286, 2020.

[4] M. Baldassarre, M. Dicorato, and I. Fiore, "Learning design of blended learning at university," in *teleXbe*, 2021.

[5] R. Owston, D. N. York, and T. Malhotra, "Blended learning in large enrolment courses: Student perceptions across four different instructional models," *Australasian Journal of Educational Technology,* vol. 35, pp. 29-45, 2019.

[6] N. Kholifah, P. Sudira, R. Rachmadtullah, M. Nurtanto, and S. Suyitno, "The effectiveness of using blended learning models against vocational education student learning motivation," *International Journal,* vol. 9, 2020.

[7] L. Di Marco, J. Breton, D. K. Martin, P. Morand, and P. Gillois, "Freedom of master's degree students to study in health curricula: Switching to optimized blended learning as a solution!," *Yearbook of Medical Informatics,* vol. 29, pp. 247-252, 2020.

[8] D. Keržič, N. Tomaževič, A. Aristovnik, and L. Umek, "Exploring critical factors of the perceived usefulness of blended learning for higher education students," *PloS one,* vol. 14, p. e0223767, 2019.

[9] Anthony Jnr, B.: 'An exploratory study on academic staff perception towards blended learning in higher education', Education and Information Technologies, 2022, 27, (3), pp. 3107-3133

[10] M. Zhu, S. Berri, and K. Zhang, "Effective instructional strategies and technology use in blended learning: A case study," *Education and Information Technologies,* pp. 1-19, 2021.

[11] R. S. Baragash and H. Al-Samarraie, "Blended learning: Investigating the influence of engagement in multiple learning delivery modes on students' performance," *Telematics and Informatics,* vol. 35, pp. 2082-2098, 2018.

[12] Bruggeman, B., Tondeur, J., Struyven, K., Pynoo, B., Garone, A., and Vanslambrouck, S.: 'Experts speaking: Crucial teacher attributes for implementing blended learning in higher education', The Internet and Higher Education, 2021, 48, pp. 100772

[13] Eggers, J.H., Oostdam, R., and Voogt, J.: 'Self-regulation strategies in blended learning environments in higher education: A systematic review', Australasian Journal of Educational Technology, 2021, pp. 175-192

[14] Handayani, T., Kalengkongan, J., Marini, A., and Sumantri, M.: 'Developing hybrid

learning models platform based on user experience', in Editor (Ed.)^(Eds.): 'Book Developing hybrid learning models platform based on user experience' (IOP Publishing, 2021, edn.), pp. 032018

[15] Bilousova, L., Gryzun, L., and Zhytienova, N.: 'Interactive methods in blended learning of the fundamentals of UI/UX design by pre-service specialists', Educational Technology Quarterly, 2021, 2021, (3), pp. 415-428

[16] S. D. Oktaria, R. N. Sasongko, and M. Kristiawan, "Development of Blended Learning Designs using Moodle to Support Academics of The Curriculum in University of Bengkulu," *Jurnal Studi Guru dan Pembelajaran,* vol. 4, pp. 118-126, 2021.

[17] Heilporn, G., Lakhal, S., and Bélisle, M.: 'An examination of teachers' strategies to foster student engagement in blended learning in higher education', International Journal of Educational Technology in Higher Education, 2021, 18, (1), pp. 1-25

[18] Jnr, B.A.: 'Institutional factors for faculty members' implementation of blended learning in higher education', Education+ Training, 2021

[19] Alamri, H.A., Watson, S., and Watson, W.: 'Learning technology models that support personalization within blended learning environments in higher education', TechTrends, 2021, 65, (1), pp. 62-78

[20] Muhuro, P., and Kangethe, S.M.: 'Prospects and pitfalls associated with implementing blended learning in rural-based higher education institutions in Southern Africa', Perspectives in Education, 2021, 39, (1), pp. 427-441