

## RESEARCH ARTICLE

# The attitudes of King Khalid University students towards the new learning system due to the current constraints of COVID-19 pandemic

Sabah Mohamed Abbas Hamza<sup>1,\*</sup>, Bahia Khalifa Ibrahim<sup>2</sup>, Salah Edin Hassan El-Obeid<sup>1</sup>, Nawal Salih Ahmed Balol<sup>1</sup>, Richa Rastogi<sup>1</sup>, Eyas G. Abdelraheem Osman<sup>3</sup>, Abdalbasit Adam Mariod<sup>4</sup>

<sup>1</sup> Department of English, King Khalid University, Abha 62529, Saudi Arabia

<sup>2</sup> Department of English, Prince Sattam Bin Abdulaziz University, Kharj 16278, Saudi Arabia

<sup>3</sup> Applied College Medical Sciences, Shaqura University, Shaqura 15526, Saudi Arabia

<sup>4</sup> Indigenous Knowledge and Heritage Centre, Ghibaish College of Science and Technology, Ghibaish 5111, Sudan

\* **Corresponding author:** Sabah Mohamed Abbas Hamza, shamza@kku.edu.sa

## ABSTRACT

As a preventive measure against the danger presented by COVID, scholastic establishments everywhere in the world have been compelled to totally suspend eye-to-eye instruction, including labs and other learning exercises. Various activities have been dispatched by advanced education suppliers in the realm of Saudi Arabia and in King Khalid University, to present virtual learning joined by a quick change of the educational program. Virtual learning is more helpful since it can provide a dynamic and enthusiastic air for learning. The meaning of virtual learning including its usage, evaluation and significant exploration articles is investigated in this research paper. This research paper expects to explore the mentalities and views of college understudies on the utilization of virtual learning instruments in the English Department at Dhahran Al-Janoub College at King Khalid University. The information was gathered via a questionnaire that was distributed randomly among undergraduate female students in the college. It was responded by 33 students. Items of the questionnaire were designed quantitatively. The organized inquiries estimated the emotional reactions to explain the target reactions and simultaneously, improve the definition of suggestions of the study. For example, network adjustment, recorded talk trade, and the actuation of communications were firmly connected to zones learners recorded for improvement. Additionally, the result of the study shows that the learning exercises of college understudies are huge, and relying upon the educators and innovation apparatuses utilized, the nature of cooperation will contrast. The study recommends making Blackboard more interactive when teaching courses in a blended mode by adding more features to its interface so as to promote the positive learning attitudes of the undergraduates.

**Keywords:** virtual learning; COVID-19; pandemic; virtual learning apparatuses; understudies' discernment; point of view; disposition

## 1. Problem of the study

During the year 2020, extremely intense respiratory disorder COVID spread in Saudi Arabia and everywhere in the world. From that point forward, the Kingdom of Saudi Arabia has taken extraordinary measures because of the flare-up, including school and college terminations, diverting gaining from

### ARTICLE INFO

Received: 28 February 2023 | Accepted: 12 June 2023 | Available online: 28 July 2023

### CITATION

Hamza SMA, Ibrahim BK, El-Obeid SHE, et al. The attitudes of King Khalid University students towards the new learning system due to the current constraints of COVID-19 pandemic. *Environment and Social Psychology* 2023; 8(2): 1554. doi: 10.54517/esp.v8i2.1554

### COPYRIGHT

Copyright © 2023 by author(s). *Environment and Social Psychology* is published by Asia Pacific Academy of Science Pte. Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>), permitting distribution and reproduction in any medium, provided the original work is cited.

conventional techniques into a virtual framework as an immediate or quick movement or remedy arrangement. The analysts examined the impacts of the quick shift in learning from college learners' perspectives during the pandemic.

### **1.1. Aims of the study**

This study plans to accomplish the accompanying aim:

To investigate the learners' attitudes towards the speedy move into virtual learning during the pandemic.

### **1.2. Significance of the study**

The present study is significant since it helps educators, colleges, and foundation overseers to know the advantages and disadvantages of the learning experience and make a move towards the improvement of the nature of internet-based learning.

### **1.3. Questions of the study**

The research paper endeavored to discover answers to the accompanying inquiries:

- 1) What is the positive impact of virtual learning on the English Department undergraduate students?
- 2) To what extent does virtual learning influence learners' overall performance from their viewpoints?

### **1.4. Data collection procedures and instruments**

This research took an experimental approach. The research was carried out in a quantitative way. On the basis of ten items, a questionnaire was developed. It was built on a five-point Likert scale and was closed-ended, with responses ranging from Strongly Agree to Agree to Neutral to Disagree to Strongly Disagree. Since there were no classes and universities were closed due to the pandemic Corona Virus (COVID-19), the questionnaire was distributed among 33 students via WhatsApp and the participants were selected through random and convenient sampling.

## **2. Literature review**

After the worldwide spread of COVID, most colleges and scholastic foundations have moved to web-based learning rather than vis-a-vis conventional learning and Saudi Arabia isn't an exception. Since the forward leap of this pandemic, though everybody was restricted and there were no universities, educational meetings, or schools, work in private or public organizations, and so on, learning ought not to stop. It should go on, and the sole method by which this learning ought to have proceeded is virtual learning.

Accordingly, all Saudi colleges have moved to utilize virtual learning to proceed with the instructive interaction. Besides, virtual learning could be the most ideal decision during the lockdown, since it saves time, exertion, and transportation costs. Students can get to their classes from wherever at their own speed and at a lot less expense. It is an extraordinary chance of getting understudies occupied with profoundly intelligent and cooperative undertakings that assist them with creating significant relational abilities and upgrade their general level of performance.

### **2.1. Virtual learning**

Virtual learning is a type of learning which happens in online conditions or courses. It may be carried out successfully using distinctive learning framework hence, colleges and educational foundations ought to give a productive LMS to be used adequately by the instructors to get ready just as giving quick feedback.

As indicated by Sanford<sup>[1]</sup>, virtual learning "is the option in contrast to the up close and personal or customary instructing. On the web, virtual educating is a web-based instructing measure in which there is no

actual support of the instructors and understudies is obligatory and, they are situated in various separate areas at the hour of the showing cycle”. Racheva<sup>[2]</sup>, additionally concurs that “virtual learning can be characterized as distance learning led in a virtual learning climate with electronic examination content intended for independent or live web-conferencing web-based instructing and coaching”.

During the pandemic, virtual learning has an incredible role in overcoming any barrier between the educators and the students and encourages the correspondence cycle to make up for the deficiency of up close and personal collaboration. Virtual learning could be credited with:

- Setting aside time and cash just as movement costs.
- Being adaptable: It isn't limited by time/date or area.
- Being available: Most online talks are recorded so understudies can without much of a stretch access them, download, forward, and watch them, however, many occasions as they need.
- Being helpful: No area or time limitations, so students can learn whenever it might suit them.
- Top-notch content: Educators' appropriate use of online devices will bring about conveying high-caliber and engaging content.
- Prompt test, test input: Giving quick criticism after the finish of the test or a test is useful for the students to know their level and shortcomings.

## **2.2. Instructive advances**

Instructive innovation is the utilization of programs, equipment, and instructive speculations to encourage learning interaction. Robinson et al.<sup>[3]</sup> believe that “Instructive innovation makes, utilizes, and oversees mechanical cycles and instructive assets to help improve client scholastic execution”. Moreover, the utilization of virtual learning improves availability, adaptability and it is helpful to all clients since these frameworks permit the administration, content conveyance, understudy following, and task and friend joint effort too<sup>[4]</sup>.

Successful usage of these Learning Management Systems (LMS) can prompt a more intuitive environment that helps learners' “imaginative abilities and cooperation”. Additionally, ways of evaluation are a decent path for successful correspondence between both the learners and the educators. This should be possible by getting them associated with the instructing learning measure, conversations, collaborative assignments, tests, and input, and so on are rehearsed, accordingly, instructive establishments and colleges give these methods to encourage the instructive interaction particularly during the pandemic Coronavirus; they assume an extremely extraordinary part to allow the figuring out how to continue. Besides, Hussein<sup>[5]</sup> states that the utilization of innovation spurs EFL students to create systems for productive language learning. Mohsen and Shafeeq<sup>[6]</sup> concurs that “the far-reaching accessibility of innovative foundation has improved the reception of learning (LMSs) in instructive establishments”. Furthermore, he expresses that “it is turning into a reality that the present successful educating requires compelling innovation use”.

For the previously mentioned signs of usage of the instructive virtual classes during the lockdown, the current researches center around the examination of the learners towards the utilization of these virtual classes.

## **2.3. EFL students' perspectives towards virtual learning**

Virtual learning conditions along with the far-reaching and utilization of the web and the accessibility of computers and cell phones have changed the concentration from conventional classes into more understudy-focused and intuitive classes.

During the Coronavirus time, conventional or up close and personal language learning is halted. All the Saudi colleges have received virtual or online classes to meet the present circumstance and to proceed with the learning interaction. In this way, realizing the student's perspectives is a crucial factor for evaluating the virtual

learning measure. Since a definitive objective of the learning cycle is the learners' high-quality performance, their perspectives mirror how much this objective is being accomplished. This reflection helps the educators, the colleges, and administrators to know the advantages and disadvantages of the virtual learning experience and make a move towards its improvement.

#### **2.4. Related works**

The interest in virtual educating and learning is progressively being embraced by the instructive framework in Saudi Arabia because of the Coronavirus pandemic which made the direction of up close and personal homeroom guidance inconceivable for the consistent conveyance of training. Not many types of researches have been directed here. One of these studies, directed by Anas<sup>[7]</sup> shows that Saudi understudies appreciate mixed learning and worth the serious level of commitment of online instruments: communitarian exercises and conversation discussions. Another new study was completed by Al-Nofaie<sup>[8]</sup>. It was a contextual analysis at Altaif College which explored the Saudi college understudies' insights towards learning through Chalkboard, during Coronavirus. The study shows the learner's inclination of the offbeat environment over the simultaneous learning. Another study is done by Demuyakor<sup>[9]</sup>, for surveying Ghanaian global learners' fulfillment with internet learning in higher instructive establishments in Beijing, China. The results of this study uncover that the learners are happy with the execution of web-based learning programs. In any case, they conceded that web-based learning is over the top expensive as well as has genuine availability issues. Additionally, another study was led by Rama<sup>[10]</sup> who researched the instructors' mentalities toward web-based education, mechanical ability, and access. The outcomes showed that educators have inspirational perspectives towards internet instruction. Another research conducted by Khalil<sup>[11]</sup> investigated undergrad clinical understudies' insights about the viability of synchronized web-based learning at the Unaizah School of Medication and Clinical Sciences, Qassim College. The study results revealed that online meetings have two principal points of interest: efficiency and improvement of learners' exhibition; nonetheless, there are a few difficulties like substance, methodological, specialized, insight, discernment, and conduct social during meetings and online tests. Moreover, another study directed by Shahzad<sup>[12]</sup> researched the effect of virtual teaching on ESL understudies' conduct. The outcomes uncovered that learners have uplifting mentalities about the new field of instructing. Additionally, another study finished by Saraswati<sup>[13]</sup> explored educators' and learners' discernments towards the sorts of remunerations utilized in showing English on the web; their recurrence, their motivation, and settings in which the analyses are given. The after effects of the study showed the outcomes genuine praises are more given than object rewards. Additionally, educators affirmed that appreciation brought about a positive impact on learners' scholarly levels. Also, learners were extremely satisfied and exceptionally energetic. Notwithstanding these studies, a new study was done by Krishnan<sup>[14]</sup> exploring the students' insight in regards to learning English through conventional and free online assets learning. The study results showed that students found the free online assets as significant devices for learning English concerning discussion. Besides, the students likewise had inspirational perspectives towards free online resources. All in all, free online assets consistently give inspiring learning conditions, improve students' basic reasoning and scientific abilities, and support social cooperation between the actual students and between the educators and students. Another study was carried out in China by Jin<sup>[15]</sup> to investigate the impact of the shift from traditional methods of teaching to e-learning from students' perspective. The obtained results showed that the use of the Push-Pull Mooring model resulted in students' satisfaction with that shit. Also, a study was also conducted in Saudi Arabia by Bahanshal and Khan<sup>[16]</sup> investigated the efficiency of online classes from teachers as well as students' perspectives. The results reviled that the participants showed positive attitudes towards E-learning. A recent study was conducted by Perera and Abeysekera<sup>[17]</sup> in Sri Lanka. They examined the factors which affect the learners' perceptions during the COVID pandemic. The study findings

showed that students were very satisfied with the experience they underwent. Moreover, the most important factors greatly influenced these students' perceptions are performance expectancy, effort expectancy and service quality and social influence.

### 3. Data analysis and discussion

Reliability statistics:

Factor Cronbach's alpha to measure the reliability of the study tool.

	Item	Reliability
All hubs	10	0.81

From the above table, the general reliability coefficient is high, reaching 0.81. This indicates that the questionnaire has a high degree of reliability that can be relied upon for application.

#### 3.1. What is the positive influence of V-learning on the students' performance?

**Table 1.** Distribution frequency and percentage answering of sample study about Items the first question.

Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Percentage	Sample orientation
1. I think that, learning via the Internet is easier than traditional one.	14 45.2%	4 12.9%	10 32.3%	1 3.2%	2 6.5%	78%	Agree
2. I prefer to take exams online.	25 80.6%	3 9.7%	–	3 9.7%	–	90%	Strongly agree
3. The university has provided us with all the capabilities that support me as a student for a rapid transition from traditional learning to virtual learning.	16 51.6%	11 35.5%	2 6.5%	2 6.5%	–	86%	Strongly agree
4. I have completed learning all the outcomes of all the courses in the course specification.	8 48.4%	12 38.7%	3 9.7%	–	1 3.2%	86%	Strongly agree
5. Virtual learning helped me develop my skills in using technology.	17 54.8%	10 32.3%	3 9.7%	–	1 3.2%	88%	Strongly agree

It is clear from **Table 1** above that 78% of the sum of the whole respondents agree that “learning via the Internet is easier than traditional one”.

Moreover, 90% of the study sample answered that they strongly agree about “taking online exam”.

Answers for item number (3) show that 86% of the study samples answered that they strongly agree that “the university has all the capabilities that support them as students to make a rapid transition from traditional learning to virtual learning”.

Likewise, 86% strongly agree about “completed learning all the outcomes of all the courses in the course specification”.

Additionally, 88% of the study samples answered that they strongly agree that “virtual learning helped me develop my skills in using technology”.

From the fore mentioned results, it is clear that the majority of the sample strongly agree with the expressions of the first question which reflects their satisfaction with the virtual learning as effective learning experience or which reflects the learners prefer the virtual learning over the traditional one.

**Table 2.** Illustrates the mean and stander deviation and Chi-Square and degree of freedom and *p*-value of answering the first question.

Statements	Means	STD	Ch <sup>2</sup>	D.F	<i>p</i> -value
1. I think that, learning via the Internet is easier than traditional one.	3.9	1.2	20	4	0.00
2. I prefer to take exams online.	4.9	1.2	31.2	2	0.00
3. The university has provided us with all the capabilities that support me as a student for a rapid transition from traditional learning to virtual learning.	4.3	0.9	18.7	3	0.00
4. I have completed learning all the outcomes of all the courses in the course specification.	4.3	0.9	17.9	3	0.00
5. Virtual learning helped me develop my skills in using technology.	4.4	0.9	20.5	3	0.00

From the above table, it is noticed that the arithmetic means of all statements is greater than the default arithmetic mean (3), which means that all answers of the sample members are heading in a positive direction and it appears that the standard deviation ranges from 0.9 to 1.2, which means that there are similarity and homogeneity in the answers provided by the respondents. The probability value for most of the statements is less than the significance level 0.05, and this indicates the existence of statistically significant differences, meaning that the respondents’ answers bias one answer without the other.

The positive impact of virtual learning on student performance is: take exams online—virtual learning helped me develop my skills in using technology—complete learning all outcomes of all courses in the privacy of the course—the university has all the capabilities that support them as students to make a rapid transition from traditional learning to virtual learning—learning via the Internet is easier than traditional ones.

### 3.2. To what extent does virtual learning influence students’ performance from their perspectives?

**Table 3.** Distribution frequency and percentage answering of sample study about Items the second question.

Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Percentage	Sample orientation
1. I am satisfied with the virtual learning experience.	22 71%	4 12.9%	1 3.2%	1 3.2%	3 9.7%	86%	Strongly agree
2. I am strongly satisfied with the information technology services at the university—the virtual education system.	15 28.1%	5 16.1%	5 16.1%	4 12.9%	2 6.5%	78%	Agree
3. I agree to continue learning virtually even after the end of the pandemic.	19 61.3%	5 16.1%	2 6.5%	4 12.9%	1 3.2%	84%	Strongly agree
4. I am satisfied with my grades in the mid and final exams.	17 54.8%	4 12.9%	2 6.5%	6 19.4%	2 6.5%	78%	Agree
5. Virtual learning decreases my grades in assessments.	10 32.3%	3 9.7%	5 16.1%	2 6.5%	11 35.5%	60%	Neutral

It is clear from **Table 3** above that 86% of the sum of the whole respondents strongly agree that “I am satisfied with the virtual learning experience”.

Also 78% of the study samples answered that they agree that “I am strongly satisfied with the information technology services at the university—the virtual education system”.

In addition, 84% of the study samples answered that they strongly agree that “I agree to continue learning virtually even after the end of the pandemic”.

As well as 78% agree that “I am satisfied with my grades in the mid and final exams”.

Likewise, 60% of the study samples answered that they were neutral about “virtual learning decreases my grades in assessments”.

Therefore, the respondents’ responses show clearly that most of them agree with the statements of this axis.

**Table 4.** Illustrates the mean and standard deviation and Chi-Square and degree of freedom and *p*-value of answering the second question.

<b>Statements</b>	<b>Means</b>	<b>STD</b>	<b>Ch<sup>2</sup></b>	<b>D.F</b>	<b><i>p</i>-value</b>
1. I am satisfied with the virtual learning experience.	4.3	1.3	51	4	0.00
2. I am strongly satisfied with the information technology services at the university—the virtual education system.	3.9	1.3	16.6	4	0.00
3. I agree to continue learning virtually even after the end of the pandemic.	4.2	1.2	34.6	4	0.00
4. I am satisfied with my grades in the mid and final exams.	3.9	1.4	25.3	4	0.00
5. Virtual learning decreases my grades in assessments.	3	1.7	10.8	4	0.03

From the above table, it is noticed that the arithmetic means of all statements is greater than the default arithmetic mean (3), which means that all answers of the sample members are heading in a positive direction and it appears that the standard deviation ranges from 1.2 to 1.7, which means that there are similarity and homogeneity in the answers provided by the respondents. The probability value for most of the statements is less than the significance level of 0.05, and this indicates the existence of statistically significant differences, meaning that the respondents’ answers bias one answer without the other.

Therefore, it can be said that virtual learning greatly affects students’ performance positively.

## 4. Conclusion

During the first COVID-19 pandemic in mid-March 2020, varied applications were utilized by Saudi Universities in conducting learning. Virtual learning is helpful for the continuity of the learning process as well as the learners’ responses to learning within the current state of affairs. That’s to say, as a result of the employment of the web-based learning, the learning process has become easier and motivating. The findings of this study ensure that the effective utilization of virtual learning has a major impact on learners’ interaction and engagement. They require active participation and interaction apps, and hence it’s suggested to provide more self-learning tutorials within the Blackboard interface icons to facilitate ease of access and usage. The study reveals scope for more analysis in however versatile and non-flexible synchronous and asynchronous learning which are often a hindrance to virtual teaching and learning methods. Subsequently, virtual learning will greatly affect students’ performance and attitudes to be positive and provide better learning opportunities than different kinds of strategies of learning.

## 5. Recommendation

In the initial phase of the COVID-19 outbreak, this study was carried out. There was a very rapid progress in the next step. The study recommends that other researchers disclose the resolution of the barriers faced by learners while studying virtually during the emergency response period of COVID-19 and the improvement of the use of other platforms (Google Meet and Class Point) in the implementation of virtual lectures in order to be more effective. The authors also recommend adding more features to make Blackboard more interesting and interactive. Besides, they recommend that the courses have to be taught in a blended mode to familiarize the students with virtual learning.

## 6. Limitations

The research was conducted on a relatively small population, the Saudi female undergraduates in the Department of English—Dhahran Al-Janoub Science and Arts College, King Khalid University. It limits our ability to generalize from this study that all Saudi students have properly educated knowledge of COVID-19 and endorse the introduction of virtual learning in different higher education institutions. Secondly, a large-scale survey is required to ensure that the target population of all Saudi students studying at higher education institutions is equally represented.

Despite these limitations, this research demonstrates how deeply virtual learning can affect the attitudes of undergraduates and make the transition effective.

## Author contributions

Conceptualization, SMAH; methodology, SMAH; software, SMAH; validation, SMAH and BKI; formal analysis, EGAO; investigation, SMAH and RR; resources, BKI; data curation, BKI; writing—original draft preparation, SEHO and NSAB; writing—review and editing, RR and SMAH; visualization, AAM; supervision, AAM. All authors have read and agreed to the published version of the manuscript.

## Acknowledgment

The authors express their gratitude to the administration of King Khalid University, particularly the Deanship of the Dhahran Al-Janoub Sciences and Arts College. They also owe a debt of gratitude to the English Department of the college staff and students for providing them with the opportunity to write a research paper on such an important issue.

## Conflict of interest

The authors declared no potential conflict of interest concerning the research, authorship, and/or publication of this article.

## References

1. Sanford DR. *The Rowman & Littlefield Guide for Peer Tutors*. Rowman & Littlefield Publishers; 2022.
2. Racheva V. What is virtual learning? Available online: <https://www.vedamo.com/knowledge/what-is-virtual-learning/> (accessed on 19 July 2023).
3. Robinson R, Molenda M, Rezabek L. *Facilitating Learning*. Routledge; 2007.
4. Yacef K. Some thoughts on the synergetic effects of combining ITS and LMS technologies for the service of education. In: *Shaping the Future of Learning through Intelligent Technologies*. IOS Press; 2003.
5. Hussein ET. The effectiveness of using Blackboard in improving the English listening and speaking skills of the female students at the University of Hail. *Advances in Social Sciences Research Journal* 2016; 3(12): 81–93. doi: 10.14738/assrj.312.2379
6. Mohsen.M, Shafeeq C. EFL teachers' perceptions on Blackboard applications. *English Language Teaching* 2014; 7(11): 108–115. doi: 10.5539/elt.v7n11p108
7. Anas A. Perceptions of Saudi students to blended learning environments at the University of Bisha, Saudi Arabia. *Arab World English Journal* 2020; 6: 261–277. doi: 10.24093/awej/call6.17
8. Al-Nofaie H. Saudi University students' perceptions towards virtual education during COVID-19 pandemic: A case study of language learning via Blackboard. *Arab World English Journal* 2020; 11(3): 4–20. doi: 10.24093/awej/vol11no3.1
9. Demuyakor J. Coronavirus (COVID-19) and online learning in higher institutions of education: A survey of the perceptions of Ghanaian international students in China. *Online Journal of Communication and Media Technologies* 2020; 10(3): e202018. doi: 10.29333/ojcm/8286
10. Rama J, Sabasales M, Antonio A, et al. Virtual teaching as the 'New Norm': Analyzing science teachers' attitude toward online teaching, technological competence, and access. *International Journal of Advanced Science and Technology* 2020. doi: 10.2139/ssrn.3654236



11. Khalil R, Mansour AE, Fadda WA, et al. The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: A qualitative study exploring medical students' perspectives. *BMC Medical Education* 2020; 20(1): 285. doi: 10.1186/s12909-020-02208-z
12. Shahzad SK, Hussain J, Sadaf N, et al. Impact of virtual teaching on ESL learners' attitudes under COVID-19 circumstances at post graduate level in Pakistan. *English Language Teaching* 2020; 13: 1–9. doi: 10.5539/elt.v13n9p1
13. Saraswati NMSD, Ratminingsih NM, Utami IGALP. Students' and teachers' perception on reward in online English teaching context. *Journal of Educational Research and Evaluation* 2020; 4(3): 307–314. doi: 10.23887/jere.v4i3.27923
14. Krishnan IA, Ching HS, Ramalingam S, et al. Challenges of learning English in the 21st century: Online vs. traditional during COVID-19. *Malaysian Journal of Social Sciences and Humanities* 2020; 5(9): 1–15. doi: 10.47405/mjssh.v5i9.494
15. Jin Y, Lin C, Zhao Q, et al. A study on traditional teaching method transferring to E-learning under COVID-19 pandemic: Form Chinese students' perspectives. *Frontiers in Psychology* 2021; 12: 632787. doi: 10.3389/fpsyg.2021.632787
16. Bahanshal D, Khan IA. Effect of COVID-19 on education in Saudi Arabia and E-learning strategies. *Arab World English Journal* 2021; 7(1): 359–376. doi: 10.24093/awej/call7.25
17. Perera RHAT, Abeysekera N. Factors affecting learners' perception of e-learning during the COVID-19 pandemic. *Asian Association of Open Universities Journal* 2022; 17 (1): 84–100. doi: 10.1108/AAOUJ-10-2021-0124