E-learning from the Perspective of University of Zakho Students During Covid-19

Fakhir O. Mohammed [1], Aveen M. Hasan [2]

[1,2] Department of English Language, Faculty of Humanities, University of Zakho, Kurdistan Region, Iraq

ABSTRACT

The study investigates the impressions of students at University of Zakho, Kurdistan Region of Iraq, about e-learning during the Covid-19, highlighting some problems resulted from using this e-learning system. Also, the statistical significance of correlations according to gender is calculated. Using qualitative and quantitative methods for data collection, a questionnaire of seven items is utilized via google document and sent to nearly 1000 participants (males and females) via social media and online platforms. Only 752 responses returned. The data were interpreted and analyzed by Excel sheets and SPSS software. As there was statistical significance in gender differences, the results showed that the majority of the participants do not view e-learning as a fun process for their education and they have no willingness to use it for their future studies. In addition, more than half of the participants agree that (1) e-learning is costly; (2) lectures are better understood in classrooms; (3) e-learning is not adequate because of the internet and electricity outage; and (4) e-learning leads to some eye problems and headaches. Generally, knowing the students' impressions about using e-learning for their education will be helpful for the university administrators, educational policy makers, teachers to determine the students' genuine needs, motivation or challenges. This will be helpful to gain an understanding of e-learning in Kurdistan Region of Iraq, to cope with challenges involved in the process of e-learning, and develop approaches to solve the problems resulted from.

KEY WORDS: Covid-19, E-Learning, Problems of E-Learning, Students' Impressions, University of Zakho

1.   INTRODUCTION:

The Coronavirus pandemic (Covid-19), like almost all other pandemic diseases, has spread everywhere like a bomb quickly and unexpectedly. It has crossed over big cities, countries and continents in a way as if the globe is a small village, making almost all the world population be fearful and stressed. People's life has turned upside down. This pandemic has made people stop their everyday activities. Almost every social, economic, political, medical, and religious activities and events have been paralyzed. Markets and Malls have been emptied from the food and the everyday needed objects. Schools, institutions, universities, mosques and churches have been closed. Firms and businesses have come to a standstill. In this regard, the Covid-19 outbreak has become the topic of breaking news of the majority of mass media, namely TVs, radios, magazines, newspapers, etc. However, seemingly not to have an end in sight, students from all parts of the world have been shocked by the Covid-19 outbreak. Consequently, they have been obliged to stay at home for their safety. Surely, this was not the end of life. The process of teaching and learning has become online, as if there is "an accelerating shift to a digital world" (Westgarth 2020). Hence, e-learning and technologies have played an important role in teaching and learning. It can be said that "Technology cannot prevent the onset of the pandemics; however, it can help prevent the spread" (Manjunath 2020). Even though most of schools, institutes and universities use a type of blended process of teaching and learning, the use of different types of e-learning and technologies have been very useful in making such a process easier and safer for students.

E-learning is defined as any learning that is done utilizing internet or intranet connection (Asanok *et al* 2008). Students have different impressions about e-

learning positive or negative. It is important to know the students' impressions in education because when students have a low level of learning expectation, their motivation and success will be reduced (Açıkgöz Ün 2007 cited in Şen 2013, p.947).

Due to the Covid-19 pandemic, the e-learning systems are used in the Iraqi-Kurdistan region higher education institutions to deliver the educational materials. The e-learning system is investigated in different countries such as Croatia (Knezevic, 2007), Ghana (Tagoe 2012; Mamattah, 2016), Saudi Arabia (Zabadi and Al-Alawi 2016), Nepal (Subedi *et al* 2020), etc. Consulting any online system has not investigated before in the Kurdistan Region and students' impressions about this system are not examined. In other words, there have been no studies and research papers about the employment of e-learning generally and during the Covid-19 outbreak especially in a Kurdish context. Therefore, the use of e-learning as an equivalent process of learning and teaching is tackled in the current study. According to *gender differences*, the study investigates:

1. The students' impressions about using e-learning for their education during the Covid-19.
2. The problems of e-learning faced by the university students.
3. Significance of correlation between the students' impressions toward e-learning and the problems of e-learning according to gender.

This paper is limited to investigating the impressions of students at University of Zakho about e-learning in general for their education during the Covid-19. Also, on the basis of results obtained from the students' responses, this study is especially devoted for highlighting the main problems of e-learning faced by the students during the Covid-19 pandemic.

E-learning has mainly been processed to take the position of classroom learning. However, studies and research on such a field within settings where the Kurdish is the official language and English is the foreign language is open to investigate. Therefore, it is very important to manifest the university students' impressions on e-learning and identify its problems because that will help university administrators, educational policy makers, teachers to determine the students' genuine needs, motivation or challenges. Generally, it will help in understanding this learning style and its effectiveness on students' knowledge and design approaches to solve the problems that might emerge as a result.

2. LITERATURE REVIEW

Nowadays, e-learning (also known as digital or online learning) has mostly become a remarkable alternative to classroom learning in almost all educational systems.

This is due to the fact that e-learning is "online access to learning resources, anywhere and anytime" (Holmes and Gardner 2006, p. 14). Hence, e-learning is a process of learning where internet plays an important role (Hadjerrouit, 2007, p. 28). E-learning is different from classroom learning in terms of distance. At schools, institutes and universities, learners gather for taking their lectures. In contrast, through e-learning, teachers and learners are apart from one another. That is, e-learning is a kind of distance education, where educators can access lots of digital materials remotely (Subedi *et al*. 2020, p. 69). E-learning is processed "at a distance from the tutor or instructor, that the learner uses some form of technology (usually a computer) to access the learning materials" (Ally, 2008, p. 16). Although e-learning is interesting and fun, it also meets some diverse challenges, especially those related to "cost, time, place, and risk imposed by more traditional forms of corporate training and university teaching" (Hurst and Thomas, 2008, p. 444).

The study of e-learning directions, its effects and problems in teaching and learning processes is not new. E-learning has not been raised because of the Covid-19; it has come to be advantageous in the field of education long time ago. For example, in an attempt to make a prototype model of e-learning system to be implemented in place of traditional teaching, Pozgaj and Knezevic (2007) conducted a survey study with 117 participants from University of Zagreb, Croatia. The results manifested that most of the participants (76.07%) agreed that e-learning is interesting. Only 9.4% of the participants said that they were not interested in e-learning at all. Among some disadvantages of e-learning, the obtained data showed that 25.6% of the participants confirmed that internet is costly, hence, e-leaning is costly too.

In another survey by Buzzetto-More (2008), it was found that online resources were seen helpful for understanding the course key terms and contents. The study was based on a questionnaire of 60 questions that was distributed to 160 students in order to present their experiences and perceptions toward e-learning. The results showed that the majority of students (72.8%) agreed that e-learning is convenient and joyful for them. The percentage was even higher (79.8%) when it came to the submission of assignments online. Further, the students will take an online course in the future with the highest percentage (28.8%) for "Strongly Agree" followed by 23.5% for "Agree". Also, 28.1% of the participants agreed that e-learning is preferable to traditional classes.

For showing variances according to gender, Tagoe (2012) investigated 534 respondents' perceptions toward e-learning, at University of Ghana. After interpreting and analyzing the data, the results showed that 44.6% of

all the respondents agreed that e-learning is easy and joyful to use, while only 5.4% chose "Disagreed" and 1.1% said "Strongly Disagreed". Likewise, 48% of the respondents agreed that e-learning will be easy and joyful for them in the future. In order to find whether e-learning is preferable to traditional classes, 47.8% of the participants strongly agreed that it is better for the process of learning to use a kind of mixed mode, i.e., a mixture of web-dependent and face-to-face learning.

Furthermore, Mamattah (2016) investigated a total of 4150 students' perceptions toward e-learning from Ho Polytechnic, Ghana. By using a questionnaire, the obtained data confirmed that 80% of all the students liked e-learning, and 69% of them agreed that it will be fun to be used in the future. With regard to the cost of e-learning, 62% males and 89% females agreed that e-learning is costlier than classroom learning. Like those obtained from other previous studies, the results showed that the majority of students (47%) preferred "hybrid", i.e., mixed mode of learning.

Recently, and after the outbreak of Covid-19, Radha *et al* (2020) conducted a study on a sample of students' attitudes toward e-learning locally and internationally. By using a stratified sampling method and google forms, the results confirmed that 82.29% of the participants had willingness to be involved in e-learning. In finding comparison between e-learning and traditional learning, 42.29% preferred e-learning. However, though 70.86% of the participants agreed that e-learning is essential for making knowledge wider, 80% of them preferred face-to-face learning especially for practical materials.

In another study conducted by Subedi *et al*. (2020), the impact of e-learning on the process of education, during the pandemic, in different selected nursing faculties from Nepal was investigated. By implementing an online survey, the collected data presented that more than half of the participants (54.8%) did not enjoy taking e-learning for their education. Concerning the cost of education, 71.5% of the participants agreed that e-learning is cheaper because it indeed saves travel costs. However, the results showed that e-learning is problematic due to the nature of context where education is carried on. When taking online classes, most of the participants felt that they were disturbed and interrupted because of electricity (63.2%) and network (63.6%) problems. Other shortcomings of e-learning were related to eye problems and headaches, and the percentage recorded was 50.5%.

3. METHOD

For the purpose of showing the impact of e-learning on the education of university students at University of Zakho during Covid-19, the researchers used a descriptive and quantitative method in the current paper.

3.1 Participants and Sampling Procedures

A population of 1000 participants (male and female) took part in this research online. The link of the questionnaire was sent to the participants via Viber, WhatsApp, and Facebook messenger. For obtaining more responses, the researchers kept waiting for exactly two months, January and February, 2021. During the allocated period of time, only 752 (255 males and 497 females) participants, i.e., (34% males and 66% females), responded to the questions. Such a number of responses is statistically considered reliable because it is more than 50% of the population (i.e., 1000 participants). Although such procedures were achieved online, the researchers followed a "snowball" way of finding participants and collecting the data (Sharon, 2018). In other words, for receiving more responses, the researchers also asked their friends to ask their colleagues who in turn asked their relatives, and so on.

The selected participants were students at the University of Zakho, a public university in Duhok governorate. To the knowledge of the researchers, the data were collected from participants of different age, gender and education so that the study has a good coverage of population. However, age and education were not considered because they were not chosen as variables for interpreting and analyzing the data. Focus is only on the different impressions manifested by males and females. That is, gender is the only variable used in the current study. Hence, the statistical significance of correlations and variances between males and females is calculated.

3.2 Tools and Data Collection Procedures

The tool that was used for the purpose of gathering and measuring the data was the following:

1. A questionnaire of seven questions was formed by the researchers and used to collect the participants' impressions toward e-learning as well as problems of e-learning during Covid-19. This *questionnaire* was created via docs.google.com and sent to 1000 participants via online platforms, namely Viber, WhatsApp, and Facebook messenger. The total number of responses returned was exactly 752. Because the population of the current study is a large one it is best seen to collect data needed through a questionnaire. Questions number 1 and 7 were limited for gaining responses regarding the general impact of e-learning on the university students reflecting whether the e-learning process is joyful and there is tendency for using it in the future. On the other hand, questions 2-6 were devoted for showing some problems of e-learning in view of the participants. The

questionnaire is responded by a three-point Likert scale ranging from Agreed, Neutral and Disagreed.

2. For obtaining more responses, the questionnaire, which was originally written in English, was translated into Kurdish by the researchers themselves. Hence, every question in the questionnaire was in both English and Kurdish languages. The translated version of the questionnaire was very helpful for understanding the content of the questions by the participants who did not know English. This was due to the fact that the questionnaire was also sent to students from non-English departments in the target university. There was not any focus on differentiating pure and social sciences because they were not chosen as variables in the study.

3.3 Data Analysis Procedures

The frequencies and percentages of responses were automatically calculated by google document website. By using Excel sheets and quantitative analysis, the results were presented on bar charts as described in the following subsections. The statistical significance of correlations between males and females concerning their responses to e-learning, as well as its problems, has been calculated by using the SPSS software, version 18.

4. RESULTS AND DISCUSSION

On the basis of literature review and aims of the study, the obtained data were analyzed and interpreted according to three fundamental inquiries, namely: 1) the general impression on e-learning expressed by the Kurdish university students during Covid-19 pandemic, 2) highlighting some problems of e-learning according to the students' impressions, and (3) showing the statistical significance of gender differences. The group statistics of means (M) and standard deviations (SD) for gender differences in showing general impressions of the participants toward e-learning and its problems in University of Zakho are presented in the following table:

Table 1
Group Statistics

	Gender	N	Mean	Std. Deviation
Q1	Male	197	2.46	1.579
	Female	425	2.44	1.470
Q2	Male	197	3.44	1.645
	Female	425	3.24	1.617
Q3	Male	197	3.43	1.663
	Female	425	3.20	1.627
Q4	Male	197	3.29	1.642
	Female	425	3.36	1.645
Q5	Male	197	3.75	1.561
	Female	425	3.78	1.470
Q6	Male	197	3.23	1.653
	Female	425	3.02	1.489
Q7	Male	197	2.47	1.589
	Female	425	2.45	1.502

4.1 Students' General Attitudes toward E-learning

As a general impression toward e-learning, more than half of the respondents, i.e., 76.4% of the participants (25.2% males and 51.1% females) disagreed on e-learning as a fun process of education. The results were neither in agreement with those obtained by Subedi *et al* (2020) nor with Mamattah's (2016) results. However, the results in the current study were not in line with those obtained by Pozgaj and Knezevic (2007), Buzzetto-More (2008) and Tagoe (2012), who concluded that the majority of their target respondents agreed on the statement that e-learning is interesting. A low percentage (15.1%), 6.3% males and 8.7% females, selected "Agreed". This percentage predicts that the participants do not intend to use e-learning in any other context. Further, despite females showed higher frequencies than males, there was no statistically significant difference between males (M=2.46, SD=1.57) and females (M=2.44, SD=1.47) whether e-learning is interesting and joyful; $t(620) = .187$, $p>0.05$. The male-female variances of frequencies are presented in the following figure:
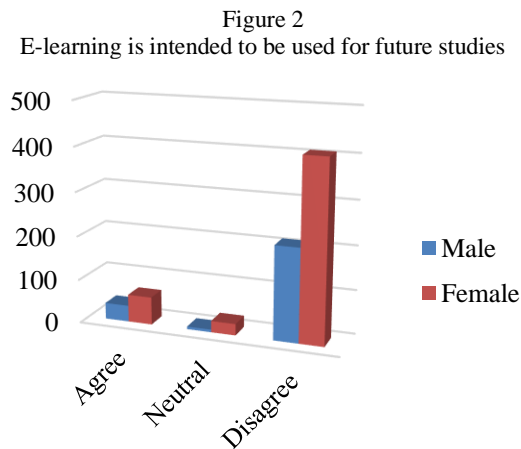
Figure 1
E-learning is fun to use
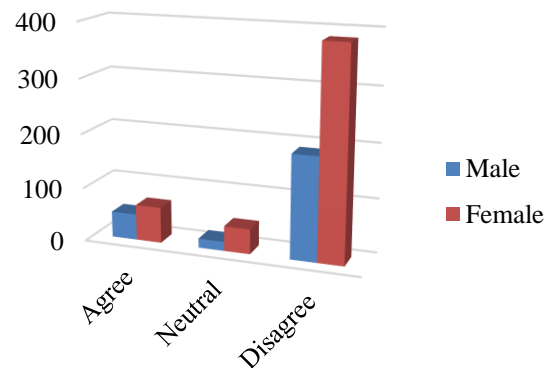
Although all the schools, institutes and universities implemented a kind of blended process of learning, and the risk of Covid-19 is still ongoing, more than half of the participants (82.4%), 28.1% males and 54.2% females, do not have willingness to use e-learning for their studies in the future.

In contrast with the results obtained by Buzzetto-More (2008), Tagoe (2012), Mamattah (2016) and Radha *et al*. (2020), only 13.3% of all the participants (4.9% males and 8.3% females) agreed on consulting e-learning and online platforms for their future studies.

However, the statistical t-test correlation presented that there was no significance between males (M=2.47, SD=1.58) and females (M=2.45, SD=1.50) concerning the willingness of using e-learning in the future; $t(620) = .190$, $p>0.05$. The results of frequencies are presented in Figure (2) below:

Figure 2
E-learning is intended to be used for future studies

In figures (1) and (2), it is clear that the University of Zakho students are not interested in e-learning and they have no tendency to use e-learning in the future.

4.2 Problems Of E-Learning According to Students' Impressions

According to the results obtained from the data, especially question number 6, whether e-learning is cheaper than classroom learning, 49.2% of respondents (18.8% males and 30.3% females) surprisingly believed that e-learning is to a degree costlier than classroom learning. This is probably due to the students' needs of many things such as having computers, laptops, smartphones, good electricity, internet access, etc. They are not available for most of the students. Our results were not in line with those obtained by Subedi *et al* (2020), where most of the respondents said that e-learning is cheaper. Such percentages were slightly higher in relation to all the respondents (46.5%), 14.2% males and 32.3% females, who chose "Disagreed". With regard to the gender factor, both males (M=3.23, SD=1.65) and females (M=3.02, SD=1.48), t(620) = .161, *p*<0.05, presented statistically significant difference concerning the general cost and fees of e-learning. The results were in favor of females.

Figure 3
E-learning is generally cheaper than classroom learning
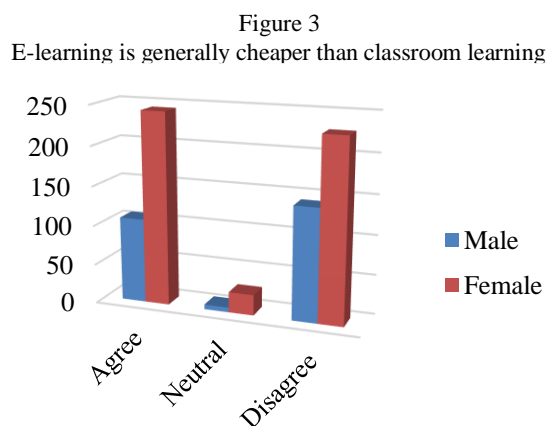
It can be said that in the Kurdish context e-learning is to an extent economically useful where it avoids many challenges such as clothes, food and transportation expenditures.

However, while there are different viewpoints by respondents from different social and cultural contexts, the results in this paper are approximately in line with those gained by Mamattah (2016), where most of the respondents agreed that e-learning is costlier than classroom learning. In contrast, our results were not in agreement with those obtained by Pozgaj and Knezevic (2007), where only 25.6% of all the participants agreed that e-learning is costlier than traditional learning because of internet costs.

As we all know that the education system all around the globe, particularly in Kurdistan Region of Iraq, has suddenly changed from traditional classroom settings to a digital system of e-learning and online platforms. Such a change occurred so that the risk of coronavirus infections is reduced. Thus, assuming the variances between males (M=3.75, SD=1.56) and females (M=3.78, SD=1.47), t(620) = .232, *p*>0.05, and when asking about their impressions whether they want their lectures to be given through e-learning or in classrooms (i.e., on-campus), 77.1% of all the respondents (28.4% males and 48.7% females) believed that classroom learning is better for them.

In other words, and in agreement with the results calculated by Subedi *et al* (2020), a large number of respondents did not agree to take classes from home. While 1.4% of all responses was "Neutral", only 21.4% of all the respondents (5.3% males and 16.1% females) were glad to have their lectures through e-learning. Such a low percentage is in line with the results previously obtained by Buzzetto-More (2008), where only 28.1% of the participants agreed that e-learning is preferable to traditional classes.

However, Tagoe (2012) and Mamattah (2016) came to the conclusion that a kind of mixed mode of learning is preferred during the pandemic. Hence, and as confirmed by Radha *et al.* (2020), some practical materials need to be taught face-to-face on-campus.

Maybe the reason is that a large number of students suffer from lack of both electricity service and internet access. According to Soni (2020: p. 6), other factors including "deficiency of proper learning attitude, lack of suitable materials for learning, more involvement in classroom learning, incapability of self-discipline", etc., hinder the way of education via e-learning.

These can be regarded as serious problems of implementing e-learning as a successful process for education during the Covid-19 pandemic. Figure (4) below presents the frequencies obtained from responses to question 5 of the questionnaire:

Figure 4
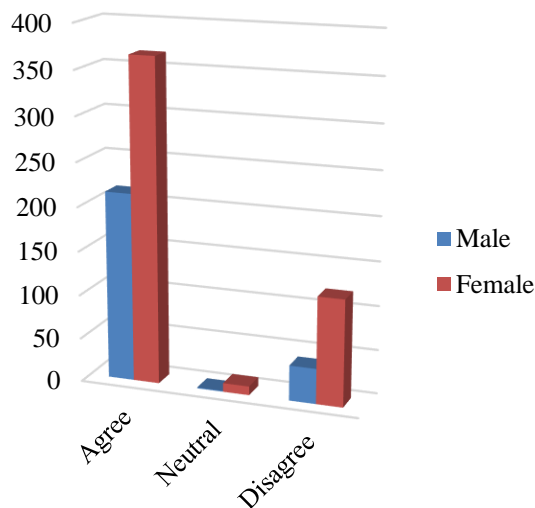Clarification of topics on-campus and online

Figure 5
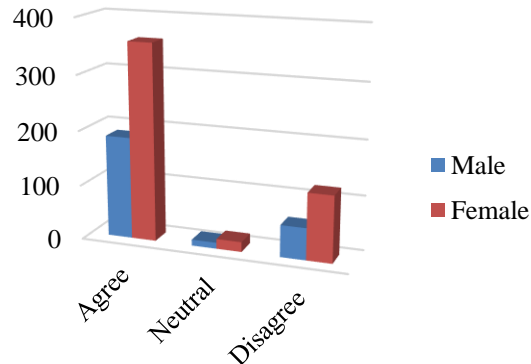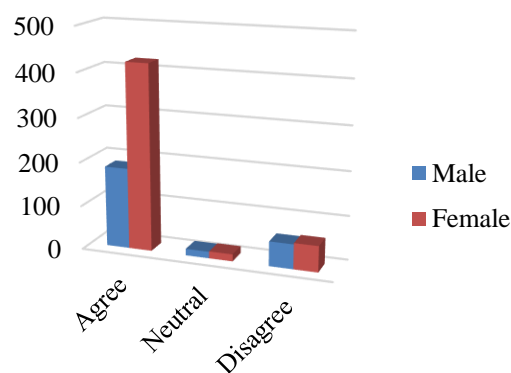E-learning is not perfect because of electricity problems

Figure 6
E-learning is not preferable because of difficult access to internet

As mentioned above, two main problems of e-learning in the context of Kurdish universities are shortage of electricity service and difficult access to internet.

In response to question 3 whether shortage of electricity has influence on the participants' e-learning process, 72.3% of all the respondents (24.7% males and 47.6% females) chose "Agreed", as shown in Figure (5). There was no statistical difference between males (M=3.43, SD=1.66) and females (M=3.20, SD=1.62), t(620) = 1.67, *p*>0.05.

Though they showed different impressions regarding the effect of electricity on the process of e-learning, the males and females had approximately similar attitudes toward question 3 in the questionnaire.

Likewise, responses to question 2 whether difficulty of accessing internet has impact on e-learning, 80.5% of all the respondents (24.4% males and 56.1% females) chose "Agreed" again, as shown in Figure (6). However, with regard to responses obtained from question 3, gender showed no such significant variance between males (M=3.44, SD=1.64) and females (M=3.24, SD=1.61), t(620) = 1.45, *p*>0.05. Such high percentages were also confirmed by Subedi *et al* (2020) before. Although 23.8% of all the respondents (7.7% males and 16.1% females) had opposite viewpoints about electricity service, it can be said that any power outage at home can make the students' engaging in any e-learning process nearly impossible.

Hence, the same is true with internet access. Although 15.2% of all the respondents (7.4% males and 7.8% females) selected "Disagreed", any instability in internet network can make the students feel disturbed, leading to stoppage of e-learning.

The different frequencies obtained from questions 2 and 3 are presented in figures (5) and (6):

One final problem of engaging in e-learning is related to some health issues. As previously confirmed by Subedi *et al* (2020), more than half of the respondents (58.9%), 24.6% males and 34.3% females, suffered from headaches and eye problems due to long gazing at computer and smartphone screens. While 2.5% stayed neutral, the rest of the participants (38.5%), 9.1% males and 29.4% females, chose "Disagreed". Not surprisingly, as it is clear from the means calculations, there was no statistical significance between males (M=3.29, SD=1.69) and females (M=3.36, SD=1.64), t(620) = .499, *p*>0.05.

Figure 7
Clarification of topics on-campus and online
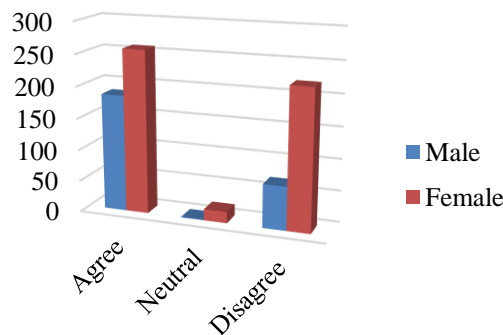
In conclusion, from the data analysis manifested above, the Bahdini Kurdish university students have expressed that they did not see e-learning in the Bahdini Kurdish context as a fun process, as well as they have no willingness to implement it in their future studies. Such general impressions are the result of four main reasons (i.e., problems) deduced from the students' impressions:

1. E-learning is costlier than classroom learning.
2. Classroom learning is better for understanding the content of lectures.
3. E-learning is not perfect because of electricity outage and difficult access to internet.
4. E-learning can lead to health issues such as headaches and eye problems.

5. CONCLUSIONS

The main points of conclusion that are arrived at through data analysis and results are summarized as the following:

1. The majority of the respondents from the University of Zakho perceived e-learning as a learning process that is not fun and joyful. Also, they do not have willingness to use e-learning for their future studies.
2. With regard to the problems of e-learning investigated, more than half of the participants, males and females, agree that (a) e-learning is costlier than classroom learning, (b) lectures are better understood in classrooms than through e-learning, (c) e-learning is not perfect because of internet and electricity outage, and (d) e-learning leads to some health issues such as eye problems and headaches.
3. Gender factor shows statistically significant differences in their impressions toward e-learning and the problems of e-learning. The noticeable point of statistical difference is in responses to question 6 of the questionnaire whether e-learning is cheaper or costlier than classroom learning. The calculated value of significance for females is higher than that of males.

6. IMPLICATIONS

On the basis of literature review, results and conclusions, it is significant to suggest that the learning and teaching process at the University of Zakho is to be a mixture between e-learning and traditional learning, i.e., hybrid. Other researchers including Tagoe (2012), Mamattah (2016), and Radha, *et al*. (2020) recommended the same implications. Such a point of conclusion came after it was found that some practical materials are better to be taught in face-to-face communication. Also, though the use of e-learning technologies enhances the level of education to be higher, however, problems such as hard access to internet and electricity outage should be taken into consideration by the government. If learners cannot easily access online platforms especially designed for the purpose of teaching, the process of learning will be to an extent impossible.

7. REFERENCES

Ally, M. 2008. "Foundations of Educational Theory for Online Learning". In Anderson, T. (Ed.), The Theory and Practice of Online Learning (pp. 15-44). AU Press.

Asanok, M., Kitrakhan, P. & Brahmawong, C. 2008. Building critical components for a successful multimedia-based collaborative e-learning design framework. International journal of the computer, internet and management, 16 (3), 71-79.

Buzzetto-More, N. A. 2008. "Student Perceptions of Various E-Learning Components". [Online] Interdisciplinary Journal of E-Learning and Learning Objects, 4, pp. 113-135. Available at https://www.researchgate.net/publication/320655850_Student_Perceptions_of_Various_E-Learning_Components/ [Accessed 22 July 2021].

Hadjerrouit, S. 2007. Using an Understanding of the Learning Cycle to Build Effective E-learning. In Buzzetto-More, N. A. (Ed.), Advanced Principles of Effective e-Learning (pp. 27-58). California: Informing Science Press.

Holmes, B. & Gardner, J. 2006. E-learning: Concepts and Practice. London: Sage Publications.

Hurst, D. & Thomas, J. 2008. Foundations of Educational Theory for Online Learning. In Anderson, T. (Ed.), The Theory and Practice of Online Learning (pp. 441-472). AU Press.

Mamattah, R. S. 2016. "Students' Perceptions of E-learning". Unpublished Thesis, Linköping University, Ghana.

Manjunas, B. S. 2020, April 14. "Covid-19: 8 ways in which technology helps pandemic management". Available at https://cio.economictimes.indiatimes.com/news/next-gen-technologies/covid-19-8-ways-in-which-technology-helps-pandemic-management/75139759/. [Accessed 25 November 2021].

Pozgaj, Z. & Knezevic, B. 2007, June 25-28. "E-Learning: Survey on Students' Opinions" [Paper Presentation]. Proceedings of the ITI 2007 29th Int. Conf. on Information Technology Interfaces, Cavtat, Croatia. Available at https://www.researchgate.net/publication/4266153_E-Learning_Survey_on_Students%27_Opinions [Accessed 24 July 2021].

Radha, R., Sathishkumar, V., Mahalakshmi, K. & Saravanakumar, Ar. 2020. "E-Learning during Lockdown of Covid-19 Pandemic: A Global Perspective". [Online] International Journal of Control and Automation, 13 (4), pp. 1088-1099. Available at http://sersc.org/journals/index.php/IJCA/article/view/26035 [Accessed 24 July 2021].

Şen, H. Ş. 2013. "The Attitudes of University Students towards Learning". [Online] Procedia - Social and Behavioral Sciences, 83, p.947-953. Available at https://doi.org/10.1016/j.sbspro.2013.06.177 [Accessed 22 July 2021].

Shahzad, A., Hassan, R., Aremu, A. Y., Hussain, A., & Lodhi, R. N. 2020. "Effects of COVID-19 in E-learning on higher education institution students: the group comparison between male and female". [Online] Quality & Quantity, 55, pp. 805–826. Available at https://link.springer.com/article/10.1007/s11135-020-01028-z [Accessed 25 July 2021].

Sharon, T. 2018, March 3. "43 ways to find participants for research". Available at https://medium.com/@tsharon/43-ways-to-find-participants-for-research-ba4ddcc2255b/. [Accessed 12 July 2021].

Soni, V. D. 2020. "Global Impact of E-learning during COVID 19". Available at http://dx.doi.org/10.2139/ssrn.3630073 [Accessed 8 March 2021].

Subedi, S., Nayaju, S., Subedi, S., Shah, S. K., & Shah, J. M. 2020. "Impact of E-learning during COVID-19 Pandemic among Nursing Students and Teachers of Nepal". [Online] International Journal of Science and Healthcare Research (IJSHR), 5 (3), pp. 68-76. Available at https://ijshr.com/IJSHR_Vol.5_Issue.3_July2020/IJSHR0012.pdf [Accessed 24 July 2021].

Tagoe, M. 2012. "Students' perceptions on incorporating e-learning into teaching and learning at the University of Ghana". [Online] International Journal of Education and Development using Information and Communication Technology (IJEDICT), 8 (1), pp. 91-103. Available at https://files.eric.ed.gov/fulltext/EJ1084152.pdf [Accessed 24 July 2021].

Westgarth, R. 2020, May 21. "The importance of technology in the era of COVID-19". Available at https://www.techuk.org/insights/opinions/item/17620-the-importance-of-technology-in-the-era-of-covid-19/. [Accessed 30 November 2020].

Zabadi, A. M., & Al-Alawi, A. H. 2016. University Students' Attitudes towards E-Learning: University of Business & Technology (UBT)-Saudi Arabia-Jeddah: A Case Study. [Online] Canadian Center of Science and Education, 11(6), pp. 286-293. Available at http://dx.doi.org/10.5539/ijbm.v11n6p286 [Accessed 23 July 2021].

	Questions	Agree ڕازیم	Neutral نزانم	Disagree نەرازیم
1	I feel that e-learning is fun to use. نمز هەست دكەم كو خواندنا ئەلكترونى یا خوشە			
2	I do not like e-learning because of difficult access to internet. نمز حەز ژ خواندنا ئەلكترونى ناكەم جونكى ئینتەرنێت یا نەخوشە			
3	E-learning is not perfect for me because of electricity problems. خواندنا ئەلكترونى بو من نەیا باشە ژبەر برین و نەویشێن كەهرەبێ			
4	E-learning can lead to headaches and eye problems because of long gazing and concentrating on screens of computers, laptops, cell phones, etc. خواندنا ئەلكترونى سەرئیشان و نەویشێن جاڤى بو من ژبەر كو نمز كەلەك بەرێ خو ددەمە شاشێن كومپیوتەر و لاپتوب و تەلەفونان			
5	I see that some topics will be easier and more clarified if they are given on-campus than to be delivered online. نمز دبینم كو هندەك ببەت دێ بسەناهیتر بن نەكەر د هولێن خواندنێدا بهێنە كوتن ژ خواندنا ئەلكترونى			
6	In my opinion, e-learning is generally cheaper than classroom learning. ب دیتنا من خواندنا ئەلكترونى ئەرزانترە			
7	I intend to use e-learning for my studies in the future. من لبەرە د پاشەروژێدا ژی خواندنا ئەلكترونى بكوبهینم			

Appendix I
A screenshot of the questionnaire link