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Virtual teaching: Teachers' perspectives on online virtual classroom effectiveness during and beyond Covid-19

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ABSTRACT.

The purpose was to investigate the Arabic language teachers' perspectives on online VC effectiveness during and beyond COVID-19. Participants were 340 teachers. This study employed cross-sectional descriptive method, with the main focus on Arabic Language teachers' perspectives on online VC effectiveness during and beyond COVID-19. Findings from descriptive analysis of the teachers' responses on the importance of using virtual classrooms in distance education program shoed that the rank agree comes first, where teachers responded with agree in 17 items, 2 with strongly agree and only one item for disagree. Using one-way analysis of variance (ANOVA), findings showed that there were no statistically significant differences between the responses of the study sample towards the use of virtual classrooms by gender, while academic qualification and years of experience contributed significantly, where those with higher qualification, and who are experts had positive perspectives on online VCs effectiveness during and beyond COVID-19.

KEYWORDS. Virtual Teaching, Online Virtual Classroom, Covid-19

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Introduction

Covid-19 has invaded most countries of the world, and this has forced all educational institutions to shift to e-learning or distance education. School aged children and young people in most countries around the world have had to stay in their homes after the closure of schools (WHO Regional Office for Europe,2021).

This pandemic made schools offer their courses online while staff worked remotely in order to protect millions of students and themselves (Altun etal.,2021; Alyoussef 2021; Bilgin, and Erhan, 2021; Karaman et al.,2020).

The fourth wave of infection strikes schools and they are currently shut. Most schools have rapidly adopted online teaching and learning modes, ensuring the continuity of learning and teaching (Alshaibani,2020; Dhawan,2020; Adedoyin & Soykan,2020; Stein2020; Zhang,2020).

For a short period of time, it was believed that the Internet was only a place for chatting, reading newspapers, shopping and viewing forums. Then, the use of the Internet and educational institutions began, and knowledge was exchanged through the means of communication. There were websites for schools and universities on the Internet, and the view of the Internet, smartphones and computers changed, It has come to be seen as an essential educational tool, as the number of schools and universities connected to the Internet is increasing day by day. The search results in Google revealed that there are more than (400) universities and electronic colleges (Online University), and that more than (35,000) teachers and (250,000) students use e-learning before the Corona pandemic, and that there are university portals and that there are more than (1700) Online university course in the United States only(Al-Rahmi et al.,2020) .

VRT is seen as an advanced information and education technology that provides a computer-generated learning environment that simulates the real reality, and enables the learner to immerse himself in it, interact with it, and control it by external means that connect his senses to the computer, and accordingly the education that takes place using e-mail and the Internet is called education (Tahoon,2021). The virtual is a type of distance education through which the process of acquiring skills and knowledge takes place, as a result of deliberate interactions with scientific materials that are easily accessible through browsers (Lege& Bonner,2020) .

Teaching methods vary in teaching at this stage. However, the increasing growth in information and communication technology and the demand to elevate the role of the teacher from the provider and the basic provider of knowledge and information. The teacher is considered to be a facilitator and participant in the success of the educational proces. This leads to the emergence of trends and teaching methods more effective based on these modern technological techniques. It became necessary to employ these technological techniques in teaching to create interaction and participation between teacher and learner (Karagozlu,2021). At this stage, the student was provided with technological techniques that make him able to keep pace with these changes. Tablets for example make it easy and quick to reach the center of science and knowledge and to see everything that is new first hand in the fastest time and the least effort and cost (Quadir& Zhou,2021). This necessitates the use of modern educational patterns that serve the educational system in an innovative way which liberates it from the restrictions of time and place and addresses its economic and educational problems, in order to improve learning opportunities for these students and educational technological techniques (Alpaslan, Ozgur, and Ridvan,2021) through which direct lessons and lectures can be provided on the Internet and provide the basic elements needed by the teacher. It is an interactive learning and teaching environment that contains a set of activities that simulate the usual physical classroom activities carried out by a teacher and students separated by space barriers, but they work together at the same time regardless of where they are (Gurevych et al.,2021).

VCE is considered one of the most appropriate educational environments (Adamczyk, Andrzej and Aleksandra, 2017) in which effective active learning methods are available that allow the student to

interact, participate and take responsibility (Islam2019). The virtual classroom environment differs from the traditional learning environment, because its learning activities are centered around the student, and make him responsible for his learning, which leads to the enhancement of his learning self-regulation skills (Ozen and İlke, 2016), as studies have confirmed that the student's prior knowledge and organization of his learning process affects his performance in e-learning environments (Berns & Reyes-Sánchez,2021; Tahoon,2021).

VC also urge students to seek help. The student's presence alone, far from his colleagues in the educational environment, compared to the traditional class, forces him to seek educational assistance from others, and to take advantage of the educational capabilities provided by VC by communicating with specialists, using educational sites, or holding workshops (Quadir& Zhou,2021). Cooperative learning (Kuuk and Ali,2020) with the rest of his colleagues, which develops the student in several skills such as asking for help, searching for information and peer learning (Karagozlu,2021).

Problem statement

KSA is a country that is characterized by a wide geographical area, varying between cities, villages and the Badia, and this large geographical extension represents a challenge for the Ministry of Education to provide quality education for students in remote areas or that suffer from some shortcomings in the presence of distinguished teachers in some disciplines, especially in Hence the need to find educational alternatives that achieve the Ministry's objectives in this field, and the virtual classroom is one of the most important means that can achieve this, due to its flexibility and ability to overcome temporal and spatial obstacles, or obstacles associated with the lack of teachers in some remote areas. During the COVID-19 pandemic, all students whether they are college students or pre-university students are forced to take online classes given by their teachers. KSA is not an exception. There, they are endeavoring to shift traditional classroom teaching to virtual teaching through VC in an attempt to strengthen social distancing measures. Hence, the use of VT is strongly advocated.

The following question was posed, and the study seeks to answer

What is the importance of using VCs in the distance education program as perceived by Arabic language teachers?

Aims

The aim was to investigate the Arabic language teachers' perspectives on online VCs effectiveness during and beyond COVID-19.

Hypotheses

The following hypotheses were tested

1- Men and women will show no differences in their responses towards the use of VCs.

2. Academic qualification will have no significant effect on respondents' responses towards the use of VCs.

3. Years of experience (5years, 5-10 years, more than 10 years) will have no significant effect on respondents' responses towards the use of VCs.

Methodology

This study employed cross-sectional descriptive method, with the main focus on Arabic Language teachers' perspectives on online VCs effectiveness during and beyond COVID-19. The study was conducted in February, 2021.

Participants and procedure

A cross-sectional study was performed for all teachers, either immigrants or natives, in Educational Edara , public, private, and foreign education, Al-Kharj Governorate ,KSA. A convenience sampling

method was used to recruit participants. For the teachers to be included in this study, there were some criteria: to be teachers of Arabic Language in primary, middle and secondary schools stages, both sexes(males and females). online questionnaire was accessed by teachers. All questions must be answered and responded to. The author logged on in order to re-check and eliminate those questionnaires with missing data. Participants were 340 teachers (females, n= 130, 38.23%, and males 201, 61.76%).

Instrument

A 20- item survey instrument was developed particularly for this research study. The first part concerns with the demographic information, while the second parts concerns with the tools questions. The five-point Likert scale (strongly agree, somewhat agree, disagree, disagree, strongly disagree) was used to score the research tool. The internal consistency of the survey was measured through Cronbach's alpha estimated at 0.86. A group of 5 experts examined the content validity. They indicated whether questions were, irrelevant, or highly relevant. All items were highly relevant. A content validity index at the item level (I-CVI) = 0.90.

Independent variables are:

1. Academic qualification: It has three levels (bachelor, high diploma, master's degree or more).

2. Years of experience: It has three levels (less than 5 years, 6-10 years, 10 years and more).

3. Gender (male, female).

Dependent variable:

It is the average scores of teachers' performance on the questionnaire through the use of virtual classrooms - distance learning.

Ethical Procedures

Participants were volunteer public, private, and foreign education teachers, Al-Kharj Governorate, KSA. They were informed about their role in the study, the purpose of the study and the data collection methods. The author wishes they can continue with him till the end of the study. However, they were free to discontinue at any time.

Results

To answer the first question, which states: " What is the importance of using VCs in the distance education program as perceived by Arabic language teachers?" means and standard deviation were used for each statement of the first dimension related to recognizing the importance of VCs in the distance education program as perceived by Arabic language teachers. This is shown in table 1. Table 1 shows the findings from descriptive analysis of the teachers' responses on the importance of using virtual classrooms in distance education program. The rank agree comes first, where teachers responded with agree in 17 items, 2 with strongly agree and only one item for disagree. The teachers were probably ready to use all the functions in VCs. They see, among others, that VCs help provide programs that simulate reality, provide good opportunities to practice speaking, discussion and listening skills, classes help achieve distance learning goals, help in exchanging experiences and information among students, classes help develop thinking skills, and are a technical, advanced and important system to meet the challenges of the times. This is consistent with the findings of other studies (e.g. Al-Maroof et al.,2021; Cutri et al.,2020; Rashid et al., 2021). Those author proved that the teachers in their studies agreed on the importance of using VCs in distance education program.

Table 1. Teachers' responses on the importance of using VCs in distance education program

No.	Item	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	M.	SD	Degree	Rating
1	VCs help provide programs that simulate reality	12.3	56.7	12.00	11.00	8.00	3.77	1.21	Agree	17
2	Virtual classes help achieve distance learning goals	40.00	51.9	5.1	3.00	2.00	4.33	1.27	Agree	5
3	VC is an educational system	22.00	39.00	19.00	12.00	8.00	4.03	1.02	Agree	11
4	VCs help employ modern teaching strategies	35.00	54.00	6.00	3.2	1.8	4.36	1.20	Agree	4
5	Virtual classrooms help employ modern technologies in teaching	42.00	53.00	2.00	1.5	1.5	4.56	1.04	Agree	1
6	VCs meet the needs of students	18.9	51.1	15.00	9.00	6.00	3.70	1.29	Agree	15
7	VCs provide good opportunities to practice speaking, discussion and listening skills	23.00	39.00	18.00	8.00	12.00	4.05	1.22	Agree	10
8	VCs have many advantages that reduce some educational difficulties	25.00	38.00	17.00	6.00	4.00	4.06	1.26	Agree	9
9	Virtual classes develop students' self-learning skills	38.00	51.9	7.1	3.00	2.00	4.31	1.26	Agree	6
10	VCs increase the joint interaction between teacher and student	12.00	54.00	15.00	11.00	8.00	3.77	1.21	Agree	18
11	VCs help in exchanging experiences and information among students	20.00	37.00	23.00	12.00	8.00	4.03	1.02	Agree	13
12	VCs lead to increased student enthusiasm for learning.	11.00	54.00	16.00	11.00	8.00	3.77	1.33	Agree	19
13	Ineffective system in the teaching process.	9.00	3.77	6.00	11.00	16.00	54.00	1.30	Disgree	20
14	VCs help in acquiring new computer skills	23.00	39.00	17.00	9.00	4.00	4.06	1.26	Agree	8
15	Virtual classes help to update and develop distance learning methods.	54.00	41.00	2.00	1.5	1.5	4.56	1.04	Srongly agree	2
16	VCs help develop thinking skills	17.9	51.1	16.00	9.00	6.00	3.70	1.29	Agree	16
17	VC gives the student a space of scientific freedom	22.00	37.00	21.00	12.00	8.00	4.03	1.02	Agree	12
18	This technology provides the student with privacy	24.00	39.00	16.00	9.00	4.00	4.06	1.08	Agree	7
19	VCs help continuous training	16.9	50.1	18.00	9.00	6.00	3.70	1.29	Agree	14

20	VCs are a technical, advanced and important system to meet the challenges of the times	52.00	42.00	2.00	1.5	1.5	4.56	1.04	Srongly agree	3

To verify the first hypothesis, which states " Men and women will show no differences in their responses towards the use of VCs.", ANOVA was used regarding the reality of using VCs in the DL program according to the gender variable. The results are shown in table 2. VCs help learners overcome the limitations of time and place, especially at the times of crises such as Corona epidemic. Nevertheless, very few of previous studies have examined the effect of gender on VCs, let alone in a Saudi Arabia context. ANCOVA was performed considering gender as the independent variable and VCs as the dependent variable. The result of the ANOVA, as in table 2, shows that the F-value (for using VCs in the distance learning program according to the gender variable was greater than the alpha level P = 0,374 > 0.05. Therefore, men and women showed no differences in their responses towards the use of VCs during Covid-19 outbreak.

Table 2. ANOVA for using VCs in the distance learning program according to the gender variable

	Sum of Squares	df	Mean Square	F.	Sig.
Between Groups	1,154	3	0,385	1,948	0,374 not sig.
Within Groups	42,536	336	0,367		
Total	43,681	339			

To verify the second hypothesis, which states " Academic qualification will have no significant effect on respondents' responses towards the use of VCs.", ANOVA was used regarding the reality of using VCs in the distance learning program according to the academic qualification variable. VCs, as shown in table 3 help learners overcome the limitations of time and place, especially at the times of crises such as Corona epidemic. Nevertheless, very few of previous studies have examined the effect of academic qualification on VCs, let alone in a Saudi Arabia context. ANCOVA was performed considering academic qualification as the independent variable and VCs as the dependent variable. The result of the ANOVA shows that the F-value(for using VCs in the distance learning program according to the academic qualification variable was less than the alpha level P = 0,012 < 0.05. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted as academic qualification had significant effect on respondents' responses towards the use of VCs during the COVID 19 outbreak.

Table 3. ANOVA for using VCs in the distance learning program according to the academic qualification variable

	Sum of Squares	df	Mean Square	F.	Sig.
Between Groups	22.996	3	4,599	19,56	0,012 sig.
Within Groups	71,942	336	2,35		
Total	94,938	339			

To verify the third hypothesis, which states " Years of experience (5years, 5-10 years, more than 10 years) will have no significant effect on respondents' responses towards the use of VCs.", ANOVA was used regarding the reality of using VCs in the distance learning program according to the years of experience variable. ANCOVA, as shown in table 4, was performed considering years of experience as the independent variable and VCs as the dependent variable. The result of the ANOVA shows that the F-value (for using VCs in the distance learning program according to the years of experience variable was less than the alpha level P = 0.013 < 0.05. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted years of experience (5years, 5-10 years, more than 10 years) had significant effect on respondents' responses towards the use of VCs during the COVID 19 outbreak.

Table 4. ANOVA for using VCs in the distance learning program according to the years of experience variable

	Sum of Squares	df	Mean Square	F.	Sig.
Between Groups	86.35	3	43.18	4,50	0,013 sig.
Within Groups	1181.43	336	9.60		
Total	1267.78	339			

Discussion

The aim was to investigate the Arabic language teachers' perspectives on online VC effectiveness during and beyond COVID-19. As shown in table 1. , the rank agree comes first, where teachers responded with agree in 17 items, 2 with strongly agree and only one item for disagree. The teachers were probably ready to use all the functions in virtual classrooms. VCs seem to raise positive attitudes concerning learning and teaching. This result is aligned with this of a study conducted by Salbego and Tumolo (2015) which showed that the participants possess positive perspectives towards their experiences with online classes. The majority of respondents realize that VCs facilitate their learning and teaching process in the same manner when compared to face-to-face classes and do not cause difficulties. This result is also aligned with this of a study conducted Al-Qahtani(2019)which showed that the majority of teachers enjoy the experiences of virtual classes, and they mentioned many advantages of using VCs in the learning and teaching process.

Though there are several contradictory findings about how male and female teachers view the use VCs in the distance learning program, Our sample similarly reflected that there is no statistically significant difference using virtual classrooms in the distance learning program across gender during the COVID 19 outbreak. Briggs (2005) in his study found sex differences in regarding perceptions of online teaching roles and competencies importance and Chase (2002) found differences in gender on instructional design practice, particularly on course design. Some authors' results (e.g. Peluchette & Rust2005) indicated that women preferred the use of technology in instruction compared to men. Nevertheless, in our study, it is not surprising that there is difference in involvement in online teaching and course development between female and male teachers. This may be attributed that differentiation in place and time between our results and the results of other researchers.

ANOVA showed that the F-value (for using VCs in the distance learning program according to the academic qualification variable was less than the alpha level P = 0,012 $<$ 0.05. Academic qualifications can encourage the quality of the performance of teachers. Thus, the higher the academic qualifications, the better the quality of teacher's performance on online learning.

Years of experience (5years, 5-10 years, more than 10 years) had significant effect on respondents' responses towards the use of VCs. The result of the ANOVA shows that the F-value (for using VCs in the distance learning program according to the years of experience variable was less than the alpha level P = 0.013 $<$ 0.05. Hence, the null hypothesis is rejected and the alternative hypothesis is accepted years of experience (5years, 5-10 years, more than 10 years) had significant effect on respondents' responses towards the use of VCs during the COVID 19 outbreak. The more who has experience of teaching the more he/she is likely to welcome the use virtual classrooms in the DL program. novice online teachers are likely to view themselves as not ready to nor equipped for online teaching. One can conclude that teachers who teach online can range from novice to expert in their attitudes towards online teaching as well as their ability. That is, the experience they gain from years of teaching online impacts online course attitudes towards online teaching, their ability, as well as design and facilitation. Our findings show that faculty with much online teaching experience have higher attitudes towards online teaching and they see themselves able to teach online compared to those with five years' experience.

Most teachers seem to have formal education training. They were taught through face-to-face method. As we are in the era of continuous change with online technologies, which become a necessity

and a must, teachers' readiness to use VCs in the distance learning program may be in a state of flux (Varvel2007). However, teachers who are new to online teaching are anxious of trying to teach online. This is consistent with Carril, Sanmamed, and Sellés(2013) who found that those faculty professors who experienced online teaching were proficient and pedagogically competent. These results are partially compatible with the results of (Martin, Budhrani& Wang,2019) which indicated significant differences in gender, years of teaching online, and delivery method for faculty perceptions of importance of online teaching competencies.

Conclusion

The lesson learnt to be learnt from the COVID-19 pandemic is that teachers should have positive attitudes towards online teaching as an alternative to face- to-face teaching especially at times of crises . They also should be encouraged to continue using online tools to enhance teaching and learning after the end of the epidemic wave.

Recommendations

Based on the results of this study, some recommendations are presented below. Strengthening the positive attitude towards employing VCs technology. Training and encouraging teachers to communicate with students through electronic pages and e-mails, given that many students have Internet service at home. The need for the university to offer materials that give the student the skills and techniques of e-learning in order to facilitate the process of interaction and benefit by students with the educational materials presented electronically. Encouraging teachers who employ VCs in education, financially and morally.

Conflicts of Interest: The author declares no conflict of interest.

References

Adamczyk, M., Adamczyk, A., and Tłuściak-Deliowska,A.(2017). Using Mobile Phones by Young People: The Trends and Risk of Addiction. *Psycho-Educational Research Reviews* 7 (1):29-. https://www.journals.lapub.co.uk/index.php/perr/article/view/190.

Adedoyin, O. B., & Soykan, E. (2020). Covid-19 pandemic and online learning: the challenges and opportunities. *Interactive Learning Environments*, 1-13. https://doi.org/10.1080/10494820.2020.1813180

Altun, T., Salih A., Ahmet G., and Caner Ö. (2021). Investigating Education Faculty Students' Views about Asynchronous Distance Education Practices During Covid-19 Isolation Period. *Psycho-Educational Research Reviews* 10 (1):34-45. https://www.journals.lapub.co.uk/index.php/perr/article/view/1710. Retrieved on 5/11/2021

Al-Maroof, R.S.; Alhumaid, K.; Akour, I.; Salloum, S. (2021).Factors That Affect E-Learning Platforms after the Spread of COVID-19: Post Acceptance Study. *Data* , 6, 49. https://doi.org/10.3390/data6050049

Alpaslan, M., Ozgur U., and Ridvan A. (2021). Adaptation of Technological Pedagogical Content Knowledge Scale into Turkish Culture Within the Scope of 21st Century Skills. *Psycho-Educational Research Reviews* 10 (1):77-91. https://www.journals.lapub.co.uk/index.php/perr/article/view/1631.

Al-Qahtani, M. H. (2019). Teachers' and Students' Perceptions of Virtual Classes and the effectiveness of Virtual Classes in Enhancing Communication Skills. *Arab World English Journal, Special Issue: The Dynamics of EFL in Saudi Arabia*. 223-240. DOI: https://dx.doi.org/10.24093/awej/efl1.16 Retrieved on 5/11/2021

Al-Rahmi, W. M., Yahaya, N., Alturki, U., Alrobai, A., Aldraiweesh, A. A., Omar Alsayed, A., et al. (2020). Social media - Based Collaborative Learning: the Effect on Learning success with the Moderating Role of Cyberstalking and Cyberbullying. Interactive Learn. *Environments*, 1–14. doi:10.1080/10494820.2020.1728342 Retrieved on 5/11/2021

Alshaibani, M. (2020). Prevalence and Factors Associated With Social Networking Addiction Among Saudi University Students: A Cross-Sectional Survey". *Psycho-Educational Research Reviews* 9 (2):87-99. https://www.journals.lapub.co.uk/index.php/perr/article/view/1466. Retrieved on 5/11/2021

Alyoussef,I. (2021).E-Learning System Use During Emergency: An Empirical Study During the COVID-19 *Pandemic. Front. Educ*. 6:677753. doi: 10.3389/feduc.2021.677753 Retrieved on 5/11/2021

Berns, A., & Reyes-Sánchez, S. (2021). A Review of Virtual Reality-Based Language Learning Apps. RIED. *Revista Iberoamericana de Educación a Distancia*, 24(1), pp. 159-177. doi: http://dx.doi.org/10.5944/ried.24.1.27486 Retrieved on 5/11/2021

Bilgin, O., and Erhan ,Y. (2021).Perceptions of University Students about Coronavirus: A Metaphor Analysis Study. *Psycho-Educational Research Reviews* 10 (1):118-27. https://www.journals.lapub.co.uk/index.php/perr/article/view/1623.

Briggs, S. (2005). Changing roles and competencies of academics. *Active Learning in Higher Education*, 6(3), 256–268. https://doi.org/10.1177/1469787405057753

Carril, P. C. M., Sanmamed, M. G., & Sellés, N. H. (2013). Pedagogical roles and competencies of university teachers practicing in the e-learning environment. The *International Review of Research in Open and Distributed Learning*, 14(3), 462–487. https://doi.org/10.19173/irrodl.v14i3.1477

Chase, C. A. (2002). *The impact of gender differences and levels of expertise in instructional design* (Doctoral dissertation). Wayne State University.

Cutri RM, Mena J, Whiting EF. (2020).Faculty readiness for online crisis teaching: transitioning to online teaching during the COVID-19 *pandemic. Eur J Teach Educ.* 43(4):523–541. doi:10.1080/02619768.2020.1815702 Retrieved on 5/11/2021

Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. Journal of Educational Technology Systems, 49, 5-22.

Gurevych, R., Silveistr, A., Mokliuk M., Shaposhnikova, I., Gordiichuk, G., & Saiapina, S. (2021). Using Augmented Reality Technology in Higher Education Institutions. *Postmodern Openings*, 12(2), 109-132. https://doi.org/10.18662/po/12.2/299 Retrieved on 5/11/2021

Islam, M.(2019).Bangladeshi University Students' Perception about Using Google Classroom for Teaching English. *Psycho-Educational Research Reviews* 8 (2):57-65. https://www.journals.lapub.co.uk/index.php/perr/article/view/1165. Retrieved on 5/11/2021

Karagozlu, D.(2021)Creating a Sustainable Education Environment with Augmented Reality Technology. *Sustainability*, 13, 5851. https:// doi.org/10.3390/su13115851 Retrieved on 5/11/2021

Karaman, H., and Coşkun A.(2020. An Investigation of Adolescents' Levels of Exposure to Cyberbullying in Terms of Social Media Attitudes and Social Appearance Anxiety". *Psycho-Educational Research Reviews* 9 (3):17-25. https://www.journals.lapub.co.uk/index.php/perr/article/view/1548. Retrieved on 5/11/2021

Kuuk, Ö., and Ali A. (2020). Cooperative Learning in Developing Positive Attitudes and Reflective Thinking Skills of High School Students' in English Course". *Psycho-Educational Research Reviews* 9 (1):83-96. https://www.journals.lapub.co.uk/index.php/perr/article/view/1389.

Lege, R.& Bonner,E.(2020). Virtual reality in education: The promise, progress, and challenge. *Projects: virtual reality in the language classroom State of Virtual Reality in Education series*. DOI:10.29140/jaltcall.v16n3.388

Martin, F., Budhrani, K., & Wang, C. (2019). Examining faculty perception of their readiness to teach online. *Online Learning*, 23(3), 97-119. doi:10.24059/olj.v23i3.1555 Retrieved on 5/11/2021

Ozen, Ö., and İlke E. (2016).Self-Regulation Skills and Test Anxiety of Senior High School Students". *Psycho-Educational Research Reviews* 5 (3):94 -. https://www.journals.lapub.co.uk/index.php/perr/article/view/151.

Peluchette, J. V., & Rust, K. A. (2005). Technology use in the classroom: Preferences of management faculty members. *Journal of Education for Business*, 80(4), 200–205. http://dx.doi.org/10.3200/JOEB.80.4.200-205

Quadir, B.; Zhou, M.(2021).Students Perceptions, System Characteristics and Online Learning During the COVID-19 Epidemic School Disruption. *International Journal of Distance Education Technologies (IJDET)*, 19, 1–19. DOI: 10.4018/IJDET.20210401.oa1

Rashid , A., Shukor, N., Tasir, Z. and Na, K.(2021). Teachers' perceptions and readiness toward the implementation of virtual learning environment. *International Journal of Evaluation and Research in Education (IJERE)* 10(1): 209-214, DOI: 10.11591/ijere.v10i1.21014

Salbego, N. & Tumolo, C. (2015). Skype Classes: Teachers and Students' Perceptions on Synchronous Online Classes In Relation To Face-To-Face Teaching and Learning. *International Journal of Language and Applied Linguistic*, 1(3), 36-45. (http://www.ijlal.ir)

Stein, D. S. (2020). Keeping the promise of distance education: Ethical challenges for higher education administrators. In V. p.-. Wang (Ed.), *Handbook of research on ethical challenges in higher education leadership and administration*. Ohio State: IGI Global.

Tahoon, R. (2021). Effects of Test Anxiety, Distance Education on General Anxiety and Life Satisfaction of University Students. Psycho-Educational Research Reviews 10 (1):107-17. https://www.journals.lapub.co.uk/index.php/perr/article/view/1601. Retrieved on 5/11/2021

Varvel, V. E. (2007). Master online teacher competencies. Online Journal of Distance Learning Administration, 10(1), 1–41.

WHO Regional Office for Europe (2021). *Schooling during COVID-19: Recommendations from the European Technical Advisory Group for schooling during COVID-19 health through the COVID-19 crisis*. Copenhagen: WHO Regional Office for Europe.

Zhang, W., Wang, Y., Yang, L., Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak. *Journal of Risk and Financial Management*, 13, 55. https://doi.org/10.3390/jrfm13030055