Remote online language teaching in a limited resource context during COVID-19: the case of Egypt

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Abstract. This study aimed to investigate how the enforced online language teaching operated in a limited resource context, i.e. Egypt. Based on the Technology Acceptance Model (TAM), a nation-wide survey examined how 258 language teachers perceived the sudden move to remote online teaching and whether such perceptions had an impact on their readiness and intention to use this mode during and after the pandemic. Confirmatory factor analysis was used and revealed that four factors constitute teachers' perceptions. Results showed that participants have positive perceptions of online teaching, which consequently indicate that they were ready to use online language teaching even after switching back to face-to-face. Demographic data had no statistically significant effect on the participants' perceptions of enforced online teaching. Teachers identified training needs that show readiness and intention to engage more with this mode of teaching.

Keywords: remote online teaching, EFL, TAM, Egypt.

1. Introduction

Published research prior to COVID on key challenges facing education in Egypt includes issues of over-centralized control, exam-orientation, and entrenchment of social inequalities (Loveluck, 2012). Evidence suggests the challenges are more severe for vulnerable groups including learners with poor socio-economics (Ersado & Gignoux, 2014), learners with disabilities, refugees, and asylum seekers. The swift move to remote online teaching during the pandemic was unforeseen and unprecedented. Additionally, training programs do not address the needs of online

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teachers, which Moeini (2008) describes as 'the missing part of online training programmes'. Studies in the research context focused on university levels (e.g. El-Sayad, Saad, & Thurasamy, 2021; Esawe, Esawe, & Esawe, 2022), but less attention was given to school teachers. The main research questions for this study were as follows.

- To what extent has the remote online teaching approach during the pandemic shaped or re-shaped teachers' readiness to use technology for language teaching?

- To what extent have the demographic variables influenced teachers' experiences during the pandemic, their needs, and intentions to use technological tools in the future?

2. Theoretical background

The use of online teaching tools in English as a Foreign Language (EFL) contexts has been the subject of research for a few decades focusing on issues such as perceptions of technology use (e.g. Cheng, 2007), interactive behaviors (e.g. Liao & Lin, 2011), and evaluating online teaching/learning (e.g. Chan, Chow, & Jia, 2005; Novo-Corti, Varela-Candamio, & Ramil-Díaz, 2003) among others. TAM has been a general framework for many studies. TAM was introduced by Davis (1986, 1989, 1993) more than four decades ago, but it still forms a significant element of current studies. Charness and Boot (2016) note TAM's two primary factors affecting an individual's intention to use new technology: Perceived Usefulness (PU) and Perceived Ease of Use (PEU). Davis (1986, 1989, 1993) explains these as the individual's own likelihood that using a technological tool can improve tasks with relative ease. Attitudes are related to the individual's appraisal of the need to use certain technological tools to fulfill his/her task. Behavioral intentions are concerned with the possibility of using the tool involved by this individual in the future.

3. Method

3.1. Instruments

A questionnaire of 24 Likert-type items was designed to collect data about EFL teachers' perceptions of the enforced online teaching and the variables shaping/

reshaping them. To validate the questionnaire, four experts examined the items for content validity and confirmatory factor analysis was used to assess its construct validity. Cronbach's alpha analysis was computed to examine reliability. Translation and back-translation procedures were implemented followed by a pilot on six teachers to investigate item clarity and appropriateness, instructions, and format.

3.2. Participants and procedures

The questionnaire was delivered via Qualtrics in December 2021, which resulted in 258 responses. Respondents came from state, private, and international institutions representing 16 out of the 27 geographical regions in the country. Age, educational qualifications, and teaching experience are shown in Table 1 below.

Table 1. Demographics

Variable	n	%	Variable	n	%
Age			**Qualifications**		
< 25	23	8.9	BA	112	43.4
25-30	37	14.3	Diploma	91	35.3
31-35	52	20.2	MA	63	14
36-40	47	18.2	PhD	9	3.5
41-45	45	17.4	Other	8	3.1
46-50	33	12.8	Missing	2	0.8
51+	11	4.3			
Missing	10	3.9			
School Type			**Teaching Experience**		
Public	68	26.4	< 2	7	2.7
Experimental	54	20.9	2-5	36	14
Azhariate	10	3.9	6-10	54	20.9
Private	56	21.7	11-15	55	21.3
International	60	23.3	61-20	35	13.6
Missing	10	3.9	20+	68	26.4
			Missing	3	1.2
Teaching Stage					
Primary	102	39.5			
Intermediate/ Preparatory	64	24.8			
High/ Secondary	70	27			
Missing	22	8.5			

3.3. Analysis

Three statistical techniques were used, namely Confirmatory Factor Analysis (CFA), and descriptive and inferential statistics. CFA was used to understand the interrelationships among the questionnaire variables and their underlying dimension(s). Descriptive statistics were conducted to the participants' responses. Inferential statistics (i.e. Kruskal-Wallis and One-way ANOVA, followed by the Scheffe post hoc-test) were computed to scrutinize the impact of biodata on participants' perceptions of and readiness for online teaching.

4. Results

4.1. Factors influencing perceptions

The CFA suggested four dimensions constituting the construct of teachers' perceptions of enforced online teaching which are (1) Attitude, Perceived Impact and Future Intention (APIFI), (2) PEU, (3) Perceived Challenges (PC), and (4) PU. Cronbach's alphas were 0.93, 0.77, 0.77, and 0.58 for Factors 1, 2, 3, and 4 respectively.

4.2. Teachers' perceptions

Item descriptive statistical analyses (frequencies (F), means (M), and standard deviations (SD)) revealed that the respondents had positive perceptions of enforced online teaching. Consequently, this reflects their readiness to endorse online teaching and their intention to use it in the future.

Table 2 illustrates the descriptive statistics of participants' responses.

Table 2. Descriptive statistics

Factors		Number of Items	Responses	
			(Strongly) Agree – Can't Decide – (Strongly) Disagree	
			M	SD
	APIFI	13	3.05 – 4.02	$0.858 \leq SD \geq 1.202$
	PEU	5	3.51 – 3.94	$0.881 \leq SD \geq 1.092$
	PC	5	3.10 – 3.35	$1.070 \leq SD \geq 1.269$
	PU	2	3.06 – 3.39	$1.136 \leq SD \geq 1.154$

4.3. Variables shaping/reshaping perceptions

Inferential statistics showed there was no statistically significant difference among participants' mean scores on the overall questionnaire and across its factors according to their age, school type, teaching stage, teacher qualifications, and teaching experience. The only significant difference found was related to Factor 2 (PEU), with primary stage teachers' increased perception of ease of online teaching use (t=0.001, p=0.000). Table 3 shows the factors of teachers' perceptions, variables tested, statistical tests used, values obtained from each test, and statistical significance.

Table 3. Kruskal-Wallis and One-way ANOVAs related to the relationships between teachers' demographics and perceptions

Factors	Variables and Statistical Tests				
	Age	School Type	Teaching Stage	Qualifications	Experience
	Kruskal-Wallis (H)	ANOVA and Post-hoc-test (Scheffe)	ANOVA and Post-hoc-test (Scheffe)	ANOVA and Post-hoc-test (Scheffe) (F-ratio)	ANOVA and Post-hoc-test (Scheffe) (F-ratio)
F1	0.173 (df=2)	0.534	0.131	0.081	0.084
F2	0.282 (df=2)	0.443	0.001 [Pr]*	0.089	0.056
F3	0.087 (df=2)	0.448	0.834	0.519	0.471
F4	0.193 (df=2)	0.098	1.340	0.263	0.641
Notes	*Significant at 0.05 Pr=Primary Stage				

The questionnaire open-ended responses revealed that involvement in enforced online teaching led participants to reflect on their practice and identify pedagogical training needs which could not have been identified otherwise. Some of these were online classroom management, online testing, online interaction and engagement, supporting learning disabilities, and materials accessibility. Such results support their claims for readiness and intention to engage more with this mode of teaching in the future.

5. Discussion and conclusion

This study investigated EFL teachers' perceptions, readiness, and intention to integrate online teaching during and after COVID. Findings revealed that teachers had positive perceptions of online teaching, which indicated they were ready to endorse this type of practice in the future. Demographics had no impact on

perceptions of online teaching. The need to deliver education to students urged teachers to use their limited resources during the pandemic despite lack of adequate training. Data suggested that primary teachers had more positive perceptions in relation to ease of/intention to use online teaching. This could be attributed to the educational reform of primary education adopted by the government which requires primary material to be delivered online by 2024. Therefore, enforced online teaching helped teachers to identify a partial substitute for face-to-face teaching and understand their training needs.

References

Chan, A., Chow, K., & Jia, W. (2005). A framework for evaluation of learning effectiveness in online courses. In R. W. Lau, Q. Li, R. Cheung & W. Liu (Eds), *Advances in web-based learning-ICWL* (pp. 383-395). Springer. https://doi.org/10.1007/978-3-540-45200-3_36

Charness, N., & Boot, W. (2016). Technology, gaming, and social networking. In K. W. Schaie & S. L. Willis (Eds), *Handbook of the psychology of aging* (8th ed., pp. 389-407). Elsevier. https://doi.org/10.1016/B978-0-12-411469-2.00020-0

Cheng, H. (2007). *The perceptions of Taiwanese college students toward the English courses using an online course management system*. PhD dissertation, Ohio University.

Davis, F. (1986). *Technology acceptance model for empirically testing new end-user information systems: theory and results*. Massachusetts Institute of Technology.

Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-339. https://doi.org/10.2307/249008

Davis, F. (1993). User acceptance of information technology: system characteristics, user perceptions and behavioral impacts. *International Journal of Man–Machine Studies, 38*(3), 475-487. https://doi.org/10.1006/imms.1993.1022

El-Sayad, G., Saad, N., & Thurasamy, R. (2021). How higher education students in Egypt perceived online learning engagement and satisfaction during the COVID-19 pandemic. *Journal of Computers in Education, 8*, 527-550. https://doi.org/10.1007/s40692-021-00191-y

Ersado, L., & Gignoux, J. (2014). Egypt: inequality of opportunity in education. *World Bank Policy Research Working Paper No.6996. SSRN*. https://ssrn.com/abstract=2476136

Esawe, A., Esawe, K., & Esawe, N. (2022). Acceptance of the learning management system in the time of COVID-19 pandemic: an application and extension of the unified theory of acceptance and use of technology model. *E-Learning and Digital Media*. https://doi.org/10.1177/20427530221107788

Liao, C., & Lin, S. (2011). An analysis of the interactive behaviors of self-learning management in a web-based Moodle e-learning platform. *African Journal of Business Management*, 5(22), 9191-9199.

Loveluck, L. (2012). *Education in Egypt: key challenges*. Middle East and North Africa Programme. https://www.chathamhouse.org/sites/default/files/public/Research/Middle%20 East/0312egyptedu_background.pdf

Moeini, H. (2008). Identifying needs: a missing part in teacher training programs. *International Journal of Media, Technology and Lifelong Learning, 4*(1), 1-12. https://doi.org/10.7577/ seminar.2488

Novo-Corti, I., Varela-Candamio, L., & Ramil-Díaz, M. (2003). E-learning and face to face mixed methodology: evaluating effectiveness of e-learning and perceived satisfaction for a microeconomic course using the Moodle platform. *Computers in Human Behavior, 29*(2), 410-415. https://doi.org/10.1016/j.chb.2012.06.006

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