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FROM THE EDITOR

by Jarosław Krajka

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Anniversary celebration over, the publishing work of *Teaching English with Technology* continues with a new issue full of research ideas and teaching solutions in a variety of areas of technology-enhanced language teaching and learning. With the COVID-19 pandemic still strong (and even on the rise in some parts of the world) despite vaccination process, language educators need to continue remote education, trying to make the most of the affordances offered by the available systems and exploiting the whole difficult situation to the benefit of their students.

The current issue of *Teaching English with Technology* takes under closer scrutiny gamification as realized in most popular quizzing tools such as *Kahoot!*. Also known as ‘clickers’, programs of this kind have a great role in involving learners in the flow of the lesson eliciting their responses in the electronic mode in the ways difficult to achieve in a traditional classroom. At the same time, however, response times in clickers depend on the device one uses to reply, which means that students with correct and fast answers but using older and slower phones might be at some disadvantage in comparison to those with smarter machines.

Whether we like it or not, online tools such as *Kahoot!*, *Duolingo*, *Memrise*, *Quizlet* or *Genial.ly* have dominated language classrooms in the pandemic era. It is thus essential to find well-justified and pedagogically sound ways of using them to the greatest advantage of learners. We hope this issue of our Journal will help the teaching community do that.

The issue opens with the article by **Martín Flores Quiroz, Ricardo Gutiérrez, Franco Rocha, María Paz Valenzuela** and **Cynthia Vilches** (Chile), in which *Kahoot!* is investigated experimentally as a tool stimulating vocabulary acquisition. The results of the experimental treatment indicated an improvement regarding English vocabulary knowledge using the *Kahoot!* app, with a significant variation and a medium effect size.

Athip Thumvichit (Thailand) deliberates on the approaches and strategies used by language teachers in the times of the pandemic crisis. As indicated by the study, teachers’ agentic actions identified were endeavoring to create an interactive learning environment;

implementing social media platforms to compensate for the loss of face-to-face communication; working with students to adjust their teaching practices; promoting autonomous learning; and incorporating formative assessment approaches.

Mobile quizzing can also prove highly useful in the development of phonological abilities. Close-ended tasks authored in *Kahoot!* and *Moodle* were investigated by **Anita Buczek-Zawila** (Poland) to the purpose of improving university students' recognition. The study shows that matters such as student comfort, instant individual feedback and personal safety are most efficiently handled by the *Moodle* quizzes. Apart from providing well-balanced scores, they offer the least-threatening, stress-free environments for learning and assessment, thus enabling students to self-monitor their progress.

In a very different part of the world, also gamification and m-learning were investigated with the aim of reinforcing students' learner autonomy. A case study by **Linh Le Nhat Pham, Hoang Tan Nguyen and Van Thi Kieu Le** (Vietnam) scrutinizes the effectiveness of m-learning on students' language acquisition in autonomous contexts. The paper draws a connection between students' personal interest in the subject and their performance.

The new educational reality that emerges as a result of the COVID-19 crisis also requires a redefinition of CALL teacher education. **Hussein Meihami** (Iran) investigates Iranian EFL teacher educators' voice about the challenges of conducting CALL teacher education programs. The thematic analysis of the narratives, based on the principles of ethnography semantics, indicated that challenges such as inertia, ignorance of training CALL educators, insufficient time to address CALL compared to other topics, insufficient infrastructure, insufficient standards, and lack of established methodology to administrate CALL teacher education were among the main obstacles of conducting CALL teacher education.

The current issue of *Teaching English with Technology* would not be complete without a practical paper, offering ready-made lesson scenarios for use in the pandemic online teaching. **Fika Megawati, Nur Mukminatien, Alda Indah Permana, Lita Agusniasari Dewi and Fita Fitriati** (Indonesia) illustrate the practice of Emergency Remote Teaching and Learning by showing how *Canva*, *ZoomAnnotation*, *iSpringSuite* and *TikTok* can be utilized to accommodate language instruction and motivate learners to develop their communicative performance.

We wish you good reading!

IMPROVING ENGLISH VOCABULARY LEARNING THROUGH KAHOOT!: A QUASI-EXPERIMENTAL HIGH SCHOOL EXPERIENCE

by **Martín Flores Quiroz, Ricardo Gutiérrez, Franco Rocha, María Paz Valenzuela**
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Abstract

This research investigates the effects of the use of Kahoot! to improve English vocabulary learning in an EFL context using a quasi-experimental post-test design. An experimental and a control group from two 9th grade classes participated in the study. A pre- and post-test were applied to both groups and the scores of both groups were compared to determine whether there was any variation. The interventions in each group consisted of two lessons a week for four weeks. In particular, the results of the experimental treatment indicated an improvement regarding English vocabulary knowledge using the Kahoot! app, with a significant variation and a medium effect size. In general, this suggests the necessity of implementing new strategies with the available ICTs at hand to enhance the learning of English in Chilean classrooms.

Keywords: English vocabulary; Kahoot!; ICT; Game-based learning

1. Introduction

Although the Chilean government has enacted policies to include ICT (Information and Communication Technology) in school classrooms (Decree n°369, 2015), few institutions have included them. According to Agencia de Calidad de la Educación (2017), only 0.9% of educational institutions have advanced use of technologies in the educational field.

In conjunction with the scarce use of ICTs, the learning of English at schools concerns policy makers. In 2012, a national English test was applied, which showed that all skills were insufficiently developed. Herein, the lowest score was reading comprehension. In brief, 82% of the students cannot certify their level of English, with an average of 49 points out of 100 (70 points were needed to certify the A2 level) (Agencia de Calidad de la Educación, 2013).

As a way to tackle both these deficiencies, it is necessary to improve the strategies used to teach English by using ICTs. In this way, teachers could prepare more effective lessons for students. For that purpose, the present research aimed at finding out whether the use of Kahoot!

was effective as a vocabulary learning strategy. This research works on the assumption that by improving vocabulary, students can improve reading comprehension (Beck et al., 1983). The process of word recognition is essential for understanding an idea or a text, as the misconception of one of the components could lead to a whole new meaning (McNamara, 2012). Moreover, Farjado et al. (2012) confirmed that the more mistakes in the recognition of words students make, the more errors in reading comprehension arise after testing university students (see Wright & Cervetti, 2017, for a recent systematic review on the subject). Nevertheless, testing improvements on reading comprehension are beyond the scope of this study.

The purpose of the present research was to test the use of the ICT Kahoot! with English vocabulary learning to determine whether there exists a variation in scores comparing the pre- and post-test taken in two 9th grades. The idea was to establish whether the use of Kahoot! made any difference in contrast to the control group. Accordingly, the research question was: Does the proficiency of English vocabulary in the experimental group vary because of the use of Kahoot! as an ICT in contrast to the control group?

2. Literature review

2.1. Game-based learning

Game-based learning (GBL) is “an environment where game content and game play enhance knowledge and skills acquisition” (Qian & Clark, 2016, p. 51). In this sense, any activity, whether digital or physical, can be considered in the realm of GBL as long as game-like activities are present. In the same vein, Qian and Clark further state that these activities must have “problem solving spaces and challenges that provide players/learners with a sense of achievement” (2016, p.51).

When considering GBL in digital environments, these spaces and challenges may be placed on a continuum that can range from drill and practice to higher cognitive skills, such as critical thinking. At the same time, the chosen activity may have negative and positive effects on the students (Chen et al., 2018). Thus, in order to have a successful GBL activity, a balance must be struck between the level of challenge and the abilities of the learners to avoid, on the one hand, boredom, and, on the other, anxiety, especially if the goal is to learn vocabulary.

2.2. Vocabulary learning in digital game-based learning

As noted before, several factors must be considered to have a successful GBL activity. Particularly for digital based-game learning (DGBL), Chiu (2013) conducted a meta-analysis of

the quantitative evidence found in the literature regarding vocabulary learning through DGBL, focusing on four main aspects: treatment duration, educational level of the participants, presence/absence of teacher instruction and presence/absence of game-based learning. Regarding treatment duration, when the interventions lasted less than a month, the results were better than when they were longer. This suggests that the students may have been interested in the novelty of learning through a computer but later lost interest or felt fatigued. Considering the educational level of the participants, high-school and university students benefit more from these interventions than primary school students because the effect size is larger ($d = 1.032$ v. $d = 0.321$). Regarding teacher instruction, students showed larger improvement when they played the games without teacher assistance. Finally, this meta-analysis points out that L2 vocabulary learning has a larger effect when games are not used. Nevertheless, Chiu states that this particular finding cements the need to further study “the degree to which computer software helps learners to review vocabulary and help them acquire new words” (p. 55).

As recently noted by Cárdenas-Moncada et al. (2020), DGBL has not been extensively researched in the realm of learning English as foreign language (EFL), although there has been research on the use of DGBL to reduce anxiety and improve willingness to communicate with positive results (Reinders & Wattana, 2015). So far, the evidence is promising because the use of DGBL for EFL improves language skills development while having better results than mere educational software.

2.3. Kahoot! as a teaching tool

Although the use of Kahoot! as a teaching tool has been studied before, most research has focused on positive attitudes towards learning and motivation (Muñoz, 2016; Ramírez et al., 2017). Thus, these results suggest that Kahoot! is an adequate tool to reinforce the students' self-confidence and outlook when facing different tasks. Nevertheless, the few studies that have focused on learning, such as Iwamoto et al. (2017) in psychology, have found significant effects on the scores of the groups that have used Kahoot! as a learning tool. This conclusion is shared by Cárdenas-Moncada et al. (2020), where few studies have focused on improving EFL performance through Kahoot!, focusing mainly on other educational software (Kocaman & Kizilkaya-Cumaoglu, 2014; Alyaz & Genc, 2016). Theirs is one of the first to focus on this aspect in Chile, particularly with an adult group, while also measuring perceptions and attitudes towards the use of Kahoot!. Specifically, when it came to learning grammar, structure and vocabulary, the experimental group achieved statistically significantly higher scores than the control group. Nonetheless, there is a need to continue researching this topic.

3. Methodology

3.1. Research design

The design of this research was quasi-experimental. As Hernández et al. (2014) explain, there is an existing control over at least one of the independent variables to verify if there is any relation or effect in the dependent variable, to, then, verify the cause of it. Furthermore, the design was quasi-experimental since there was no random assignment of the participants to the control and experimental groups (Creswell, 2012). At this point, it was not possible to randomize both groups because the two 9th grade classes were conformed at the beginning of the school year and could not have any modification to their participants.

In addition to the quasi-experimental design, a control group and pre- and post-test design was included, which, as Hernández et al. (2014) state, removes the internal validity issues and allows the experimental treatment effect to be confirmed. Moreover, this is an explanatory research because the effect of the intervention, the use of Kahoot! to practice acquisition of English vocabulary, was measured to test its effectiveness (Hernández et al., 2014).

3.2. The aim of the study

The purpose of this research was to test the use of the Kahoot! tool with English vocabulary learning to determine whether there is a variation in scores comparing the pre- and post-test taken in two 9th grades. On that vein, the research question was: Does the proficiency of English vocabulary in the experimental group vary because of the use of Kahoot! as an ICT tool in contrast to the control group?

3.3. Participants and the context

The sampling of the present research was non-probabilistic. In this type of sampling, as Creswell (2012) defines it, the selection of the participants is based on their characteristics, availability and convenience. Since the national standardized English test is taken by 11th grade students, participants had to be in either 9th or 10th grade to improve vocabulary and scores in the future. The present research was carried out in a public school from Quinta Normal, Santiago, Chile. The number of subjects was twenty-eight out of thirty-one in the control group and twenty-nine out of thirty-nine in the experimental group. The total number of subjects was fifty-seven out of seventy students. The students that did not take part in one of the tests were not considered, as it would not be possible to contrast the results obtained. The study was carried out in two 9th grades and all the participants were female.

Considering the sample, the margin of error for generalization was 5.63, which means that the results can vary up to 6% approximately.

Due to only female and small sample, the generalization of the results was limited, which should be considered in future research.

3.4. Intervention materials

The materials used in the present research were divided into two categories: instruments of data collection and intervention materials. The instruments of data collection were identical pre- and post-tests for both groups that comprised four items each. These items tested vocabulary in different ways such as classifying words into categories, using vocabulary in context, matching words and rearranging scrambled sentences.

The intervention materials in the control group were a set of three worksheets with activities similar to the tests. This practice approach is often related to the Grammar-Translation Method, a traditional approach that focuses on translating from the L1 to the L2 and vice versa (Larsen-Freeman & Anderson, 2011). Therefore, the participants had to translate the meaning of the vocabulary they were learning and apply it to some activities such as multiple choice, word matching and arrange the words to form a sentence. In the experimental group, a set of five different kahoots were applied, similar to the questions presented in the tests. In these, the participants had to relate English words to images, where they could not use their L1.

3.5. Design and procedure

The present research was carried out over a period of four weeks. In the first class, both groups took the pre-test. The post-test was taken during the last class. The same researcher acted as teacher for both groups, teaching the same content; the main difference being the manner in which the content was practiced. The experimental group practiced vocabulary through Kahoot!, while the control group practiced through traditional methods, such as worksheets and exercises on the whiteboard. The pre- and post-tests were graded by two different researchers independently, in order to cross check results and avoid biases.

3.6. Data collection tools and procedures

The data were collected from a pre- and post-test. After applying the tests, a KR-20 test was conducted with a value of .88, which indicates that the pre- and post-test had high reliability (Zaiontz, 2020).

For the present research, the analysis used the Student's T test, which, as Hernández et al. (2014) state, allows to determine whether there is a significant variation between two variables or two groups. Additionally, an effect size test would be applied if the variation were significant to evaluate the size of it. As Thalheimer and Cook (2002) state, there is a specific scale that determines how big the effect of the treatment was, and that gives an insight into how large the effect was. It is important to report the effect size, since, as Field and Gillet (2010) claim, focusing only on reaching significant values while not reporting effect sizes can lead to misleading interpretations of experiments.

4. Findings and discussion

Table 1 illustrates the descriptive statistical measures of mode, mean and median obtained by the control group in the pre-test and post-test.

Table 1. Mode, mean and median of the control group

	Pre-test control group	Post-test control group
Mode	23	29
Mean	23	31
Median	27	29

Based on the means, it is possible to identify an increase of 35% from pre-test to post-test. Furthermore, the mode had a positive variation of 26% and the median had also a positive variation of 7.5%.

Table 2 illustrates the descriptive statistical measures of mode, mean and median obtained by the experimental group in the pre-test and post-test.

Table 2. Mode, mean and median of the experimental group

	Pre-test experimental group	Post-test experimental group
Mode	22	42
Mean	25	37
Median	24	38

As can be seen, the experimental group also achieved positive results. There was a positive variation of 48% between the means from pre-test to post-test. Additionally, there was also a positive variation of 91% in the mode and a positive variation of 58% in the median.

These results indicate that the experimental group increased their scores to a greater extent than the control group. Nevertheless, the previous information by itself has no statistical significance, so that Student's t-test was conducted.

The pre-test was taken to distinguish whether both groups, the experimental and control, were on equal terms at the beginning of the interventions. Table 3 illustrates the independent-samples t-test conducted to compare the pre-test mean scores in the control and experimental groups.

Table 3. Independent-samples t-test: control and experimental groups pre-test

Independent-samples t-test: control and experimental groups' pre-test	Variable 1	Variable 2
Mean	23.0714286	25.0689655
Observations	28	29
Standard deviation	8.105455737	9.346240782
Degrees of Freedom	55	
t Stat	-0.86074593	
P(T<=t) one-tail	0.19655742	
t Critical one-tail	1.67303397	
P(T<=t) two-tail	0.39311484	
t Critical two-tail	2.00404478	

There was no significant difference in the scores obtained by the control group ($M=23$, $SD=8.1$) and the scores obtained by the experimental group ($M=25$, $SD= 9.3$) in the pre-test, $t(55) = -0.860$, $p=.196$. These results suggest that before the experimental treatment began, both groups were in equal conditions, as there was no statistical difference between their score's means.

The post-test was taken to check whether there were any differences between both groups after the interventions with Kahoot! on the experimental group. Table 4 illustrates the independent-samples t-test conducted to compare the post-test mean scores in the control and experimental groups.

Table 4. Independent-samples t-test control and experimental groups post-test

Independent-samples t-test: control and experimental groups' post-test	Variable 1	Variable 2
Mean	31.3214286	37.2413793
Observations	28	29
Standard deviation	8.128840159	8.407714028
Degrees of Freedom	55	
t Stat	-2.70115077	
P(T<=t) one-tail	0.00458385	
t Critical one-tail	1.67303397	
P(T<=t) two-tail	0.00916771	
t Critical two-tail	2.00404478	

There was a significant difference in the scores obtained by the control group ($M=31$, $SD=8.1$) and the scores obtained by the experimental group ($M=37$, $SD= 8.4$) in the post-test, $t(55) = -2.701$, $p=.004$. Therefore, it can be said that Kahoot! is a useful tool that helps improve the vocabulary of the students.

Considering that the variation in the scores was significant, it was possible to identify the magnitude of the effect. In order to do it, an effect size or Cohen's d test was used. Fritz et al. (2012) state that the effect size allows researchers to focus on a quantitative description, generally more interpretable and comparable to other studies, because statistical significance can always be achieved with a large sample.

The intervention had a medium size effect ($d = .716$) (Cohen, 1988), well within Hattie's zone of desired effects (2009). This medium effect size means that almost 76% of the participants in the control group achieved a score lower than the average participant in the experimental group (Coe, 2002). Therefore, the difference in vocabulary learning achieved by the Kahoot! intervention is not only significant but also important.

5. Conclusion

As stated in the literature review, there is still a need to investigate whether the use of DGBL improves language learning, particularly, vocabulary, not only because of the conclusions reached by Chiu's meta-analysis (2013), where vocabulary learning was more effective when no games were involved, but also because most studies that have used Kahoot! as a teaching tool have focused on motivation and attitudes towards learning.

The findings of this study are consonant with what other researchers have concluded so far: Kahoot! can be used to improve learning. From a general learning perspective, these results agree with Iwamoto et al. (2017)'s conclusions that Kahoot! can be used to achieve significant differences in scores when compared to traditional learning methodologies. As presented in the results section, the higher results achieved by the experimental value are significantly different from the experimental group ($t(55) = -2.701$, $p=.004$). Particularly in relation to learning English as a foreign language, these results provide further evidence to Cárdenas-Moncada et al. (2020)'s findings that Kahoot! can be used to improve English vocabulary, not only in a group of adults as they did.

Interestingly, while most studies with Kahoot! have focused on university students, this one has focused on high school students, achieving positive results in vocabulary learning. As stated by Chen et al. (2018), the possibility to interact and receive immediate feedback are

features that allow students to avoid boredom and anxiety when it comes to DGBL. These two characteristics are present in Kahoot!, which clearly relate to the positive impact it has on motivation as described in previous studies, and also on how the participants of this study engaged and achieved higher scores. Additionally, being able to compete among peers while keeping a live feed of the scores further engages learners (Qian & Clark, 2016).

Regarding the impact of this study, English vocabulary learning scores were improved in the experimental group in a significant way by also studying a demographic that had not been considered in previous studies with Kahoot!. This opens the possibility to improve vocabulary learning and, in turn, test if this type of improvement may improve reading comprehension (Wright & Cervetti, 2017). This is a positive outcome especially if we consider that, as mentioned before, reading comprehension in English is the weakest skill in Chilean high school students. At the same time, the intervention had a medium effect size ($d=.716$), something that had not been reported in previous EFL studies and that allows this study to be compared with other studies in future meta-analyses.

Even though the results were positive, it is important to mention that this study did have some limitations that need to be considered in future studies. First, the school where this study took place was an all-female public high school. Secondly, the sample size was rather small (<30 per group), which could generate problems when generalizing these results to larger populations. Thirdly, this school only represents a very particular sociodemographic group, lower middle class. Gender and socioeconomic status must be considered in future research. Fourthly, this research only focused on the use of a particular type of ICT. Therefore, future research should identify the available ICT resources in the Chilean classroom and generate interventions based on them. In addition, a larger sample should be considered, while also reporting the effect size of the intervention. Finally, future research should study if, by improving vocabulary through Kahoot!, learners also improve their reading comprehension by testing this skill before and after a vocabulary-focused intervention, which was beyond the scope of this research.

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References

- Agencia de Calidad de la Educación. (2013). *Informe de Resultados SIMCE inglés III medio 2012 para Docentes y Directivos*. http://archivos.agenciaeducacion.cl/biblioteca_digital_historica/resultados/2012/inserto_2012.pdf

- Agencia de Calidad de la Educación. (2017). *Percepciones acerca del uso de Tecnologías de Información y Comunicación (TIC) y los aprendizajes de los alumnos de enseñanza media.* http://archivos.agenciaeducacion.cl/06_Tics_y_aprendizajes.pdf
- Alyaz, Y. & Genc, Z. (2016). Digital game-based language learning in foreign language teacher education. *Turkish Online Journal of Distance Education, 17*(4), 130-146. <https://eric.ed.gov/?id=EJ1116837>
- Beck, I. L., Perfetti, C. A., & McKeown, M. G. (1982). Effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational Psychology, 74*(4), 506-521. <https://doi.org/10.1037/0022-0663.74.4.506>
- Cárdenas-Moncada, C., Veliz-Campos, M., & Veliz, L. (2020). Game-based student response systems: The impact of Kahoot in a Chilean vocational higher education EFL classroom. *CALL-EJ, 21*(1), 64-78. <http://callej.org/journal/21-1/Cardenas-Veliz-Veliz2020.pdf>
- Chen, M., Tseng, W. & Hsiao, T. (2018). The effectiveness of digital game-based vocabulary learning: A framework-based view of meta-analysis. *British Journal of Educational Technology, 49*(1), 69-77. <https://doi.org/10.1111/bjet.12526>
- Chi, Y. (2013) Computer-assisted second language vocabulary instruction: A meta-analysis. *British Journal of Educational Technology, 44*(2), 52-56. <https://doi.org/10.1111/j.1467-8535.2012.01342.x>
- Coe, R. (2002). It's the Effect Size, Stupid. What Effect Size Is and Why It Is Important [Paper]. The British Educational Research Association Annual Conference, Exeter, U.K. <http://www.leeds.ac.uk/edocol/documents/00002182.htm>
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.) New York: Routledge.
- Creswell, J. W. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4th ed.). Boston: Pearson.
- Decreto n°369. Diario Oficial de la República de Chile, Santiago, Chile, December 2, 2015.
- Farjado, A., Hernández, J., & González, A, (2012). Acceso léxico y comprensión lectora: un estudio con jóvenes universitarios. *Revista Electrónica de Investigación Educativa, 14*(2), 25-33. <http://redie.uabc.mx/vol14no2/contenido/fajardoetal.html>
- Field, A. & Gillet, R. (2010). How to do a meta-analysis. *British Journal of Mathematical and Statistical Psychology, 63*(3), 665-694. <https://doi.org/10.1348/000711010X502733>
- Fritz, C. O., Morris, P. E., & Richler, J. J. (2012). Effect size estimates: current use, calculations, and interpretation. *Journal of Experimental Psychology: General, 141*(1), 2. <https://doi.org/10.1037/a0024338>
- Hattie, J. (2009). *Visible Learning*. Abingdon: Routledge.
- Hernandez, R., Fernandez, C, & Baptista, P. (2014). *Metodología de la Investigación* (6th ed.). México D. F.: McGraw-Hill/Interamericana.
- Iwamoto, D., Hargis, J., Taitano, E., & Vuong, K. (2017). Analyzing the efficacy of the testing effect using Kahoot on students. *The Turkish Online Journal of Distance Education, 18*(2), 80-93. <https://eric.ed.gov/?id=EJ1145220>
- Kocaman, O., & Kizilkaya-Cumaoglu, G. (2014). The effect of educational software (DENIS) and games on vocabulary learning strategies and achievement. *Education and Science, 39*(176), 305-316. <https://dx.doi.org/10.15390/EB.2014.3704>

- Larsen-Freeman, D., & Anderson, M. (2011). *Techniques and Principles in language teaching* (3rd ed.). New York: Oxford University Press.
- McNamara, D. S. (Ed.). (2012). *Reading Comprehension Strategies: Theories, Interventions, and Technologies*. New York: Psychology Press.
- Ministerio de educación (2015) *Bases Curriculares 7º básico a 2º medio*. <https://media.mineduc.cl/wp-content/uploads/sites/28/2017/07/Bases-Curriculares-7%C2%BA-b%C3%A1sico-a-2%C2%BA-medio.pdf>
- Muñoz, M. (2016). *Las TICs en Educación: Kahoot! como propuesta de gamificación e innovación educativa para educación secundaria en educación física* [Unpublished Master's dissertation]. Logroño: Universidad Internacional de La Rioja.
- Qian, M. & Clark, K. (2016). Game-based Learning and 21st century skills: A review of recent research. *Computers in Human Behaviour*, 63, 50-58. <https://doi.org/10.1016/j.chb.2016.05.023>
- Ramírez, A., Arciniega, A., Iriarte, A. & Arriaga, M. (2017) Educational applications for teaching: Case study Kahoot!. *Revista EDUCATECONCIENCIA*, 16(17), 139-149. <http://tecnocientifica.com.mx/educateconciencia/index.php/revistaeducate/article/view/391>
- Reinders, H. & Wattana, S. (2015). Affect and willingness to communicate in digital game-based learning. *ReCALL*, 27(1), 38-57. <https://doi.org/10.1017/S0958344014000226>
- Thalheimer, W. & Cook, S. (2019, October 9). *How to calculate effect sizes from published research articles: a simplified methodology*. Doctoral Research Methods – Content. http://www.bwgriffin.com/gsu/courses/edur9131/content/Effect_Sizes_pdf5.pdf
- Wright, T. & Cervetti, G. (2016). A systematic review of the research on vocabulary instruction that impacts text comprehension. *Reading Research Quarterly*, 52(2), 203-226. <https://doi.org/10.1002/rrq.163>
- Zaiontz, C. (2019, July 4). *Kuder and Richardson Formula 20*. Real Statistics Using Excel. <http://www.real-statistics.com/reliability/internal-consistency-reliability/kuder-richardson-formula-20/>

ENGLISH LANGUAGE TEACHING IN TIMES OF CRISIS: TEACHER AGENCY IN RESPONSE TO THE PANDEMIC-FORCED ONLINE EDUCATION

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Abstract

Teacher agency occurs when teachers demonstrate a capacity to solve pedagogical and curriculum challenges. This article delves into how tertiary English teachers in Thailand practice their agency in response to the abrupt conversion to online teaching amid the COVID-19 pandemic. This study drew on teachers' responses to a questionnaire ($n=162$) and semi-structure interviews ($n=3$) to identify their positioning and agentic actions. The results suggest that teachers' positioning as being professionally responsible for students' learning outcomes remains intact, even though the situation restricted them from going beyond their fundamental responsibilities. From a pedagogical standpoint, teachers' agentic actions identified were endeavoring to create an interactive learning environment; implementing social media platforms to compensate for the loss of face-to-face communication; working with students to adjust their teaching practices; promoting autonomous learning; and incorporating formative assessment approaches. Teachers might find themselves struggling to achieve their pedagogical goals, but once they become familiar with the new learning environment and master suitable teaching methods, online learning can be a viable option for formal language education, even in the normal situation.

Keywords: teacher agency; English language teaching; online teaching; higher education; COVID-19

1. Introduction

The outbreak of Coronavirus Disease 19 (COVID-19) was declared a pandemic in March 2020 by the World Health Organization (WHO). At the time of writing, COVID-19 is responsible for the loss of millions of lives and disruption to billions. UNESCO reported that schools and higher education institutions (HEIs) in 185 countries were temporarily shut down in an attempt to control the spread of the disease, affecting 90% of all enrolled students. The disruption of learning was unforeseen and posed challenges for governments, education administrators, teachers, students, and parents on a continuity of learning during the closure. The Thai Ministry

of Education (MoE) urgently requested teachers at all levels of education to implement remote learning. Teachers were demanded to teach via the “tube” regardless of their qualifications and prior experience.

Distance education is not a new concept but implementing it with limited preparation time and resources is a daunting task. For K-12 education, the MoE launched a strategic plan for the academic year of 2020, with an emphasis on on-air learning. This involved collaborating with Distance Learning Foundation Under the Royal Patronage (FURP) to render classes on Distance Learning Television (DLTV) with the support of the MoE online platform, Digital Education Excellence Platform (DEEP). With the aim to deliver a quality learning experience, teachers were expected to be “lead learners” who initiate steps toward innovative instructional approaches. Which approach to use depended on the availability of tools, content, access, and timeframe. While K-12 education is fully supported by the government and other sectors, the policy to assist higher education remains in question. In accordance with the MoE Notification on Vigilant Measures against COVID-19, each HEI issued its own measures and recommendations on teaching and learning during the COVID-19 pandemic as classes could no longer be delayed. Since the government did not release a standard protocol for higher education, the institutions devised their own protocols for teaching and learning utilizing available resources. Tertiary teachers had to think on their feet to deliver effective remote learning, though many of them completely lack experience.

Research on language teaching and professional development has gone through a period of rapid transformation over the past decades, with expanding acknowledgment of teaching as personally practiced and socially established (Borg, 2006). Defined as “agency exercised by teachers actively working to make choices, conduct intentional actions, exert control, and bring about change in a given context” (Ruan, Zheng, & Toom, 2020, p. 2), teacher agency has been playing a crucial role in the process of educational changes (Buchanan, 2015). Despite the potential benefits of implementing new policies, teachers often receive insufficient information about changes or limited support, making it difficult for them to meet policy objectives and social expectations (Wedell & Grassick, 2018). As education continually changes in line with trends, teacher educators have raised concerns over how to embed a sense of teacher agency within teachers and how teacher agency guides education policy (Coffman, 2015). Although there have been many attempts to determine the role individual experience plays in the vast range of contexts that language teachers encounter – such as English department teachers in a changing curricular landscape (Ruan et al., 2020) and English primary teachers in language policy reform (Le,

Nguyen, & Burns, 2020) – there has been an absence of documentation on how tertiary English teachers practice their agency in these unusual times.

Given the importance of the agentic role of teachers, the interplay between educational changes and teaching practices, and the education landscape in Thailand, the current study is devoted to investigating the agency of tertiary English teachers during the COVID-19 crisis. More precisely, teacher agency in terms of their beliefs and teaching practices that facilitate “social-distancing” learning and attempt to provide an explanation as to how such conditions influence on their practices were probed into. This study is guided by the question: “How do tertiary English teachers practice their agency during the COVID-19 crisis?” Since the teacher agency model can bridge the void between teacher professional development and educational changes (Imants & Van der Wal, 2020), this investigation will contribute to the understanding of teacher agency under the unique circumstance and cast some light on how to prepare teachers and students for unforeseen situations in the future.

2. Literature review

2.1. Agency

Agency is a multifaceted concept. As an agent, one deliberately takes actions to make things happen (Bandura, 2001). From the sociological perspective, agency is defined as the interim engagement in different structural conditions (Emirbayer & Mische, 1998). Biesta and Tedder (2007) assert that agency is what one tries to attain in specific situations under specific ecological circumstances. To put it differently, agency is an attempt to make concrete contributions to a particular setting, influenced by a particular solitary event. Drawing from the commonalities of previous works, Ruan et al. (2020) concluded that agency demands both one’s cognitive process and action. Belief and willingness alone are not considered as achieving agency; performing the task is required to fulfill one’s agency. This is probably the reason why previous works on the subject of agency tended to focus on both the cognitive aspects and actions taken to achieve certain goals. It is also essential to address the rationale behind practicing agency. Since agency is socio-culturally oriented, it is meant to mediate between individuals and social contexts (Rogers & Wetzel, 2013). In this respect, one’s actions need to be justified not only by one’s capabilities but also by structural contexts and culture.

Agency has been approached across various disciplines, enabling the further development of concepts and methods that significantly complement and extend the existing ones. When agency is linked to professions, the spotlight is often on what professionals contribute to making

their practices fit conditions assumed to be unavoidable at all costs. The above discussion on agency from the sociological viewpoint helps provide an understanding of teacher agency. Teacher agency is regarded as a form of professional agency. Bounded by socio-cultural constraints, teacher agency is exercised in connection with, for example, curricula, relationships with peers and administrators, dominant culture, available resources, and educational changes. In line with sociologists who count individual characteristics in addition to socio-cultural constraints as providing insight into agentic behaviors, teacher agency can be explored through teachers' personal attributes at work, socio-cultural constraints, and the actions they take, especially in troubled times (Toom, Pyhältö, & Rust, 2015). Therefore, to yield a better understanding of how teachers practice their agency, it is essential for the current study to develop an understanding of not only cognitive aspects but also contextual conditions and teachers' practices.

In surveying previous studies, it was discovered that there are different ways in which teacher agency can be manifested. Le et al. (2020), for example, explored how English teachers in Vietnam practiced their agency in response to the new language policy by looking into their classroom practices. This included how they made pedagogical decisions within the teaching context. Since Vietnamese English teachers played no role in the policy development and were expected to serve only as implementers of the policy, which they did based on existing knowledge. Another example is Schweisfurth's (2006) study examining how teachers took global citizenship issues into account when teaching in the context of curricula demands. The researcher reported that teachers successfully adjusted their instructional approaches to meet curricular expectations because they were supported by their institutions. Both studies demonstrate that to act or not to act is entirely up to teachers per se. This is a vivid indication that teachers always practice agency, even when they "passively accept" policies and practices (Brodie, 2019, p. 3). The cases above, however, are different from the context of the current study. It is important to note that the COVID-19 situation did not offer teachers as much freedom as policies or educational trends do. Nevertheless, teacher agency can still be examined since changes have already been applied, and teachers must make pedagogical decisions to some extent. In the current study, therefore, teachers are considered as agents who enact agency at their own will despite limited freedom.

In connection with organizational changes, it has been theorized that the process of such enactment gives teachers opportunities to mediate between individual pathways and rudimentary changes that occur within their organizations (Vähänsantanen & Eteläpelto, 2011). Teachers' enactment can also be seen through the way they (re)invent the context, thrusting constraints

upon themselves (Weick, 2001). In this sense, it is also crucial for this current study to address how teachers interpret the situation and position themselves within the situation.

2.2. Positioning

Understanding how teachers position themselves in a particular context contributes to the construction of teacher agency since self-positioning closely interacts with teachers' positioning of students and teaching practices (Kayi-Aydar, 2015). Agency is immanent in everyone, but activating it depends on individual decisions (Redman, 2013). On account of a moral order, agents may decide whether to create, adapt, or ignore the moral implications of their actions (van Langenhove, 2017). This implies an interplay between social structure and agency within the trajectory of positioning theory. Positioning Theory (PT) (Davies & Harré, 1999) seeks to explain the construction of identities and the world through the lens of discourse, which refers not only to language in use but also interpreted language in an authentic context (Cameron, 2001). PT is useful in teacher agency research in a way that it can be used to explore personal agency. That is, it is theorized that the number of chances to act varies from person to person (Le et al., 2020). People, therefore, find themselves in different positions. They may either embrace their rights or distributions of rights and services or challenge the rights and services they distributed (Davies & Harré, 1999). It has been argued that roles and positions are different. While roles are steady, positions are dynamic (van Langenhove & Harré, 1999). Positioning is understood as one setting for a position for oneself or others. Via such (re)positioning act, agency can be demonstrated. The most common key elements of PT include rights, duties, and obligations (Harré & Moghaddam, 2003). These elements are carried out in relation to personal attributes such as being rational and open-minded and the moral order of teacher service (Langenhove & Harré, 1999). The (re)positioning act can be performed in numerous ways. Some examples of such include direct positioning (e.g., praising someone as a great teacher), indirect positioning (e.g., Thai references to a teacher as a "boat"), moral positioning (e.g., teachers' feeling of being responsible for students' learning outcomes), and personal positioning (e.g., a teacher's personal feeling of resisting policy changes). Davies and Harré (1990) recommend that one has to enter discursive processes to examine the (re)positioning act. That is, one may be required to explore discourse at either the individual, group, or institutional level. For this reason, the current study draws on discourse at the group and individual levels.

3. Methodology

This study employed a mixed-methods design combining quantitative and qualitative data – the Explanatory Design (Creswell, Plano Clark, Gutmann, & Hanson, 2003). As suggested by Yin (1994), researchers should involve a variety of sources to provide a means of data triangulation. Figure 1 presents the workflow of this study.

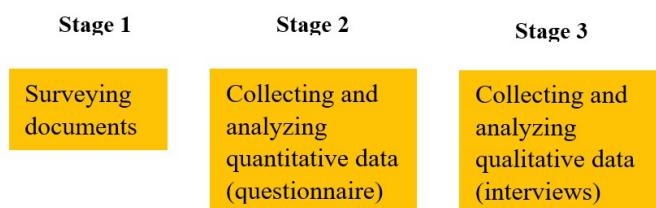


Figure 1. Research workflow

3.1. Documentation

This study began with a survey of pedagogical guidelines issued by HEIs across the country. Efforts were made to collect as many documents as possible, and since HEIs were not fully operative at the time of conducting this study, a web-driven approach was used to gather documents. Only notifications posted on HEIs' official websites were collected. A corpus of 50 notifications issued by 50 HEIs was compiled, yielding a wide variety of pedagogical guidelines. The purpose of this analysis was to gain an overall picture of teaching tools and methods that tertiary teachers were expected to employ during the crisis. Only guidelines related to teaching, learning, and evaluation were considered. Most of the notifications were written in Thai, but some HEIs provided an English version as an alternative. It is worth mentioning that the guidelines were only one of several measures HEIs took to provide safe education and support for students (e.g., measures to alleviate the impacts of COVID-19, precautionary measures).

The notifications were treated as a single unit for the reason that this study did not focus on differences between HEIs. The analysis began with reading through the notifications and then extracting relevant guidelines. The guidelines were categorized into teaching methods, teaching platforms, and evaluation tools. After that, a list of each was created and expanded as new elements emerged. These lists would serve to categorize the general pedagogical perspectives into which teachers' perceptions and insights were placed.

3.2. Questionnaire and respondents

In this study, the questionnaire served two purposes: to collect quantitative data and select cases. It was designed in conformity with the first three cores of the activity system proposed by Engeström (1987): subject, tool, and object. To illustrate how these three cores operate in the context of this study (see Figure 2), it is important to consider the extent to which the outbreak of COVID-19 started to affect the educational sector. Educational institutions were forced to close; however, teaching and learning continued. Pedagogical guidelines for teachers under social-distancing conditions were issued. Teachers at this point became the subjects or actors as they mediated between the situation and teaching. Different teaching methods and evaluation tools are the approaches used by the teachers to mediate distance learning, and which teaching method and evaluation tool to use and how they are used may depend on personal and/or institutional objects. In this respect, the questionnaire was designed in the way that it focuses on three elements: teachers themselves (e.g., experience, beliefs, interpretation), teaching methods and evaluation tools, and learning outcomes. The questionnaire was divided into three sections: background information, interpretation, and teaching practices. The second section asked respondents to describe how they feel about the abrupt changes that the COVID-19 pandemic had brought to English language education, whereas the third section employed multiple-answer items to elicit information regarding teaching practices.

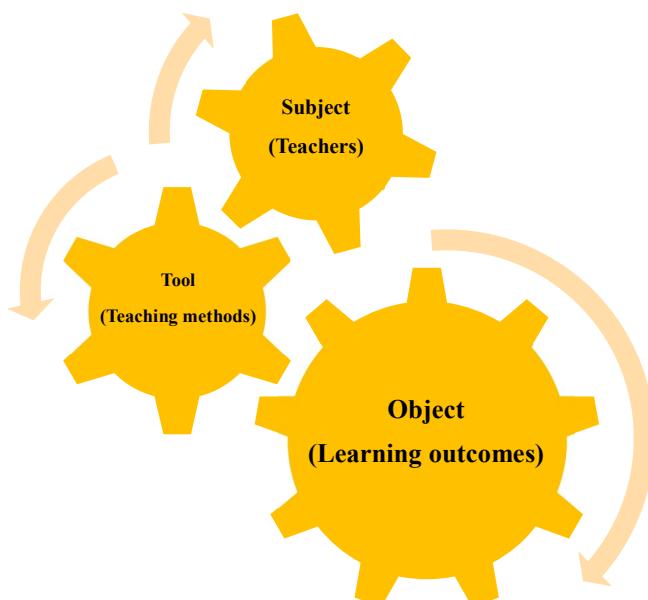


Figure 2. The first three cores of the activity system

The questionnaire respondents included 162 tertiary teachers of English who taught at least one

English course during the closure of HEIs. The respondents were recruited by using snowball sampling with an online survey platform, and thus the response rate could not be identified. In accordance with the Declaration of Helsinki, the respondents received information regarding the objectives of this study and were assured of their confidentiality, anonymity, and the right to withdraw from participation at any time without penalty. Table 1 presents the demographic profile of the respondents.

Table 1. Demographic profile of the respondents

Demographic variables	Number (n=162)	Percentage
Age		
21-25	3	1.9%
26-30	34	21%
31-35	59	36.4%
36-40	30	18.5%
41-45	22	13.6%
46-50	12	7.4%
51+	2	1.2%
Nationality		
Thai	146	90.1%
Non-Thai	16	9.9%
Experience in teaching English at the higher education level		
Less than 1 year	10	6.2%
1-3 years	21	13%
4-6 years	34	21%
7-9 years	44	27.2%
10+ years	53	32.7%
Employment status		
Full-time	138	85.2%
Part-time	24	14.8%
Course taught during the COVID-19 pandemic (multiple answer)		
General English	122	75.3%
English for Specific Purposes	46	28.4%
Skill-specific courses	37	22.8%
Other	11	6.8%

3.3. Interviews

The cases were selected using the purposive sampling technique. Three teachers, who had earlier completed the questionnaire, were selected since they differed in their teaching modes. The names *Ali*, *Pimpa*, and *Saran* are all pseudonyms (see Table 2). To allow them to share their thought and insights freely, they were interviewed in Thai, their first language. The interviews

lasted between 40 and 60 minutes. The participants were interviewed individually by telephone on September 28th-30th 2020, and the interviews were audio-recorded and transcribed verbatim for analysis – verbatim transcriptions allow researchers to document the actual representation of verbal contributions of participants (Halcomb & Davidson, 2006). Some responses were translated into English, but only for the purposes of reporting data. The interviews were threefold: general beliefs about English language teaching, positioning, and teaching practices. More questions, however, were added to elicit more in-depth information.

Content analysis and thematic analysis were used because both approaches pay attention to contextual description and interpretation of data and cut across the data to identify cultural-contextual ideas or underlying messages. Whenever ambiguity in their responses was encountered, the participants were contacted for clarification.

Table 2. Demographic profile of the interview participants

Pseudonym	Teaching Experience	Highest degree	Nationality /L1	Course	Employment status	Teaching mode
Ali	7	Master's degree	Thai/Thai	General English/English for Specific Purposes	Full-time	Synchronously
Pimpa	11	Doctoral degree	Thai/Thai	English for Specific Purposes	Full-time	Asynchronously
Saran	15	Doctoral degree	Thai/Thai	General English	Full-time	Synchronously and asynchronously

4. Findings and discussion

4.1. Pedagogical guidelines

In this section, the lists of teaching methods, platforms, and evaluation tools recommended by HEIs for teaching and learning were presented (Table 3), although some HEIs that did not suggest specific tools and methods for remote teaching and merely suggested “online teaching”. Both synchronous and asynchronous approaches were recommended. While some HEIs demanded the teachers be prerecorded, others encouraged teachers to teach remotely via a group meeting application (GMA) such as Zoom, Google Meet, Microsoft Teams, and the like. In the former case, students could watch the recordings as often as they wished, and those who had no Internet

access at home could study whenever the opportunity arose. It should be noted that, in addition to closing educational institutions, the spread of COVID-19 prevented people from traveling to other provinces. As a result, many students did not have access to the resources (technology and connectivity) required for online learning. Given such circumstances, students could significantly benefit from asynchronous classes.

In contrast, synchronous teaching allows students to interact with their teachers and classmates online, although they need quality Internet access to join live-stream classes. Some HEIs, nevertheless, suggested ways to connect with those who did not have the basic tools such as requiring teachers to record the live stream classes and then upload them for students to access on demand. In fact, teachers had to always bear in mind that some students might not be able to attend the live sessions due to the lack of technology and connectivity.

Although some HEIs did not provide specific pedagogical guidelines, several of them recommended particular teaching methods, platforms, and evaluation tools. In general, the teaching methods recommended by HEIs were meant to promote autonomous learning and learner-centeredness. As for the teaching platforms, HEIs encouraged teachers to use GMAs and live-stream their classes and interact with students. Concerning evaluation, both summative and formative assessments were recommended. The former included online testing and take-home exams. The latter included reports, projects, clip presentations, and assignments. Despite all the above-mentioned recommendations, HEIs did not give specific detailed information regarding the implementation.

Table 2. HEIs' guidelines for teaching and learning during the COVID-19 pandemic

Mode	Method	Platform	Evaluation
Synchronous	Active learning	Learning Management System	Online testing
Asynchronous	Self-guided lesson	Zoom	Take-home exam
	Project-based learning	Microsoft Teams	Report
	Problem-based learning	Google Meet	Clip presentation
	Case-based learning	Echo360	Project
	Task-based learning	MyCourseVille	Assignment
	Research-based learning	Blackboard Collaborate	
	Assignment-based learning	LEB2 Live	
	Simulation-based learning	Google Classroom	
	Self-directed study	Facebook Live	
	Discussion-based learning	Cloud Meeting	

Discovery learning	Moodle
	MOOC
	i-Classroom
	OBS Studio

4.2. Pre-pandemic phase

Prior to the pandemic, most of the respondents had never taught remotely ($n=139$) and had not received training or attended a workshop on distance education or related areas ($n=146$). The most common goal of teaching English was to improve students' communication skills with the mean score (M) of 4.06, followed by fulfilling course objectives (M=3.29). Helping students pass exams as a goal of teaching English was the least perceived goal (M=2.89). The majority of the respondents agreed that English can be learned anywhere (M=4.53). This implies that teachers believe that learning of English should not be restricted to the classroom, and students should be encouraged to learn English even when they are not in the classroom. When participants were asked: "What do you try to achieve when you teach English?", *Ali* and *Pimpa*'s responses indicate that they wanted to help students communicate effectively. They were then encouraged to briefly describe how they promote English communication in their face-to-face classrooms. *Ali* explained:

- (1) I want to help my students to be able to express their thoughts and ideas. I am not good at standing in front of the classroom and spending the whole class giving a lecture. I often spend a little time introducing the topic and ask students to participate in an activity in which they have to talk with their friends or present something to their class. (*Ali*)

Since the focus is on building communication skills, she spends most of her class time on activities that allow students to practice their English communication skills rather than on traditional one-way lecturing. *Pimpa* illustrated:

- (2) My students do not have a chance to use English outside of the classroom, so in the class time, I make sure that they use English as much as possible. I try to use English in the classroom, and my students are expected to use English as well. (*Pimpa*)

Pimpa, by way of an alternative, uses English as a medium of instruction (EMI) and encourages her students to use English in class. *Saran*'s aim, on the other hand, was to prepare his students for undergraduate study and further courses that would be given in English. He stated:

- (3) I expect my students to improve the English skills that are useful for further undergraduate study. Although it is a foundation course, we do not focus on general English. (*Saran*)

Based on both the questionnaire and interview data, teachers considered improving communication skills as the ultimate goal of teaching English.

4.3. Pandemic phase: Teachers' positioning

This section presents and discusses teachers' positioning and reactions to the situation in relation to teaching and learning within the context of higher education. Their agentic behaviors became observable as they dealt with the situation and responded to the abrupt changes. The questionnaire respondents were encouraged to write a few words describing how they felt about the abrupt changes that the COVID-19 pandemic had brought to English language education. The data were divided into positive (e.g., challenging, convenient, enjoyable, opportunity), neutral (e.g., hectic, tough, different), and negative responses (e.g., difficult, inconvenient, ineffective, time-consuming, energy-consuming). Although many of them committed to either feeling positive, negative, or neutral toward the situation, some expressed mixed feelings. It is worth noting that the number of responses ($n=131$) is not in parallel with the number of respondents because some of them did not respond to this item. As shown in Figure 3, about 40% of the responses were purely negative, suggesting that teachers are not likely to be in favor of remote teaching. The negative interpretations, however, may not reflect teachers' actual performance or quality of their instruction but rather their personal feelings toward the situation.

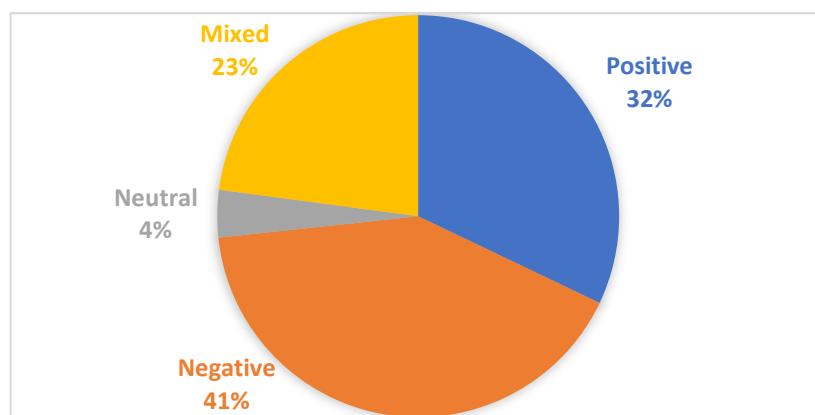


Figure 3. Teachers' interpretations of the situation ($n=131$)

The following item asked if they received any forms of support from anyone at the planning and teaching stages. Figure 4 shows that teachers were mainly supported by internal resources. More than half of the respondents received support from their colleagues. About one third were supported by their institutions and staff. Students also played a supportive role here as around 20% of the participating teachers reported that they were supported by their own students. However, some of them revealed that they were not supported by anyone at all. The rest of the support was from teachers from other institutions, friends, and family members. Support from government bodies and other agencies was completely absent.

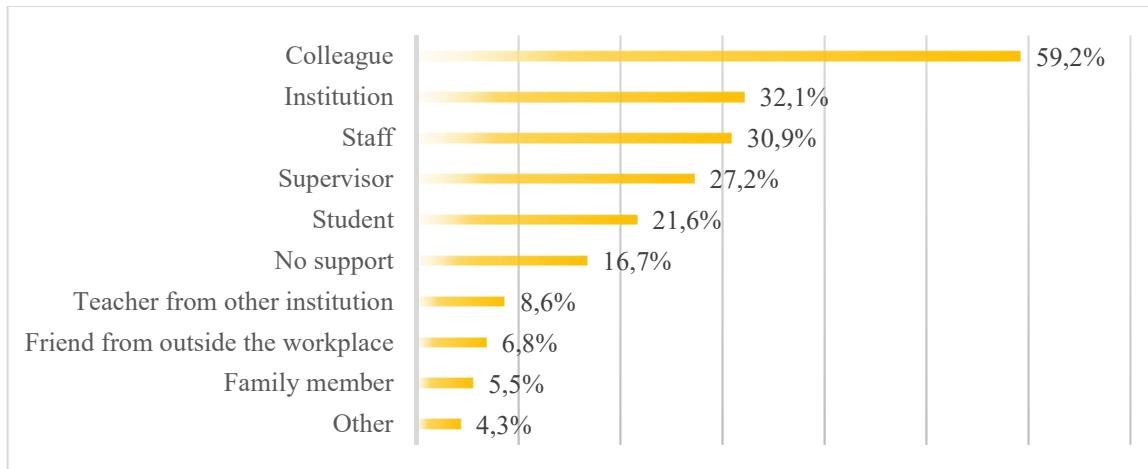


Figure 4. Support received in planning and teaching (n=162) (multiple answer)

The participants were asked to justify their interpretations of the situation. *Ali* and *Saran* were optimistic about the situation. They said:

(4) I think the situation gives us the opportunity to learn new things. I feel that it is good that we were forced to do it. We can now teach from anywhere and students can also learn from anywhere. The incident brought new teaching ideas and approaches. (*Ali*)

(5) We got to step out of our comfort zone. We were forced by the situation to learn more about online teaching and to develop other skills that will be important in the future, such as making videos and operating online teaching applications. (*Saran*)

They considered the situation as an opportunity to acquire new skill sets despite being otherwise coerced into an unfamiliar mode of teaching. Although making videos and using teaching applications are not a regular part of traditional face-to-face classroom instruction, teachers may need such skills as the trend of formal education moves toward remote teaching. *Pimpa* illustrated:

(6) To be honest, I did not directly interact with students while I was teaching. For me, asynchronous teaching is difficult when you want to help them improve their language skills. I had to change my teaching style. I often got students to do things that allowed them to practice their communication skills, but I was not sure if they actually did what I asked. (*Pimpa*)

Asynchronous remote teaching during the crisis posed some specific obstacles. *Pimpa* was forced to change her teaching style because her teaching mode did not encourage direct teacher-student and student-student interaction during class time.

The responses presented above can only inform of how they felt toward the situation, which were found insufficient to identify their positioning. They were then asked if their responsibilities related to teaching and learning changed as a result of the crisis. All of them

admitted that their teaching workload increased because they had to (re)design lessons to suit the situation. *Saran* raised concerns about his role as follows:

(7) In the normal classroom, I would also give my students advice about other things. I think I gained more trust and respect when I was teaching in a normal situation. When I taught online, students never met me in person. Apart from teaching, I did not interact with them. (*Saran*)

His response implies that teachers play various roles in a typical classroom in which they also contribute to the non-academic side of students' lives. Apart from academic results, they are accountable for their students' mental health (Pillay, Goddard, & Wilss, 2005). Nevertheless, remote teaching redefined the role of tertiary teachers because teacher-student interaction did not occur in person. Therefore, the teachers' role was limited to teaching subject content, and it became more difficult to develop a deeper relationship with students, not to mention those who taught asynchronously. This is not to say that they curtailed their non-instructor roles or resisted keeping their previous roles. Unlike other cases of educational change, the COVID-19 crisis did not offer many options to tertiary teachers. During the crisis, the cutting back of supplementary roles that teachers normally engage in should not be considered as what Buchanan (2015) refers to as "pushing back" for the reason that it was not the result of rejection or resistance.

Consistent with the questionnaire, the participants were asked to describe the forms of support they received. Supported by his colleagues, *Ali* elucidated:

(8) My colleagues helped me a lot. One of the teachers in my department was good at operating computer stuff, so he taught me how to use the application and make my online classroom look more attractive with the background and other things. Lecturers in my team also helped each other in selecting supplementary materials. I had not collaborated with others like this for a long time. I do not know about others, but for me, it was a great experience. (*Ali*)

Despite having to rely on themselves, *Ali* and her team collaborated to complement their skills and knowledge. Colleagues seemed to be the closest and most accessible source of support for teachers in these unusual times. Aside from course-related support, colleagues could provide tech support, which contributed greatly to the success of remote teaching. According to a number of professional development studies, collaboration among teachers is regarded as a crucial means of fostering professional growth (Hargreaves, 2003) and students' achievement (Louis, Dretzke, & Wahlstrom, 2010; Hargreaves & Fullan, 2012), even if it is often viewed as an "elusive", "inconsistent" and "theoretical" practice (Woodland, Lee, & Randall, 2013, p. 443). Situations like this promote collaboration among teachers, especially when inadequate assistance is provided by the institutions or where there is a lack of the wherewithal to make meaningful interventions.

Pimpa admitted that she did not get significant support from anyone in particular, but her institution assigned a group of staff to facilitate uploading teachers' recordings onto the university's online learning platform. On the other side, *Saran* mentioned that in addition to institutional support which was delivered in the form of equipment, application subscription, and tutorial sessions, he realized that he was strongly supported by his students. He explained:

(9) My students shared with me how they felt about my approach, what they were comfortable with, and how they were doing in other classes. Their feedback helped me adjust my teaching. One of my students said she had no choice but to help her parents because they were financially affected by COVID-19, so she could not attend some sessions. (*Saran*)

The practice of regularly gathering students' feedback for immediate changes was not perceived as course evaluation but a form of teacher-student collaboration which could be beneficial for both teachers and students. Teachers no longer had to wait until the completion of the course to collect students' feedback. Listening to students periodically during the course may help eradicate barriers that prevent them from learning. Although accommodating students' feedback is an unsettling task, UNESCO (2020) suggests that educators must find "flexible forms" and "flexible times" to adapt to the changing society (p. 16).

4.4. Pandemic phase: Teaching practices

Synchronous teaching was the most common approach (n=76), followed by a mix of synchronous and asynchronous teaching (n=62). Only some teachers (n=24) used the asynchronous teaching approach. The dominance of synchronous teaching could be due to the nature of English courses, which rely heavily on classroom interaction rather than leaving students to take advantage of the available resources independently. When teachers were required to interact with students virtually, GMAs were the most common tools used by teachers (see Figure 5). This means that teachers adapted to the situation by learning to use new teaching tools. Slide presentations were also commonly used in remote teaching, either as a standalone tool for asynchronous teaching or in combination with other tools such as GMAs, Learning Management Systems (LMSs), and social media platforms. When teachers become accustomed to their new teaching routine, opportunities for more advanced use of integrated technology solutions arise, and thus it would appear that the post-COVID-19 education will likely benefit from the integration of new technology into the traditional classroom. However, the LMS (e.g., Blackboard, Google Classroom, Moodle) was used by only about 30% of the respondents, notwithstanding the general acknowledgment that such combinations provide easy communication and support for active engagement (Rubin, Fernandes, Avgerinou, & Moore, 2010).

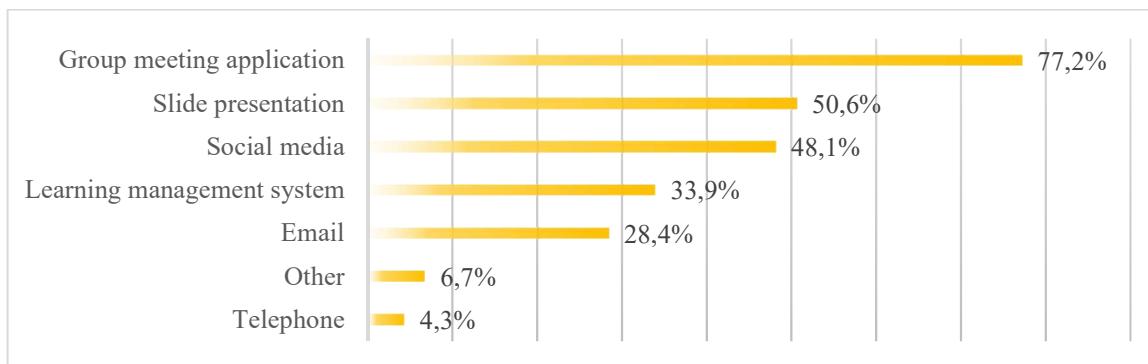


Figure 5. Teaching tools (n=162) (multiple answer)

Figure 6 shows that the most commonly used teaching method during the crisis was lecture-based learning. Although lecturing is the most employed teaching method in higher education, the isolated use of lecture-based learning has been severely criticized for not promoting critical thinking and cognitive engagement (Schmidt, Wagener, Smeets, Keemink, & van der Molen, 2015). For the teaching and learning of English in any context, lecture-based learning is not an ideal method. When the focus is on improving communication skills, students are expected to play an active role and be given sufficient opportunity to practice the language. Moreover, the method was not at all recommended by HEIs (revisit Table 3). The overreliance on lecturing, nonetheless, was foreseeable as they were adjusting to unconventional teaching conditions. The amount of time devoted to lecturing could be reduced once they became familiar with remote teaching. Assignment- and project-based learning were the second most preferred methods, with almost half of the respondents using them. Recommended by many HEIs, such methods are sensible, especially when the focus is on promoting autonomous learning. However, the methods used in face-to-face classrooms like active, task-based, and discussion-based approaches were used by a number of respondents. This means that there were teachers who made efforts to use interactive teaching methods in spite of the limitations.

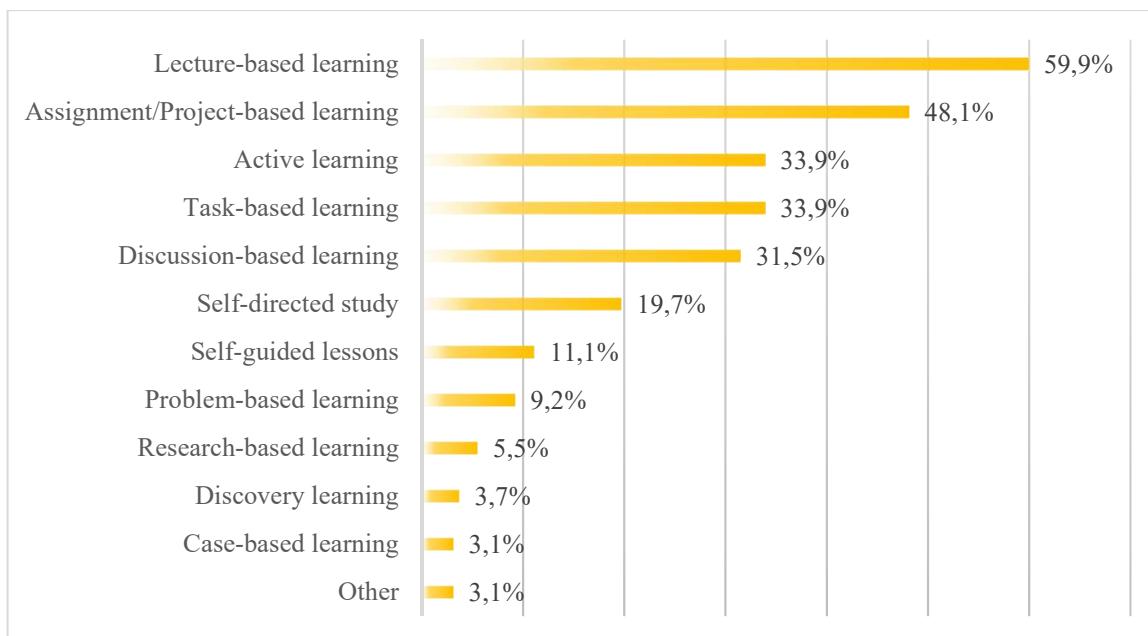


Figure 6. Teaching methods (n=162) (multiple answer)

Assignments, projects, and reports were the most common tools used to evaluate students' learning outcomes, with 69% of the respondents employing these means (see Figure 7). The midterm and final exams could be replaced by a series of assignments which was recommended by HEIs. Assigning students to do a project or write a report on their own can greatly promote autonomous learning among students because it transfers the responsibility of learning to students. However, the findings suggest that summative testing was still very much preferred by teachers, with almost half of the respondents using online testing platforms, 23% using take-home exams, and 9% administering exams at their institutions. It is worth mentioning that some HEIs delayed the exam until the situation became manageable. Therefore, some teachers could decide whether to use alternative evaluation tools or wait until they were able to administer the on-site exam. Another evaluation tool identified here is phone call which was used to assist in the evaluation of oral skills.

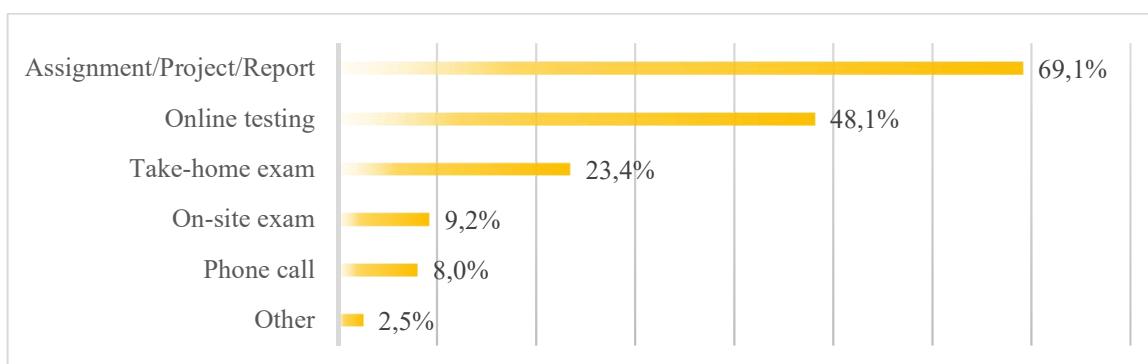


Figure 7. Evaluation (n=162) (multiple answer)

The most common challenges faced by teachers were led by classroom management factors: organizing activities and administering exams (see Figure 8). It is well established that communicative activities are an essential element in any English classroom. Although remote teaching tools like GMSs and LMSs can facilitate interactions, teachers do not have the same amount of freedom they have in face-to-face classrooms. They might find it difficult to organize activities that promote communicative interactions between students. Teachers might also be frustrated at not being able to give paper-and-pencil tests in person. Operating devices and applications might have posed some challenges because teachers had only limited time to learn to use them. Even among tertiary English teachers, using EMI can be challenging. Previous scholarly discussions have concluded that, in English as a Foreign Language (EFL) contexts, using EMI put tertiary teachers of content courses under enormous stress (Byun et al., 2011; Kang, 2012). When class time was mostly devoted to lecturing, teachers turned an English course – which is interactive in nature – into one that was more content-based, leading to difficulty in using EMI.

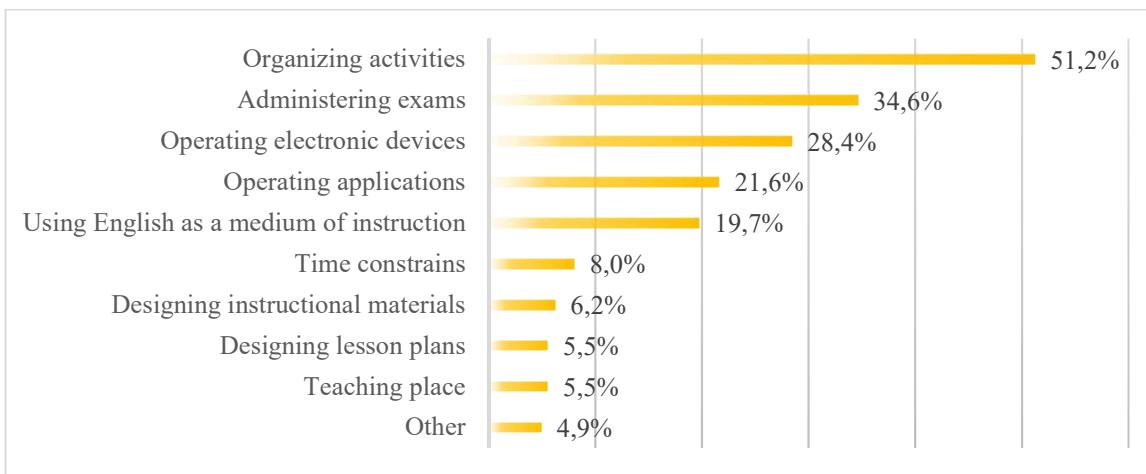


Figure 8. Challenges in emergency online teaching (n=162) (multiple answer)

The participants used different teaching methods during the crisis. All the participants admitted that they had to break their old teaching habits and make adjustments to their lessons. *Ali* described her teaching method as a “link”. She explained:

(10) I did not use drills and practice as much as I do in the normal classes. I provided links between ideas and assigned students to work by themselves. I somehow got so frustrated because I did not get to see students practicing in person. I did try to use activities at first, but students hardly responded. I found myself spending more time talking. I no longer used activities like role play, games, and co-work. (Ali)

Her class time was mainly devoted to introducing and explaining points, and students were expected to study independently at their own pace. Since her usual practice had been to use drills and activities, her tension was built around not being able to organize activities in her online class. It can be observed that the situation somehow constrained teachers' freedom to use communicative approaches. In this way, the success of learning depends substantially on students' ability to adjust to the new learning environment. *Ali*'s frustration can be best explained by reference to MacIntyre, Gregersen, and Mercer's (2020) study. They found that the abrupt conversion to online teaching was one of the crucial factors that produced significant levels of stress. Since she mentioned students' responses to her classroom activities, she was further asked about her students' reactions to online teaching. She added that her students were unusually quiet and barely responded to her questions. It was not just teachers who struggled to foster classroom interactions but students who had to adjust to remote learning.

As regards *Pimpa*, her teaching was recorded by a slide presentation tool. Her students were invited to a group chat on a social media application through which she stayed in contact with them during the remote learning period. Once a video was posted on the website, she asked her students to watch it. She explained:

- (11) When I was recording the videos, I felt so strange. I did a lot of talking, but students were asked to practice as well. For example, I remember asking students to repeat after me and to answer simple questions. When I asked a question, I told them to pause the video and answer it. I hoped that they would do what I asked. Follow-up questions and assignments were posted in the group chat. (*Pimpa*)

When it comes to an asynchronous class, teaching and learning become more complicated. It is clear that *Pimpa* made efforts to create an interactive atmosphere. She tried to interact with students and gave them chances to practice using the language. She added that her teaching became more of a lecture, and she seemed to focus on grammar and vocabulary. Her lessons tended to be more language-oriented, increasingly focusing on elements such as grammar, structure, and vocabulary. Like *Ali*'s students, her students did not respond much in the group chat.

As he constantly received feedback from students, *Saran* said that he decided to change his teaching approach during the course. He elaborated:

- (12) I normally use the PPP [present, practice, and perform] method in normal classes. At first, I used it in my online class. Students were assigned to complete tasks independently because I thought it would be convenient for them to do assigned works by themselves. My students then commented on the unusual amount of workload, which is understandable. I decided to use more collaborative tasks. I divided students into groups by using the collaboration feature of the

application. It was much easier than I expected. My students then created their own group chats and worked on their tasks with their group members. (*Saran*)

In *Saran's* case, the PPP method was replaced by collaborative task-based learning, which was appropriate for his academic-focused course. With such a method, students collaborated with their peers to complete academic tasks during both class and out-of-class time. He seemed to be satisfied with his students' performance and ability to work collaboratively without relying solely on him. His response suggests that collaborative online learning is possible with students' willingness to cooperate and technological support.

For evaluation, several adjustments were reported. *Ali* and *Saran* no longer relied predominantly on summative tests. Since their institutions had given them freedom regarding teaching and evaluation, they reduced the weight of summative tests like final exams and added more value to a series of assignments. *Ali* assigned her students to do individual video presentations instead of role play. However, she was a bit concerned about not being able to give immediate feedback and talk with them in person about their work. The situation restricted teachers from providing spontaneous correction and feedback, and thus the shift from in-class to remote evaluation may impede meaningful feedback.

Saran administered the final exam on an online testing platform. When an exam was not proctored, cheating was one of the major concerns among teachers. *Saran* said:

(13) I heard that many teachers complained about cheating in online exams. I did not worry too much about how they got the answer. Getting the correct answer meant they knew the answer. Knowing the answer means they fulfill the objective. It was just one part of the evaluation. They still had to submit their assignments. (*Saran*)

Instead of worrying about how students got their answers, *Saran* focused on fulfilling course objectives. A well-designed test on an online platform can still yield useful information for evaluating students' learning outcomes. Also, reducing the weight of mid-term and final exams gave teachers more confidence in using online testing.

5. Conclusion

The onset of the COVID-19 pandemic witnessed agentic actions of tertiary English teachers. The abrupt transition to online teaching created challenges as well as opportunities in pursuing their goals. Notwithstanding all the negative feelings, when the time came, they played an active role in battling the disruption to learning by collaborating with their peers and thinking on their feet to facilitate online learning with tools available to them despite limited support and preparation time. It is fair to say that teachers struggled but embraced opportunities to learn novel teaching approaches and reinvent English language education. Since teachers could only interact with

students online, their roles as a teacher were reduced to the point that their contribution to students' extra-curricular development was limited. Teachers' positioning as being professionally responsible for students' learning outcomes remains intact, even though the situation restricted teachers from going beyond their fundamental responsibilities. As mentioned earlier, this does not mean that they resisted adopting their usual advisory role, rather the situation made it difficult for them to fully provide non-academic support.

From a pedagogical perspective, the combination of lecture-based and assignment-based learning is likely to be the most common short-term solution. The prevalence of lecture-based learning does not suggest that they refused to implement the teaching methods recommended by their institutions. Indeed, they clearly demonstrated a great deal of endurance and effort to overcome impediments to online learning and provide classroom-like interaction between teachers and students and among students. Several agentic actions of teachers were identified: endeavoring to create an interactive learning atmosphere, using social media platforms to compensate for the loss of face-to-face communication, collaborating with students to adjust their teaching practices, implementing different teaching methods, promoting autonomous learning, and incorporating formative assessment approaches to instruction and evaluation. In times of chaos and tension, teachers did not abandon their goals and ideals with respect to English language learning, which requires a measured aggregate of interactions, activities, and practice.

In addition, the success of remote English learning also depends on the students themselves. The teaching and learning of English become far less complicated with students who adjust well or take responsibility for their own learning. Teachers may find themselves struggling to achieve their goals and desirable learning outcomes, but once they are familiar with the new learning environment and master the teaching methods suitable for remote learning in their context, distance language learning can be a viable option for formal education. This study shows that in times of crisis, tertiary English teachers were brave participants who used their expertise to practice their agency so as to benefit their students.

Some implications can be drawn from this study. Teachers' personal efforts alone may be insufficient to achieve desirable results, and thus institutions and government should provide them with concrete support and "detailed" pedagogical guidance. Teachers should never give up communicative approaches despite the difficulties they may encounter. They are encouraged to work collaboratively with their colleagues during the planning and teaching stages. With vigorous working relationships with their colleagues, they are enabled to establish agency by gearing the change requirements to match their practices (Robinson, 2012). Learning activities and pedagogical methods that motivate students to take responsibility for their learning should

be implemented. Last but not least, training programs on online education should be offered not only to teachers but also to students.

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References

- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1-26. <https://doi.org/10.1146/annurev.psych.52.1.1>
- Biesta, G. J. J., & Tedder, M. (2007). Agency and learning in the lifecourse: Towards an ecological perspective. *Studies in the Education of Adults*, 39(2), 132-149. <https://doi.org/10.1080/02660830.2007.11661545>
- Borg, S. (2006). *Teacher Cognition in Language Education: Research and Practice*. London: Continuum.
- Brodie, K. (2019). Teacher agency in professional learning communities. *Professional Development in Education*. <https://doi.org/10.1080/19415257.2019.1689523>
- Buchanan, R. (2015). Teacher identity and agency in an era of accountability. *Teachers and Teaching*, 21(6), 700-719. <https://doi.org/10.1080/13540602.2015.1044329>
- Byun, K., Chu, H., Kim, M., Park, I., Kim, S., & Jung, J. (2011). English-medium teaching in Korean higher education: Policy debates and reality. *Higher Education*, 62(4), 431-449. <https://doi.org/10.1007/s10734-010-9397-4>
- Cameron, D. (2001). *Working with Spoken Discourse*. London: Sage.
- Coffman, A. N. (2015). Teacher Agency and Education Policy. *The New Educator*, 11(4), 322-332. <https://doi.org/10.1080/1547688X.2015.1087759>
- Creswell, J. W., Plano Clark, V. L., Gutmann, M., & Hanson, W. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of Mixed Methods in Social and Behavioral Research* (pp. 209-240). Thousand Oaks, CA: Sage Publications.
- Davies, B., & Harré, R. (1990). Positioning the discursive production of selves. *Journal for the Theory of Social Behaviour*, 20(1), 43-63.
- Emirbayer, M., & Mische, A. (1998). What is agency? *American Journal of Sociology*, 103(4), 962-1023. <https://doi.org/10.1086/231294>
- Engeström, Y. (1987). *Learning by Expanding: An Activity-Theoretical Approach to Developmental Research*. Helsinki: Orienta-Konsultit.
- Halcomb, E. J., & Davidson, P. M. (2006). Is verbatim transcription of interview data always necessary? *Applied Nursing Research*, 19(1), 38-42. <https://doi.org/10.1016/j.apnr.2005.06.001>
- Hargreaves, A. (2003). *Enseñar en la sociedad del conocimiento: La educación en la era de la inventiva* [Teaching in the knowledge society: Education in the age of insecurity]. Barcelona: Octaedro.
- Hargreaves, A., & Fullan, M. (2012). *Professional Capital: Transforming Teaching in Every School*. New York, NY: Teachers College, Columbia University.
- Harré, R., & Moghaddam, F. M. (2003). Introduction: The self and others in traditional psychology and in

- positioning theory. In R. Harré & F. M. Moghaddam (Eds.), *The Self and Others: Positioning Individuals and Groups in Personal, Political, and Cultural Contexts* (pp. 1-12). Westport, CT: Praeger.
- Imants, J., & Van der Wal, M. M. (2020) A model of teacher agency in professional development and school reform. *Journal of Curriculum Studies*, 52(1), 1-14. <https://doi.org/10.1080/00220272.2019.1604809>
- Kang, H. S. (2012). English-only instruction at Korean universities: Help or hindrance to higher learning? *English Today*, 28(1), 29-34. <https://doi.org/10.1017/S0266078411000654>
- Kayi-Aydar, H. (2015). Teacher agency, positioning, and English language learners: Voices of pre-service classroom teachers. *Teaching and Teacher Education*, 45, 94-103. <https://doi.org/10.1016/j.tate.2014.09.009>
- Le, M. D., Nguyen, H. T. M., & Burns, A. (2020). English primary teacher agency in implementing teaching methods in response to language policy reform: A Vietnamese case study. *Current Issues in Language Planning*, 22(1-2), 199-224. <https://doi.org/10.1080/14664208.2020.1741209>
- Louis, K. S., Dretzke, B., & Wahlstrom, K. (2010). How does leadership affect student achievement? Results from a national US survey. *School Effectiveness and School Improvement*, 21(3), 315-336. <http://doi.org/10.1080/09243453.2010.486586>
- MacIntyre, P. D., Gregersen, T., & Mercer, S. (2020). Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. *System*, 94, article 102352. <https://doi.org/10.1016/j.system.2020.102352>
- Pillay, H. K., Goddard, R., & Wilss, L. A. (2005). Well-being, burnout and competence: Implications for teachers. *Australian Journal of Teacher Education*, 30(2), 22-33. <http://doi.org/10.14221/ajte.2005v30n2.3>
- Redman, C. (2013). Agentic roles, rights and duties in a technological era. In R. Harré & F. Moghaddam (Eds.), *Psychology of Friendship and Enmity: Relationships in Love, Work, Politics, and War* (Vol. 1, pp. 109-127). Westport, CT: Praeger.
- Robinson, S. (2012). Constructing teacher agency in response to the constraints of education policy: Adoption and adaptation. *Curriculum Journal*, 23(2), 231-245. <https://doi.org/10.1080/09585176.2012.678702>
- Rogers, R., & Wetzel, M. M. (2013). Studying agency in literacy teacher education: A layered approach to positive discourse analysis. *Critical Inquiry in Language Studies*, 10(1), 62-92. <https://doi.org/10.1080/15427587.2013.753845>
- Ruan, X., Zheng, X., & Toom A. (2020). From perceived discrepancies to intentional efforts: Understanding English department teachers' agency in classroom instruction in a changing curricular landscape. *Teaching and Teacher Education*, 92, article 103074. <https://doi.org/10.1016/j.tate.2020.103074>
- Rubin, B., Fernandes, R., Avgerinou, M. D., & Moore J. (2010). The effect of learning management systems on student and faculty outcomes. *The Internet and Higher Education*, 13(1-2), 82-83. <https://doi.org/10.1016/j.iheduc.2009.10.008>
- Schmidt, H. G., Wagener, S. L. Smeets, A. C. M. G., Keemink, L. M., & van der Molen, H. T. (2015). On the use and misuse of lectures in higher education. *Health Professions Education*, 1(1), 12-18. <https://doi.org/10.1016/j.hpe.2015.11.010>
- Schweisfurth M. (2006). Education for global citizenship: Teacher agency and curricular structure in Ontario schools. *Educational Review*, 58(1), 41-50. <https://doi.org/10.1080/00131910500352648>
- Toom, A., Pyhältö, K., & Rust, F. O. C. (2015). Teachers' professional agency in contradictory times. *Teachers and*

Teaching, 21(6), 615-623. <https://doi.org/10.1080/13540602.2015.1044334>

UNESCO. (2020). Education in a post COVID-19 world: Nine ideas for action. Retrieved from <https://en.unesco.org/news/education-post-covid-world-nine-ideas-public-action>

Vähäsantanen, K., & Eteläpelto, A. (2011). Vocational teachers' pathways in the course of a curriculum reform. *Journal of Curriculum Studies, 43*(3), 291-312. <https://doi.org/10.1080/00220272.2011.557839>

van Langenhove, L., & Harré, R. (1999). Introducing positioning theory. In R. Harré & L. van Langenhove (Eds.), *Positioning Theory* (pp. 14-31). Oxford: Blackwell.

van Langenove, L. (2017). Varieties of moral orders and the dual structure of society: A perspective from positioning theory. *Frontiers in Society, 2*(9), 1-13. <http://doi.org/10.3389/fsoc.2017.00009>

Wedell, M., & Grassick, L. (2018). Living with curriculum change: An overview. In M. Wedell & L. Grassick (Eds.), *International Perspectives on Teachers Living with Curriculum Change* (pp. 1-14). Basingstoke: Palgrave Macmillan.

Weick, K. (2001). *Making Sense of the Organization*. Oxford: Blackwell.

Woodland, R., Lee, M. K., & Randall, J. (2013). A validation study of the teacher collaboration assessment survey. *Educational Research Evaluation, 19*(5), 442-460. <http://doi.org/10.1080/13803611.2013.795118>

Yin, R. K. (1994). *Case Study Research: Design and Methods* (2nd ed.). Thousand Oaks, CA: Sage Publications.

CATERING TO ASSESSMENT NEEDS OF STUDENTS OF ENGLISH - CALL TO THE RESCUE?

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Abstract

The study focuses on the process of assessing (a micro-skill) goal attainment in EFL pronunciation course via measures which can foster different students' attitudes and self-perceptions. Standard (pen-and-paper) tests offer immediate evidence of success but they put heavy demands on students' cognitive, performance and stress-controlling skills. CALL-related techniques can be used as supplementary ones, even if technically assessing different sub-skills, *Kahoot* or *Moodle* quizzes can complement and re-orientate the assessment as well as the learning processes.

To investigate the impact of the diverse assessment measures a small-scale research was conducted among Year 1 students of the English Department at the Pedagogical University in Kraków. They are participants in a 90-hours-a-year pronunciation course, where one of the components involves mastering transcribing skills. The specific element of the course evaluated by standard and CALL-related measures in the study were the phonetic variants of the *-es* and *-ed* endings in English. Through analysis of test scores, coupled with the ideas obtained via semi-structured interviews, the study hoped to verify the claim that matters such as student comfort, instant individual feedback and personal safety are most efficiently handled by the *Moodle* quizzes. Apart from providing well-balanced scores, they offer the least-threatening, stress-free environments for learning and assessment, thus developing students' self-monitoring their progress.

Keywords: assessment; test anxiety; pronunciation instruction; pen-and-paper tests; computer-based tests

1. Introduction

Any learning process requires assessing goal attainment. Whether the focus is on performance or mastery goals, the measures applied to assess attainment of these can be diverse and can foster different students' attitudes and self-perceptions. For many students, the test situation on its own creates considerable anxiety which can badly affect their performance (Komorowska, 2002; Underhill, 1987). Therefore, it is deemed desirable to attempt working out assessment schemes and conditions that would both determine the relative success at learning a specific content or

skill and do so in a reliable and guided manner. Additionally, instructors would want to show the learners how to evaluate their progress in learning, to be able to diagnose the strong and the weak points independently of the teacher. Both teacher assessment and carefully introduced elements of student's self-assessment contribute to students' making more progress and taking more responsibility for their learning (Czettwertyńska, 2015; Komorowska, 2005; 2002; Underhill, 1987). It appears to be a necessity to reconsider the habitually used assessment practices in order to implement diversification and flexibility inherent in adaptive teaching to make assessment more comprehensive, more inclusive and more students'-needs-relevant.

English Studies pronunciation courses, apart from regular training in English oral skills, characteristically insist on mastering transcribing skills. The belief behind this requirement is that those who can record in a visual form certain contrasts or variants practiced in class will also be able to pronounce them – and vice versa (Werfel, 2017). It is seen as a feeding-breeding relationship. Assessing students' success in this skill typically incorporates pen-and-paper tests of transcription, where the test-takers' task is to apply the IPA characters appropriately. While this mode offers the teacher immediate evidence of success – or lack thereof – it puts heavy demands on students' cognitive, performance and stress-controlling skills. Students focus on the outcome and what can be done to ensure the positive final score, not on improved understanding, self-monitoring or generating solutions. Therefore, some more comprehensive and varied measures need to be implemented to provide assistance in the assessment process and to complement it.

Even if technically assessing different sub-skills, certain CALL-related techniques, such as game-based student response systems (*Kahoot!* for this study) (Licorish et al., 2017; 2018) or *Moodle* quizzes (Neill, 2018; Aperliński et al., 2013) can complement and re-orientate the assessment as well as the learning processes. These supplementary measures enable important factors to surface from the background. Student comfort, instant individual feedback and personal safety reveal themselves to be all-important and largely conducive to the ultimate success, at the same time contributing significantly to developing self-monitoring skills.

Therefore, the paper tries to examine the more adaptive and flexible assessment protocols with a view to cater for student diversity in a relevant manner. The typical, ever-present "test culture" largely ignores the need to adapt assessment activities and tasks to students' characteristics and personal needs within the affective domain, at the same time not taking notice of students' emotional well-being. The sole focus on measuring progress or achievement prevails. The study aims to investigate whether expanding task types and techniques can constitute a move towards a form of inclusive assessment consistent with demands of adaptive

teaching (Coll et al., 2000). Through analysis of test scores, both traditional and CALL-related, enriched by information obtained via a series of semi-structured interviews, the author hopes to determine whether incorporating the various assessment forms and CALL elements can indeed foster students' performance skills. Put differently, the question arises: Does CALL come to the rescue when we try to cater for students' assessment needs?

In order to reveal the preferable and comprehensive assessment forms of the study participants, a number of research questions have been formulated (section 4). Based on these, fed by ideas developed in the subject literature, a working hypothesis has been proposed to the effect that catering for students' needs when it comes to assessing the achievement of transcription skills ought to involve incorporation of carefully planned CALL-based activities.

2. The background: Transcription vs. speaking

It has been observed countless times that pronunciation errors cause the majority of communication breakdowns, both when we talk about communicating with native and non-native speakers, with, ultimately, pronunciation constituting possibly the greatest single barrier to successful exchanges. Speech is, after all, an activity which is carried on in numerous events. Lack of knowledge of English sounds, both in terms of recognition and production, can thus impede communication. Too much accentedness or distorted speech may give rise to misunderstanding, miscommunication and frustration, resulting in psychological nervousness in speakers (Lu, 2002, p. 37). Learning to understand and use phonetic symbols leads to effective remediation of these difficulties.

It is commonly believed that early integration of the basic phonetic symbols into the English language classroom, particularly so at the college or university level, is essential to the students' formation of accurate English pronunciation and intonation – the foundations of verbal language, helping to minimize interference from their mother tongue. As Lu (2002, p. 38) observes, phonetic symbols are not difficult to learn, particularly with teachers who know how to effectively use them to improve and further develop learners' pronouncing skills. Needless to say, using them requires a lot of practice before a strong command of the symbols is possible. It may be because learning to transcribe necessarily requires adults to shift the way they analyse words, ultimately to make them able to think beyond the print.

Phonetic transcription training leads to increased levels of explicit phonemic awareness (Werfel, 2017, p. 285). Phonemic awareness, the ability to analyse the sound structure of words at the level of individual speech sounds, has emerged over the past several decades as an important, but not the only, linguistic predictor of children's reading and spelling skills.

Kindergarten phonemic awareness skills are positively correlated to word decoding and reading comprehension across grade levels, from elementary school to high school (Werfel, 2017, p. 282). However, the further step, namely, thinking beyond print, requires explicit phonemic awareness skills. A higher level skill than phonemic awareness, explicit phonemic awareness, is a literate individual's ability to analyse the sounds of words separate from print. After breaking the code of letter-sound correspondence, individuals are influenced heavily by print in their analysis of words, even when instructed to analyse the sounds of words. Individuals with higher levels of explicit phonemic awareness can better manipulate the sound structure of words while ignoring the influence of print and, thus, likely would report that, for example, "witch" and "rich" contain the same number of sounds and that they rhyme.

Phonetic transcription training is the active ingredient of foreign language education that results in higher levels of explicit phonemic awareness. It is a useful learning technique for two different kinds of people: native speakers and EFL learners alike (Lecumberri and Maidment, 2000). Generally, getting familiar with it reinforces the idea that spoken and written representations of language are separate things. It makes people, especially native speakers of a language, more aware of what they actually say, rather than what they think they say. In the learning context, "transcribing texts helps to make one aware of the target one should be aiming for and of the pronunciation (or range of pronunciations) one can expect from native speakers" (Lecumberri and Maidment, 2000, p. 1). It therefore makes pedagogical sense to underscore the fundamental significance of sound discrimination and identification in the process of developing good foreign language pronunciation (Eckman et al., 2009), where transcribing skills offer great assistance. ICT affords various tools to be used for such training, including specific protocols implemented in the (Polish university-) popular learning managing system Moodle (Aperliński et al., 2013). *Conditio sine qua non* of good pronunciation is the ability to distinguish the foreign language phonemic inventory's sounds. A student who is unable to hear the difference between the sounds is unlikely to be able to pronounce them correctly. It is not possible to expect and demand proper sound reproduction of what we cannot extract auditorily (Eckman et al., 2009). However, it is equally clear that although perceiving the contrasts in the sound inventory of a foreign language is the basis for developing good pronunciation, it does not guarantee that. From the start, the main objective of learning pronunciation is to develop phonematic hearing, which is the ability to accurately recognise a foreign language's sounds. Again, at the university level, phonetic transcription sensitizes students to the existing contrasts.

Once the teacher made sure that the students had mastered the skill of recognising a given sound or sound groups, they could go to the next phase of training, that is, to practice correct

articulation, frequently trying to overcome L1 habits in the process. All imitative acts that are the quintessence of such production training are an act of will and the effect of the decision-making process. They include acceptance of a certain pattern, recognition of its characteristics as a specific implementation instruction, and consequently execution of this implementation through the control of the articulatory apparatus. If such actions become fixed, they may turn into desirable articulation habits (Isaacs, 2014). This is where the universally perceived primacy of perception in relation to speech production comes from (Escudero, 2007). Thus, the help offered in the form of phonetic transcription is seen as essential in fostering increased phonemic awareness and - in consequence - good speech habits.

It has been observed through years of classroom practice at the Pedagogical University in Kraków Year 1 English Pronunciation Classes that students' performance on tests on phonetic transcription, particularly those targeting the realisation of appropriate variants of two inflectional endings of English, the “-es” and the “-ed”, is less than satisfactory. In personal communication, when discussing the individual results, students report on their difficulties with having to cope with multiple areas of expertise at the same time: having to recall and recognise the pronunciation of a whole item, to apply an appropriate variant of the ending and to record all that in the form of phonetic script, all in the allocated time limit and in classroom conditions, surrounded by their peers and closely monitored by the teacher. For years, the results obtained in these tests were significantly lower than those in other tests of transcription. The specific kind of test this study focuses on are achievement tests, which take a sample of a language element, here – the specific variants of two inflectional endings in English (the ”-es” and the “-ed”), which has been covered in the course of study in order to determine how well the learners have mastered the specific element(s) (Underhill, 1987, p. 13). They also perform a subsidiary diagnostic function, allowing the teacher to know which aspect of the particular content was not successfully learnt.

It has been judged desirable to enrich the assessment process with techniques that can support students in their learning and create conditions that would eliminate the debilitating effect of classroom test-related anxiety. Two such solutions were introduced: *Kahoot!* and e-Quiz on the department e-learning *Moodle* platform. These two tools were selected in order to minimise the emotional inference and to emphasise the centrality of learning, within the broadly perceived interrelatedness between instruction, assessment and learning, as those that address the contextual, the instructional, the interactional, the elicitation and the affective dimensions straightforwardly.

3. Literature review

Ideally, for any meaningful learning to occur, assessment-elicited evidence of student learning should be gathered, as a result of which instruction is modified in response to feedback. Only recording current student achievement seems inadequate and incompatible with the ideas of assessment for learning (Cheng & Fox, 2017) and adaptive teaching (Coll et al., 2000). In terms of actual uses and practices employed by instructors, still mostly traditional forms of assessment, tests or quizzes, continue to be used, and even with more innovative procedures or modes, the focus is on traditional language elements or skills (Shohamy et al., 2008). Considering the relationship between the process of learning and the need to evaluate its relative success, the following regularity transpires: “Learning a language, like learning anything else, is essentially an individual achievement... But typically this private process takes place in the public context of the classroom, the individual is one of the group” (Castillo, in Turula, 2013, p. 255).

Assessment tools and methods are multiple and varied (see Cheng et al., 2004 and Cheng and Fox, 2017, for a review). Studies frequently concentrate on external, standardised, high-stakes assessment formulas, though the diversity of teacher practices is acknowledged, stressing the relationship between assessment and instruction (Cheng et al., 2004) as well as the test ‘fitness for purpose’ concept (Galaczi, 2010). Research has also acknowledged the challenges inherent in meaningful and efficient assessment as faced by teachers (Wach, 2013; İnceçay & İnceçay, 2010; Cummins, 2009).

With the constant spreading of computer-based testing (CBT), important features of the mode are brought to the foreground, such as greater flexibility in test item design, access to a larger repository of items, and faster turnarounds for score receipt (Backes & Cowan, 2018). Such a test mode also allows for testing accommodations, understood as changes to testing procedures (presentation of test materials, students' responses to test items, scheduling, test setting, etc.) that have little or no impact on the construct being tested and supporting the performance of students so that their academic content knowledge and skills are demonstrated to the greatest extent (Educational Testing Service, 2009). Computer-based tests can provide constructive diagnostic information to complement the language learning process, yet it is argued they should be used more selectively in other contexts, for example in high-stakes tests, where the factors of design, validity, technological familiarity and practicality are an issue (Dooey, 2008). The advantages of online testing, though outside the context of language learning, have been summarised in Candrlic et al. (2014), who say that an essential part of every LMS is a subsystem that enables online testing. Students solve tasks using a computer rather than writing their responses on paper. Standard LMS systems (such as Moodle, Sakai, Dokeos and

Blackboard) provide various options that make the process of creating tests or quizzes very flexible. As a result, instructors are able to construct tests that feature different types of questions, randomly generate tests from question banks, allow students to solve the test several times, etc. Their results show that online tests can replace traditional paper-based tests for students' knowledge assessment, but special attention should be paid to the test composition. They also report that, based on students' comments received during the testing activities, preference to use the keyboard rather than a pencil transpires more and more, so they would rather take online tests than paper-based tests, however, no specific reason for that preference was stated (Candrlic et al., 2014).

The testing mode has thus been viewed to play a major role. Shohamy et al. (2008, p. 19) underline that quizzes and tests were criticised on several grounds, for instance, for the fact that they produce anxiety and diminish performance, placing learners in (apparently) high-stakes situations, where one-time accuracy determines their future learning. Against the background of concerns for how paper-and-pencil testing fits into modern pedagogy, including contemporary language teaching, research is focused on, among others, the (non-existent) difference in scores between in-class testing and online testing in a communicative and proficiency-oriented program (VanPatten et.al., 2015); on the postulates to view computer-based and traditional speaking assessment as *complementary* and not competing perspectives, where technology is seen not as a replacement for standard methods, but as a new additional possibility (Galaczi, 2010); or on the relationship between testing mode (taking a test on computer versus on paper) and cognitive load (Prisacari & Danielson, 2017), where the results support the claim that online testing can be implemented in educational settings without imposing additional cognitive load on students. The opposite, namely increased cognitive load, yet resulting in better recall and positive impact on working memory performance during paper-based tests rather than computer-based tests, was reported in the study by Carpenter & Alloway (2018), who also point out that research on CALT aims to demonstrate the equivalence of scores between CBT and standard paper-and-pencil tests, so that the two modes are comparable. Stowell and Bennet (2010) argue that administering regular course exams in an online format would reduce test anxiety experienced at the time of the exam and improve exam scores. Online quizzes offer considerably more flexibility than more traditional paper-based tests as students can participate in them 24/7. It is by definition easier to arrange early or late online quizzes (Neill, 2018).

There is wide research available into the relationship between testing, motivation, anxiety and stress-related factors (Cheng et al., 2014; Coll et al., 2000; Stowell & Bennet, 2010; Vavla & Gokaj, 2013; Wu & Lee, 2017). The studies reveal significant relationships among attitudes,

motivation, text anxiety and test performance, all within the context of self-efficacy and pressure on self-esteem. Motivation and anxiety exhibit a mutually influential relationship and alongside other personal factors will influence students' overall performance (Cheng et al. 2014). This anxiety typically surfaces during certain cognitive performances for test-takers, for instance, when they compare themselves with others in the group, are concerned about the consequences of failing the test, experience low self-confidence or are generally excessively worried about being (publicly) assessed (Wu and Lee, 2017). Additionally, difficulties may be experienced with adapting to the level and type of exercises, enforced under psychological pressure (Vavla & Gokaj, 2013). In this context, Yielder et al. (2017) discuss not only the impact of test format on strategies for test taking and learning in general, but also on students' well-being. In the latter aspects students described the effects tests had on their emotions, detailed as fear of failing, anxiety about negative marking, a feeling of lack of control, a worry of not learning enough. Such emotions of uncertainty and broadly-conceived-of stress had a detrimental and demoralising effect on their learning.

It is only natural that teachers often find students in a class showing much diversity in their needs and interests. They differ a lot in their motivation, prior knowledge and skills, learning styles, multiple intelligences, interests and backgrounds, to name but a few aspects. It is in this context that alternatives to traditional in-class, paper-based assessment are sought, and the solutions need to encompass innovative, possibly technology-related, but first of all student-centred protocols (Chapelle & Voss, 2017). Learning structure that is fun and interesting is more appealing to students than when it is done for the sole purpose of passing the test and meeting requirements.

Instructional games are gaining acceptance in the classroom as the e-learning merits of student engagement and immediate feedback are recognised. Within higher education, the use of such tools is often limited due to doubts regarding the scholarly merits of such activities, whereas when applied with caution they allow educators to tailor their instruction based on student scores and understanding on quizzes (Plump and LaRosa, 2017). *Kahoot!* is a popular eLearning tool that can easily be used to add vitality, student engagement, and meta-cognitive supports to higher education classrooms with a limited instructor or student training required (Plump and La Rosa, 2017). The format is believed to offer support for students to interactively answer quizzes in classrooms as part of a formative assessment regime (Licorish et al., 2018; 2017). As such it is a welcome innovation introduced during classes.

Aperliński et al. (2013) discuss students' opinion voiced in relation to Moodle or traditional paper transcription exercises. Among the pluses of paper exercises, points such as

quicker and more effective learning, more comfortable and natural writing, no need to carry a laptop and no websites to distract are mentioned. These are countered with the minuses: no (instant) feedback and difficulty with error correction as rewrite is needed. Online Moodle activities are praised for being fast and easy to use, for low effort demands, instant, accurate and clear feedback and for relative ease to correct errors (no rewrite needed). The problematic areas are the overall difficulty level being too low because of low effort requirements, and the fact that proper transcription form is quickly forgotten.

The present study was grounded in a course whose primary objective was improving the students' pronunciation of English. As the course progressed, the students developed their personalised attitudes towards English pronunciation as well as the abilities to self-rate their achieved levels, therefore attaching different degrees of importance to having good pronunciation. Consequently, motivational aspects and willingness to attain good pronunciation are not stable, but vary with experience and, often, learner characteristics (Waniek-Klimczak et al., 2013). Cognitive factors that are typically found relevant for more accurate pronunciation and phonological processing involve attention control allowing one to switch between tasks and mental sets, phonological short-term memory used to encode phonological units and their sequential order for further processing, and inhibition control – the mechanism that allows bilinguals to speak one of their languages while blocking the interference from the language currently not in use, so that learners can better avoid interference from their L1 phonological categories resulting in more target-like / less accented L2 perception and production (Mora and Darcy, 2017). Pronunciation learning regularly involves positive and negative emotions, which in turn may have great impact on their L2 learning and assessment. Errors may lead to adult learners' hypersensitivity and self-consciousness as well as lower self-image. When they feel that they are the focus of attention and under constant scrutiny of their classmates and the teacher, they may not perform their real competence, which points to a significant role of the affective domain in learning L2 pronunciation (Jedynak, 2013). Gabryś-Barker (2012) further emphasises that students may demonstrate preference to perform certain actions in a specific context, depending on perceived intrinsic pleasantness of the stimulus in specific favourable instructional conditions. Tasks which offer expectation of success promote high need of achievement and low fear of failure. All this is conducive to enhancing learners' self-esteem. Achievement goals fall into two categories: performance goals and mastery goals. A mastery goal orientation emphasises learning, understanding, improving, mastering new skills, and taking on challenges, they require varying evaluation methods, and making evaluation private. In contrast, a performance-goal orientation (also called an ego-involved orientation) emphasises comparison of students'

abilities, where student evaluation is public, performance is attributed to individual ability, and students who outperform others are rewarded (Cauley and McMillan, 2010). Consequently, the achievement of both types needs to be assessed. All this must be somehow integrated with the demand for concrete marks that frequently are required by the specific educational reality to certify to the course completion, though Shohamy et al. (2008, p. 19) observe that assigning grades was consistently among the least important reasons for assessing ventured by teachers. Such seems to be the case with the group targeted in the study.

4. Methodology

4.1. The aims of the study

This study aims at answering the following research questions:

1. Is there a significant difference in the scores obtained on traditional pen-and-paper tests of transcription as compared to the scores achieved in CALL based measures (Kahoot! and *Moodle* quiz)?
2. What are the students' opinions on regular pen-and-paper tests used to evaluate their transcription skills?
3. How welcome is the presence of CALL-related solutions as part of the assessment process?
4. Which CALL solutions are most conducive to both effective and student-friendly assessment, as judged by students' test scores and personal opinions?

To achieve the goals, the current study was conceptualized as a small scale mixed method study into the assessment preferences in the group of 1st year students in the English Department of the Pedagogical University of Kraków (PUK). The aim was to determine the set of possible formulas and contexts for meaningful, comprehensive and at the same time student-friendly assessment of elements of specific course content, compatible with the principle of catering for diversity.

4.2. Participants and the context

For the students in the English Studies Department at PUK a course in English Pronunciation, termed in the curriculum as (Practical) English Phonetics, is mandatory. It comprises 90 hours of class instruction and obligatorily includes training in IPA transcription with the aim to visually record English words and utterances.

The study focused on 4 groups of 1st Year students ($N = 72$) in the English Department at the Pedagogical University of Kraków, who as part of the degree participate in the 90-hours-course called Phonetics.

Table 1. The sample

Number of Year 1 groups	4
N (participants overall)	90
Number of Year 1 groups with CALL-related testing protocols	2
N (CALL-groups participants)	36
Overall number of test samples	216
Overall number of interviews	10

The central objective of the course was actual training in English pronunciation, where students develop their expertise through a variety of instructional modes in order to attain high-accuracy near-native-like pronunciation goals, disassociating themselves from their L1 background and abandoning, to the extent it is possible, those habits of pronunciation that contribute significantly to L1 (Polish, Ukrainian, Russian)-accented speech. An important part of the curriculum is learning to use (read and produce) the IPA phonetic transcription of English words and utterances. The belief behind this requirement is that those who can first recognise and subsequently record in a visual form the contrasting variants practiced in class, will also be able to pronounce them as a result of developing and thus raising their explicit phonemic awareness (Werfel, 2017).

One of the L1 habits to be eradicated in the course of instruction is the massive tendency towards Final Obstruent Devoicing, carried over from L1 onto English. Students work on developing an understanding of the notion of voicing in general, on its functions in terms of contrasting meaning and on the problems inherent in dropping L1 interference in the form of producing voiceless consonants at the end of words. Curriculum writers judged the two English inflectional endings: the multifunctional “-es” and the (mostly) regular praeterite “-ed” marker to be used in this context, first as phonological awareness raisers, and second as items combining several aspects of the language phonology, morphology and (in a broad sense) grammar. Such item practice goes hand in hand with the proposed ban on compartmentalization of language skills practice. Thus, during the course, students spend several classes practicing the variant-to-environment applications, working on handouts specifically designed to bring out the multitude

of functions and contexts and produce desirable contrasts. Their achievement is then measured through transcription-based tests. These are followed by a face-to-face oral pronunciation test, where the two inflectional endings in their respective variants feature prominently, both in individual words and in longer utterances.

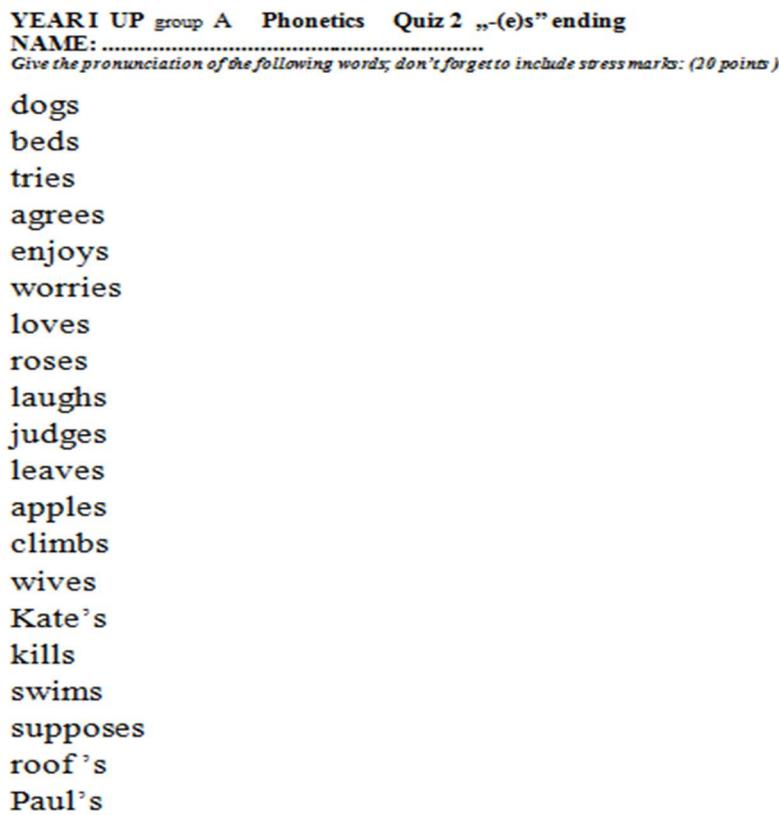
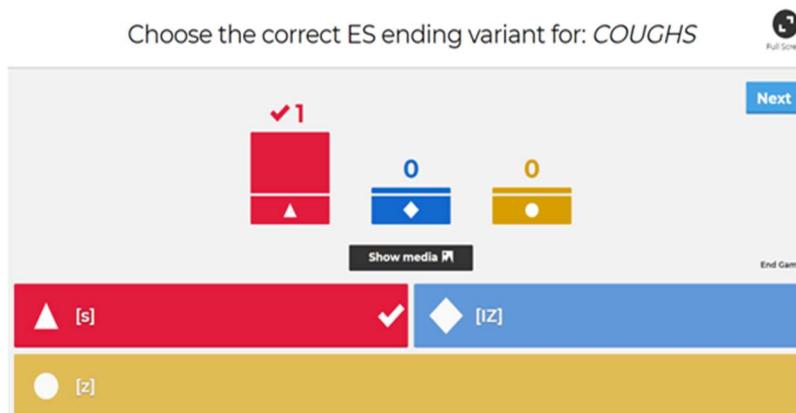
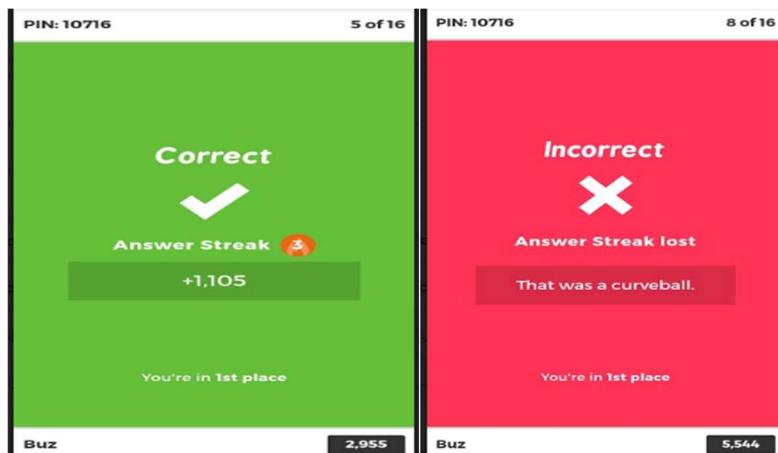


Figure 1. Pen-and-paper quiz

4.3. Design and procedure

For many years the pen-and-paper tests described above were considered relatively straightforward and easy for students in terms of low cognitive load required to perform well. And yet, in personal communication, when discussing the obtained scores, this view was challenged. As a result, in two student groups of students ($N = 36$) additional assessment techniques were implemented. The “-es”-ending assessment was supplemented with a *Kahoot!* quiz run in class, followed by a regular class based written test of transcription, to be finally complemented by a *Moodle* quiz. For the “-ed”- ending, only the Moodle quiz was used, to the total abandonment of the pen-paper-test. Sample quiz formats for the online formulas are shown below. In the remaining groups no CALT measures were introduced.

Figure 2. *Kahoot!* – the question formatFigure 3. *Kahoot!* – the main screen feedbackFigure 4. *Kahoot!* - individual feedback on a mobile device

Question 1
Not yet answered
Marked out of 1
Flag question
Edit question

He _____ his teeth

Select one:

- a. brʌɪtɪz
- b. brʌɪz
- c. brɪθɪz
- d. brɪθz

Question 6
Not yet answered
Marked out of 1
Flag question
Edit question

_____ don't normally eat _____.

Select one:

- a. lizədz bætəflætz
- b. lizədz bætəflɪz
- c. lizəds bætəflætz
- d. lizəds bætəflɪz

Question 8
Not yet answered
Marked out of 1
Flag question
Edit question

The _____ are more colourful than the _____.

Select one:

- a. menz tatz koks hætz
- b. menz tatz koks hæts
- c. mens tats koks hæts
- d. mens tatz koks hæts

Figure 5. Moodle - the format: from simple one-item-questions to progressively more complex multi-items ones

Started on	Tuesday, 14 May 2019, 1:29 pm
State	Finished
Completed on	Tuesday, 14 May 2019, 1:33 pm
Time taken	3 mins 10 secs
Marks	6/10
Grade	60 out of 100
Feedback	You must try again :-(

Question 1
Incorrect
Mark 0 out of 1
Flag question
Edit question

He _____ his teeth

Select one:

- a. brʌɪtɪz
- b. brʌɪz
- c. brɪθɪz **X**
- d. brɪθz

Figure 6. Moodle - the quiz summary for an individual student

4.4. Data collection tools and procedures

The instruments of data collection included written test results (the quantitative part) and the semi-structured interviews (the qualitative part). The data were gathered between December 2018 and February 2019. Pattern-coding strategy (Miles et al. 2014) was employed to analyse the interviews data qualitatively.

4.5. The finding: test results

The following section outlines the scores obtained in all the assessment formulas across the student-participants. The order of presentation is as follows: first, the scores on the *Kahoot!* quiz on the “-es” ending variant is shown, then the pen-and-paper “-es” ending written test on transcription results are shown. These are followed by the scores obtained on the *Moodle* quizzes on the “-es” and the “-ed” endings in the two groups ($N = 36$) (Table 2). For comparison, scores of randomly selected students (from the general population taught) obtained in the groups with no added CALL-related techniques are presented for both the endings (Table 3).

Table 2. Scores in written and CALL tests

N=36	Kahoot “-es”		“-es” pen-and-paper		“-es” Moodle quiz		“-ed” Moodle quiz	
	Score (16)	% 76	Score (20)	% 87	Score (10)	% 93	Score (10)	% 93
Correct (average)	12.222		17.406		9.333		9.305	
SD		2.21		2.05		0.98		0.75
Number of failed tests		10		4		1		2
Chi-square validation					13.006			
P-value ($p < .05$)					.004624			

Table 3. Pen-and-paper test scores in no-CALT supported groups

N=36	“-es” pen-and-paper		“-ed” pen-and-paper	
	Score (20)	% 82	Score (20)	% 83
Correct (average)	16.5		16.62	
SD		2.81		2.46
Number of failed tests		9		8

The results show, on the whole, that course participants in their majority have successfully acquired relevant transcription skills when it comes to mastering the correct application of the appropriate variant of the two inflectional endings. The passing grade for the tests was generally rather high, 75% for the *Kahoot!* quiz (12 points out of 16) and 80% for the remaining test

formulas. The percentage of failed attempts is acceptable in all cases, the overall discriminability allowed for appropriate proportions of all marks.

One could argue that the tests are not really comparable, since they require slightly different skills of the participants. The *Kahoot!* and the *Moodle* quizzes follow the multiple-choice format and focus on recognizing the correct set of IPA symbols and the appropriate ending variant. The pen-and-paper test requires students to actually produce the transcription themselves, which is seen as a special difficulty in comparison to the other too, as it calls for a heavier cognitive and memory load on the part of the students (Mora and Darcy, 2017). On the other hand, the *Moodle* quizzes get progressively more complex, they start with a single word-item to be recognised, ending up with as many as four distinct forms within one question space. This supports the assumption that the facilitation in the form of a multiple-choice recognition task is compensated for by the increased relative complexity of the task itself. All three formats are strictly time-limited, with more leniency in this respect observed with classroom-run written tests. The results were always discussed with each individual, who can study the test, compare it to the expected value and analyse the feedback given. Notably, the types of feedback were different for each of the techniques, with *Kahoot!* quiz offering the least personalized feedback, though the instant one, just like in the case of a *Moodle* quiz. The feedback, albeit individualised, was significantly delayed in the case of pen-and-paper transcription test.

In order to arrive at a deeper understanding of the students' performance in the assessment procedures, as well as to discover their opinions on the forms most conducive to their learning a series of semi-structured interviews was carried out. The next section discussed the ideas emerging from them.

4.6. The findings: interviews

From the total of 36 participants from the two groups who did both traditional pen-and-paper tests as well as *Kahoot!* and *Moodle* quizzes, a selection of 10 students was sampled to forward their opinions and ideas in the form of a semi-structured interview, carried out during the author's office hours. The students were not selected randomly, it was the deliberate intention of the author to have a spectrum of opinions coming from high, average and low achievers. Therefore purposive and non-probability sampling was judged desirable. The interviews were run after all forms of the “-es” - ending testing were done, but before the “-ed” ending was tested. Before the end of the semester, the interviewees as well as any other participants could venture their opinions during the final individual oral task test, carried out in the face-to-face situation with the teacher. The carefully-orchestrated selection of students was the consequence of a popular view that

different types of students work best in different instructional contexts and need different kinds of feedback. Low achieving students require highly specific immediate and explicit feedback, while high-achievers benefit more from delayed feedback (Cauley and McMillan, 2010). Also, in a group there will always be students who are reticent to demonstrate their knowledge publically, for fear of being labelled attention-seeking by their peers (Licorish et al., 2018). One such student, a high-achieving ‘tall poppy’, who scored maximum on all tests, demonstrated precisely that sort of attitude in class, and was therefore asked to give the interview. Apart from them, two more high-achievers, four average students and three low-achieving participants were asked to contribute their ideas.

The interviews were structured so as to disclose students’ opinions and encourage them to forward their own ideas for assessment that supports their learning. Some of the questions were fed by responses offered by the author, and basing on views found in subject literature (Jedynak, 2013; Gabryś-Barker, 2012; Mora and Darcy, 2017; Plump and LaRosa, 2017). Others were more open, so as to avoid intentional answering and the statistical “halo-effect”, where essentially the respondents answer in the way they intuitively feel the researcher expects them to answer. They were grouped into several major areas, following the pattern coding strategy (Mills et al., 2014):

- a. identifying the procedural differences between the three testing formulas;
- b. rating the significance of factors such as task type, task time limit, teacher involvement, student engagement, cognitive load, attention focus, the testing context, the elicitation techniques;
- c. the problems with each of the techniques, with the division into inherent and individual;
- d. the affective and the interactional dimension of assessment and their relatedness to learning.

The data extrapolated from the interviews are discussed below, where a selection of the students’ opinions are tabulated for ease of reference. These present but a fraction of the opinions expressed, they can, however, be treated as representative for the views held by this particular group of respondents.

Table 4. Semi-structured interviews responses

The feature	"-es" pen-and-paper	Kahoot! "-es"	"-es" Moodle quiz
What is required of students	Producing transcription of individual items with "-es" ending added	Recognizing the required variant of the ending, appropriately to the phonetic context	Recognizing the correct transcription of individual words incorporating the ending variant appropriate in the given phonetic context
General context	Classroom, public	Classroom, public	Familiar, private
Task formula	Clear, unchanging	Clear, unchanging	Clear, unchanging
Time limit	Set but negotiable with the teacher if need be; teacher leniency observed	Strictly defined by the program	Defined by the platform, non-negotiable
Aids allowed	Printed table with IPA characters	None	Printed table with IPA characters
Teacher intervention	Possible when needed, but generally minimal	None	None
Difficulty level	Consistent, stable, non-varying	Consistent, stable, non-varying	Progressively more challenging and demanding, more items to be handled at once
Attention focus	Can vary	Essential	Essential but can vary
Feedback formula	Delayed, individual, informative	Immediate, simple (right or wrong)	Immediate, individual, can be insufficient
Potential problems 1: technicalities	"nothing to write with"; "pencils not allowed", "an easier group"	Slow internet connection, slow mobile device, BYOD principle	Slow internet connection; platform breakdowns;
Potential problems 2: individual	Insufficient command of the symbols	Slow reaction time, following the screen action	Insufficient command of the symbols; attention fluctuation
Anonymity	Some	None	Full
Competitive spirit	None	A lot	None
Interaction pattern	With the material, not the group	With the class	With the material, very individual
Relatedness to further learning	Regular class assessment practice; feeds self-study protocols; enhances skill development	Not much; a welcome break in the class flow; possibly a revision tool; affects class dynamics	Additional procedure to classroom based ones; feeds self-study protocols; enhances skill development

Test anxiety	High	Some, related to Intermediate competition, activity not perceived as a test situation
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When asked specifically to evaluate the three techniques as forms of assessment, the respondents presented rather balanced and mature views, certifying to a lot of reflective critical thinking about the matters discussed. Table 5 summarizes their opinions (underlining mine).

Table 5. The tests evaluation

"-es" pen-and-paper	<ul style="list-style-type: none"> ● heavy demand on memory and recall skills ● writing things down takes time ● many details to take into account: the symbols, stress marks, variants etc. ● assesses many aspects at the same time ● external control of all circumstances ● <u>high level of test-induced stress and anxiety</u> ● undoubtedly one's individual work; <u>reflecting the level of course element attainment</u> ● <u>detailed though delayed feedback in personal communication with the teacher</u> ● "if you do it slowly, everybody in class can see that" ● teacher monitoring constantly and able to react to potential problems
Kahoot! "-es"	<ul style="list-style-type: none"> ● "a waking up activity"; ● introduces variety and diversity, ● welcome break in classroom routine; changed dynamics ● <u>high level of stimulation and excitement;</u> ● external control of all circumstances; ● "enjoyed by those who can't live without some form of competition" ● improves students' engagement and satisfaction ● <u>A revision activity - yes; form of assessment - no</u> ● <u>A "lifesaver" function in assessment, tipping the scales in favour of mildly doubtful performance</u> (the tall poppy's suggestion)
"-es" Moodle quiz; "-ed" Moodle quiz	<ul style="list-style-type: none"> ● focuses on recognizing transcription and the variants - <u>a much lower cognitive load, still heavy memory load</u> ● done individually within the time limit and time window defined by the teacher ● technical possibility for cheating by sharing answers; <u>therefore they cannot be the only form of assessment, could be assigned relative less worth to eliminate the incentive for cheating</u> ● quick and quiet feedback, regular, though not as detailed as for the class written test ● not every class material lends itself nicely to this form of assessment ● my own machine, my own space, my own comfort => <u>personal safety</u> ● nobody physically monitors the activity; no hovering to see where I am in the task ● improve student engagement and satisfaction ● <u>much lower test-related stress or general anxiety</u> ● <u>not so very easy as I had originally thought</u> ● <u>the clear task instructions are all important</u>

5. Discussion and implications

At a superficial level, especially when comparing the task formulas and demands, what could reasonably be expected is the overwhelming student preference for lighter, somewhat entertainment-oriented, involving, competition-related forms of assessment. A closer inspection, however, reveals some very thoughtful considerations are surfacing.

It is only natural that undergraduate students welcome the use of the *Kahoot!* game. It bases on students bringing and using their own mobile devices (the BYOD practice) and, frequently, their own high-speed internet. With the growing user expertise and new potential of mobile devices also for working (indirectly) on one's pronunciation or general speaking skills, effective use of them in classroom practice is preferable to trying in vain to ban them from the class completely (Niewiadomski, 2010). One result that is perhaps the most striking in relation to *Kahoot!* quizzing technique is the reported lack of anonymity. Numerous sources (Licorish et al., 2017; 2018; Plump and LaRosa, 2017) underline this aspect as one of the benefits of using GSRS tasks in the classroom, fostering deep and enriched participation. Because of the game's high-competitiveness, anonymity was not enforced in class, actually students revealed their nicknames voluntarily and wanted to be known for their achievement, ready to risk demoting when answering incorrectly. They were not, however, judged on the spot for their responses, correct and incorrect.

Judging from the opinions expressed in the interviews, the participants felt strongly that *Kahoot!* could be used for revision as a useful tool for course content, before actual assessment. That is in accordance with the findings of Licorish et al.(2017; 2018), who pointed out to *Kahoot!*'s potential for repeating course content in a novel way, facilitating remembering key concepts and allowing a deeper understanding of the relevant issues, later reinforced and enriched in class discussions and more in-depth thinking. Equally important is the specific feature of *Kahoot!*, namely that as its organizing ground rule it assumes the central role of fun and entertainment, which on the whole positively impacts learners' motivation, enriches learning experience and enhances active participation. This contributes to the learners' emotional and psychological well-being. As such it can also positively affect the attitude learners develop towards the specific language aspect studied, which in the long term must contribute to higher attainment and increased target-seeking (cf. Waniek-Klimczak et al., 2013). For those in class who are less competition-oriented, it clearly changes the patterns of class dynamics, a desirable occurrence anyway. On the whole, it is likely to contribute to creating an environment that is most conducive to deep learning and thus providing students with the much needed tools to adopt

diverse learning strategies in their study as assessment (Coll et al., 2000). The most interesting and most innovative suggestion, though, is the idea to use *Kahoot!* quiz results in favour of those students who represent borderline cases assessment-wise. Coming from a person who does not need that sort of crutch, being a top scorer on all the course assessment procedures, this is seen as a reflection of deep critical thinking and a sign of mature attitude to managing one's own learning. The idea was openly presented to the class and accepted by popular vote as an element of classroom procedures.

Pen-and-paper tests as a form of mainly summative assessment have been a regular fixture in many classes. Students are accustomed to them, see their role as evaluative measures and realize the cognitive and memory load associated with them (Carpenter & Alloway, 2018; Shohamy et al., 2008). However, if the only feedback students receive is a final grade (e.g., for a unit of instruction, midterms, finals, or external tests), they cannot see how their efforts improve skills, which may lower expectations for success in the future (Ellis, 2008). Furthermore, the evaluative comments and judgments of ability that are prevalent in comparisons can be debilitating for students. The test-induced anxiety can be somewhat manipulated by using fair tests, with unambiguous, familiar item types and tasks (Turula, 2010). When students know these are coming, they understand their role in realistic assessment of their performance and goal-attainment as well as receive simple and straightforward instructions, the tension and anxiety inherent in the test situation can be lowered. The interview responses revealed that students understand the common preconceptions and recognize symptoms of test-related anxiety. They still, however, underscore the lack of psychological and physical comfort when taking them. It is related to the fact that what happens with in-class assessment is that a private process is accommodated in and largely influenced by the public domain in which it takes place (Turula, 2013). Because of this public dimension, it requires some possible accommodations (Educational Testing Service, 2009) in a dialogue with the learner, who especially in this public context may experience a number of negatively affecting emotions, generally subsumed under the term "language anxiety".

The students then may and do experience any combination of the following (Turula, 2013): lack of confidence in oneself as a learner, uneasiness, frustration, self-doubt, apprehension and tension which are specifically related to language learning situations. It is regularly context-sensitive, influenced by learners' perception of this environment and arises in response to certain language learning situations: assimilation of knowledge and skills, evaluative procedures, having to perform publicly in the tasks, whether of a test-like nature or not. When all these occur in the sphere of pronunciation training, the effects can be amalgamated, since learner's individual

factors play an important role in acquiring the target language phonology. These comprise not only learner anxiety but can keep auditory information in working memory and focus attention on the relevant cues (Mora and Darcy, 2017). All these are arguments in favour of adapting classroom testing procedures and yet to continue some testing protocols while looking for student-friendly complementary measures.

When the factors described above – fun and engagement elements, competitiveness, test related stress – are cumulatively taken together, the significant role of the affective domain in L2 pronunciation instruction becomes evident. It therefore makes pedagogical sense to search for supplementary assessment techniques that would compensate for the variable anxiety and cognitive control influence on students performance. One such additional measure was the introduction of GSRS *Kahoot!* quiz. Another could be relocation of a portion of the course assessment process into the virtual environment of a *Moodle* platform.

The course followed a module-like organization, therefore any number and arrangement of online quizzes can be created, at least partly in place of a mid-semester series of written tests. Students were permitted to see responses and answers immediately after submission, but only general feedback and overall mark was viewable after this window is closed. This is consistent with the general advantage of computer-based-tests, namely that when administered in relevant situations they provide nearly instant constructive diagnostic information to complement the language learning process (Dooey, 2008). Quiz extensions can be offered only to students under exceptional circumstances, without the necessity to arrange additional times and venues for class test. All this makes computer-based tests a valuable element of dynamic and adaptive classroom assessment (Backes & Cowan, 2018; Neill, 2018). Although quiz security remains a concern for the teacher (Neill, 2018), the incorporation of them seems inevitable. These measures are also welcome by students themselves, who classified this form of assessment as one of possible testing techniques, reflecting on the unsuitability of every chunk of the course to be e-evaluated. They understand the pedagogical concerns of the teacher when it comes to possible cheating and suggest different score value to be allocated to the online quiz within the whole course assessment. At the same time they appreciated the lowered cognitive load associated with this test formula (Aperliński et al., 2013; Prisacari & Danielson, 2017; Vavla & Gokaj, 2013), still noticing the progressive increase in question items difficulty. Test mode effects are evident in the overall better scores achieved, though the difference is not overwhelmingly in favour of out-of-class assessment (VanPatten et.al., 2015). However, what they seem to view as the biggest advantage and a single factor most contributing to their success on the test is the positive influence of personal safety and familiar, anxiety-reducing environment of doing the test.

Emotional security, interaction with the material only, generally lowered anxiety all appeared to positively impact test-takers' performance (Yielder et al., 2017; Wu and Lee, 2017). Personal, safe environment, without the teacher hovering over, without looking to the peers around is seen as conducive to raised self-esteem and better achievement as a result, to the exclusion of factors such as phonetic aptitude and high motivation (Jedynak, 2013; Turula, 2013; Gabryś-Barker, 2012).

The participants demonstrated great sensitivity to personal and contextual circumstances in the strife to obtain successful outcomes in their learning process (Gabryś-Barker, 2012). In all three measures taken to assess goal-attainment, slightly different task types were employed. In the CALL-related ones, the tasks themselves may have had a more facilitative power and create a positive attitude in students. However, since positivity works best when it precedes the given learning situation and a learner is willing to actively engage in it, it is not surprising that the experience of online *Moodle* quiz was uniformly viewed as conducive to greater than usual as well as more pleasant achievement. Since the potentially threatening elements were eliminated, the situation-specific anxiety was sufficiently low to stimulate desired performance rather than promote defensive or withdrawal strategies. After the positive appraisal of first of these quizzes (the “-es” ending), the expectation of success on the second one (the “-ed”) was high, magnified by low fear of failure and newly discovered and developed need for achievement (Stowell & Bennet, 2010). The added value of personal well-being and safe personal environment are understood as crucial to the general outcome of assessment.

It is believed that there is an interdependence between learners' self-perception and their success in achievement-related situations. The online form of assessment in the form of a *Moodle* quiz eliminates the undesirable influence of fear of failure (it can be done again) (Yielder et al., 2017), poor self-image and low self-esteem – there is no one to judge the student, potential advantage of extroversion/introversion, inhibition – the outer world is made absent. The technology here is seen as a welcomed complement to standard class assessment methods, a new additional possibility (Galaczi, 2010). It has been stressed before (Carpenter & Alloway, 2018; Turula, 2013) that VLE participants are equally anxiety-sensitive when compared to traditional learning contexts, being subject to the same real world driving forces and constraints, all related to offline affect-related problems. However, when it comes to e-assessment, it appears that the present study offered compelling evidence to the contrary: the specific personal-safety-guaranteed environment, coupled with conditions supporting interaction with the material only rather than with other course participants or the teacher, constitutes a favourable testing scene and thus encourages students to perform at their best.

6. Conclusion

Varying the forms of assessment by incorporating technology-related solutions provides multiple opportunities for classroom success in the language aspect trained. That, in turn, boosts the self-esteem and self-confidence of all students, particularly those with a long history of well-established language anxiety (Turula, 2010; 2013).

E-assessment has certain obvious merits (Chatzigavriil et al., 2015): it enhances the quality of assessment in general; meets students' expectations, keeps up with educational standards and trends while for prospective teachers and/or managers it has the potential for experiential learning by doing training. One can also notice some inherent problems, to name but a few: the reliability of available tools is critical yet still questionable while the still common lack of institutional culture works as a barrier to e-assessment.

While extensive (and effective) application of technology throughout the assessment and learning cycles has yet to be reached, its increasing presence reveals a clear inclination towards innovative practices in assessment. Building a clear consensus as for the goals, objectives and merit of (formative and summative) e-assessment to all entities involved in the process is thus of fundamental importance.

Our findings indicate that the specific type of (test) task and its cognitive demands might advantage certain groups of learners to obtain better performance for reasons unrelated to their phonological skills / pronunciation ability. With no significant difference in the test scores, with mature and sound opinions expressed by participants in relation to the CBTTests and the standard ones, it may be concluded that a feasible approach will thus be to entail using various kinds of tasks and test modes (pen-and-paper as well as online) that would help compensate for individual differences in cognitive control and stress-handling. It has become evident that the instructor needs to consider the possible consequences of task demand, individual differences in cognitive control and the general safety-promoting context when setting the necessary assessment protocols. Likewise, it is important to use various types of explicit feedback strategies to compensate for potential differences. In blended learning environments this means taking into account individual learner differences and needs as well as group dynamics, but also in addition a number of new-media-related constraints on e-learning and e-assessment.

We are fully aware that the presented research cannot form the basis for drawing final conclusions. The study was largely done in an action-research mode, implemented in a small atomic group. The results obtained have the purpose of helping the teacher work towards a more effective and more learner-centred course organization. It was done also with the purpose of

involving the students into the process of active learning and active evaluation, not just passive test-takers (Dzierzgowska, 2011).

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References

- Aperliński, G., Łodzikowski, K., & Weckwerth, J. (2013). Doing phonetic transcription on Moodle. *Conference: 3rd International Conference on English Pronunciation: Issues & Practices*. Retrieved 12 April 2020 from https://www.researchgate.net/publication/348280751_Doing_phonetic_transcription_on_Moodle.
- Backes, B., & Cowan, J. (2018). Is the pen mightier than the keyboard? The effect of online testing on measured student achievement. *CALDER Working Paper* No. 190. Retrieved 11 January 2021 from <https://files.eric.ed.gov/fulltext/ED583636.pdf>.
- Chapelle, C. A., & Voss, E. (2017). Utilizing technology in language assessment. In: E. Shohamy, I. G. Or & S. May (Eds.), *Language Testing and Assessment* (pp. 149-161). Cham: Springer.
- Carpenter, R., & Alloway, T. (2018). Computer versus Paper-Based Testing: Are they equivalent when it comes to working memory? *Journal of Psychoeducational Assessment* 37, 1-13.
- Cauley, K. M., & McMillan, J. H. (2010). Formative assessment techniques to support student motivation and achievement. *The Clearing House*, 83(1), 1-6.
- Chatzigavriil, A., Tarini, F., & Malte, W. (2015). *E-assessment practice at Russell Group Universities*. The London School of Economics and Political Science, Learning Technology and Innovation, London, UK. Retrieved 10 April 2019 from <https://core.ac.uk/download/pdf/35437417.pdf>.
- Cheng, L., & Fox, J. (2017). *Assessment in the Language Classroom*. London: Palgrave.
- Cheng, L., Klinger, D., Fox, J., Doe, C., Jin, Y., & Wu, J. (2014). Motivation and test anxiety in test performance across three testing contexts: The CAEL, CET, and GEPT. *TESOL Quarterly*, 48, 300-330.
- Cheng, L., Rodgers, T., & Hu, H. (2004). ESL/EFL instructors' classroom assessment practices: Purposes, methods, and procedures. *Language Testing*, 21(3), 360-389.
- Coll, C., Barberà, E., & Onrubia, J. (2000). Catering for student diversity in assessment practices. *Journal for the Study of Education and Development*, 23(90), 111-132. Retrieved 14 January 2021 from https://www.academia.edu/29889899/La_atenci%C3%B3n_a_la_diversidad_en_las_pr%C3%A1cticas_de_evaluaci%C3%B3n_1_Catering_for_student_diversity_in_assessment_practices.
- Cummins, A. (2009). Language assessment in education: Tests, curricula, and teaching. *Annual Review of Applied Linguistics*, 29, 90-100.
- Czetwertyńska, G. (2015). Ocenianie jako nauczanie i uczenie się. *Języki Obce w Szkole*, 2015/03, 4-9.
- Dooey, P. (2008). Language testing and technology: Problems of transition to a new era. *ReCALL*, 20(1), 21-34.
- Dzierzgowska, I. (2011). *Jak uczyć metodami aktywnymi*. Warszawa: Fraszka Edukacyjna.
- Eckman, F. R., Iverson, G. K., Fox, R. A., Jacewicz, E., & Lee, S. (2009). Perception and production in the acquisition of L2 phonemic contrasts. In M. A. Watkins, A. S. Rauber & B. O. Baptista (Eds.), *Recent Research in Second Language Phonetics/Phonology: Perception and Production* (pp. 81-95). Cambridge: Cambridge Scholars Publishing.

- Educational Testing Service, (2009). *Guidelines for the Assessment of English Language Learners*. Retrieved 11 January 2021 from https://www.ets.org/s/about/pdf/ell_guidelines.pdf.
- Ellis, R. (2008). *The Study of Second Language Acquisition*. 2nd edition. Oxford: Oxford University Press.
- Escudero, P. (2007). Second language phonology: The role of perception. In M. Pennington (Ed.), *Phonology in Context* (109-134). London: Palgrave McMillan,.
- Gabryś-Barker, D. (2012). Explaining affectivity in second/foreign language learning. In D. Gabryś-Barker (Ed.), *Readings in Second Language Acquisition* (pp. 175-200). Katowice: Wydawnictwo Uniwersytetu Śląskiego.
- Galaczi, E. (2010). Face-to-face and computer-based assessment of speaking: Challenges and opportunities. In L. Araújo (Ed.), *Computer-based Assessment of Foreign Language Speaking Skills* (pp. 29-51). Retrieved 12 January 2021 from <http://publications.jrc.ec.europa.eu/repository/bitstream/11111111/15037/1/lbna24558enc.pdf>.
- Isaacs, T. (2014). Assessing pronunciation. In A. J. Kunنان (Ed.), *The Companion to Language Assessment* (pp. 140-155). Oxford: Wiley-Blackwell.
- İnceçay, G., & İnceçay, V. (2010) A case study on needs assessment of English language teachers. *Procedia Social and Behavioral Sciences*, 2, 317-321.
- Jedynak, M. (2013). Affectivity in learning L2 phonology/phonetics – The role of self-concept in successful acquisition of English pronunciation. In D. Gabryś-Barker & J. Bielska (Eds.), *The Affective Dimension in Second Language Acquisition* (pp. 60-73). Bristol: Multilingual Matters.
- Komorowska, H. (2005). Testowanie językowych osiągnięć uczniów – trudności i zagrożenia. *Języki Obce w Szkole*, 2005/06, 41-65.
- Komorowska, H. (2002). *Sprawdzanie umiejętności w nauce języka obcego. Kontrola - Ocena - Testowanie*. Warszawa: Fraszka Edukacyjna.
- Lecumberri, M. L., G. & Maidment, J. A. (2000). *English Transcription Course*. London: Arnold.
- Licorish, S. A., George, J. L., Owen, H. E., & Daniel, B. (2017). “Go Kahoot!” Enriching classroom engagement, motivation and learning experience with games. In W. Chen, et al. (Eds.), *Proceedings of the 25th International Conference on Computers in Education* (pp. 755-764). New Zealand: Asia-Pacific Society for Computers in Education.
- Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). Students’ perception of Kahoot!’s influence on teaching and learning. *Research and Practice in Technology Enhanced Learning*, 13(9). Retrieved 16 March 2019 from <https://doi.org/10.1186/s41039-018-0078-8>
- Lu, D. (2002). Phonetic symbols: A necessary stepping stone for ESL learners. *Forum*, 40(4), 36-39.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis. A Methods Sourcebook*. Third edition. Los Angeles: SAGE.
- Mora, J. C., & Darcy, I. (2017). The relationship between cognitive control and pronunciation in a second language. In T. Isaac. & P. Trofimovich (Eds.), *Second Language Pronunciation Assessment: Interdisciplinary Perspectives* (pp. 95-120). Bristol: Blue Ridge Summit: Multilingual Matters / Channel View Publications. Retrieved 16 march 2019 from <http://www.jstor.org/stable/10.21832/j.ctt1xp3wcc.10>
- Neill, J. (2018). Online quizzes and exams with Moodle. Wikiversity. Retrieved March 9, 2019, from

https://en.wikiversity.org/w/index.php?title=User:Jtneill/Teaching/Online_Quizzes_and_Exams_with_Module&oldid=1862062

- Niewiadomski, K. (2010). Zastosowanie nowoczesnych telefonów komórkowych jako pomocy dydaktycznej w nauce fonetyki języka angielskiego. In M. Pawlak & E. Waniek-Klimczak (Eds.), *Mówienie w języku obcym – sukcesy i porażki uczenia się i nauczania* (pp. 277-285). Poznań-Kalisz-Konin: Wydział Pedagogiczno-Artystyczny UAM w Poznaniu & PWSZ w Koninie.
- Prisacari, A. A., & Danielson, J. (2017). Computer-based versus paper-based testing: Investigating testing mode with cognitive load and scratch paper use. *Computers in Human Behavior*, 77, 1-10. Retrieved 16 January 2021 from <https://doi.org/10.1016/j.chb.2017.07.044>
- Plump, C. M., & LaRosa, J. (2017). Using Kahoot! in the classroom to create engagement and active learning: A game-based technology solution for elearning novices. *Management Teaching Review*, 2(2), 151-158. Retrieved 17 March 2019 from <https://doi.org/10.1177/2379298116689783>
- Shohamy, E., Inbar-Lourie, O., & Poehner, M. E. (2008). *Investigating Assessment Perceptions and Practices in the Advanced Foreign Language Classroom*. (Report No. 1108). University Park, PA: Center for Advanced Language Proficiency Education and Research.
- Stowell, J., & Bennett, D. (2010). Effects of online testing on student exam performance and test anxiety. *Journal of Educational Computing Research*, 42, 161-171.
- Turula, A. (2010). *Teaching English as a Foreign Language: From Theory to Practice and All the Way Back*. Częstochowa: Wydawnictwo Wyższej Szkoły Lingwistycznej.
- Turula, A. (2013). Affect in VLEs: Anxiety and motivation in blended EFL teacher training. In D. Gabryś-Barker & J. Bielska (Eds.), *The Affective Dimension in Second Language Acquisition* (pp. 254-267). Bristol: Multilingual Matters.
- Underhill, N. (1987). *Testing Spoken Language*. Cambridge: Cambridge University Press.
- Wach, A. (2012). Classroom-based language efficiency assessment: A challenge for EFL teachers. *Glottodidactica*, 39(1), 81-92.
- Waniek-Klimczak, E., Porzuczek, A., & Rojczyk, A. (2013). Affective dimensions in SL pronunciation: A large-scale attitude study. In D. Gabryś-Barker & J. Bielska (Eds.), *The Affective Dimension in Second Language Acquisition* (pp. 124-137). Bristol: Multilingual Matters.
- VanPatten, B., Trego, D., & Hopkins, W. (2015). In-class vs. online testing in university-level language courses: A research report. *Foreign Language Annals*, 48(4), 659-668. Retrieved 16 January 2021 from [n/a-n/a.10.1111/flan.12160](https://doi.org/10.1111/flan.12160).
- Vavla, L., & Gokaj, R. (2013). Learner's perceptions of assessment and testing in EFL classrooms in Albania. *Mediterranean Journal of Social Sciences*, 4(11), 509-515.
- Werfel, K. L. (2017) Phonetic transcription training improves adults' explicit phonemic awareness: Evidence from undergraduate students. *Communication Disorders Quarterly*, 39(1), 281-287. Retrieved 16 March 2019 from sagepub.com/journalsPermissions.nav
- Wu, J., & Lee, M. C. (2017). The relationships between test performance and students' perceptions of learning motivation, test value, and test anxiety in the context of the English benchmark requirement for graduation in Taiwan's universities. *Language Testing in Asia*, 7(9). Retrieved 16 January 2021 from <https://doi.org/10.1186/s40468-017-0041-4>

Yielder, J., Wearn, A., Chen, Y., Henning, M. A., Weller, J., Lillis, S., & Mogol, V. (2017). A qualitative exploration of student perceptions of the impact of progress tests on learning and emotional wellbeing. *BMC Medical Education*, 17(148). Retrieved 15 January 2021 from <https://doi.org/10.1186/s12909-017-0984-2>.

TRIGGERING STUDENTS' LEARNING AUTONOMY USING THE COMBINATION OF M-LEARNING AND GAMIFICATION: A CASE STUDY AT NGUYEN TAT THANH UNIVERSITY

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Abstract

M-learning is usually thought of as based on videos, digital materials, and high technology. Nonetheless, it is not a complete perspective of this new educational trend. Mobile devices with many functions can be an effective tool to support learning. Furthermore, learners nowadays, who were born in the 4.0 movement, are more familiar with mobile devices than notebooks. They spend much time on their mobile phones interacting on social media and playing mobile games. Hence, if educators can integrate those interests into traditional lesson plans, added value would appear for learners' academic performance and learner autonomy.

This paper proposes the idea of combining m-learning, gamification, and other factors influencing learning motivation into a mobile application to reinforce students' learner autonomy. With a case study at Nguyen Tat Thanh University, we take a closer look at the effectiveness of the application on students' language acquisition and a detailed description of how to best use the application along with lessons at schools. Using experimental methods with surveys and tests, this paper draws a bonding connection between students' personal interest in the subject and their performance. The study provides thoughtful insights into utilizing m-learning and gamification to improve students' learner autonomy and modernize language learning classrooms in this technological context.

Keywords: gamification; m-learning; learner autonomy; language teaching

1. Introduction

In response to the rapid growth of smartphone users, from 1.06 billions in 2012 to 3.6 billions in 2020 (Statista, 2021), mobile learning has become a necessary trend for education nowadays.

The effects of mobile learning on students' motivation have been reassured by many studies around the world (Ciampa, 2014; Su & Cheng, 2015; Huang, Yang, Chiang & Su, 2016). To discover how and why mobile applications affect learners' motivation, Jeno, Adachi, Grytnes, Vandvik and Deci (2019) examined the effects under Self Determination Theory (SDT) perspectives. They found that compared to textbooks, students with mobile applications achieved higher levels of perceived competence, perceived autonomy and intrinsic motivation. However, the sample of the research was small and within a short period, which affects the generalization of the experiment. The 4.0 movement also introduces another trend of digital game-based learning. Though many believe that the games have a positive effect on students' motivation, the results were not consistent (Filsecker & Hickey, 2014). Proulx, Romero and Arnab (2016) built a framework to match motivation elements according to SDT with digital game aspects. The framework offered guidelines for educators to design appropriate digital game applications that help improve learners' intrinsic motivation.

Inspired by the growing trend of technology in education, the paper aims at introducing a combined application of mobile learning and gamification, as well as reinforce the findings of the existing studies. Firstly, the paper hopes to reinforce Jeno's (2019) findings using an experiment with a larger sample of 89 students and over a longer period of 3 months. Moreover, applying elements suggested by Proulx et al. (2016), the paper also focuses examining the framework of digital games in learning with an empirical experiment on Vietnamese students at tertiary levels. Finally, the research introduces a new approach to mobile learning with combined aspects of digital game-based learning to enhance students' competency and learner autonomy. Playing behaviours were analyzed to check if the application fits all groups of learners. Therefore, the following questions were explored:

1. What are the effects of the application of the combination of M-learning and gamification on the academic performance of the students in the experimental group?
2. Will the application be able to trigger the learner autonomy of students in the experimental group?
3. How do different groups of students react to the application?

Quantitative analysis was utilized to discover the effects of the application. Students were randomly divided into control and experimental groups with the same learning conditions to observe and measure the improvement over three months. Hence, the research would offer detailed insights into the actual effects of the application on students within a long period of three months when compared to students using textbooks only. After the course, test results along with learner autonomy levels were collected in both classes to analyze the performance and learner

autonomy. Moreover, enjoyment of the application was also assessed using EGameFlow scale by Fu, Su and Yu (2019) to check the appropriateness of the application to different groups of learners.

2. Literature review

2.1. M-learning in language teaching

The outburst of mobile phones' popularity has led to a new trend of applying mobile phones into teaching and learning, which is called m-learning or Mobile Assisted Language Learning (MALL) in languages education. Many researchers have been working on defining m-learning under various perspectives. M-learning was defined to be the use of small computing mobile devices, including mobile phones and small handheld devices, in learning (Mcconatha, Prael & Lynch, 2008). Also, Mirski and Abfalter (2004) referred to m-learning as a type of distant learning. On the other hand, Alzaza and Yaakub (2011) stated that m-learning is the development of e-learning that uses mobile technology. The effects of m-learning on learners have been proved by many studies. Crompton (2013) mentioned benefits of m-learning that could extend learning space and environment compared to the traditional classes, which means students can learn within both formal (classroom) and informal (social media, argumentation, etc.) contexts. Besides, Sarrab, Al-Shihi & Rehman (2013) also stated that m-learning brought many benefits to learners such as increasing the interactive dimension of learning, offering fast access to information and bridging the cultural gaps among the students. Meanwhile, Jeno, Grytnes and Vandvik (2017) focused on the psychological effects with a conclusion that m-learning enhanced learners' intrinsic motivation by engaging activities. Jeno et al. (2019) extended their studies and found out that mobile applications also enabled students in Biology class to identify species more quickly and accurately compared to traditional textbook, which represents their learning competency; and increased learners' well-being, too. Thus, they concluded that mobile applications should be incorporated into the classroom.

Many mobile applications have been developed to meet the requirements of all groups of learners, ranging from primary through secondary to tertiary levels. For primary learners, mobile applications developed to help them with pronunciation, basic English skills and vocabulary recognition are *Pogg-Spelling and Verbs*, *Speech with Milo* apps and *Mindsnacks*. Applications for secondary learners would focus more on English 4 skills, with typical examples like *Open Language*, *Duolingo* and *FluentU*. The tertiary learners require more opportunities to practice their language or to get exposed to authentic materials, which leads to the development of many

applications like *English Podcast for Learners*, *Voxy* and *Speech Tutor*. The majority of the applications were developed in the form of games, which require learners to complete tasks from the applications. Many others also provide real-life materials like *English Podcasts for Learners*; while others connect learners with native speakers to practice like *Voxy*. Thus, the applications are suitable for learners to self-improve their language level at home with a separated curriculum from what they studied at school.

In Vietnam, m-learning is getting more and more attention, especially for students in tertiary levels. When investigating m-learning in Vietnam, Vu (2016) stated that Vietnamese students are well-prepared for m-learning since the majority of them are equipped with mobile devices and the connections in universities are available. He also found out that Vietnamese students can quickly adapt to digital learning, however, they are still concerned about the lack of real-life interaction with teachers at school. Many universities in Vietnam are beginning to develop their *Moodle* system as the most common m-learning approach. The system allows students to get access to the study course, learn from a distance and keep track of the course. However, to best utilize the effects of m-learning, more forms of mobile applications should be developed to integrate it directly into the in-class and out-of-class activities.

2.2. Gamification

Started around 2008, gamification was defined as “the use of game elements in non-game contexts” (Deterding, Dixon, Khaled & Nacke, 2011, p. 9). Since then, the term has been seen in many studies as a new approach to teaching, especially in this technological era. The impact of gamification was mostly reported to be positive, especially on students’ learning motivation and in-class performance. Durin, Lee, Bade, On and Hamzad (2019) discovered the three main impacts of gamification were enhancing students’ attitude toward learning, understanding of the subject and motivation. Game elements used in gamification as mentioned by Bedwell, Pavlas, Heyne, Lazzara, and Salas (2012, p. 737) are “action language, assessment, conflict/ challenge, control, environment, game fiction, human interaction, immersion, and rules/ goals”. Durin et al. (2019) listed 33 game elements and concluded that the most popular ones used over time were rewards, feedback, challenge, mission, level, score, task, character, timing, narrative, leaderboards, progress bars, and badges. This is the guideline for educators to consider whenever employing gamification in teaching. Moreover, to make gamification impactful, Bunchball (2010) suggested a necessary components of game mechanic – base components of a game (points, levels, badges, virtual goods, leader boards and virtual presents) to match with game

dynamic's elements such as response to inputs (reward, status, achievement, self-expression, competition, and altruism).

In this research, all of the elements mentioned are included in the application to ensure the positive impact of gamification on learners. Moreover, cooperative or competitive forms of interaction between learners in gamification are also utilized in this research with the Area mode, which allows learners to compete with each other. The application was used as an out-of-class gamification strategy, which provided a game-based learning environment for students after the class.

2.3. Learner autonomy – motivation

The term ‘autonomy’ was first defined as the ability of students to take responsibility for their own study (Holec, 1981). Later, to clarify the psychological and methodological preparation, Little (1991) defined learner autonomy as “a capacity for detachment, critical reflection, decision making, and independent action” (p. 4). Since then, educators have been shifting their focus to improve learner autonomy in teaching practices. To improve learner autonomy, beside learners’ independence, Morrison (2011) also emphasized the importance of interaction and support from teachers and other learners, as learner autonomy was “not a solitary experience but rather one in which the learner, in conjunction with relevant others, can make the decision necessary to meet the learner’s needs” (p. 4).

On the other hand, motivation is also an essential element in learning. Dincer and Yesilyurt (2017) state that motivation plays a vital part that determines the success or failure of learning a language. Further examining the factors of motivation, Deci and Ryan (1985) mentioned the two common types of motivation, which were extrinsic and intrinsic. Later, Williams and Burden (1997) identified them as internal and external motivational factors. This division of intrinsic and extrinsic motivation was utilized by many researchers when investigating human motivation (Zarei & Elekaei, 2012; Sun & Hsieh, 2018; Locke & Schattke, 2019). Intrinsic motivation refers to students’ personal desire to study for enjoyment, while extrinsic motivation comes from instrumental purposes like getting praise or avoiding punishment. Another division of motivation by Zhang, Su, and Liu (2013) distinguishes integrative motivation, which refers to the personal wishing of the students to be a part of the target culture, and instrumental motivation, studying for their academic and career purposes.

The relationship among motivation, learner autonomy and language proficiency has been of interest for many researchers. The two concepts have a positive relationship that has been proved by many studies. Ayan (2015) emphasized the influence of self-motivation on the

promotion of individual autonomy. On the other hand, Soodmand Afshar, Rahimi and Rahimi (2014) found out that learners with higher levels of learner autonomy show strong motivation in their foreign language acquisition. To check the relationship of motivation and autonomy, Wang and Xu (2015) conducted a study with 300 non-English students and found that intrinsic motivation and intermediate achievement had a strong relationship with learner autonomy. Jianfeng, Raj and Ai (2018) reinforced the relationship of the two elements with a study of 480 year-three undergraduates. They proved the correlation of the three variables: learning motivation, learner autonomy and language proficiency, in which the first two elements had a significantly positive relationship with the other one.

2.4. Self-Determination Theory about motivation

Self-Determination Theory (SDT) is a macro theory of motivation introduced by Deci and Ryan (1985). The model examines the influence of a person's internal and external factors on his/her motivation and autonomy. According to SDT, the three basic psychological needs of humans include autonomy, competence and relatedness. When satisfied, those three basic needs enhance the process of autonomy and motivation, which positively impacts learning. Besides, the degree to which the teacher can meet the basic needs also determines the quality of students' motivation. Ryan and Deci (2000, 2002) also found out that the autonomous learning environment can foster quality motivation, while controlling the environment undermines it. In addition, the SDT gives guidance to educators on students' level and types of motivation, as well as how to regulate their extrinsic motivation to become intrinsic motivation. The model suggested the process of motivation change from Amotivation to Extrinsic Motivation and Intrinsic Motivation with factors involved at each level. This means with appropriate influences educators can help transform students' motivation from amotivation to intrinsic motivation.

In this research, by providing an online environment satisfying factors mentioned in the model, the application aims at shifting students' motivation into intrinsic motivation, which also helps improve their learner autonomy.

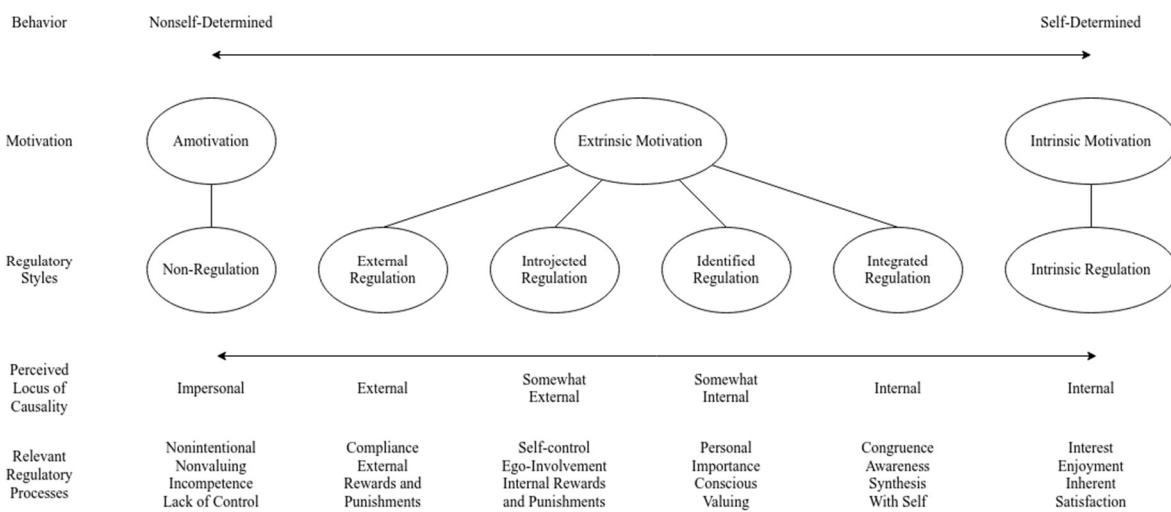


Figure 1. Self-Determination Theory (Ryan and Deci, 2000)

3. Methodology

3.1. The aim of the study

This study uses a randomized experimental design to evaluate the effectiveness of blend of m-learning and gamification on student's academic improvement and autonomous learning in an authentic classroom setting. Thus, the following research questions were explored:

1. What are the effects of the application, which represents the combination of m-learning and gamification, on the academic performance of the students in the experimental group?
2. Will the application be able to enhance the learner autonomy of students in the experimental group?
3. How do different groups of students react to the application?

3.2. Participants and setting

The studies involved 114 sophomores from the Faculty of Foreign Languages, Nguyen Tat Thanh University. The students were randomly selected out of 3,000 students at the faculty and divided into two classes comprising the experimental group (including 59 students) and the control group (including 55 students). They were at the B1 level of the CEFR framework and had been learning for 4 semesters at Nguyen Tat Thanh University. During the course, Skilful level 3 by Macmillan was utilized as the main course book to develop students' listening skills.

The majority of the students were female, with the range of age from 20 to 24. 78.07% of the students completed all the required tests to assess their language proficiency. The other students, who missed 1-2 tests, were not counted to ensure the exactness of the data. Similarly,

78.07% of participants completed the survey with a valid result, together with empty papers, all-good-score responses were considered to be invalid.

Table 1. Participants

Variable	Subcategory	(n = 114)					
		Tested n	Tested %	Survey n	Survey %	Tested + Survey	Tested + Survey
				n	%		
Gender	Male	25	21.93	25	21.93	21	18.42
	Female	64	56.14	64	56.14	55	48.25
Age	20	76	66.67	80	70.18	68	59.65
	21 – 24	10	8.77	7	6.14	6	5.26
	25 and above	3	2.63	2	1.75	2	1.75
Total		89	78.07	89	78.07	76	66.67

3.3. Instruments

3.3.1. Instructional model

In order to enhance the students' intrinsic motivation and learner autonomy, the game was designed to meet the three basic needs according to the SDT theory (Figure 2). The need for competence was demonstrated by letting the students choose the topic and the playing mode. The students would choose between the two playing modes: the game battle, which was to compete with other learners, and self-practice. The practice mode also allows players to choose the topics to play. In terms of the need for autonomy, the students were free to make choices, decisions, and the time to play, which was not limited compared to learning periods in class. They could also experience the need for relatedness through the interaction with other players, the interaction with their characters in the game and the ranking of their result compared to other learners.

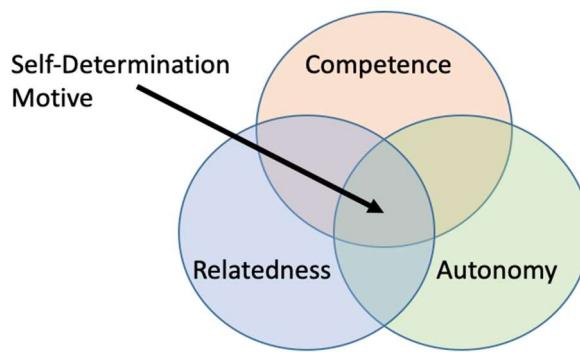


Figure 2. Self-Determination Theory (Ryan and Deci, 2000)

3.3.2. Academic performance tests

Three tests were applied to track the students' academic performance during the course and validate the impact of the game.

- Pre-instruction test included 40 selected-response questions. The test was divided into three main parts: listening, vocabulary and grammar.
- Post-instruction test followed the same format as the pre-instruction one. However, the content of the questions contained knowledge from 9 units in the coursebook. This test was supposed to reflect what students have learnt in the course.
- General listening test with 40 questions in total. The test involved a variety of exercises to check the students' listening skills in general, ranging from listening for specific information to comprehensive listening. The test included 19 selected-response questions and 21 constructed-response questions.

3.3.3. EGameFlow

The EGameFlow scale by Fu et al. (2009) was utilized to measure the students' involvement in the game. Fu et al. concluded that the students' enjoyment of a game would determine their involvement and commitment into the game as well as the learning process. The 7-point scale included 42 questions divided into 8 categories: (1) concentration (6 items); (2) goal clarity (4 items); (3) feedback (5 items); (4) challenge (6 items); (5) autonomy (3 items); (6) immersion (7 items); (7) social interaction (6 items); (8) knowledge improvement (5 items). Cronbach's alpha of 42 items was 0.942, which showed that the scale was highly reliable and consistent.

Table 2. Questionnaire based on EGameFlow scale (Fu et al., 2009)

Category	Questions
Concentration	1, 9, 17, 25, 32, 38
Goal clarity	2, 10, 18, 26
Feedback	3, 11, 19, 27, 33
Challenge	4, 12, 20, 28, 34, 39
Autonomy	5, 13, 21
Immersion	6, 14, 22, 29, 35, 40, 42
Social interaction	7, 15, 23, 30, 36, 41
Knowledge improvement	8, 16, 24, 31, 37

3.3.4. A measure of learner autonomy in university students

Macaskill and Taylor (2010) developed a brief measure of autonomous learning in university students. The scale was tested with two groups of students: the first group (N=214) including first-year students in the psychology department, and the second group (N=172) with a more diverse background, which reinforces the reliability of the test toward different types of students at tertiary level. In this paper, the 12 items of the survey were measured by a 5-point scale.

3.4. Procedure

A 3-stage process was applied during the project:

- Pre-instruction: the experimental group and the control group was selected randomly. Students in both classes took the pre-instruction test. The result of the test was used to determine the level of the students and to check their improvement over the course.
- While-instruction: Both classes were taught using the same methodology and course book. The experimental class students, beside the traditional instruction, were instructed to combine the game into the lesson at home. At home they competed with each other to gain more points as well as to revise the lesson. On the other hand, the control group was assigned paper homework to complete at home, instead. The exercises in the application were compiled in the forms of homework exercises. The teacher would correct the homework at the beginning of the following lesson. Therefore, the two groups were offered a chance to acquire the same amount of knowledge, but using different methods.

- Post-instruction: after 9 weeks, the two classes took the post-instruction test – the listening skill test to measure their academic improvement over the course. They were also required to take the EGameFlow and the Autonomy survey to compare the opinions among the two groups.

3.5. Description of the game

The game was designed with two playing modes, dashboard and the library.

1. Arena mode: Students were randomly paired to compete with each other. Each completed challenges in the game, the faster one and with more correct answers would be the winner. The winner gained more points to upgrade their ranking as well as their character in the game. The identification of the students was hidden as they used nicknames during the game. Each battle game consisted of 3 rounds representing 4 skills: vocabulary, grammar, listening for specific information and comprehensive listening.
2. Practice mode: In order to combat well in the Battle mode, students could practice by playing themselves in the practice mode. They were allowed to choose the unit and the types of game to practice. Each time they finished a practice game, they would also gain some points for their ranking.
3. Dashboard: The dashboard was the first theme to be displayed when the app was activated. Students' performance was demonstrated by a triangle chart based on their scores in both battle and practice modes. Besides, the dashboards also included other necessary functions namely settings, nickname, ranking, and avatar.
4. Library: This display offered the students useful sources of information for self-study. They could access the library for new words listed, which were categorized into units. The grammatical points of each unit were also displayed here with forms, structures, examples and practice exercises.

4. Results

4.1. Academic performance

To evaluate the influence of the application on students' academic performance, t scores collected in the three tests were analyzed and compared between the two groups. The data collected served to verify the proposed hypothesis.

The pre-instruction test was used to check the students' current level of English in order to ensure the equality between the two groups. Moreover, the results collected from this test would be the foundation to measure the students' improvement during the course.

Table 3. Scoring of pre-instruction test, post-instruction test and listening skills test

Group	Pre-instruction test mean score	Post-instruction test mean score	Improvement (*p = 000)	Listening skills test mean score	Improvement (*p = 000)
Experimental	3.79	6.84	3.05*	6.38	2.51*
Control	3.64	5.66	2.02*	4.27	0.70
Difference (*p = 000)	0.15	1.18*		2.11*	

There were 95 students taking the test, 50 from experimental class and 45 from control class. As can be seen from the table above, two groups were at the same level of English at the beginning of the course ($MD = 0.15$, $sig. = 0.582$).

After 3 months of the listening course, both groups showed a considerable improvement in the two tests.

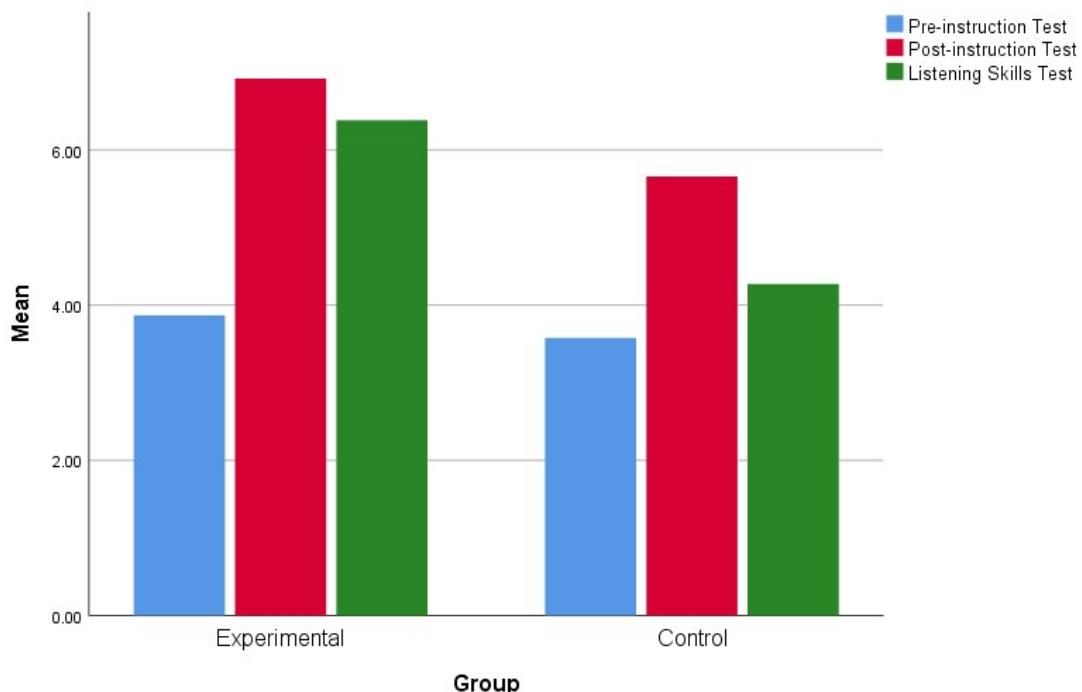


Figure 3. Mean score of pre-instruction, post-instruction and listening skills test of experimental and control group

However, the experimental group witnessed a much more significant increase in both post-instruction and general listening tests. This shows that the experimental class improved much more considerably in terms of the knowledge they learnt and their listening skills in general.

The improvement of the experimental group in the post-instruction and general listening skills tests were 3.02 and 2.51 respectively, compared to those of the control class, which were 2.02 and 0.07.

Moreover, as Table 3 indicates, the difference between the increment of the two groups was significant. Besides, there were strong correlations between each pair of the pre-instruction – post-instruction and pre-instruction – general listening skills test (sig. < 0.001)

Table 4. Correlation between pre-instruction, post-instruction and listening skills test

Correlation (*p = 0.01)	Post-instruction test	Listening skills test	Post-instruction score increment
Pre-instruction test	0.572*	0.636*	-0.334
Post-instruction test	-	0.729*	-

Another interesting finding of the study was the negative correlation between the pre-instruction test and the score increment in the post-instruction test (sig. = 0.001). This means that good students retained their performance while there was a dramatic improvement for students with lower scores in the pre-instruction test.

In short, as Table 4 implies, although starting from the same level of English with the same teacher and the same teaching methodology, the students in the experimental class improved much more significantly compared to the control group in terms of the knowledge learnt and the listening skills in general.

4.2. Autonomous learning scale

On the other hand, beside academic performance, learner autonomy was also factor to measure the effect of the application. The students' learner autonomy was measured on a 5-point Likert scale with all constructs having good internal consistency (Cronbach's Alpha range: 0.932-0.937). The questions in the scale were divided into two factors: Factor 1 labelled as Independence of Learning containing all key components of autonomous learning, and Factor 2 related to the study habits.

Table 5. Autonomous learning scale result

Content	Experimental group		Control group	
	Mean	SD	Mean	SD
Factor 1				
I enjoy new learning experiences.	4.27	0.676	3.96	0.878
Even when tasks are difficult, I try to stick with them.	3.90	0.714	2.98	0.753
I enjoy finding information about new topics on my own.	4.22	0.685	3.16	1.043
I am open to new ways of doing familiar things.	4.00	0.945	2.39	0.920
I take responsibility for my learning experiences.	4.37	0.698	4.23	0.677
I enjoy being set a challenge.	3.96	0.798	2.64	1.069
I tend to be motivated to work by assessment deadlines.	3.96	0.935	3.11	1.481
Factor 2				
I frequently find excuses for not getting down to work.	3.20	1.060	2.96	1.127
I plan my time for study effectively.	3.92	0.871	2.95	1.011
I am good at meeting deadlines.	3.51	0.845	4.20	0.968
My time management is good.	3.67	0.851	3.02	0.917
I am happy working on my own.	4.27	0.785	3.71	0.968

Table 5 shows the results of the two groups for each question. Generally, except for time management skill, the mean score of the experimental group was higher than that of the control group.

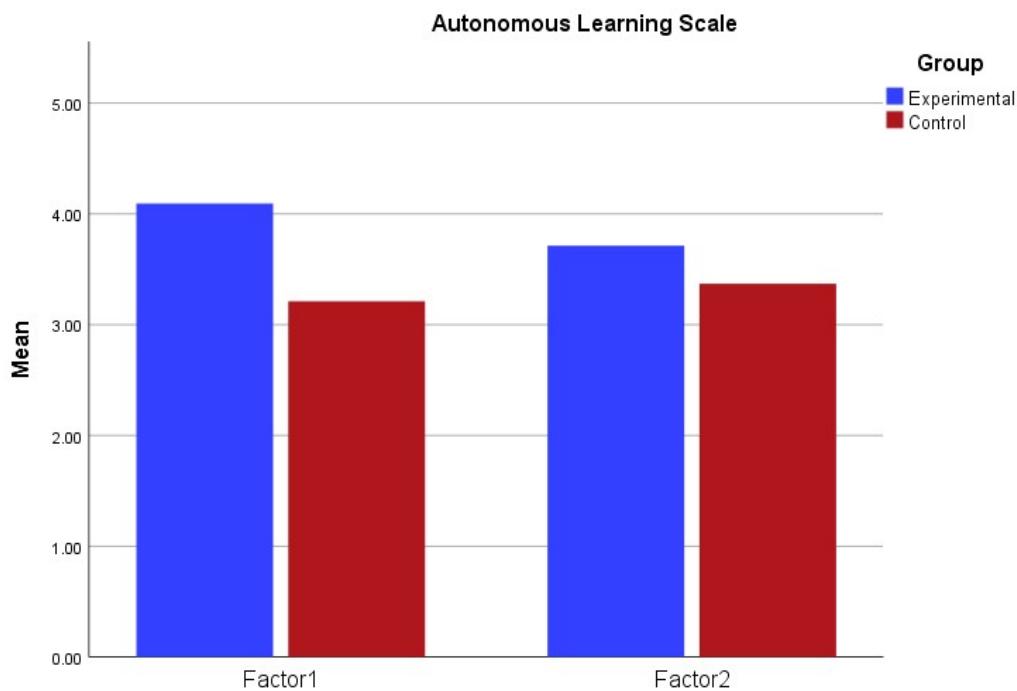


Figure 4. Mean score of each factor in autonomous learning scale of experimental and control group

The experimental group got higher mean for both factors. More importantly, the figures of the experimental group for Factor 1 were significantly higher than those of the control group (Experimental group: $M = 4.094$, $SD = 0.494$; Control group: $M = 3.211$, $SD = 0.560$, $MD = 0.882$, $SD = 0.109$, $\text{sig.} < 001$). It is also noticeable that Factor 1 contains elements of intrinsic motivation which we were aiming for. The figure for Factor 2 was (Experimental group: $M = 3.713$, $SD = 0.511$; Control group: $M = 3.369$, $SD = 0.508$, $MD = 0.344$, $SD = 0.105$, $\text{sig.} = 002$).

After the course, the students in the experimental group showed higher levels of autonomous learning than their peers in the control group, especially behaviours demonstrated in Factor 1.

4.3. EGameFlow

To make a closer investigation of the students' enjoyment of the application, their enjoyment in the game was rated on a 7-point Likert scale and all constructs had pretty good internal consistency (Cronbach's Alpha range: 0.755-0.821). We collected 49 forms with the generally high average scores. The most striking figure was the knowledge improvement with the smallest SD and the highest average while the immersion factor got the lowest score and the highest SD.

Table 6. EGameFlow scale result

Content	Experimental group	
	Mean	SD
Concentration	5.97	0.659
Goal Clarity	5.86	0.687
Feedback	6.07	0.685
Challenge	6.06	0.685
Autonomy	5.85	0.855
Immersion	5.32	0.944
Social Interaction	5.50	0.934
Knowledge Improvement	6.27	0.610

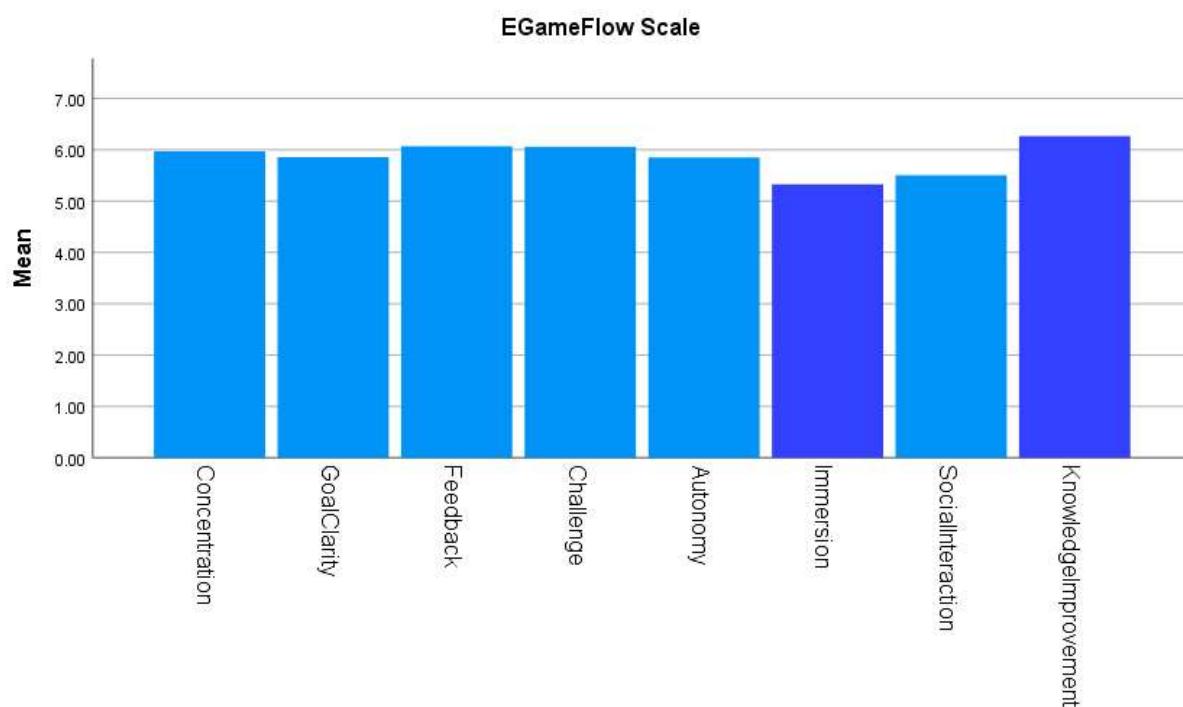


Figure 5. Mean score of each category in EGameFlow scale of the experimental group

The results of the survey corroborated the proposed hypothesis. Students can utilize the application to a moderate extent so that they can improve their competency but not become addicted to the games.

Table 7. Correlation between autonomous learning scale result and each category in EGameFlow scale result

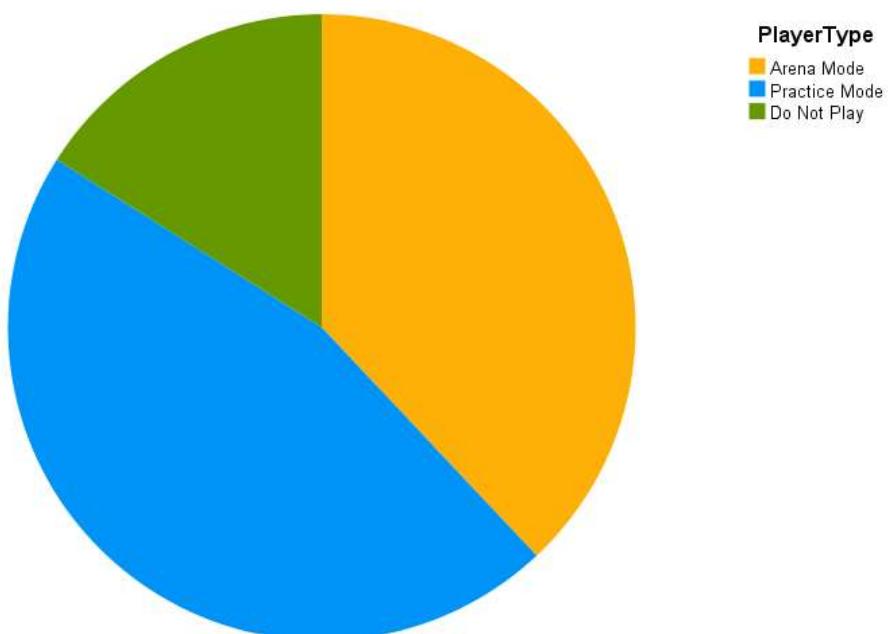
Correlation (*p = 0.05)	Concen- tration	Goal Clarity	Feedback	Challenge	Autonomy	Immer- sion	Social Interaction	Knowledge Improvement
Autonomous Scale Mean	0.379*	0.300*	0.428**	0.439**	0.260	0.596* *	0.373*	0.445**

Moreover, students with high autonomous results gave higher scores to every factor in EGameFlow Scale with the correlations shown in the table above. This can be understood that enjoying and playing the game can be a factor that helps trigger and improve the students' learner autonomy level.

4.4. Learners' playing behavior

The students' playing behaviors were also observed and analyzed to gain insights into further development.

Firstly, the students were divided by their playing mode. There were 23 students mostly playing in the Practice mode and 19 students playing in the Arena mode. The other 8 students who did not practice frequently were not involved in the results for better analysis. The percentage of students playing in the two modes was demonstrated in Figure 6.

Figure 6. Engagement of students with *Powerlish*

The correlations between the two groups with the results of the tests were analysed as follows.

Table 8. Correlation between number of practice times and pre-instruction, post-instruction, listening skills test

Correlation (*p = 0.05)	Pre-instruction test	Post-instruction test	Listening skills test	Post-instruction score increment
Practice times	-0.418*	-0.502*	-0.262	0.175

Practice players had a tendency to gain lower scores in the pre-instruction test and the general listening test ($\text{sig.}=0.047$ and 0.034 respectively); however, this was not the case for the post-instruction test. We can imply that the students with lower scores had tried to improve their knowledge of the course by practicing the games many times; however, the content of the application was mainly from the syllabus at school so they got higher scores for the post-instruction test, while the overall skill improvement was not significant.

Table 9. Correlation between the number of Arena times and the pre-instruction and the listening skills test scores

Correlation (*p = 0.05)	Pre-instruction test	Listening skills test
Arena times	0.517*	0.509*

On the other hand, the students that liked playing in the Arena mode gained higher scores in both the pre-instruction and the general listening test, which means the students with a strong base of knowledge are more confident to compete with other players.

Secondly, gender-based analysis was also applied to examine whether their playing behaviours were determined by gender.

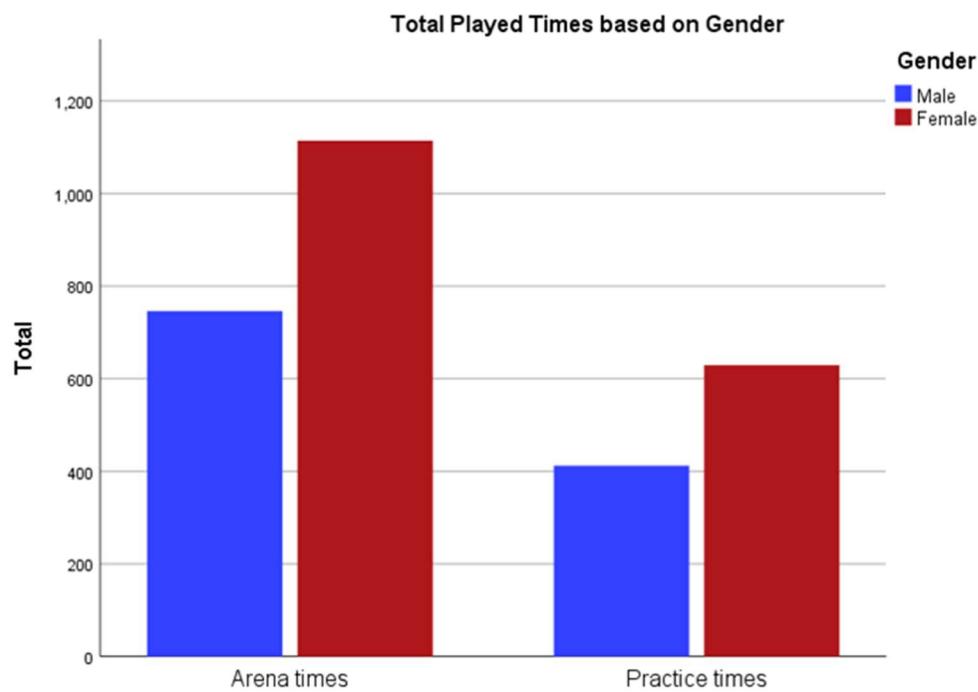


Figure 7. Numbers of Arena times and Practice times of each gender

In total, the male students played 746 games in the Arena mode and 412 in the Practice mode, while the figures for female students were 1114 and 629 respectively.

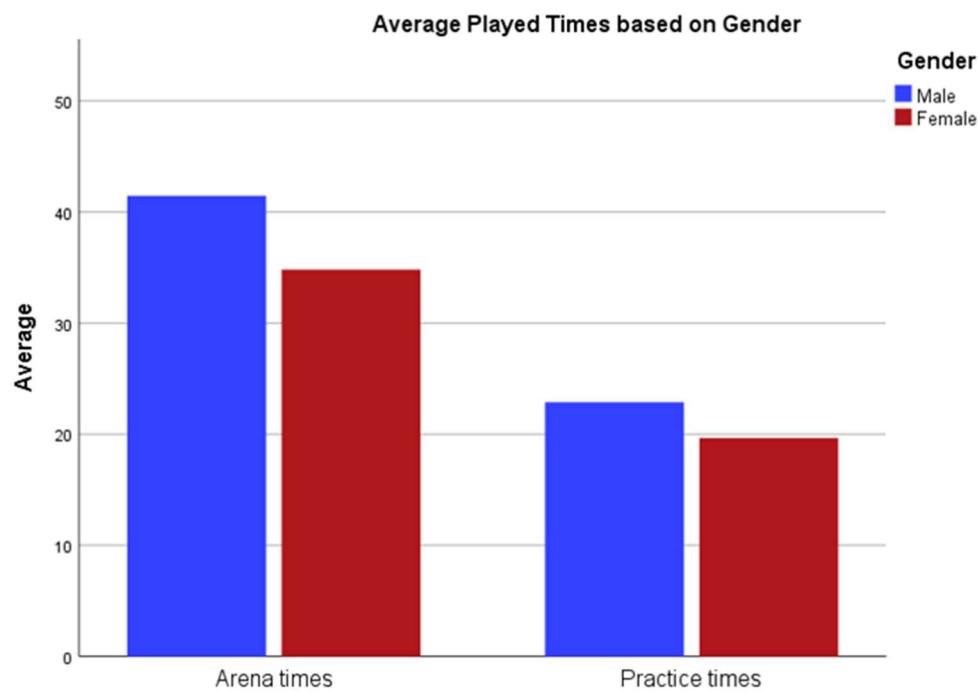


Figure 8. Average of Arena games and Practice games of each gender

On average, each male student played 41 Arena games and 23 Practice games; whereas each female student played 35 and 20 games for each mode respectively.

It can be seen from the figures that the male students played slightly more than the female ones, especially in the Arena mode. However, the difference was not significant, which proves that the platform was user-friendly for both groups of students.

Finally, based on the results of the pre-instruction test, the students in the experimental group were divided into three groups: Group 1 comprised the students with the score below 3.0 ($N=19$), Group 2 had those with score from 3.0 to 4.25 ($N=15$) and the remaining ones went to Group 3 ($N=16$).

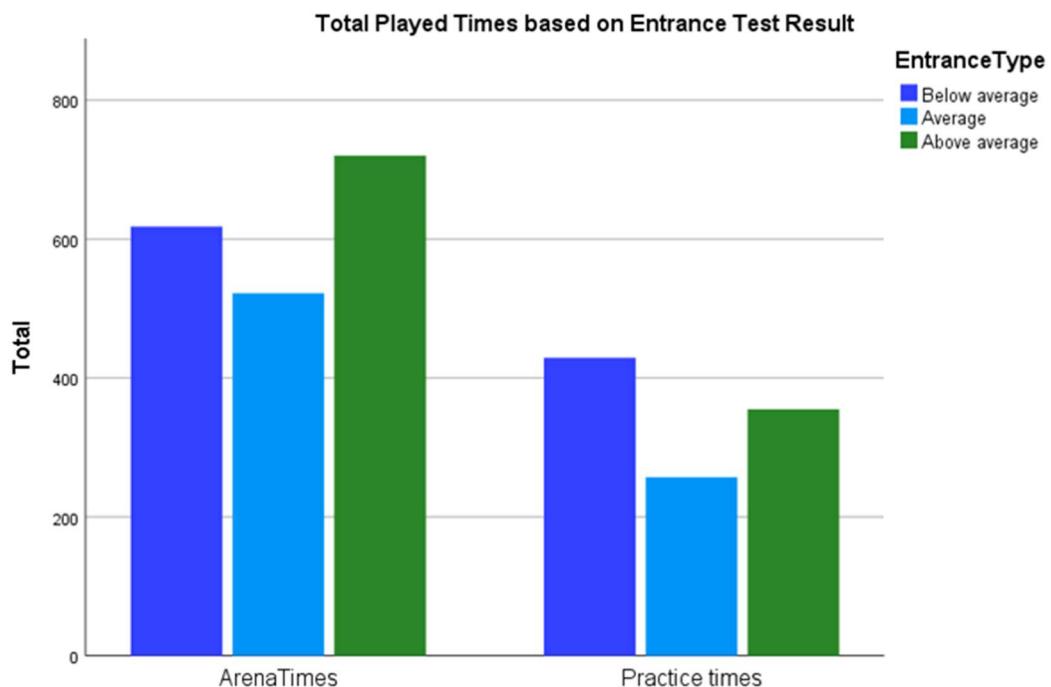


Figure 9. Numbers of Arena times and Practice times of each group based on the pre-instruction test score

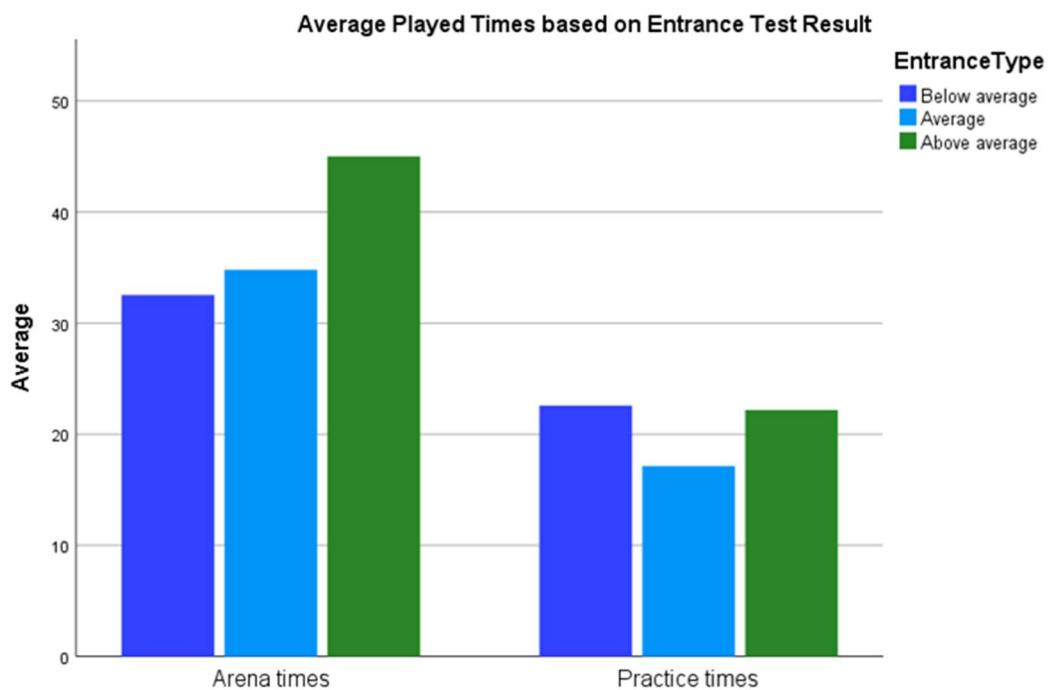


Figure 10. Average of Arena times and Practice times of each group based on the pre-instruction test score

The most striking was the Arena playing times of the high-score students with the figure of nearly 45; while the students with lowest scores tended to play Practice games the most. This strengthens the conclusion that good students prefer competitiveness whereas the others like practicing alone first then compete with each other later to check their knowledge and skills.

It is also noticeable that all students played in the Arena mode more frequently than the in the Practice mode. Therefore, competitiveness with other players can be a good selling point for students when designing applications for study.

5. Discussion

After learning with the application integrated into the program, the students' both academic performance and learner autonomy witnessed a remarkable improvement compared to those in the traditional class. The increase in the post-instruction test proves that the students improved the knowledge required in the program, while the general listening test results mean their listening skills in general were also enhanced owing to the utilization of the application. More importantly, the significantly higher autonomy level in the experimental class implies that the application successfully brought about positive effects on making students autonomous learners, which was also the final aim of the application. The utilization of the application received enthusiastic responses from students with the enjoyable scale results over average. Teachers' concerns relating to games addiction were also clarified when the students reported that they

were not too immersed into the games, while the majority of them said that the application helped them improve their knowledge. Moreover, the application was designed to suit almost every group of learners in the class regardless of gender or favour. Most students found the competitive games intriguing, and the resources in the application were useful for them. Students with better scores enjoyed interacting and combating with other learners to revise the lessons, while the others chose the Practice mode to improve their skills first.

The paper also reassures the five factors influencing learner autonomy generalized from previous studies by Kemala (2016), which are motivation, teacher, environment, material and task. By influencing the five factors with the application, students' autonomy improved significantly. The interaction in the game created an engaging environment with social interaction, while the resources in the application made materials accessible to every student. Furthermore, the various games representing different types of tasks were designed to make students more intrigued in their study and the encouragement from the teacher was another factor utilized in this project to affect learner autonomy.

The findings of the paper paved the way for a new approach to English study blending m-learning and gamification, which benefits various stakeholders. The application offers the students with an intriguing platform for studying English where they can play games, interact with other learners, track their progress, practice their skills and self-study at the same time. On the other hand, the paper suggests an m-learning instructional model for teachers to manage their class more effectively while still developing the students' learner autonomy. The application enables teachers to track the students' performance weekly and observe their playing behaviours to develop teaching strategies accordingly. And, most importantly, educators are recommended to adopt new perspectives to m-learning where user-orientation is of the highest order. Instead of simply delivering lessons and being a communication channel, m-learning can be adapted to be a perfect tool to develop learners' autonomy by considering such factors as competitive games, practice games, progress tracker and learning resources.

However, there still exist some limitations to improve in order for the application to make positive effects on many other learners. Firstly, the application was developed for listening, hence, the other 3 skills (speaking, writing and reading) were not focused on yet. Moreover, the application was not equipped with a teacher platform, which requires a program developer when the teacher needs to add more exercises into the application. Regarding the paper, the findings mostly depend on quantitative analysis of surveys and tests without any qualitative consideration to examine the students' personal opinions about the application. Last but not least, the sample

of the paper was drawn only from Nguyen Tat Thanh University, which is not enough to generalize the results for the students at tertiary level in general.

The paper can form the foundation for further development into m-learning and gamification for students at the tertiary level. Research can be conducted to examine the impact of this application model on many other groups of students ranging from freshman to senior students, as well as students from other universities or departments. After that, developers working in the education segment can base on the findings and the model presented in the paper to invent many other applications that can be integrated into the teaching program to improve learner autonomy of students studying English as well as other subjects using the model suggested in the paper.

6. Conclusion

The effectiveness of m-learning and gamification on students' knowledge improvement and learner autonomy was examined by an empirical study with quantitative data analysis. The students in experimental class, who were taught with the application, showed significant improvement in their knowledge and listening skills in general. This increase can be attributed to the application as the control class received the same teaching environment with one curriculum and teacher. Moreover, the application also succeeded in enhancing students' learner autonomy with the figures significantly higher than those in the control class. Most of the students enjoyed the games and considered them as a useful tool to improve their knowledge without getting addicted to the game. Their playing behaviours also varied according to their ability and purposes. Overall, the students with higher levels of English preferred the battle mode to compete with others while the others spent more time in the practice mode before competing.

The paper suggests a new approach to m-learning in teaching English, which is about utilizing gamification and integrating it into learning both inside and outside the classroom. Instead of being the platform for distance learning, m-learning can be used to engage the students into the lesson and connect them together. Following the model suggested, researchers can also emphasize their works on finding out more impacts of the m-learning and gamification on the students' learner autonomy to modernize teaching methodologies in this 4.0 era with the support of Artificial Intelligence (AI) technology.

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References

- Alzaza, N. S., & Yaakub, A. R. (2011). Students' awareness and requirements of mobile learning services in the higher education environment. *American Journal of Economics and Business Administration*, 3(1), 95-100. <https://doi.org/10.3844/ajebasp.2011.95.100>
- Ayan, E. (2015). Moodle as builder of motivation and autonomy in English courses. *Open Journal of Modern Linguistics*, 5(01), 6-20. <http://doi.org/10.4236/ojml.2015.51002>
- Bedwell, W. L., Pavlas, D., Heyne, K., Lazzara, E. H., & Salas, E. (2012). Toward a taxonomy linking game attributes to learning: An empirical study. *Simulation & Gaming*, 43(6), 729-760. <https://doi.org/10.1177%2F1046878112439444>
- Bunchball, I. (2010). *Gamification 101: An Introduction to the Use of Game Dynamics to Influence Behavior [White Paper]*. Retrieved from <https://www.bunchball.com/gamification101>
- Ciampa, K. (2014). Learning in a mobile age: an investigation of student motivation. *Journal of Computer Assisted Learning*, 30(1), 82-96. <https://doi.org/10.1111/jcal.12036>
- Crompton, H. (2013). The benefits and challenges of mobile learning. *Learning and Leading with Technology*, 41, 38-39.
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109-134.
- Durin, F., Lee, R., Bade, A., On, C. K., & Hamzah, N. (2019). Impact of implementing game elements in gamifying educational environment: A study. *Journal of Physics: Conference Series*, 1358(1). <https://doi.org/10.1088/1742-6596/1358/1/012064>
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: defining "gamification". *Proceedings of the 15th International Academic MindTrek Conference on Envisioning Future Media Environments - MindTrek '11*, 9-15. <https://doi.org/10.1145/2181037.2181040>
- Dincer, A., & Yesilyurt, S. (2017). Motivation to speak English: A Self-Determination Theory perspective. *PASAA: Journal of Language Teaching and Learning in Thailand*, 53, 1-25.
- Filsecker, M., & Hickey, D. T. (2014). A multilevel analysis of the effects of external rewards on elementary students' motivation, engagement and learning in an educational game. *Computers & Education*, 75, 136-148. <https://doi.org/10.1016/j.compedu.2014.02.008>
- Fu, F. L., Su, R. C., & Yu, S. C. (2009). EGameFlow: A scale to measure learners' enjoyment of e-learning games. *Computers & Education*, 52(1), 101-112. <https://doi.org/10.1016/j.compedu.2008.07.004>
- Holec, H. (1981). *Autonomy and Foreign Language Learning*. Oxford: Pergamon.
- Huang, C. S., Yang, S. J., Chiang, T. H., & Su, A. Y. (2016). Effects of situated mobile learning approach on learning motivation and performance of EFL students. *Journal of Educational Technology & Society*, 19(1), 263-276.
- Huang, J. P., & Benson, P. (2013). Autonomy, agency and identity in foreign and second language education. *Chinese Journal of Applied Linguistics*, 36(1), 7-28. <https://doi.org/10.1515/cjal-2013-0002>

- Jeno, L. M., Grytnes, J. A., & Vandvik, V. (2017). The effect of a mobile-application tool on biology students' motivation and achievement in species identification: A Self-Determination Theory perspective. *Computers & Education*, 107, 1-12. <https://doi.org/10.1016/j.compedu.2016.12.011>
- Jeno, L. M., Adachi, P. J., Grytnes, J. A., Vandvik, V., & Deci, E. L. (2019). The effects of m-learning on motivation, achievement and well-being: A Self-Determination Theory approach. *British Journal of Educational Technology*, 50(2), 669-683. <https://doi.org/10.1111/bjet.12657>
- Jianfeng, C., Raj, G. S., & Ai, J. T. T. (2018). The correlations among learning motivation, autonomy and language proficiency in Chinese EFL context. *LEARN Journal: Language Education and Acquisition Research Network*, 11(1), 1-14.
- Kemala, Z. (2016). An analysis of factors influencing the autonomous learners in learning English. *ELTIN JOURNAL, Journal of English Language Teaching in Indonesia*, 4(1), 11-20.
- Little, D. G. (1991). *Learner Autonomy: Definitions, Issues and Problems*. Dublin: Authentik Language Learning Resources.
- Locke, E. A., & Schattke, K. (2019). Intrinsic and extrinsic motivation: Time for expansion and clarification. *Motivation Science*, 5(4), 277-290. <https://doi.org/10.1037/mot0000116>
- Macaskill, A., & Taylor, E. (2010). The development of a brief measure of learner autonomy in university students. *Studies in Higher Education*, 35(3), 351-359. <https://doi.org/10.1080/03075070903502703>
- Mcconatha, D., Praul, M., & Lynch, M. J. (2008). Mobile learning in higher education: An empirical assessment of a new educational tool. *Turkish Online Journal of Educational Technology-TOJET*, 7(3), 15-21.
- Morrison, B. (2011). *Independent Language Learning: Building on Experience, Seeking New Perspectives*. Hong Kong: Hong Kong University Press. <https://doi.org/10.5790/hongkong/9789888083640.001.0001>
- Mirski, P. J., & Abfalter, D. (2004). Knowledge enhancement on site – guests' attitudes towards m-learning. *Proceeding of the Information and Communication Technologies in Tourism 2004, 11th ENTER International Conference in Cairo, (ICC'04), Cairo, Egypt*, 592-600.
- Proulx, J. N., Romero, M., & Arnab, S. (2017). Learning mechanics and game mechanics under the perspective of Self-Determination Theory to foster motivation in digital game based learning. *Simulation & Gaming*, 48(1), 81-97. <https://doi.org/10.1177%2F1046878116674399>
- Ryan, R. M., & Deci, E. L. (2000). Self-Determination Theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Ryan, R. M., & Deci, E. L. (2002). An overview of self-determination theory: An organismic-dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of Self-Determination Theory Research* (pp. 3-33). Rochester, NY: University of Rochester Press.
- Sarrab, M., Al-Shihi, H., & Rehman, O. M. H. (2013). Exploring major challenges and benefits of m-learning adoption. *British Journal of Applied Science and Technology*, 3(4), 826-839. <https://doi.org/10.9734/BJAST/2013/3766>
- Soodmand Afshar, H., Rahimi, A., & Rahimi, M. (2014). Instrumental motivation, critical thinking, autonomy and academic achievement of Iranian EFL learners. *Issues in Educational Research*, 24(3), 281-298.
- Statista (2021, March 18). Smartphone users worldwide 2016–2023. <https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>

- Su, C. H., & Cheng, C. H. (2015). A mobile gamification learning system for improving the learning motivation and achievements. *Journal of Computer Assisted Learning*, 31(3), 268-286. <https://doi.org/10.1111/jcal.12088>
- Sun, J. C. Y., & Hsieh, P. H. (2018). Application of a gamified interactive response system to enhance the intrinsic and extrinsic motivation, student engagement, and attention of English learners. *Journal of Educational Technology & Society*, 21(3), 104-116.
- Vu, N. N. (2016). Mobile learning in language teaching context of Vietnam: An evaluation of students' readiness. *Journal of Science, Ho Chi Minh University of Education*, 7(85), 16-27.
- Wang, Q. S., & Xu, Q. X. (2015). A study on influence of English learning motivation upon undergraduates' autonomous learning. *Journal of Nanchang Hangkong University*, 17(3), 105-111. <https://doi.org/10.5539/elt.v10n2p100>
- Williams, M., & Burden, R. (1997). *Psychology for Language Teachers: A Social Constructivist Approach*. Cambridge: Cambridge University Press.
- Zarei, A. A., & Elekaei, A. (2012). *Learner Autonomy and Language Learning Strategies: An Empirical Analysis*. Saarbrücken, Germany: Lambert Academic Publishing.
- Zhang, W., Su, D., & Liu, M. (2013). Personality traits, motivation and foreign language attainment. *Journal of Language Teaching and Research*, 4(1), 58-66. <https://doi.org/10.4304/jltr.4.1.58-66>

A NARRATIVE INQUIRY INTO IRANIAN EFL TEACHER EDUCATORS' VOICE ABOUT CHALLENGES OF CALL TEACHER EDUCATION

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Abstract

The rapid integration of technology in EFL learning and teaching requires competent EFL teachers to use Computer-Assisted Language Learning (CALL) in their classes. Hence, the role of CALL teacher education in preparing competent EFL teachers is significant. However, conducting CALL teacher education is not without challenges. Given the importance of examining these challenges, the purpose of the current study was to investigate Iranian EFL teacher educators' voice about the challenges of conducting CALL teacher education programs. To that end, eight Iranian EFL teacher educators' biographical narratives were analyzed to obtain challenges concerning CALL teacher education. The thematic analysis of the narratives, based on the principles of ethnography semantics, indicated that challenges such as inertia, ignorance of training CALL educators, insufficient time to address CALL compared to other topics, insufficient infrastructure, insufficient standards, and lack of established methodology to administrate CALL teacher education were among the main obstacles of conducting CALL teacher education in the Iranian context. Moreover, the findings revealed that lack of EFL teachers' motivation to participate in such programs, insufficient CALL infrastructure in schools and institutes, and EFL teachers' inertia were other challenges in CALL teacher education. The findings suggest that the stability of CALL can be reached by removing the challenges of CALL teacher education if policy-makers address issues such as the required budgets, CALL infrastructures, and teacher motivation in CALL teacher education.

Keywords: CALL teacher education; EFL teacher educators; biographical narratives

1. Introduction

Computer-Assisted Language Learning (CALL) has recently turned into a significant vehicle for language teachers to facilitate the process of language learning and teaching. This is because of the fundamental relationship between technology and language teaching and learning. The relationship provides a venue for the integration of technology into language pedagogy (Stockwell, 2007). However, it should be noted that this relationship is not a linear one (Torsani,

2016) since many influential factors are involved in such a relationship. L2 teachers who are competent and able to integrate technology into language pedagogy play a critical role in L2 teaching. Hence, the role of CALL teacher education in preparing L2 teachers to use and integrate CALL in their L2 classes is crucial. It is due to this reason that CALL teacher education can be regarded as a venue in which the *symbiosis* between linguistics and technology can be transmitted to L2 teachers (Torsani, 2016).

CALL teacher education is one of the primary subfields of CALL, originating from the fact that teachers have a “pivotal” role in CALL (Hubbard, 2008). CALL teacher education aims to enhance the quality of L2 teaching by developing the competencies of L2 teachers to integrate technology and language pedagogy (Guichon & Hauck, 2011; Kessler, 2006). According to Torsani (2016), CALL teacher education has three main characteristics: effectiveness, integration, and volatile nature. CALL teacher education should train L2 teachers effectively to make them competent to teach learners with different levels of digital literacy: from high digitally literate learners to low digitally literate ones. Integration is another characteristic of CALL teacher education, which has different types in different settings; if implemented appropriately, L2 teachers can obtain technical and pedagogical knowledge from the CALL teacher education programs (Egbert, 2006). Finally, CALL teacher education needs to have a volatile nature to help L2 teachers develop and update their ability and competence to keep up with the rapid changes in technology (Hanson-Smith, 2006).

CALL teacher education can have different benefits for L2 language teachers. As Masood (2010) noted, the skills and the technical knowledge achieved during CALL teacher education programs can create L2 teachers’ real teaching profession in the future. As a result, L2 teachers will feel more comfortable with integrating technology into their L2 classrooms. Moreover, L2 teachers who participate in CALL teacher education programs have a higher level of self-efficacy to use CALL materials in their classes compared to those who do not (Chai & Lim, 2011; Kitade, 2015). Furthermore, CALL teacher education programs can develop a positive attitude in L2 teachers to implement CALL materials in their classrooms (Jeong, 2017). As a whole, CALL teacher education can help L2 teachers become “digital natives” (Prensky, 2001) in that they can understand and use digital technology (Dudeney & Hockly, 2016). As Jeong (2017) points out, L2 teachers who become digital natives will develop new learning styles, strategies, and cognitive learning experiences.

Although CALL teacher education has different benefits for L2 teachers, it has not been paid due attention to (Hubbard, 2008) since its implementation and administration are not without challenges. Understanding why CALL teacher education is not addressed in different countries

can help L2 practitioners provoke appropriate reactions about these challenges. In Iran, like many other countries, CALL teacher education is not administrated adequately and appropriately to prepare English as a foreign language (EFL) teachers' CALL profession (Marandi, 2019). Although different reasons have been mentioned for not giving priority to CALL teacher education in preparing CALL-oriented EFL teachers in Iran, studies examining the challenges of CALL teacher education in the Iranian context have been lacking (Hedayati & Marandi, 2014). Given that, investigating the challenges to administrating CALL teacher education can help EFL teachers integrate CALL into their classes with confidence and knowledge (Hong, 2010) and become skilled CALL practitioners (Stockwell. 2009). This would have a facilitative role in EFL teacher educators' decision-making when they want to prepare EFL teachers for a particular situation, such as the COVID-19 pandemic, in which most instruction needs to be delivered through technology. However, if the challenges are not investigated, EFL practitioners cannot prepare an effective CALL teacher education program. Although some studies (e.g., Dehqan et al., 2017; Fathi & Ebadi, 2020; Hedayati & Marandi, 2014) were done to explore the challenges of implementing CALL from the perspectives of Iranian EFL teachers, comparable studies on Iranian EFL teacher educators' perspectives concerning the challenges of CALL teacher education are lacking. Hence, the purpose of the current study, which had an exploratory nature, was to investigate the Iranian EFL teacher educators' voice about the challenges of administrating CALL teacher education in Iran.

2. Literature review

Since the nature of the current study was an exploratory one in that it was an attempt to explore the challenges of CALL teacher education programs in Iran, the researcher needed to scrutinize the theoretical concepts of CALL teacher education. Hence, the researcher divided the literature review into four sections. First, a brief history of CALL teacher education was evoked. Then, the related theories of CALL were addressed. Third, the approaches to CALL teacher education were reviewed. Finally, the already mentioned challenges of CALL teacher education by Hubbard (2008) have been reviewed to provide tentative a priori codes for the thematic analysis. Overall, such a literature review would help the readers obtain a comprehensive picture of CALL teacher education theory and practice, aiding them to conduct a more reliable analysis of EFL teacher educators' challenges to address CALL teacher education.

2.1. A brief history of CALL teacher education

There were not many educational programs related to CALL in which L2 teachers were involved before the 1980s (Kessler & Hubbard, 2017). Gradually, interest in integrating CALL into teacher education programs, such as the programs administrated by Micro Users in the ESL Institution in England, arose in 1983 (Davies, Otto, & Rüschoff, 2012). Micro Users in the ESL Institution tried to use microcomputers to help EFL learners. From 1985 onward, integrating CALL into teacher education programs created interactive CALL-based instructions. This point's logic can be related to the emergence of interactive and communicative L2 teaching approaches from 1980 (Ellis, 2020). This led to the emergence of computational linguistics, which applied computers in research into linguistics and teaching (Kessler & Hubbard, 2017). The rapidly increasing rate of CALL in teacher education programs could be due to the seminal CALL workshops of 1982, pioneered by Tim Johns (Delcloque, 2000). During the 1980s, the Computer Assisted Language Instruction Consortium foundation became the motive for the *CALICO Journal*'s launch. In the 1990s, universities tried to use CALL in their courses.

There was very little research about conducting CALL teacher education programs during the 1980s and the 1990s. Some examples can be the guidelines provided by Curtin and Shinall (1985) or the descriptions of CALL-based courses by Koet (1999). However, the description of the methodology of CALL teacher education had been paid more attention since 2000. Various special issues on CALL teacher education were launched in different CALL-related journals, including *CALL*, *Language Teaching and Technology*, and *ReCALL*. Moreover, researchers conducted more investigations on various aspects of CALL teacher education. Some of them showed CALL teacher education effectively develops EFL teachers' ability to integrate CALL in teaching EFL learners (e.g., Egbert et al., 2002). During the 2010s, other researchers such as Lomicka and Cooke-Plagwitz (2004) and Hubbard (2008) focused on different approaches to teach through technology. Since the 2010s, more special issues of the CALL-related journals have been devoted to CALL teacher education. These special issues focused on different aspects of CALL teacher education, such as theories of CALL, pre-service, in-service teacher education, alternatives to CALL education, CALL teacher education approaches and processes, etc. (Kessler & Hubbard, 2017).

2.2. The theories in CALL teacher education

Theories have a significant role in CALL research, teaching, and design (Stockwell, 2014). CALL theories help the practitioners to design research, practice it, and discuss its results. As its acronym suggests, CALL has two main parts, including technology and language learning.

Consequently, theories of CALL gain credibility from the theories of technology and language learning. Given that theories of CALL teacher education are represented in processes such as lecture/demonstration, project-based learning, situated learning, reflective learning, portfolio-based learning, mentor-based, communities of practice, and self-directed learning (Hubbard, 2008), these processes use the theories of language learning through the application of technology.

Distributed cognition (Hutchins, 1995) is among the most critical CALL theories (Stockwell, 2014). The proponents of this theory have argued that learning occurs through the interdependency between individuals' cognitive process and the environment's tools to help them fulfill the process. CALL teacher education benefits from the distributed cognition theory. It helps L2 teachers to execute their L2 instruction 1) by teaching principles and strategies which they have obtained during their pre-services and in-services programs, and 2) by completing the process of L2 teaching through the tools and assisted aids provided by CALL in CALL teacher education programs. Based on this theory, both L2 teachers' cognitive processes and environmental activities are engaged in CALL teacher education.

One more relevant theory is the situated action theory, which means that individuals do the actions whose outcomes they know (Suchman, 2006). By applying this theory to CALL teacher education, the CALL educators need to fulfill L2 teachers' quest about CALL involvement outcomes. By doing so, L2 teachers' awareness about the benefits and potential challenges will develop; hence, they will be more eager to 1) participate in CALL teacher education, and 2) integrate CALL-related materials in their teaching. As a whole, it is not so simple to propose CALL theories because of the lack of literature (Stockwell, 2014) and the unclear effects of CALL on L2 teachers.

2.3. Approaches to CALL teacher education

Different approaches are used to conduct CALL teacher education. Each of the approaches has its methodology to address technology in CALL teacher education. One approach to CALL teacher education, which represents the traditional survey course, is the *breadth first* approach (Hubbard, 2008). This approach provides comprehensive CALL alternatives, as well as language teaching. L2 teachers can explore each of the alternatives in detail (Hubbard & Levy, 2006). On the contrary, the *depth first* approach to CALL teacher education concentrates on a single and specific CALL area to help L2 teachers accrue "much intensive experience" (Hubbard, 2008, p. 181). Accordingly, the latter approach is more appropriate for in-service programs in which

teacher educators want to provide concrete information about a CALL application during a short time.

The *integrated* approach to CALL teacher education is different from the first two approaches outlined in the previous paragraph. Instead, it is addressed during different intervals in teacher education programs when L2 teachers encounter a new teaching situation in which CALL can be conducive (Hegelheimer, 2006). Furthermore, when the L2 teachers cannot physically present in CALL teacher education, they can participate in a program established based on an *online* approach. Through this approach, L2 teachers receive their instructions about CALL via online technology types. L2 teacher educators prepare face-to-face interactions during online instructions in which L2 teachers will discuss their issues. In that case, CALL teacher education will be a *blended* one (Lomicka & Lord, 2004). The blended CALL teacher education can be a venue for collaboration, discussion, and communication about CALL.

2.4. The challenges of CALL teacher education

CALL teacher education is not without its challenges, making it difficult for L2 teacher educators and L2 teachers to design and participate in it, respectively. Hubbard (2008) answers why CALL teacher education has not met with L2 teacher education. The first challenge is to change the assumptions of L2 teacher educators in that they think their current teacher education programs are successful, and there is no need to change. This is called *inertia* (Hubbard, 2008). Inertia can also be a problem for L2 teachers because they think that their current teaching practices are appropriate, and there is no need for use of CALL.

Another challenge in conducting CALL teacher education is lacking qualified CALL educators who are well aware of CALL and its different aspects. This is called *ignorance* (Hubbard, 2008). This challenge can be due to L2 educators' opinions about CALL teacher education in which they believe that they are not responsible for teaching their L2 student-teachers and L2 teachers for CALL.

Insufficient time for adding new materials to teacher education programs is another challenge in conducting CALL teacher education. The field of second language teaching and learning is an active area of research. The findings and results of the research produce new materials that are injected into the teacher education programs. Hence, it is difficult to find new space for CALL in the L2 teacher education programs (Hubbard, 2008). L2 teacher educators also find it time-consuming to keep up with the rapid development rate of CALL.

Hubbard (2008) also mentioned *insufficient infrastructure* as another challenge for conducting CALL teacher education. Appropriate infrastructures can help L2 teacher educators

accept more L2 teachers in their programs. According to Partridge (2006), when the necessary CALL-related materials are not available in a faculty, it is not easy to ask teachers to evaluate and implement CALL. It is so because the lack of the necessary materials in the faculty leads L2 teachers to become demotivated to integrate CALL-related materials in their classrooms (Hedayati & Marandi, 2014).

Insufficient standards, moreover, is another challenge to conduct CALL teacher education. Technology standards are those that specify different aspects of using CALL at different educational levels. Hubbard (2008) believes that technological standards would help avoid challenges such as inertia and ignorance by specifying related certification and recruitment standards.

One more challenge faced while conducting CALL teacher education is the *lack of established methodology* (Hubbard, 2008), referring to methods, techniques, textbooks, etc., which can determine the CALL courses' content and structure.

3. Methodology

This study was a narrative inquiry in which the researcher attempted to address the challenges of CALL teacher education, as a phenomenon, through collecting and analyzing biographical narratives. The researcher adopted Daiute's (2014) practical design in the current study. Thus, the researcher went through the following steps to do this study:

- *Determining if the research problem fits narrative research:* Since the researcher investigated the challenges of conducting CALL teacher education from the perspective of EFL teacher educators, narratives could help us capture the detailed stories concerning their experiences in this regard (Creswell & Poth, 2018).
- *Select individuals who have stories concerning the issue under investigation:* The researcher selected eight EFL teacher educators through purposive sampling. These EFL teacher educators had the experience of conducting CALL teacher education; hence, they could help the researcher obtain the CALL teacher education challenges.
- *Embed information about the context of the stories into data collection and analysis:* When doing a narrative inquiry, the researchers should consider the context in which the participants are involved (Creswell & Poth, 2018). That is because the context-sensitivity is the core of narrative inquiry (Czarniawska, 2004). The researcher took this critical issue by reviewing the context of EFL teacher education in Iran (presented in the following section).

- *Using a framework to analyze the stories:* The researcher used predetermined codes obtained from Hubbard (2008) to analyze the EFL teacher educators' biographical narratives (see Appendix).
- *Embed a collaborative approach in collecting and telling stories:* According to Creswell and Poth (2018, p. 116), "as researchers collect stories, they negotiate relationships, smooth transitions, and provide ways to be useful to the participants." Thus, when the narratives needed to be clarified for some ambiguous points, the researcher collaborated with the participants to obtain a comprehensive understanding of the narratives.
- *Present the narratives in written form:* The researcher adopted the general reporting structure in which an introduction of the challenge was provided to familiarize the readers, then some extracts of the narratives were mentioned to support the claims. These extracts included narrative segments showing a specific challenge.

3.1. The context

Iranian EFL teachers follow almost two alternative ways to find the necessary skills of English teaching. The first groups are accepted in Teaching English as a Foreign Language (TEFL) across the state-run universities. During their courses, they learn both content and pedagogical knowledge during their B.A. curriculum. Based on the Ministry of Science, Research, and Technology syllabus released in 2015, there is an optional course on CALL, which the TEFL departments can address if they have the infrastructures. However, based on the basic observations, several universities in Iran provide this course for their B.A. students, and others do not.

Consequently, the students are not competent in CALL when they obtain a B.A. degree. This group of EFL teachers needs to participate in an exam given by the Ministry of Education and pass it to teach English at schools. The second group is the TEFL students who study TEFL at Farhangian universities, specialized universities responsible for training teachers in different subjects, including English and other languages. The syllabus of this group is very similar to the first group. Hence, the second group will not obtain much about CALL during their B.A. level. The second group does not need to participate in the exam given by the Ministry of Education. They can start their teaching at schools when they are in the second year of their B.A. As a whole, both groups have not many experiences in CALL and may not know how to integrate it into their classes when they start their teaching. The two groups will have different in-service teacher education during their teaching. By scrutinizing the overall syllabus of these in-service teacher

education programs, it can be stated that CALL does not have a special space in these programs. However, some minimal theoretical and practical CALL issues are covered in these programs.

3.2. Participants

The study had an exploratory purpose of obtaining Iranian EFL teacher educators' voice about the challenges of conducting CALL teacher education. Consequently, the participants were eight Iranian EFL teacher educators, including two female and six male teacher educators teaching TEFL at different universities and across different educational levels. The researcher used purposive sampling to select those EFL teacher educators who had the experiences of designing and teaching in different pre-service and in-service teacher education programs. All of the participants held a Ph.D. in applied linguistics and had different academic titles, including assistant professor, associate professor, and professor. Their age range was between 35 and 55. Moreover, they had between 10 to 27 years of teaching experience. The participants knew what CALL is, what CALL teacher education is, and how to implement CALL in the L2 classroom. Table 1 indicates the information about the participants.

Table 1. Information about the participants

Pseudonym	Gender	Academic title	Year of teaching experiences	Teaching levels	academic
Reza	Male	Professor	27	B.A., M.A., Ph.D.	
Naser	Male	Professor	24	B.A., M.A., Ph.D.	
Sajad	Male	Associate Professor	19	B.A., M.A., Ph.D.	
Ahmad	Male	Associate Professor	14	B.A., M.A., Ph.D.	
Mobin	Male	Associate Professor	11	B.A., M.A.	
Amin	Male	Assistant Professor	10	B.A., M.A.	
Negin	Female	Associate Professor	17	B.A., M.A.	
Neda	Female	Assistant Professor.	7	B.A., M.A.	

3.3. Data collection

To obtain the voice of EFL teacher educators about the challenges of conducting CALL teacher education in Iranian contexts, the researcher asked the participants to produce a biographical narrative. The researcher asked them to state their experiences, their ideologies, their future directions, or anything else about CALL teacher education that happened during their teaching experiences. The EFL teacher educators were supposed to produce their biographical narratives following Riessman's (2008) narrative model in which each narrative includes an abstract, introduction, evaluation, resolution, and coda. It is worth noting that the researcher sent a narrative sample to the participants, including an abstract, introduction, evaluation, resolution, and coda. The narrators tell their stories about a specific topic that can be analyzed based on the

indexicality approach (De Fina & Georgakopoulou, 2019). In de Fina's (2015, p. 353) words, "[t]hrough indexicality, associations are created between specific sounds, words, discourse constructions or styles, and social characteristics or identities." Thus, by collecting the biographical narratives from the participants and analyzing them, the researcher could obtain the challenges based on the EFL teacher educators' actual experiences. The participants were asked to mention in their narratives as many challenges they faced while conducting CALL teacher education as possible. The shortest narratives had about 450 words (delivered by Sajad), and the most extended narrative had about 980 words (delivered by Amin). It should be stated that seven out of eight participants recorded their narratives orally and sent them to the researcher. Moreover, the oral narratives also followed Riessman's (2008) narrative model.

3.4. Data analysis and rigor of the study

To analyze the narratives authored by the EFL teacher educators and uncover the patterns of the themes in these narratives concerning the challenges of administrating CALL teacher education, the researcher conducted a thematic analysis (Boyatzis, 1998) using the predetermined codes. These predetermined codes were selected from the challenges of CALL teacher education, as stated by Hubbard (2008). As reviewed above (see Literature review section), these challenges were inertia, ignorance, insufficient time, insufficient infrastructure, insufficient standards, and lack of established methodology. Moreover, if each of the participants referred to other challenges, the researcher documented them. The researcher used ethnography semantics, which helped him analyze the narratives' core meaning (Spradley, 1979). The researcher read the narratives and linked them to the codes. The ethnography semantics helped the researcher extract the words, phrases, and sentences that semantically revealed the challenges of conducting CALL teacher education. Example 1 shows how the analysis of the narratives was addressed.

(1) ... I think ***we do not need to*** have a CALL teacher education program at the current time since our programs, including EFL teacher education programs, ***concentrated on other issues...***

This short example shows that this EFL teacher educator did not think that they needed to start CALL teacher education programs. Semantically speaking, "***we do not need***" shows this EFL teacher educator concentrated on other issues in EFL teacher education: "***concentrated on other issues.***"

The rigor of a study in qualitative research needs to be addressed to assure reliable and valid data analysis (Ary et al., 2014). In the current study, the researcher read the narratives and coded them based on the predetermined criteria to assure inter-coder reliability. Moreover, to ensure the credibility of the data analysis, the researcher conducted member checking,

negotiating those parts of the vague narratives, and asking the EFL teacher educators to explain more about those parts.

4. Findings and discussion

It was revealed through narrative analysis that Iranian EFL teacher educators had different opinions about the challenges of conducting CALL teacher education in the Iranian context. Table 2 summarizes the challenges of conducting CALL teacher education from Iranian EFL teacher educators' perspectives.

Table 2. Summary of the challenges mentioned by Iranian EFL teacher educators

Pseudonym	Inertia	Ignorance	Insufficient time	Insufficient infrastructure	Insufficient standards	Lack of established methodology	Other challenges
Reza	√	-	√	√	√	-	Lack of EFL teachers' motivation
Naser	√	√	√	√	-	√	-
Sajad	√	√	√	√	√	√	-
Ahmad	-	√	√	√	√	-	Insufficient infrastructure in L2 schools and institutes
Mobin	√	√	-	√	√	√	The inertia of EFL teachers
Amin	√	√	√	-	√	√	-
Negin	-	√	√	√	-	√	-
Neda	-	-	√	√	√	√	-

√ means the EFL teacher educator has a challenge.

As shown in Table 2, insufficient time and infrastructures were the challenges most frequently mentioned by EFL teacher educators. These two challenges were extracted from the EFL teachers' narratives across different academic titles (full professors, associate professors, and assistant professors). Furthermore, ignorance, insufficient standards, and lack of established methodology were the challenges referred to by most EFL teachers. Finally, the less frequent challenge was inertia. The EFL teachers (Reza, Ahmad, and Mobin) pointed out other challenges, such as lack of EFL teachers' motivation to participate in CALL teacher education, insufficient infrastructure in L2 schools and institutes for the EFL teachers to practice CALL, and inertia of EFL teachers.

4.1. Inertia: "*We know what our needs are*"

The analysis of the narratives authored by the EFL teacher educators about the challenges of CALL teacher education showed that all of them, except for Ahmad, Negin, and Neda, believed

that inertia is a challenge in conducting CALL teacher education. Here, inertia referred to EFL teacher educators' belief that they did not need to change their current EFL teacher education to a CALL-oriented one. Extract 2 is a part of Reza's narrative who thought CALL teacher education is not a need for the current EFL teacher education.

(2) ... I think that it [CALL teacher education] is not the need of our EFL teachers ... we know our needs in preparing EFL teachers for classrooms. However, it is not CALL teacher education ... it is the opinion of many of my colleagues who are working as teacher educators ... however, if a CALL teacher education is to be administrated, I think challenges such as ...

There are different reasons for the inertia of EFL teacher educators about conducting CALL teacher education. The first reason is that there is no CALL discourse in EFL communities, including the Iranian context. Since such a discourse has not received the attention it deserves, EFL teacher educators do not see CALL teacher education to address L2 teaching and learning problems. Consequently, it is difficult for EFL teacher educators to lend themselves to change. The second reason is that EFL teacher educators do not participate in intensive training, which leads them to remain in their traditional practices. Participation of teacher educators in intensive training is indispensable (Lortie, 1975) to change their opinions about the design and implementation of their teacher education programs. Hence, EFL teacher educators' participation in CALL intensive training can change their opinions about CALL teacher education. The third reason may be due to the inexistence of insufficient standards (Hubbard, 2008). When EFL teacher educators do not have the necessary standards to conduct CALL teacher education programs, they prefer not to change, resisting abandoning traditional EFL teacher education programs.

4.2. Ignorance: "No trained faculty member, no responsibility"

By analyzing the narratives authored by EFL teacher educators, the researcher recognized that faculty members tended to ignore training qualified CALL teacher educators. Extract 3, written by Sajad, shows how he stated that the lack of qualified CALL educators would be a challenge to conduct CALL teacher education.

(3) ... there was an ignorance of training EFL teacher educators who will address CALL teacher education in our context ... this is a very critical challenge for us since we do not have EFL teacher educators who can instruct EFL teachers to use CALL in their classes ...

Ignoring CALL by EFL teacher educators will cause them to be unaware of the options which can be provided (Hubbard, 2008) in EFL contexts. When they are unaware of CALL options, they will not try to make CALL the focus of their teacher education programs. This will lead to another aspect of ignorance, based on which the EFL teacher educators believe CALL

teacher education is not the responsibility of every EFL teacher educator. However, it is the responsibility of some specialized institutes. As Hubbard (2008, p. 177) stated, there is "an assumption that learning to use technological tools is the task of the teaching institution rather than the one that trains the students." Negin, one of the EFL teacher educators, narrated that she was hindered by other faculty members that CALL teacher education was not their responsibility. She pointed out this as a challenge for running CALL teacher education. Extract 4 is a part of her narrative.

(4) ... during different meetings I had with my colleagues in our department, **I raised the need** to have **special CALL preparation** for the EFL teachers, yet **most of them were ignorant** of this **responsibility** ... they believed that the EFL teachers **should participate in the programs** of other universities which are **specialized in CALL** ...

The need for EFL teachers who are competent in using CALL in their classes is now a requirement because of the rapid development of CALL (Kessler & Hubbard, 2017). That said, CALL teacher education is a need to be fulfilled in universities and other educational institutes. Consequently, the curriculum developers need to ask the faculty members to prepare themselves for running CALL teacher education programs in their contexts. Providing new certifications may encourage them not to ignore CALL teacher education and call it the universities' responsibilities.

4.3. Insufficient time: "*Many topics, new pop-ups, and limited time*"

In this study, the EFL teacher educators also mentioned insufficient time as one of the challenges in conducting CALL teacher education. It was revealed by analyzing the narratives that almost all of the EFL teacher educators believed that the field of second/foreign language learning and teaching is very vast, and new topics are emerging now and then. The EFL teacher educators stated that they had time limitations to address CALL teacher education since they needed to work upon other issues. Extract 5 is a part of Amin's narrative. Amin stated that EFL teacher educators' insufficient time is a challenge for conducting CALL teacher education among EFL teachers.

(5) ... I think that **time limitation** is among the **main challenges** to conduct CALL teacher education since our **field is full of topics and still new topics pop up** every day, which makes **CALL secondary** compared to other topics ...

When the EFL teacher educators do not have time to allot to CALL, they resist changing their educational policy (inertia) and ignore the responsibility of addressing CALL in L2 teaching (ignorance). Insufficient time to conduct CALL teacher education has two aspects. The first aspect is related to the growing body of topics in second/foreign language teaching and learning

due to numerous topics. The EFL teacher educators pay attention to topics other than CALL. Moreover, preparing new instruction models for CALL will be time-consuming for EFL teachers (Johnson, 1999) and EFL teacher educators, which can be mentioned as a challenge for conducting CALL teacher education.

4.4. Insufficient infrastructure: "*The huge obstacle to CALL*"

Almost all of the EFL teacher educators mentioned insufficient infrastructures as one of the challenges to conducting CALL teacher education in their narratives. By scrutinizing the EFL teacher educators' narratives, it was revealed that EFL teacher educators believed that insufficient infrastructure is an obstacle for conducting CALL teacher education and EFL teachers' use of CALL in classrooms. Extract 6 is a part of Mobin's narrative in which he remarked the two aspects of insufficient infrastructures about CALL teacher education.

(6) ... to me, the **inadequate infrastructures**, including technological tools, is the main challenge to conduct CALL teacher education ... since when we **do not have the necessary tools and applications, how to run CALL teacher education** ... [moreover] **our schools and institutes do not have the necessary technological tools**, so how our EFL teachers use CALL in their classes ...

Insufficient infrastructures include many problems. According to Torsani (2016, p. 72), "the potential problems relating to infrastructures are numerous: among these a lack of or inappropriate hardware (e.g., headphones), obsolescence of software, excessively high-security standards and the impossibility for the teacher to manage the technology autonomously." In other words, insufficient infrastructures can be either pedagogical or institutional. While the former is related to the community of practice and policy-makers' contributions to help EFL teacher educators pay more attention to CALL teacher education, the latter is related to technical support availability.

4.5. Insufficient standards: "*Confusion due to no guidelines*"

Through meticulous analysis of the narratives authored by EFL teacher educators, a lack of CALL standards in the form of recommendation for those who wanted to administrate CALL teacher education can be seen. It can also be inferred from their narratives that the inexistence of CALL standards encompasses the EFL learners and EFL teachers, so it would not be easy for them to use CALL in their L2 learning and teaching. The following extract is part of Amin's narrative in which he described the inexistence of standards as a challenge for conducting CALL teacher education.

(7) ... there are **no well-established guidelines** and standards about CALL teacher education, so teacher educators do not know about the programs' goals and objectives of the programs ... [moreover] I think we need to localized CALL standards that are in line with our educational system, culture, and infrastructures ...

The insufficient standards can have detrimental effects on using CALL in general and CALL teacher education. These standards take a constructivist approach to focus on the role of technology in L2 learning rather than technology use (Healey, 2018). Although different internationally-made standards are available for CALL teacher education (e.g., TESOL, 2008a, 2008b), the imbalance of access to technology across the globe asks for localized standards that consider the differences in infrastructures. Moreover, the standards need to take into account both EFL teachers and students. For students, the technology standards need to help learners "use technology productively, safely, appropriately, and legally; and how learners can think critically about their use of technology" (Healey, 2018, p. 3). This is very important for the practice of CALL by EFL learners. EFL teacher educators need to address the general and expert levels when setting CALL teacher education goals to help EFL teachers use CALL in different contexts. As a whole, making and adapting technology standards can help EFL teachers in low- and high-resource contexts integrate CALL in their classes. This, however, needs that the EFL teacher educators include the related goals and standards in their CALL teacher educations.

4.6. Lack of established methodology: "*Show me the way, leave me alone*"

Finally, the analysis of the narratives authored by the EFL teacher educators showed that some believed in a lack of established methodology to conduct CALL teacher education. They believed that there were many options for them to conduct CALL, leaving them in confusion. However, like the technology standards, the researcher believed that the problem is that the EFL teacher educators' literacy about CALL methodology is low since different empirical studies show how to conduct CALL teacher education. Excerpt 8 is a part of Naser's narratives in which he pointed out the lack of established methodology as a challenge for conducting CALL teacher education in the Iranian context.

(8) ... **there are many options, methodologies, and approaches** to conduct CALL teacher education that **leaves us in a challenging situation** to decide what to choose ...

According to Hubbard (2008), the lack of experience and CALL textbooks lead to teacher educators' confusion to select the appropriate methodology to conduct their CALL teacher education. However, it should not be ignored that the high number of options can be beneficial if the EFL teacher educators have the necessary literacy to select among them. Given that, CALL teacher education can be regarded as an arena for the EFL teachers to practice different options

to integrate technology in their classes (Hong, 2010). In recent years, there have been many approaches and methodologies to conduct CALL teacher education programs (Jeong, 2017). That said, the point is that if the literacy of CALL teacher educators develops, they can use different options to run their programs. One more point is that EFL teacher educators need to develop their literacy about technology-related standards to use the high and sometimes confusing number of CALL options in their CALL teacher education programs.

4.7. Other challenges: Lack of EFL teachers' motivation, insufficient infrastructure in L2 schools and institutes, inertia of EFL teachers

Three of the EFL teacher educators (Reza, Ahmad, and Mobin) mentioned three other challenges for conducting CALL teacher education, including lack of EFL teachers' motivation to participate in such programs (Reza), insufficient CALL infrastructures in L2 schools and institutes (Ahmad), and inertia of EFL teachers (Mobin). Extracts 9, 10 and 11 show how they asserted these challenges in their narratives.

(9) ... whenever I have talked about CALL teacher training programs with EFL teachers, I see their demotivation for those programs... (Reza)

(10) ... what can be the use of CALL teacher education when **we do not have the necessary CALL facilities** in our schools ... (Ahmad)

(11) ... one of the challenges is to change teachers' ideology about using and integrating CALL in their classes by participating in CALL teacher education programs ... (Mobin)

The dominant reason for integrating CALL in EFL classes can be the motivational tools that can help the EFL teachers to develop communication among students (Kim, 2008). EFL teachers in Iran do not become aware of such tools, so they are not motivated to participate in CALL teacher education. It should be the case that some pre-service CALL-related programs help these teachers be familiar with what CALL can offer to motivate them in a step-wise manner to participate in CALL teacher education programs. Moreover, one of the reasons why EFL teachers are not motivated to participate in CALL teacher education is insufficient infrastructure. The policy-makers need to have this in mind when trying to provide new budgets for CALL. If EFL teachers see the required infrastructures, they will become motivated to participate in CALL teacher education programs. The inertia of EFL teachers is another challenge of CALL teacher education. Changing CALL ideology in EFL teachers can be done through new certifications required to continue their teaching profession. Given that, the CALL teacher education programs can be in the form of in-service programs that the EFL teachers should participate in to receive a certificate for continuing their teaching profession.

5. Conclusion and implications

This study was an attempt to investigate Iranian EFL teacher educators' voice about the challenges of conducting CALL teacher education. Through the course of narrative analysis, it was revealed that such challenges as inertia (both concerning EFL teacher educators and EFL teachers), ignorance of training CALL educators, insufficient time to address CALL compared with other topics, insufficient infrastructures, insufficient standards, and lack of established methodology to administer CALL teacher programs were the challenges of CALL teacher education. Moreover, the findings indicated that lack of EFL teachers' motivation to participate in such programs, insufficient CALL infrastructures in L2 schools and institutes, and EFL teachers' inertia were other challenges of conducting CALL teacher education.

It is believed that EFL teacher education programs in general and CALL teacher education in particular have a significant role in helping EFL teacher educators and EFL teachers to overcome the challenges. Since CALL is going to be so typical in EFL teaching and learning that it will be invisible in the future (Kessler & Hubbard, 2017) and become normalized in language pedagogy (Bax, 2003), the policy-makers in the realm of second/foreign language learning and teaching do their best to help teacher educators focus on CALL teacher education as one of the main aspects of teachers' professional development. The policy-makers need to address the required budgets, infrastructures, motivation, etc., to remove the challenges of conducting CALL teacher education.

CALL teacher education needs to be conducted based on an identity-oriented teacher education program to develop EFL teachers' identity concerning CALL. Identity-oriented teacher education helps EFL teacher educators to internalize the necessary CALL-related ideology and practices in EFL teachers. By so doing, the EFL teachers will follow the processes in which they continuously construct and reconstruct their professional identity to integrate CALL into their classes. Consequently, they try to develop their practices based on what CALL has brought to them.

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References

- Ary, D., Jacobs, L. C., Sorensen, C. K., & Walker, D. (2014). *Introduction to Research in Education*. Wadsworth: Cengage Learning.

- Bax, S. (2003). CALL – past, present and future. *System*, 31(1), 13-28.
- Boyatzis, R. E. (1998). *Transforming Qualitative Information: Thematic Analysis and Code Development*. Thousand Oaks: Sage.
- Chai, C. S., & Lim, C. P. (2011). The Internet and teacher education: Traversing between the digitized world and schools. *The Internet and Higher Education*, 14(1), 3-9.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry & Research Design: Choosing among Five Approaches*. Thousand Oaks: Sage.
- Curtin, C., & Shinall, S. (2013). A CAI workshop from expectation to evaluation. *CALICO Journal*, 3(2), 27-29.
- Czarniawska, B. (2004). *Narratives in Social Science Research*. London: Sage.
- Daiute, C. (2014). *Narrative Inquiry: A Dynamic Approach*. Thousand Oaks: Sage.
- Davies, G., Otto, S. E., & Rüschoff, B. (2012). Historical perspectives on CALL. In M. Thomas, H. Reinders, & M. Warschauer, (Eds.), *Contemporary Computer-Assisted Language Learning* (pp. 19-38). London: A&C Black.
- De Fina, A. (2015). Narratives and identity. In A. De Fina, & A. Georgakopoulou (Eds.), *The Handbook of Narrative Analysis* (pp. 351-368). New York: John Wiley & Sons.
- De Fina, A., & Georgakopoulou, A. (2019). *The Handbook of Narrative Analysis*. London: Cambridge University Press.
- Delcloque, P. (2000). History of CALL: The history of computer assisted language learning web exhibition. Accessed March 17, 2020. http://www.ict4lt.org/en/History_of_CALL.pdf
- Dehqan, M., Barjesteh, H., Faraji, M. (2017). Coming to terms with technology: Iranian high school teachers' perceived barriers and proposed solutions. *Teaching English Language*, 11(2), 77-101.
- Dudeney, G., & Hockly, N. (2016). Blended learning in a mobile context: New tools, new learning experiences? In M. McCarthy (Ed.), *Blended Learning for Language Teaching* (pp. 219-233). Cambridge: Cambridge University Press.
- Egbert, J. (2006). Learning in context: Situating language teacher learning in CALL. In P. Hubbard & M. Levy (Eds.), *Teacher Education in CALL* (pp. 167-182). Amsterdam: John Benjamins.
- Egbert, J., Paulus, T. M., & Nakamichi, Y. (2002). The impact of CALL instruction on classroom computer use: A foundation for rethinking technology in teacher education. *Language Learning & Technology*, 6(3), 108-126.
- Ellis, R. (2020). A short history of SLA: Where have we come from and where are we going? *Language Teaching*, (online first), 1-16. <https://doi.org/10.1017/S0261444820000038>
- Fathi, J., & Ebadi, S. (2020). Exploring EFL pre-service teachers' adoption of technology in a CALL program: obstacles, motivators, and maintenance. *Education and Information Technologies*, 25, 3897-3917.
- Guichon, N., & Hauck, M. (2011). Teacher education research in CALL and CMC: More in demand than ever. *ReCALL*, 23(3), 187-199.
- Hanson-Smith, E. (2006). Communities of practice for pre-and in-service teacher education. In P. Hubbard & M. Levy (Eds.), *Teacher Education in CALL* (pp. 301-315). Amsterdam: John Benjamins.
- Healey, D. (2018). TESOL technology standards. *The TESOL Encyclopedia of English Language Teaching*, 1-6. <https://doi.org/10.1002/9781118784235.eelt0453>
- Hedayati, H. F., & Marandi, S. S. (2014). Iranian EFL teachers' perceptions of the difficulties of implementing CALL. *ReCALL*, 26(3), 298-314.

- Hegelheimer, V. (2006). When the technology course is required. In P. Hubbard & M. Levy (Eds.), *Teacher Education in CALL* (pp. 117-133). Amsterdam: John Benjamins.
- Hong, K. H. (2010). CALL teacher education as an impetus for L2 teachers in integrating technology. *ReCALL*, 22(1), 53-69.
- Hubbard, P. & Levy, M. (Eds.). (2006). *Teacher Education in CALL*. Amsterdam: John Benjamins.
- Hubbard, P. (2008). CALL and the future of language teacher education. *CALICO Journal*, 25(2), 175-188.
- Hutchins, E. (1995). *Cognition in the Wild*. Cambridge, MA: MIT Press.
- Jeong, K. O. (2017). Preparing EFL student teachers with new technologies in the Korean context. *Computer Assisted Language Learning*, 30(6), 488-509.
- Johnson, M. (1999). CALL and teacher education: Issues in course design. *CALL-EJ Online*, 1(2), 2-4.
- Kessler, G. (2006). Assessing CALL teacher training: What are we doing and what could we do better. In P. Hubbard & M. Levy (Eds.), *Teacher Education in CALL* (pp. 32-42). Amsterdam: John Benjamins.
- Kessler, G., & Hubbard, P. (2017). Language teacher education and technology. In C. A. Chapelle & S. Sauro (Eds.), *The Handbook of Technology and Second Language Teaching and Learning* (pp. 278-292). Oxford: John Wiley & Sons.
- Kim, H. K. (2008). Beyond motivation: ESL/EFL teachers' perceptions of the role of computers. *CALICO Journal*, 25(2), 241-259.
- Kitade, K. (2015). Second language teacher development through CALL practice: The emergence of teachers' agency. *CALICO Journal*, 32(3), 396-425.
- Koet, T. (1999). ICT and language skills: an integrated course. *ReCALL*, 11(1), 65-71.
- Lomicka, L., & Cooke-Plagwitz, J. (2004). *Teaching with Technology*. Boston: Heinle.
- Lomicka, L., & Lord, G. (2004). Going virtual: Inviting guests into the classroom. In L. Lomicka & G. Cooke-Plagwitz (Eds.), *Teaching with Technology* (pp. 50-55). Boston: Heinle.
- Lortie, D. (1975). *School Teacher: A Sociological Study*. Chicago: University of Chicago Press.
- Marandi, S. S. (2019). Preparing for a digital future: CALL teacher education in Iran. In H. Reinders, C. Coombe, A. Littlejohn, & D. Tafazoli (Eds.), *Innovation in Language Learning and Teaching: The Case of the Middle East and North Africa* (pp. 223-240). Cham: Palgrave.
- Masood, M. (2010). An initial comparison of educational technology courses for training teachers at Malaysian universities: A comparative study. *TOJET*, 9(1), 23-27.
- Partridge, J. (2006). Managing language & IT skills: The life-cycle of an M.A. programme. In P. Hubbard & M. Levy (Eds.), *Teacher Education in CALL* (pp. 63-79). Amsterdam: John Benjamins.
- Prensky, M. (2001). Digital natives, digital immigrants: Part 1. *On the Horizon*, 9, 1-6.
- Riessman, C. K. (2008). *Narrative Methods for the Human Sciences*. Thousand Oaks: Sage.
- Spradley, J. (1979). *The Ethnographic Interview*. New York: Holt, Rinehart & Winston.
- Stockwell, G. (2007). A review of technology choice for teaching language skills and areas in the CALL literature. *ReCALL*, 19(2), 105-120.
- Stockwell, G. (2009). Teacher education in CALL: Teaching teachers to educate themselves. *International Journal of Innovation in Language Learning and Teaching*, 3(1), 99-112.
- Stockwell, G. (2014). Exploring theory in computer-assisted language learning. In X. Deng & R. Seow (Eds.), *Alternative Pedagogies in the English Language & Communication Classroom: Selected Papers from*

- the Fourth CELC Symposium for English Language Teachers* (pp. 25-30). Singapore: Centre for English Language Communication.
- Suchman, L. (2006). *Human-Machine Reconfigurations: Plans and Situated Actions* (2nd ed.). Cambridge: Cambridge University Press.
- TESOL. (2008a). *Standards for ESL/EFL teachers of adults*. Alexandria, VA: TESOL.
- TESOL. (2008b). *TESOL technology standards framework*. Retrieved from http://www.tesol.org/docs/books/bk_technologystandards_framework_721.pdf
- Torsani, S. (2016). *CALL Teacher Education: Language Teachers and Technology Integration*. Leiden: Brill.

Appendix

Predetermined codes used to analyze the biographical narratives (extracted from Hubbard's (2008) study)

Codes	Description
Inertia	This challenge is to change the assumptions of L2 teacher educators in that they think their current teacher education programs are successful, and there is no need to change.
Ignorance	This challenge is lacking qualified CALL educators who are well aware of CALL and its different aspects.
Insufficient time	This refers to <i>insufficient time</i> for adding new materials to teacher education programs. Hence, it is difficult to find new space for CALL in the L2 teacher education programs.
Insufficient infrastructure	This refers to the lack of infrastructures to conduct CALL teacher education. Accordingly, one of the main problems in administrating CALL teacher education is the lack of technological equipment access.
Insufficient standards	Technology standards are those standards that specify different aspects of using CALL at different educational levels. Lack of such standards will hinder conducting CALL teacher education.
Lack of established methodology	This challenge refers to the lack of methods, techniques, textbooks, etc., which can determine the CALL courses' content and structure.

EMERGENCY REMOTE TEACHING AND LEARNING: TECHNOLOGY-BASED INSTRUCTIONAL PLAN ACROSS GRADE LEVELS

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Abstract

Emergency Remote Teaching and Learning (ERTL) has encouraged teachers and students to be autonomous and creative individuals. To create a supporting learning environment, the role of technology is important for classroom activities. Thus, this practical article aims to present an integration of digital applications in designing lesson plans across grade levels in the context of Indonesian EFL learning. The learning targets are focused on teacher education program, upper secondary school, and lower secondary school. Related to the technology, *Canva*, *Zoom Annotation*, *iSpring Suite 9*, and *TikTok* have been selected to accommodate learning process considering its motivating and communicative performance. Despite the limitations, exploring features of technology for educational purpose contributes to strengthening teacher professional development, particularly lesson planning.

Keywords: emergency remote teaching and learning; technology integration; digital learning environment

1. Introduction

Teaching competence is associated with the way teachers deliver lessons. To provide meaningful and relevant materials, teachers are suggested to be selective to adapt, adopt, or develop the available sources (Kusmana & Jaja, 2019; Pulker & Kukulska-Hulme, 2020; Schmeisser, 2020). In order to raise students' engagement in classroom activities, particularly in remote teaching conditions, interactive and appealing materials and media are highly expected. Thus, this lesson plan promotes technology that can provide interesting and interactive activities during emergency remote situation. Four applications are presented

based on their relevance to learning objective in different settings – tertiary level, upper secondary level, and lower secondary level. Those programs have similarities in terms of online platform, cost (free of charge), device (applicable for laptop and cell phone), and project instruction (accessible for collaboration). The implementation of this lesson plan is summarized as follows.

1. *Canva* (graphic design platform) is used for sharpening EFL student teachers' teaching skill in presenting materials during practicum.
2. *Zoom Annotation* (videotelephony software) is integrated for discussing the meaning of song interactively as one of the basic competences in upper secondary school.
3. *iSpring Suite 9* (PowerPoint-based authoring toolkit) is intended to accommodate material presentation as well as assessment in upper secondary schools.
4. *TikTok* (social networking) serves the purpose of enhancing lower secondary students' speaking performance.

As the evidence of its benefits, some studies have shown that the programs applied in this lesson plan are highly useful for enhancing language instruction. A study highlighting the effect of *Canva* as a visual tool in writing class was presented by Susilawati & Chairunnisa (2019). As for *TikTok*, the updated learning innovation is studied by Escamilla-Fajardo et al., (2021). Lecturers' reflection about *Zoom* were examined by Mpungose (2021). Meanwhile, Vikulova et al. (2018) have promoted feature of *iSpring* for teachers in a foreign language class. By taking emergency remote teaching and learning (ERTL) context as the emerging issue for technology integration, these integrated lesson plans give alternative solutions for teachers to apply ICT in EFL instruction, showing how to apply and adapt Canva, Zoom Annotation, iSpring Suite 9, and TikTok for English language learning across grade levels.

2. Lesson Plans

This part shows the use of four application programs – *Canva*, *Zoom Annotation*, *iSpring Suite 9*, and *TikTok*— in a detailed format of lesson plan. All teacher and student activities are presented in tables.

2.1 Canva: Assistance to Present E-Materials in Virtual Teaching Practicum

Objectives:

- Student teachers are able to design e-materials through *Canva* creatively.
- Student teachers are able to apply e-materials in English classroom effectively and confidently.

Target Level: Tertiary Education

Participants: English language student teachers

Estimated Time: 2x50 minutes for teaching; n x 50 for micro teaching performance (depending on the class size)

Resource/materials: speaking: e.g. audio / video, listening: e.g. audio / video, reading: e.g. texts, images, reading log, writing: e.g. writing prompts, images, mind maps; personal laptop; internet connection; virtual meeting platform (*Zoom*, *Google Meet*, *Webex*, etc.); self-reflective report.

Possible problems: The internet access is unstable

Meeting 1				
Stage	Procedure	Time	Interaction	
Warm up	<ul style="list-style-type: none"> - Teacher opens the class and checks the participant attendance. - Teacher asks students randomly to share experience about using template for presentation. - Teacher asks students about their confidence in presenting materials. - Students share their experience in the classroom. - Teacher explains the objectives of the lesson. - Teacher asks students to prepare what English skill they want to teach in secondary school and learning objective they want to achieve based on official standard competence by using <i>Canva</i>. 	10 minutes	Ss-Ss	Ss - T
Before	<ul style="list-style-type: none"> - Students are asked to watch the tutorial videos of using <i>Canva</i> for educational purpose: <ul style="list-style-type: none"> - https://www.youtube.com/watch?v=HwrlvNPWaEA, - https://www.youtube.com/watch?v=N7zG_Sp4r6w - Students are given the opportunity to ask questions or discuss about the video with the teacher and friends. 	25 minutes	Ss-Ss	Ss-T

While	<ul style="list-style-type: none"> - Teacher distributes the worksheet and explains the procedure to accomplish the project. - Meeting 1: lesson planning Homework: material production - Meeting 2: teaching Students consult their lesson plan for approval before making e-materials. - Teacher distributes presentation and observer schedule. 	50 minutes	Ss-T
After	<ul style="list-style-type: none"> - Teacher gives homework for designing the e-materials. - Teacher reviews the learning process. - Teacher closes the class. 	15 minutes	Ss-T
Homework			
	<ul style="list-style-type: none"> - Operate laptops and register an account at www.canva.com - Explore the feature of <i>Canva</i> and try its function - Design and print out e-materials - Send the e-materials to the observers through email 		
Meeting 2	Teaching Performance	1 student =	Ss - Observer
	<ul style="list-style-type: none"> - Preparation: checking the accessible participants in virtual class platform 	30 minutes	
Meeting ...	<ul style="list-style-type: none"> - Students perform micro teaching in turn. - Teacher and two friends in the class play a role as the observers, the other students are the students. - The observers express the feedback. - Students do self-reflective report. 		

Worksheet

Meeting 1

Instruction: Individually, do the project based on this instruction

1. Decide upon the target learners (secondary school students)
2. Select the skill target (Listening, Speaking, Reading, Writing)
3. Make learning objectives
4. Make one-page lesson plan
5. Select the relevant sources from books or Internet
6. Consult your lesson plan with the teacher

Homework

Canva Time: Develop English learning e-materials through *Canva*

1. Log in to your *Canva* account or register if you haven't had the account
2. Select the available layout by scrolling the ready-made templates from the category of performance

3. Design the e-materials by selecting some decoration items to make it more appealing
4. Insert the specific source based on the skill you want to enhance
5. Download the result in various formats to anticipate trouble when sharing it to the students

Meeting 2

1. Instruction: Perform the materials in micro teaching by using virtual meeting platform.
 - Teaching Presentation : 20 minutes
 - Observers' Feedback : 5 minutes
 - Self-reflection report : 5 minutes

****Things to give to observers: one-page lesson plan and e-materials**

Table 2. Presentation scoring rubric for observers

Aspects	Weight	Description and/or Feedback	(0-100%) Score: 1-100
1. Content of e-Materials	3
<ul style="list-style-type: none"> - Clear and correct language use - Creative design - Relevance to lesson plan 			
2. Presentation	1
<ul style="list-style-type: none"> - Clear organization - Adequate preparation 			
3. Discussion skill	2
<ul style="list-style-type: none"> - Effective question response - Time management 			
Total	6

Final Score:

$$(3 \times \dots) + (1 \times \dots) + (2 \times \dots) = \dots = \dots$$

6 **6**

Table 3. Self-reflective report

Self-Reflection
<ul style="list-style-type: none"> - How was my teaching after using materials created from Canva? - How was my students' response about my instruction? - What should I improve for the next teaching materials based on the observers' feedback?

2.2. Zoom Annotation: Fun Learning to Practice Speaking Skill Using Disney Movies Soundtrack

Target Learners: 11th grade (upper secondary schools)

Objective:

Students are able to interpret the meaning or moral value of the song by paying attention to social functions and linguistic elements correctly related with teenage life.

Time: 2 x 45 minutes

Material: song lyrics related to teenage life.

Tools: Handphone, Laptop, Internet Connection

Possible Problems: Requires a lot of internet quota, problematic internet network and not all students have gadget facilities to access the learning process.

Preliminary Activities	Time
<ul style="list-style-type: none"> - Teacher opens greetings and prayers to start learning through <i>Zoom</i> application. (www.zoom.us/meetings) - Teacher checks the attendance of students as an attitude of discipline. - Teacher tells the learning material to be discussed at the meeting at that time. - Teacher conveys the learning objectives. - Teacher explains the learning implementation mechanism according to the learning steps. 	5 minutes
Core Activities	
LITERACY <ul style="list-style-type: none"> - Students are asked to listen to a song entitled “Speechless” by Naomi Scott through share screen in Zoom application and they should interpret the meaning of song regarding social functions and linguistic elements which related with teenage life. 	35 minutes
<ul style="list-style-type: none"> ✓ https://www.youtube.com/watch?v=mw5VIEIvuMI (Soundtrack song of Disney movies entitled Aladdin with English subtitles) ✓ https://www.youtube.com/watch?v=2SFPGyQZNAQ (Soundtrack song of Disney movies entitled Aladdin with Indonesian subtitles) 	
CRITICAL THINKING <ul style="list-style-type: none"> - Teacher asks several questions to find out students' understanding of social functions and linguistic elements of the song. Then, teacher also asks the students about the moral value of the song through share screen menu in <i>Zoom</i> application 	

-
- Students answer some of the teacher's questions to convey their ideas based on the song.

COLLABORATION

- Teacher and students jointly discuss the meaning and moral value of soundtrack song of Disney movies by compared it with students' daily life. Then, teacher activates the menu of *Zoom Annotation* to make sure that the students will participate in the discussion using draw or text option for conveying their ideas.

COMMUNICATION

- Teacher directs students to choose one of students' favorite soundtrack songs in Disney movies and each students should sing the song for no more than one minute and after that explain the moral value of the song clearly.

CREATIVITY

- Teacher directs students to convey their ideas in interpreting the moral value of the song to practice the speaking skill.

Closing Activities

-
- | | |
|--|-----------|
| <ul style="list-style-type: none"> - Teacher and students conclude the learning outcomes at this meeting. | 5 minutes |
| <ul style="list-style-type: none"> - Teacher closes the lesson with greetings. | |
-

Worksheet

Instruction: Choose one of soundtrack songs of Disney movies which is your favourite song and sing the song for no more than one minute. Then, you should convey the moral value of that song clearly.

Theme: Soundtrack song of Disney movies which relates to teenage life

Time: One minute

1. Choose one of soundtrack songs from Disney movies that you like the most.
2. Please sing the song for no more than one minute.
3. Explain the moral value of the song clearly.

Table 5. Scoring Rubric

Criteria	Max. score	Actual score
Fluency (Speech, Word Stress and Intonation)– 14 Points		
Clear pronunciation		
Good intonation	3	-
Appropriate word stress	3	-
Clear and fluent volume	4	-
Appropriate tempo	4	-
Total	14	-
Body Language – 18 Points		
Indicates the type of songs (happy, sad, excited, etc) with body language	4	-
	4	-

Uses appropriate facial expressions			
Controls the movements	5	-	
Makes eye contact with the audience	5	-	
Total	18	-	
Appreciation – 18 Points			
Feels the atmosphere of song	6	-	
Expresses the song appropriately	6	-	
Memorizes song lyrics	6	-	
Total	18	-	
Comprehension – 50 Points			
Understands the meaning of song			
Can interpret the moral value of song	30	-	
Total	50	-	
Grand Total	100	-	

Σ Score Acquisition Assessment

Maximum Score	: 100
A = 80–100	: Very Good
B = 70–79	: Good
C = 60–69	: Enough
D = <60	: Less

2.3. Using *iSpring Suite 9* for Learning Narrative Text

Learner Target: First year in upper secondary schools/vocational high school

Objective: Students are able to identify, make, and tell the story about narrative text.

Time: 2x45 minutes

Possible Problems: the internet connection is slow, students' devices are not Android-based

Resources:

- a. *iSpring Suite 9* can explain the material and evaluation about narrative text, it can be opened by web browser, <http://gg.gg/ompsx>
- b. laptop/mobile phone, internet connection and virtual meeting platform (e.g. *Zoom*, *Google Meet*, etc.)

Learning Models	Learning activity	Time
Greeting	<ul style="list-style-type: none"> - Greeting - Attention to class comfort and cleanliness - Teacher asks questions related to the material to be studied. - Teacher conveys the basic competencies to be taught. - Teacher conveys the learning objectives. 	15'
Core	<ul style="list-style-type: none"> - Students pay attention to media in the form of a web browser related to narrative text. - Students read the material of narrative text. - Students look at the explanation of narrative text in a web browser (http://gg.gg/ompsx). - Students listen to the teacher's explanation. - Teacher asks the students to make a group consisting of 4 students to discuss about narrative text. - Teacher gives them a story, then the students identify which part is orientation, complication and resolution. - Teacher gives evaluation about narrative text especially in reading skill using <i>iSpring Suite 9</i> in web browser (http://gg.gg/ompsx). 	70'
Closing	<ul style="list-style-type: none"> - Teacher makes the conclusions on all students' answers. - Teacher provides feedback on the learning process. - Students make a summary of the meaning, structure and rules of narrative text. - Teacher gives home assignments related to narrative text in the form of a link that can be opened via a laptop or cellphone. 	5'

Worksheet displayed in iSpring Suite 9

The screenshot shows a worksheet titled "Question 1 of 10" with a score of 0 of 100. The main content area contains a narrative text about two roosters fighting for dominance in a farm yard. Below the text are several questions and answer options. On the right side, there is a sidebar titled "OUTLINE" and "NOTES" with a search bar and a list of numbered items, some of which are marked with a red checkmark. A "SUBMIT" button is located at the bottom right of the main content area.

Figure 1. The text and questions

This screenshot shows the same worksheet after an attempt. The user has selected the first option, "The eagle had watched them all day," which is marked with a green checkmark. A red box highlights the word "Incorrect" next to the second option, "The roosters were fighting to flap their wings." A message box at the bottom indicates that the user did not choose the correct response. The sidebar and "CONTINUE >" button are visible on the right.

Figure 2. The feedback for the incorrect answer

This screenshot shows the worksheet again, but now with a reminder message. A pop-up window in the center says, "You must complete the question before submitting." An "OK" button is at the bottom of the message box. The sidebar and "SUBMIT" button are visible on the right.

Figure 3. Reminder if no answer is selected

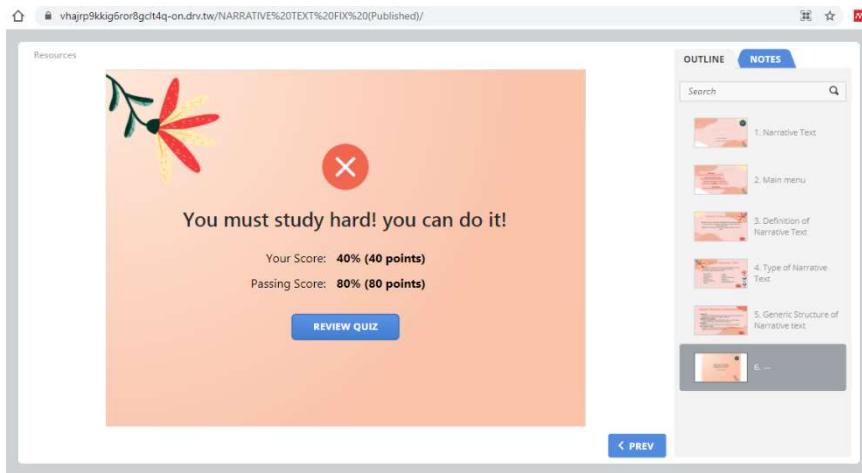


Figure 4. Results of students' attempt

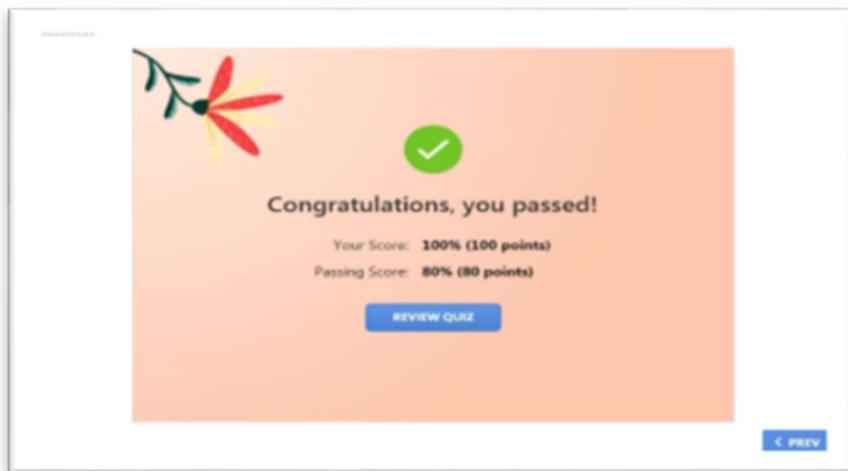


Figure 5. Congratulating page

2.4. *TikTok* Application: Fun Experience in Sharing Students' Past Personal Stories

- Education Level: Second year of junior high school (Lower Secondary Schools)
- Time: 50 minutes
- Materials: Personal Recount Text used to provide and request about information related to personal experiences in the past.
- Objective: Students are able to tell personal experiences in the past by paying attention to a social function, text structure, and language features correctly and appropriately.
- Tools: Smartphone, internet connection
- Possible Problems: Requires a lot of internet quota and problematic internet network

Pre-Stage		
Learning Activities	Time	
<ul style="list-style-type: none"> - Teacher opens greetings and prayers to start learning through the Whatsapp group. https://www.whatsapp.com/ - Teacher checks the attendance of students as an attitude of discipline. - Teacher tells the learning material to be discussed at the meeting at that time. - Teacher conveys the learning objectives at the meeting that takes place. - Teacher explains the learning implementation mechanism according to the learning steps. 		
While-Stage		
Learning Activities	Time	
LITERACY <ul style="list-style-type: none"> - Students are asked to open the <i>TikTok</i> application and observe videos made by the teacher through the <i>TikTok</i> application regarding social functions, text structures, language features of recount text about personal experience. <ol style="list-style-type: none"> 1. https://vt.tiktok.com/ZSJLfUoCV/ (Explanation of recount text) 2. https://vt.tiktok.com/ZSJLffeUk/ (Explanation of recount text) 3. https://vt.tiktok.com/ZSJLfSpPr/ (Text structure and example of recount text) 4. https://vt.tiktok.com/ZSJLfPGS6/ (Example of recount text) 		

5. <https://vt.tiktok.com/ZSJLfDfnU/>

(Example of recount text)

6. <https://vt.tiktok.com/ZSJLfkT3w/>

(Example of recount text)

CRITICAL THINKING

- Teacher asks several questions to find out students' understanding of social functions, text structures, and language features recounting text through the *TikTok* application's comments column.
- Students answer the questions obtained through observing videos played by the teacher through the *TikTok* application's comments column.

COLLABORATION

- Teacher and students jointly discuss examples of recount text and social functions, text structures, and language features of recount text about the personal experience through the comments column.

COMMUNICATION

- Teacher directs students to write important related matters (social functions, text structure, language features) received from the *TikTok* video to form a recount text about personal experience.

CREATIVITY

- Teacher directs students to make a recount text about a personal experience with the right structure.

POST-STAGE

Learning Activities	Time
<ul style="list-style-type: none"> - Teacher gives the task of telling a recount text about personal experiences orally through the <i>TikTok</i> application with a time limit set by the teacher. - Teacher closes the lesson with greetings. 	10 minutes

Worksheet

Create a spoken personal recount text and perform it in the *TikTok* application!

Theme: Experience of learning during Covid 19 Pandemic

Time: One minute

Table 7. Scoring Rubric

No.	Aspect Graded	5	4	3	2	1	Additional Notes
		Excellent	Good	Fair	Poor	Very poor	
1.	Fluency						
2.	Accuracy						
3.	Clarity						
4.	Intonation						
5.	Volume						
6.	Content						

**Maximum score = 30

3. Conclusion

This practical paper has shown that constructing lesson plans with technology integration during emergency remote teaching and learning requires creativity and provides meaningful experience. In this context, getting familiar with technology is necessary in order to develop an effective e-learning environment. Additionally, teacher skill in creating a lesson plan before implementation supports teacher professional development as teachers increase their knowledge through internet searches and practise using digital information sources (*CPD Standards: Definitions and examples of learning activities*, 2016). Accordingly, it is expected that English teachers' TPACK confidence can be improved.

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References

- CPD Standards: Definitions and examples of learning activities. (2016). <http://sciencecouncil.org/web/wp-content/uploads/2016/01/CPD-Learning-Activities.pdf>
- Escamilla-Fajardo, P., Alguacil, M., & López-Carril, S. (2021). Incorporating TikTok in higher education: Pedagogical perspectives from a corporal expression sport sciences course. *Journal of Hospitality, Leisure, Sport and Tourism Education*, 28, 100302. <https://doi.org/10.1016/j.jhlste.2021.100302>
- Kusmana, S., & Jaja, J. (2019). Study of legends and folklores as efforts to develop instructional materials in high schools. In *International Symposium on Social Sciences, Education, and Humanities (ISSEH 2018)* (pp. 229-231). Atlantis Press. <https://doi.org/10.2991/isseh-18.2019.54>
- Mpungose, C. B. (2021). Lecturers' reflections on use of Zoom video conferencing technology for e-learning at a South African university in the context of coronavirus. *African Identities*, 1-17. <https://doi.org/10.1080/14725843.2021.1902268>
- Pulker, H., & Kukulska-Hulme, A. (2020). Openness reexamined: teachers' practices with open educational

resources in online language teaching. *Distance Education*, 41(2), 216-229.
<https://doi.org/10.1080/01587919.2020.1757412>

Schmeisser, T. (2020). Using a blend of the Knowledge Framework and the Project Framework to develop materials for teaching public speaking. *Creative Components*.
<https://lib.dr.iastate.edu/creativecomponents/547>

Susilawati, A., & Chairunnisa, S. (2019). Investigating the effect of Canva on students' writing skills. *ENGLISH REVIEW: Journal of English Education*, 7(2), 169-176.
<https://doi.org/10.25134/erjee.v7i2.1800>

Vikulova, L. G., Makarova, I. V., & Gerasimova, S. A. (2018). Features of iSpring suite learning platform for teaching foreign languages. *Espacios*, 39(20), 5. <https://www.elibrary.ru/item.asp?id=34879768>

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Teaching English with Technology

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