Examining Algerian EFL Teachers' Acceptance, Online Reading Strategies, and ICT Knowledge during Covid-19

Medjahed Mohamed Raji, University Mustapha Stambouli, Mascara, mraji.medjahed@univ-mascara.dz
Pr. Yahiaoui Habib, University Mustapha Stambouli,Mascara h.yahiaoui@univ-mascara.dz

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Abstract:

In times of the global COVID-19 pandemic, educational institutions, including foreign language instruction, have been suspended and classroom-based teaching standards have immediately moved to online learning platforms. This study aims to examine how Algerian English as a foreign language (EFL) teachers accepted and acquired information and communication technology (ICT) knowledge for online reading class performance. To meet this end, the researcher used a semi-structured online interview to collect data from five Algerian EFL teachers employed at three various universities in Algeria. The research results showed that the acquisition of ICT knowledge involved teachers going through different phases. EFL teachers acquired knowledge about ICT and online reading strategies through self-exposure to existing tutorials, peer-to-peer learning, active collaboration with their students; continuous teaching training, learning from online learning platforms experts, use of digital reading platforms, and engagement in regular workshops. However, teachers pointed out the issue of low confidence when dealing with online learning programs

Keywords: ICT knowledge; Online teaching; Reading Strategies; Covid-19

الملخص:

في فترة جائحة كوفيد-19، تم تعليق المؤسسات التعليمية، بما في ذلك تعليم اللغات الأجنبية، وانتقلت معايير التدريس في الفصول الدراسية على الفور إلى منصات التعلم عبر الإنترنت. تهدف هذه الدراسة على اكتشاف كيف اكتسب مدرسو اللغة الإنجليزية كلغة أجنبية (EFL) معرفة بتكنولوجيا المعلومات والاتصالات (ICT) لأداء الدروس عبر الإنترنت. لتحقيق هذه الغاية، أجرى الباحث مقابلات عن طريق الانترنت لجمع البيانات من خمسة مدرسين جزائريين للغة الإنجليزية كلغة أجنبية من ثلاث جامعات مختلفة. وأظهرت نتائج البحث أن اكتساب المعرفة بتكنولوجيا المعلومات والاتصالات جاء من خلال مرور المدرسين بمراحل مختلفة. وعلى وجه التحديد، اكتسب مدرسو اللغة الإنجليزية كلغة أجنبية المعرفة حول تكنولوجيا المعلومات والاتصالات من خلال التعرض الذاتي للدروس التعليمية المتوفرة، والتعلم من نظير إلى نظير، والتعاون النشط مع طلابهم، والتدريب المستمر على التدريس عبر الانترنت، والتعلم من خبراء منصات التعلم عبر الإنترنت، استخدام منصات القراءة الرقمية، والمشاركة في ورش العمل المنتظمة. ومع ذلك، أشار المعلمون إلى مشكلة تدني الثقة عند التعامل مع برامج التعلم عبر الإنترنت.

الكلمات المفتاحية: معرفة تكنولوجيا المعلومات والاتصال، التعليم عن بعد، استراتيجيات القراءة، كوفيد 19

Medjahed Mohamed raji
mraji.medjahed@univ-mascara.dz

Introduction

Since the start of 2020, the COVID-19 (Coronavirus) pandemic has seriously affected people's lives and generated worldwide alerts. The World Health Organisation (WHO) announced that the confirmed cases have globally touched beyond 250 million and the death toll has risen to 5 million around the world (WHO, 2021). The authorities of many countries, Algeria included, have attempted to reduce the critical consequences of this pandemic by initiating crisis responses and establishing various precautionary actions that involve self-quarantine and physical distancing as the new normality. Moreover, education has also been considerably affected as countries strive to minimize the risks of infection and transmission among students at all education levels. Educational institutions, schools, and universities were closed, and classroom-based education shifted to online teaching and learning. Accordingly, this implied that teachers were forced to suddenly readjust and provide themselves with ICT knowledge to lead online lessons. Language teachers were therefore forced to remodel their conventionally offered courses to suit these new online platforms. Admittedly, language teachers' views about teaching and learning are usually divergent from the expectations and abilities needed to operate in an online teaching and learning situation. Online teaching also requires different student feedback, teacher-and-student relationships, classroom dynamics and control, learning and teaching exercises, and teaching strategies. Therefore, teachers must significantly change their teaching approaches for online reading classrooms**.**

Medjahed Mohamed raji

mraji.medjahed@univ-mascara.dz

In Algeria, EFL teachers were obliged to move to online teaching. They faced many challenges and difficulties in implementing their online courses. Among the most commonly used online platforms were –Moodle-, google meet, and zoom. However, teachers had no training or knowledge about how to use such programs, making it even more difficult to adapt their teaching methods to the new reality. Even before the pandemic, teachers' had trouble with it very often due to a lack of software and hardware and other times because of the inability to correctly involve technology in educational purposes. The move from conventional teaching to online teaching was sudden in a way that made teachers move accordingly. Within the issue, the following questions are raised:

1- Did the teachers have enough knowledge and training about ICTs and online reading strategies before moving to online teaching?
2- What were the main issues teachers face when using online platforms?
3- How did teachers cope with the sudden change in teaching way?

In this regard, this research aims at investigating how Algerian university EFL teachers acquired ICT knowledge about online learning and reading platforms and how they reacted to the sudden change due to the COVID-19 pandemic. Until now, no studies had been done in this specific area of research. The results of this investigation are expected to widen the understanding of how Algerian EFL teachers deal with online teaching, which may help teachers in future issues or general contexts. This study was inspired by Kinchai's (2020) work about Thai EFL Teachers.

Literature Review

Medjahed Mohamed raji
mraji.medjahed@univ-mascara.dz

Technological improvements have doubled the number of online resources and induced many advantages and certain limitations to language teaching. There is proof that studying in an online mode involves students' learning, resulting in boosted motivation and a student-centered method (Chapelle, 2005). Besides, language instruction has also been complemented by technological tools, namely smartphones, pcs, and tablets, which enable learners to go past the time and space constraints of the classroom and make language learning more pleasant and interactive (Demouy et al., 2016). Mobile phones are useful tools for teachers and can make teaching more efficient (Evans, 2008; Liu et al., 2008). Given these advantages, mobile learning and teaching should be included in an EFL teaching context to promote learner autonomy. It has been claimed that online language instruction is comparable to on-site teaching in terms of students' academic results (Magagula & Ngwenya, 2004) and achievement (Palmer, 2012). Nevertheless, there are some limitations associated with teaching in an online context including the convenience of the teaching and learning materials (Bates, 2005; Brown, 1997).

Society interests and engagements and individual constraints, including age, are constituents that represent a more prominent position in online versus on-site teaching (Bailey et al., 2014; Johnson, 2015). Certainly, online teaching requires more adaptable and needs-oriented teaching. Online instruction demands language teachers to have pedagogical experience and competencies correlated with ICT

Medjahed Mohamed raji

mraji.medjahed@univ-mascara.dz

knowledge. Besides, online program and material progress is complicated and necessitates an extended and meticulous planning process as well as technology synthesis to best promote individual diversity, the difference in plans, other life engagements, and educational evaluation (e.g., Rovai, 2003; Grant & Thornton, 2007; Rovai & Downey, 2010). Furthermore, to give online instruction effectively, a more flexible teaching method is needed (Bawane & Spector, 2009). There are differences between the online conventional teaching settings that require the evolution of specific online teaching competencies (Roddy et al. 2017). The teaching and learning techniques in online teaching vary from those in on-site teaching (Hung et al., 2010) and rely on different online instruments, methods, and software, which entails an important level of ICT proficiency (Volery & Lord, 2000).

The fast transfer to online classes during the COVID-19 pandemic is crucial to students' learning and overwhelming for language teachers. For the last decade, the Algerian government emphasizes the integration of ICT into its educational system. However, the integration only concerns some obsolete technological tools, such as data shows and computers. It was only until the pandemic that they started to plan the integration of some learning platforms such as –Moodle- and –Easyclass-. Other communication tools such as –Zoom- and –Google meet- were also used. However, most university teachers had no familiarity with such software and learning platforms and needed to adapt as quickly as possible.

Notwithstanding the increase of research validating the advantages of technology use in EFL classrooms, the majority of Algerian EFL teachers still require ICT knowledge. The technology used in online teaching needs a basic understanding of each online teaching application and learning how to use such applications to teach all language skills in English through an online platform (Jinda & Bangthamai, 2016; Nomnian & Arphattananon, 2018; Ruangrong et al., 2014). Reading was also one of the most impacted language skills. Teachers and learners were obliged to utilize digital reading materials such as e-books and reading websites. Furthermore, up until before the pandemic, digital literacy was mainly implemented as a part of a blended teaching approach. During the pandemic, teachers needed to suddenly incorporate online reading tools effectively. Nevertheless, the usage of digital texts demands new methods of learning and teaching because digital texts have effectively altered the act of reading and learners' behavior on it. More than two decades ago, Frechette (2002) predicted that digital technology "… will alter our very conception of basic terms such as reading, writing, and text." (p. 3).

As previously discussed, until now, technology has essentially been used as a tool in blended learning and teaching to increase students' learning commitment and to improve target language exposure outside the classroom. Nevertheless, the COVID-19 outbreak has required that a full online teaching approach be immediately utilized, and research is lacking to analyze how language teachers acquire

Medjahed Mohamed raji
mraji.medjahed@univ-mascara.dz

ICT literacy to change their teaching standards from classroom-based instruction to a completely online form.

The COVID-19 epidemic has provoked an accelerated classroom-to-online teaching model change, which claims the integration of technology into language teaching. To adequately control this transformation, language teachers must develop their knowledge of ICT to manage their classes through online teaching platforms. Teachers are still asked to help learners in their language lessons (Bolliger & Martindale, 2004; Roddy et al., 2017) and teachers must own sufficient ICT skills (Kukulska-Hulme, 2009) and enough knowledge of technology and pedagogy (Tai et al., 2015). Until now, only one experimental research done by Gao and Zhby (2020) has studied how EFL university teachers cope with pedagogical difficulties correlated to conducting online lessons due to the pandemic. Using a qualitative analysis method, the study shows that language teachers agreed on the advantages, weaknesses, and aspects of online teaching. The in-depth interviews also unveil that language teachers in China increased their technological competencies by analysing demands in terms of language content and technological assistance, studying to teach online classes, and agreeing on the necessity to combine technology to manage their online lectures (Gao & Zhang, 2020). However, the results may not be applied to the Algerian EFL context where technology has not been immediately embraced by educators and university language teachers. The role of online instruction in Algeria has been restricted to blended learning, rather than delivering lessons through complete online modes.

Medjahed Mohamed raji
mraji.medjahed@univ-mascara.dz

Research Methodology

The study utilized the constructivism theory to create meanings from university teachers' answers that are based on teaching experience, beliefs, and other views. A qualitative research design is adequate for research involved with difficult multi-layered meanings (Merriam, 1998). The research approach adopted was based on Creswell's method (2009) and Kenchai's (2020) study.

Participants

The participants were five EFL university teachers from various Algerian universities with an average of 5 years of teaching experience. All teachers were contacted via e-mails and all of their shared data was kept private.

Research Tool

A semi-structured interview was used as the main research tool. Semi-structured interviews were used to allow participants to "answer the question in any way they want and encourages them to do so in a relatively extended manner" (Borg, 2015, p. 496). These interviews have been successfully used in many research studies and are seen as an efficient tool for extensive investigations (Miles et al., 2014). The interview was created to gather participants' personal information using open-ended questions followed by extended questions related to the research questions (Creswell, 2014). Questions were asked according to three phases: Before Pandemic – During Pandemic – and After – Pandemic. Each phase contained the answers of two teachers according to their experience with online instruction.

Findings and Discussion

Medjahed Mohamed raji

mraji.medjahed@univ-mascara.dz

The following table contains personal information about the participants as well as the tools and phases they were involved with.

Table 1: Teachers' Information

Name	Gender	Age	Qualification	University	Teaching Platform	Phase	Interview Platform
Mr.Hadji Mohamed	Male	48	University Teacher	University Of Saida	Moodle Easy class	Before Pandemic	Google meet
Mr.Cherifi Mokhtar	Male	25	University Teacher	University Of Saida	Moodle Zoom	Before Pandemic	Google meet
Ms.Abder Djahida	Female	/	University Teacher	University Of Tiaret	Moodle Zoom	During Pandemic	Google meet
Mr.Sell Ridha	Male	27	University Teacher	University Of Barika	Moodle Easy class	During Pandemic	Google meet
Ms. Kdr Badra	Female	/	University Teacher	University Of Saida	Moodle Zoom	After Pandemic	Google meet

According to table (1), Algerian teachers mainly dealt with a platform called –Moodle- which only involved the deposition of courses. However, other teachers have worked with –Easyclass-, and –Zoom-. Teachers admitted that they had to learn about such software by watching tutorials on Youtube. Also, teachers at the University of Saida for example had a small training of three days about how to use –Moodle- appropriately. They were managing their online classes according to learners' needs and engagement in online

Medjahed Mohamed raji

mraji.medjahed@univ-mascara.dz

learning platforms. Last but not least, they continued to learn about online teaching software, either by exposing themselves to tutorials or by attending workshops organized by their respective universities. A discussion of each phase and each teacher's interview are discussed in the following sections.

Phase 1: Before the Pandemic

Mr. Mohamed Hadji – Teaching Experience (10 years) – TEFL

1.   " In my personal opinion, I would say that teaching online is a good idea, however, there are many flaws that should be tackled such as trainers are not qualified, trainees are often unable to master the Moodle platform tools, Moodle platform users – students – are often unable to have access to it, so this sort of teaching is not efficient for them "

2.   " During the outbreak of covid19, when Algeria was hit by this pandemic, teachers at the university took very quick training on how to post their online lectures with activities, just to shift from in-class teaching to online teaching. "

3.   "To teach in that short period, I tried to follow some tutorials and sessions on YouTube, so I could handle it and have some skills on how to perform it online. Further, I used some useful teacher books to cover what students needed"

4.   "As I stated earlier, I started to consult different videos on YouTube to widen my understanding as well as have an idea of how to manage Moodle and Zoom"

5.   "For me, since I have few qualifications in Computer Science, and I am fully skilled, I did not find difficulties in understanding videos explaining how to manage Moodle Platform, so I easily adjusted myself to it by reading about it

as well as consulting other social networks such as Facebook in which many groups were available to discuss and provide help for solving some online teaching issues in Moodle Platform. Further, I did not find obstacles posting lectures online because I had already taught the subject of CEO – Comprehension et Expression Orale"

Mr. Cherifi Mokhtar – Teaching Experience (5 Years) - TEFL

1- "Teaching online has served me greatly, especially during the pandemic and since universities were closed, I find that using Google meet is the perfect way to keep the learning going "

2- "I needed to prepare my students first by providing them with some details concerning learning online and how to arrange themselves at their homes then, I prepared my course materials to be compatible with the new situation which is online teaching "

3- "Luckily I had training before so I was already prepared to do so "

4- "This question is answered above I guess, in addition, I learned more about online platforms by watching YouTube tutorials concerning different platforms and also getting to know other online reading platforms "

5- "It was challenging at first since it was a new situation for me, however, having a virtual classroom was almost identical to our usual real classrooms, thus, adapting to it was easier than expected, however, there were some differences like preparing different ICT equipment such as the internet, pc. for a successful course "

According to teachers' responses, when they were confronted with the new reality, Algerian EFL teachers developed their ICT knowledge by watching tutorials on YouTube, using some books, or exchanging experiences in Facebook groups. Moreover, they were trying to depict the best online reading platforms for their students. They pointed out the many limitations they had with the –Moodle-platforms mainly due to technical issues. Moreover, they asserted that they had very little time to adapt to the new situation, and the change was sudden.

Phase 2: During the Pandemic

Mr. Sellali Redha – Teaching Experience (5 years) – TEFL

1. "I regard online teaching as a necessary resort to keep up with the unforeseen changes in education due to the Covid-19 outbreak. It certainly played a major role in connecting university facilities with students and saved them the trouble of missing out on years' worth of academic training. It is, however, not necessarily the best option for teaching university students since it resulted in a somewhat slower learning process for students who had not been quite ready for it, let alone the great decrease in academic integrity in test-taking. "

2. "Aside from technical issues such as slow and/or choppy internet connection, most students do not find online learning as engaging as learning face to face. During live sessions, you cannot be sure that students are engaged with the teacher because most of their cameras and microphones are turned off. "

3. "We were instructed to use the -Easyclass- platform to post lessons for students. The use of the platform, however, failed miserably. I resorted sometimes to using a private Facebook group for my students and often holding a live session on Zoom. Lately, Moodle is my main platform due to the decrease of restraints of Covid protocols. Furthermore, for online reading classes, I assigned my students to use Grammarly and Z-Library and helped them with the reading material selection"

4. "Technical issues are inevitable during any kind of online learning. The use of online learning websites and software is child's play, but the hardest inconveniences admittedly happen during synchronous learning due to choppy internet connections. "

Djahida Abderrahmane – Teaching Experience (6 years) – TEFL

1- "Online teaching, nowadays, is inevitable. It is the new paradigm that fits the 21st educational requirements. Online teaching is significant because it engages students and teachers in online learning environments and permits collaboration, discussion, interaction, and self-regulation. No one can deny the implications of such ."

2- "Yes, many issues manifest before, while, and after delivering an online course. Sometimes it is hard to maintain students' engagement while learning online due to their lack of competence in using online tools, lack of motivation, or course content that might be

beyond their level; especially with learners who need more feedback and assistance."

3- "In my case, I used online materials to develop students reading skills, for example, e-books, audio texts, and scripts which I followed with activities that enable students to test their comprehension and practice the language used. Gamification was one of the activities used. As far as am concerned, I found games useful to motivate learners to engage in the reading class and break the monotony online."

4- "One of the methods that seem helpful during online teaching is making research about how to overcome such problems for example referring to YouTube. In some cases, this seemed difficult too, so asking for help can solve the issue."

5- "Online teaching is motivating, yet demanding. It needs careful preparation of course content, materials, and pedagogy. In my experience, most students are highly engaged, however, some pitfalls must be considered."

Teachers were forced to work and adapt their teaching online during the pandemic. Among the limitations faced, they talked about technical issues related to learning platforms which have resulted in a slow learning process. Internet choppiness was also one of the main issues. However, they did not stick only to –Moodle- or –Easyclass- platforms but often moved to Facebook groups to share courses with their learners, or seek help from their colleagues. They used – Zoom- to have a direct connection with learners. They

Medjahed Mohamed raji

mraji.medjahed@univ-mascara.dz

admitted that students were not completely engaged in online platforms mainly because of their unfamiliarity with the platforms, and also due to their lack of readiness for such a situation.

Phase 3: After the Pandemic

Ms. Kaddari Badra – Teaching Experience (5 years) – TEFL

1. "The teaching process in this pandemic situation was difficult in all ways because there are many obstacles that we as teachers, face and we try to find the appropriate solutions to teach through online teaching. "

2. "Yes, I am still learning how to use teaching and online reading platforms to teach and to be updated with technology."

3. "Now, I think I can manage some techniques and strategies in using technology for teaching but I need to learn more to be fast in doing so. "

4. "Yes, I sometimes resort to workshops to help myself in this process and to facilitate things for me. "

5. "Since online teaching became one of the most important factors in educating national field, teachers have to attend courses concerning how to teach online and how to use technology in online teaching and to be well trained to do that"

After the pandemic recrudescence, teachers' asserted that the teaching process during the pandemic was very difficult. They confirmed that even if the situation is fairly stable, and things are getting back to normal, they are still trying to learn more about using online platforms. Teachers are engaged in

workshops and training more often. They claimed that they learned how to manage online classes, and acquired many skills and strategies related to online learning. Accordingly, they encourage getting involved in online platforms and learning how to effectively take advantage of them.

Conclusion

The current investigation was intended to examine EFL University teachers' acceptance, online strategy use, and ICT acquisition during the COVID-19 epidemic in Algeria. Results show that Algerian EFL Teachers had little or no knowledge about online learning platforms and needed to act fast. Precisely, EFL teachers applied six techniques to cope with the rapid shift and to obtain their ICT knowledge: self-exposure to existing online tutorials (Youtube, Facebook groups), peer-to-peer learning (via Facebook groups), student-to-teacher collaboration, ongoing teaching practice, use of adequate and easy online reading platforms (Grammarly, Z-library), and online learning platforms workshops. Their ICT literacy acquisition happened in three main phases; before, during, and after the pandemic. The main issues faced by teachers have mainly been related to technical issues or student engagement. Next, the findings also increased the researchers' perception of moving conventional teaching to online instruction, which was very infrequently realized before the COVID-19 pandemic in Algerian universities. These skills will be remarkably important for future complex situations that need complete online instruction. Nonetheless, the sample used in this research cannot be generalized to all of

Medjahed Mohamed raji

mraji.medjahed@univ-mascara.dz

the Algerian context, however, it can give a certain vision for the current teaching situation related to the pandemic context.

Bibliography

1-Bailey, D., Park, I., & Haji, S. (2019). An investigation of Facebook for language learning: Better understanding perceptions and participation. *CALL-EJ*, 18(2), 12-28. Bates, A. (2005). *Technology, e-Learning, and Distance Education*. Routledge

2-Bolliger, D., & Martindale, T. (2004). Key factors for determining student satisfaction in online courses. *International Journal On E-Learning*, 6, 61-67 Bawana, J., & Spector, J. (2009). Prioritization of online instructor roles: implications for competency-based teacher education programs. *Distance Education*, 30(3), 383-397. https://doi.org/10.1080/01587910903236536

3-Chapelle, C. (2005). Computer-assisted language learning. In E. Hinkel, *Handbook of Research in Second Language Teaching and Learning* (pp. 743–755). Lawrence Erlbaum Associates.

4-Creswell, J. (2009). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. USA: SAGE Publication Inc

5-Demouy, V., Jones, A., Kan, Q., Kukulska-Hulme, A., & Eardley, A. (2016). Why and how do distance learners use mobile devices for language learning? *The Eurocall Review*, 24(1), 10. https://doi.org/10.4995/eurocall.2016.5663

6-Evans, C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. *Computers & Education*, 50(2), 491-498. https://doi.org/10.1016/j.compedu.2007.09.016

7-Frechette, J.D. (2002). Developing media literacy in cyberspace. London: Praeger.
Giebelhausen, R. (2015). The paperless music classroom. General Music Today, 29(2),
45–49.

7-Gao, L., & Zhang, L. (2020). Teacher Learning in Difficult Times: Examining Foreign Language Teachers' Cognitions About Online Teaching to Tide Over COVID-19. *Frontiers in Psychology*, 11. https://doi.org/10.3389/fpsyg.2020.549653

8-Grant, M., & Thornton, H. (2007). Best practices in undergraduate adult-centered online learning: mechanisms for course design and delivery. *MERLOT Journal of Online Learning and Teaching,* 3(4), 346- 356.

9-Jinda, A., & Bangthamai, E. (2016). The problems and guidelines support of use Information and Communication Technology for the Educational of Schools in Nakhon Pathom Primary Educational Service Area Office 2. *Veridian E-Journal, Silpakorn University*, 9(1), 395-407.

10-Johnson, K. (2015). Behavioral Education in the 21st Century. *Journal of Organizational Behavior Management*, 35, 135–150. https://doi.org/10.1080/01608061.2015.1036152

11-Hung, M., Chou, C., Chen, C., & Own, Z. (2010). Learner readiness for online learning: Scale development and student

perceptions. *Computers & Education*, 55(3), 1080-1090. https://doi.org/10.1016/j.compedu.2010.05.004

12-Kukulska-Hulme, A. (2009). Will mobile learning change language learning? *Recall,* 21(2), 157-165. https://doi.org/10.1017/s0958344009000202
Kenchai, T. K. (2020). EFL Teachers' ICT Literacy

Acquisition to Online Instruction during *Language*

Education and Acquisition Research Network, 14(2).

https://so04.tci-thaijo.org/index.php/LEARN/index

13-Magagula, C., & Ngwenya, A. (2004). A comparative analysis of the academic performance of distance and on-campus learners.   *Turkish Online Journal of Distance Education-TOJDE*, 5(4), 1-11.

14-Merriam, S. (1998).   *Case Study Research in Education: A qualitative Approach. Jossey-Bass*

15-Nomnian, S., & Arphattananon, T. (2018). A qualitative study on factors influencing the achievement of English language teaching and learning in Thai government secondary schools. *Asian EFL Journal,* 20(6), 207- 233.

16-Palmer, S. (2012). Understanding the context of distance students: differences in on- and off-campus engagement with an online learning environment. *Journal of Open, Flexible and Distance Learning*, 16(1), 70-82.

17-Roddy, C., Amiet, D., Chung, J., Holt, C., Shaw, L., & McKenzie, S. et al. (2017). Applying Best Practice Online

Learning, Teaching, and Support to Intensive Online Environments: An Integrative Review. *Frontiers in Education*, 2. https://doi.org/10.3389/feduc.2017.00059

18-Rovai, A. (2003). In search of higher persistence rates in distance education online programs. *The Internet and Higher Education*, 6(1), 1-16. https://doi.org/10.1016/s1096-7516(02)00158-6

19-Rovai, A., & Downey, J. (2010). Why do some distance education programs fail while others succeed in a global environment? *The Internet and Higher Education*, 13(3), 141-147. https://doi.org/10.1016/j.iheduc.2009.07.001

20-Ruangrong, P., Jirawongphong, P., Manyum, W., Somyarone, W., Muendetch, S., & Srisurat, C. (2014). *Educational technology vs Thai teachers in the 21st century*. Panyapiwat Journal, 5(1), 195-207.

21-Tai, H., Pan, M., & Lee, B. (2015). Applying Technological Pedagogical and Content Knowledge (TPACK) model to develop an online English writing course for nursing students.   Nurse Education Today, 35(6), 782-788. https://doi.org/10.1016/j.nedt.2015.02.016

22-Volery, T., & Lord, D. (2000). Critical success factors in online education. *International   Journal of Educational Management, 14(5), 216-223.* https://doi.org/10.1108/09513540010344731

Appendix A Semi-structured interview questions and phases
Phase 1: Before the Pandemic

Medjahed Mohamed raji
mraji.medjahed@univ-mascara.dz

1. How do you find online teaching so far?
2. At the beginning of the COVID-19 pandemic, how did you move from conventional teaching to online teaching?
3. How did you prepare yourself to teach online in such a short period?
4. How did you learn to use different online learning and reading platforms to teach your students reading?
5. How did you adjust yourself and your teaching for online reading platforms?

Phase 2: During the Pandemic
1. How do you find online teaching?
2. Do you have any issues while teaching online?
3. Which online learning and reading platform are you using to teach your students?
4. How are you dealing with technical issues during online classes?
5. Could you please share your experiences with online teaching?

Phase 3: After the Pandemic
1. After the pandemic, How did you feel about your online teaching experience?
2. Are you still learning how to use certain technology or online reading platforms for teaching?
3. What are your thoughts on your ability to use technology in teaching now?
4. Are you considering or attending any workshop on technology and ICT?
5. Anything you wish to raise for future online teaching?