Implementing flipped learning during Covid-19 in Omani higher education: EFL teachers' perspectives

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The rapid adoption of emergency remote teaching (ERT) in response to the Covid-19 pandemic was characterised by many challenges. This study investigates how English as a foreign language (EFL) teachers in Oman implemented flipped learning approaches to deliver ERT curricula. The study analyses EFL teachers' experiences and identifies significant themes in relation to the data and the literature in order to inform future implementations of flipped learning approaches. A qualitative explanatory case study method was used, with thematic analysis of nine participants in two focus groups from two higher education institutions. Four themes were identified: advantages, strategies, challenges, and suggestions for better practice. Each theme is described in detail and the paper concludes with recommendations for future implementation and a discussion on implications for policy and practice of curriculum design for ERT.

Introduction

The Covid-19 pandemic resulted in the rapid suspension of face-to-face classes globally, as a substantial measure to curb the spread of the virus. Millions of students were affected by school and university closures (UNESCO, 2020) and higher education providers were forced to shift to some type of emergency remote teaching (ERT) (Hodges et al., 2020).

ERT assisted higher education institutions to carry on education with their available resources (Hodges et al., 2020; Özüdo, 2021). However, substantial challenges have been associated with ERT, including teachers' unpreparedness to shift to ERT and capability deficits to both create and deliver online content (Crawford et al., 2020; Hartshorne et al., 2020; Hodges et al., 2020). Faculty struggled to deliver online education during ERT due to lack of support and training (Hodges et al., 2020) and lack of pedagogical content knowledge of online teaching and learning (Rapanta et al., 2020). On the other hand, remote teaching during Covid-19 has provided opportunities for teachers to try flipped learning for online teaching (Marshall & Kostka, 2020; Mursyidah et al., 2021; Yen, 2020; Zawilinski et al., 2020).

This study investigated how higher education EFL teachers implemented flipped learning approaches as part of their response to ERT during Covid-19. The purpose is to inform the design of pedagogical approaches suitable for ERT. Of the studies that investigated flipped learning during Covid-19, there is insufficient research on the practical decisions and experiences of implementing flipped learning approaches in ERT.

This study is guided by the following research questions:

1. What are EFL teachers' experiences of implementing flipped learning in emergency remote teaching during Covid-19?
2. How can EFL teachers' experiences in flipped learning inform future implementations of flipped learning methods?

Flipped learning

The flipped learning approach is an innovative instructional methodology that was initiated in 2006 by two chemistry teachers, Jonathan Bergmann and Aaron Sams (Bergmann & Sams, 2015). This approach involves basically reimagining the classroom paradigm (Tang et al., 2020) as it entails the notion of schoolwork at home and homework at school that allows for a more dynamic and interactive learning environment where students can discuss content, apply concepts and receive feedback. Akçay and Akçay (2018) defined flipped learning as, "activities traditionally conducted in the classroom (e.g., content presentation) become home activities, and activities normally constituting homework become classroom activities" (p.125). To illustrate, in flipped learning, students receive theoretical content via various technological tools, such as online videos, presentations and learning management systems, and they take notes, answer some questions, and prepare questions before the class. During class time, they engage in supporting activities, such as finding answers to the questions they prepared before the lesson, participating in group activities, practising problem-solving, discussing related ideas and having debates, presentations, or role-plays (Kvashnina & Martynko, 2016; Ozdamli & Asiksoy, 2016).

The four pillars of the flipped learning approach, *flexible environment, learning culture, intentional content and professional educator* (FLIP) can guide the process of implementing flipped learning (Bauer-Ramazani et al., 2016; Ozdamli & Asiksoy, 2016). Flexible environment indicates flexibility of time and place; learning culture explains how the learning paradigm has shifted from a teacher-centred approach to student-centred approach; and intentional content sets the aim of flipped learning to help students develop conceptual understanding and procedural fluency along with the development of their cognitive skills, by involving them in exploring materials on their own. A professional educator guides teachers in planning the flipped learning materials, evaluating the progress of students' learning, and providing feedback for their learning (Mursyidah et al., 2021; Ozdamli & Asiksoy, 2016). For flipped learning to be effective, it is essential not only to design appropriate in-class learning activities like micro-lectures, small group activities, questions and answers, hands-on experiments, students' presentations, group projects, but also to design after class learning activities, such as interactive tutorials, quizzes, audio lectures, *PowerPoint* presentations, further research, readings, and reflections (Akçay & Akçay, 2018; Yen, 2020).

Based on a review of previous research on flipped learning, Al-Naabi (2020) identified four crucial elements for a successful implementation:

1. Prior exposure of students to content (e.g., recorded lectures, notes, videos);
2. An incentive for students to prepare for class (e.g., pre-class quizzes, online discussions, online activities);
3. A mechanism to measure students' understanding and to ensure that students have viewed the content (e.g., graded pre-class quizzes);
4. In-class activities that focus on higher-level cognitive activities: active learning, collaborative, and peer learning, problem-solving and/or case studies (Al-Naabi, 2020).

Flipped learning during emergency remote teaching (ERT)

Higher education institutions have made an abrupt transition to ERT to maintain learning and teaching during the Covid-19 pandemic. ERT is "a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances" (Hodges et al., 2020). This shift happened unexpectedly and in an unplanned way (Van Veldhuizen et al., 2020), making the shift overwhelming for faculty, students, and IT departments (Tang et al., 2020; Hodges et al., 2020). Nevertheless, ERT can be empowered by integrating flipped learning that has a positive effect on students' learning, attention and evaluation of learning (Tang et al., 2020), especially in ERT learning environments characterised by a teacher's sense of humour and an encouraging classroom atmosphere (Yen, 2020). Flipped classrooms made the shift to ERT easier as they enhanced in-person course delivery and prepared for future ERT scenarios (Hodges et al., 2020; Tang et al., 2020). Veldthuis et al. (2020) claimed that flipped learning can be a successful method to meet the educational needs of ERT. While one study indicated that the use of flipped learning during ERT enhanced student learning outcomes by 70% and learning motivation by 34%, it is very crucial to consider the challenges faced by students and teachers (Mursyidah et al., 2021). Flipped learning activities (before, in-class and after-class activities) proved to promote learning performance, self-efficacy and attitudes, learning outcomes, perceptions, motivation, and independent learning (Ahmad, 2016; Ali et al., 2017; Amin & Sundari, 2020; Baytiyeh & Naja, 2017; González-Gómez et al., 2019; Iglesias-Pradas et al., 2021; G. Lee & Wallace, 2018; Mursyidah et al., 2021). The studies outlined here indicated that ERT has accelerated teachers' implementation of the flipped learning approach in ERT contexts during Covid-19.

Challenges associated with flipped learning

Several research studies have identified various benefits from implementing a flipped learning approach in learning and teaching. It can offer great opportunities for enhancing learners' outcomes, engagement, motivation, preparedness, achievement, deep learning strategies, ICT skills, learning experience, autonomy, collaboration, positive attitude and perceptions, creativity, individualised learning and satisfaction (Akçay & Akçay, 2018; Bauer-Ramazani et al., 2016; Baytiyeh & Naja, 2017; Han, 2015; Marshall & Kostka, 2020; Pierce & Fox, 2012; Turan & Akdag-Cimen, 2020).

Although the flipped learning approach has some advantages, its implementation includes challenges, both expected and unexpected. Turan and Akdag-Cimen (2020) highlighted

some challenges of implementing the flipped classroom in the ELT context, among which were extra workload for students, technology/internet related problems, extra workload for teachers and materials writing anxiety. Likewise, Kvashnina and Martynko (2016) outlined some teacher-related challenges associated with flipped learning implementation. They claimed that flipped learning is time-consuming in terms of materials preparation, requires additional IT skills and knowledge and needs continuous maintenance. Additionally, they claimed that teachers might not be able to meet the different learning styles of their students. Besides teacher workload, need for training, Internet connectivity and poor quality of visual materials, Halili et al. (2015) highlighted some challenges regarding the emotional interest of students experience in flipped learning. Not all students wish to work together, and not all of them have self-directed learning skills. Also importantly, flipped learning does not support students with disabilities.

In their review of advantages and disadvantages of flipped learning, Akçayır and Akçayır (2018) categorised the challenges into four categories: pedagogical challenges, student-related challenges, teacher-related challenges, and technical challenges. Pedagogical challenges include less preparation time for students and lack of guidance outside the classroom. Student-related challenges include resistance to change, higher workload, time consumption and anxiety towards the flipped learning. Teacher-related challenges are difficulties in planning the sequence of activities, increased workload, difficulty in designing and managing tasks, and being time-consuming. Technical-related challenges include teachers' and students' technical competency, quality of videos, inequality of access to technology and specific infrastructure requirements. Furthermore, researchers have described critical challenges describing numerous negative comments from the students' perspective that flipped learning had significant perceived challenges, including technology issues, technology access, and assessment concerns (Lape et al., 2016; Yong et al., 2015; Das et al., 2019)

One of the prominent challenges in implementing flipped learning is institutional support. Flipped learning is challenging for some students and teachers, due to the additional technology resources required outside the institution. Ansori and Nafi (2019) found that accessibility to the lesson outside the classroom that depended on computer and Internet access could affect flipped learning implementation. Akçay and Akçay (2018) and Huang and Hong (2016) highlighted some challenges related to lack of institutional support, parental bias, and investment in computer resources by the institution.

It is concluded from the above studies that the effectiveness of flipped learning relies on three factors:

- teachers who are willing to prepare activities to underpin flipped learning: before-class, in-class, and after-class activities;
- students who can undertake extensive out-of-class work and who can be independent and responsible learners; and
- a dynamic learning environment that encourages students to acquire knowledge and inspires them to advance their skills.

Implementing flipped learning might face four different challenges:

- teacher-related challenges: training, preparation time, workload and domestic responsibilities, teaching materials design and development.
- student-related challenges: lack of interest, different learning styles, lack of self-regulated learning skills.
- technical challenges: a limited design for accessibility, poor quality of audio/visual/text materials, poor technical skills (teacher and students), poor Internet connection.
- institutional challenges: policies that do not support the flipped learning approach curriculum, objective and traditional assessment methods that do not match alternative assessments suitable for flipped learning.

Method

The authors selected a qualitative explanatory case study design because it allows the researchers to closely understand a process and how a particular program or a method has been implemented (Creswell, 2018; Mills & Gay, 2015). A case study design was deemed appropriate because it can provide a clear and sufficient description of the studied phenomenon (Mills & Gay, 2015) to gain a deep holistic view of the research problem (Creswell, 2018).

Data collection

The authors used a focus group discussion for data collection. Focus group discussion was used to obtain rich and deep data from the interaction of the group members (Rabiee, 2004) and to create a safe environment for the participants to reflect on their teaching strategies (Dilshad & Latif, 2013). Based on the reviewed literature, the authors collaboratively developed a focus group discussion guide to ensure systematic data collection (Appendix A). The guide was reviewed by three external academics to ensure its content validity. Two focus group discussions were conducted online through *Microsoft Teams*. It was conducted in English as English is the medium of instruction in both institutions. The first author moderated the discussions, while the second author attended the discussions and took notes. Four days prior to a focus-group online discussion, an information sheet was emailed to the participants to give them some background details about the project and to communicate the discussion guidelines. The authors gained ethical approval for data collection through the Research Committee Review Board. The Board asked for the anonymity of participants and institutions when publishing the results. Also, the Board asked for conducting the discussion groups two weeks ahead of the final exams so that data collection would not disturb the participants' administrative and teaching commitments. The authors used *Otter* (web-based video transcription software) to transcribe the data and the second author reviewed the transcription.

Sample

The study used purposive snowball sampling with nine teachers from two higher education institutions in Oman selected for each discussion (4 teachers participated in

discussion 1 and 5 teachers participated in discussion 2). The teachers in both discussion groups were EFL teachers (Appendix B presents demographic information). The selection of the participants was based on the following criteria:

- involvement in teaching and learning in ERT during Covid-19;
- basic knowledge of online pedagogy and flipped classroom methods;
- more than five years of teaching experience in higher education.

Context

The study was conducted in two Omani higher education institutions, specifically in the Foundation Program. In both institutions, the one-year program aims to equip undergraduate students with English, mathematical, information technology and study skills. During Covid-19, the students were taught English language virtually through Microsoft Teams and *Moodle*. The classes included both female and male students, ranging from 15 to 20 students in each class.

Data analysis

An inductive thematic analysis was used following Braun and Clarke's (2006) six steps: data familiarisation, coding data, searching for themes, reviewing themes, defining and naming themes, and writing up. Before conducting data analysis, the second author checked the transcribed focus group discussion. The two authors read the transcripts to become familiarized with the data. The first author imported the transcript to *ATLAS.ti 9* (data analysis software) to facilitate the data analysis. Using the analysis software, two authors coded the data and searched for the themes independently. The authors conducted a virtual meeting to discuss and review the codes and themes, based on the generated coding report from *ATLAS.ti 9*. After two rounds of revisions, the authors collaboratively defined and named the themes. Finally, the themes were divided among the authors for the write-up of the results.

Analysis and discussion

The inductive thematic analysis identified four broad themes: advantages, strategies, challenges and suggestions for better practice. This section presents the results of the focus group discussions combined for all participants, with differences noted. Participants are identified as Teacher 1A (Institution 1 discussion group, Teacher A) … Teacher 2D (Institution 2, Teacher D).

Advantages of flipped learning during ERT

The participants expressed a common view that flipped learning was beneficial in ERT during Covid-19 at different levels. First, all participants in both discussion groups valued flipped learning as it saved a lot of class time. Teacher 2B said that there was not enough time to cover the assigned writing material in class as each writing topic was considered for one week. Using flipped learning, the teacher was able to provide content to students

using videos and dedicate the virtual class time for actual writing and providing feedback. Similarly, Teacher 1C mentioned that as students watched the videos before the class, the teacher utilised the class time to answer students' doubts and questions on grammar without spending much time explaining grammar rules.

The participants stated that flipped learning provided students with better exposure to the language. The teachers made this conclusion based on the pre-class activities, including videos, readings, practice activities, website links, etc. Teacher 1A reported that in addition to the class talk between the teacher and students, the pre-class videos gave students better exposure to the language.

Second, flipped learning was associated with better student engagement and better student motivation. The participants reported that reading the materials and watching the videos before the class made the students more confident to participate in the class discussion. Additionally, watching the videos before the class made them knowledgeable about the topics discussed in the virtual classroom. Also, this enhanced student motivation because students were able to participate in the class activities.

Strategies used in flipped learning during ERT

While teachers in both institutions used various strategies for flipped learning, some of these strategies were identical. Regarding pre-class activities, teachers in both institutions depended on email to convey the content to their students at the beginning of the shift to ERT during Covid-19 as eLearning platforms were not set up. While some teachers in the second institution emailed the content to the students and encouraged them to do the pre-class activities by sending reminders, teachers from Institution 1 sent simplified emails to ensure that students completed the pre-class activities. One of the teachers said that she used to send her students an email with a simplified bullet points list, so the students know exactly the tasks they should do before the virtual class.

The teachers depended on different platforms to ensure the completion of the pre-class activities. Teacher 2B mentioned that she used *Edpuzzle* online interactive content creation software to track her students' view of the videos and *PowerPoint* presentations. Similarly, teachers in Institution 1 highlighted the benefit of the learning management system (LMS), *Moodle*, that enabled them to check students' access to the lesson content.

Requiring students to take notes of the videos and reading materials in the pre-class activities was a common strategy among teachers in both institutions. The teachers of Institution 2 emphasised the importance of note-taking skills as a study habit for the success of pre-class activities. Teacher 2C mentioned that note-taking helped students in completing in-class activities faster.

Regardless of the agreement among the teachers of both institutions on the use of videos in the pre-class phase, the teachers of both institutions considered using reading materials as a good alternative. However, Teacher 1C argued that videos could be much easier for the students to comprehend than the reading materials.

The teachers in Institution 2 argued for the importance of providing authentic materials for the students. Teacher 2B stated that all materials used for EFL students should be authentic materials for better language exposure.

Regarding in-class strategies, participants agreed on using question and answer (Q&A) activities, discussions, and group work. Teacher 1B used Q&A with her students to check their understanding of the content of the pre-class videos. Most of the teachers utilised discussions to further explain confusing points. As an example, Teacher 2B said that she videotaped the writing lesson explaining important parts of the writing process and she utilised the class time to apply the writing tips they learned from the video. In addition, group work was one of the common in-class activities. Teacher 2D indicated that she used breakout rooms to group her students for class discussion. However, some teachers were still new to the breakout room strategy. Teacher 1C admitted that she postponed the use of breakout rooms because she said that she should master it before trying it out with her students. A very important point to note in group-work activities was the individual differences between students. Most teachers believed that grouping students of the same level together was essential to ensure that all students accomplished in-class activities.

For the post-class strategies, most of the teachers used the assignment tool in the LMS *Moodle*, as a post-class activity. Most of the participants in Institution 1 created different follow-up assignments in *Moodle*, set a deadline and provided e-feedback. In addition to the assignment, Teacher 2D used reflection writing in her post-class activities.

Challenges of implementing flipped learning during ERT

Teachers faced various challenges in implementing flipped learning in ERT during Covid-19. These challenges can be classified into three main categories: student-related challenges, teacher-related challenges, and institution-related challenges (Figure 1).

Regarding student-related challenges, the most common challenge in the dataset was students not doing the pre-class activities. Most teachers reported that many of their students did not perform the pre-class activities. Teacher 1B traced this challenge to the quick shift to ERT and students' unfamiliarity with the teaching method. Teacher 1C added institution readiness as another reason for students' weak responses. He further explained that the curriculum was not designed for flipped learning and the pre-class activities were prepared by the teachers with the help of colleagues. Teachers experienced the same challenge in Institution 2, adding other reasons. First, Teacher 2C associated the challenge with students' multi-level language skills. Talking about students' multi-level language proficiency, Teacher 2E noticed that students with better language skills and high achievers performed the pre-class activities. When asked about the reasons, the majority of the teachers stated that high achievers had better confidence in language use and they were not concerned about making any mistakes. However, they mentioned that low achievers lacked confidence and were more concerned about committing language errors that can affect their self-image.

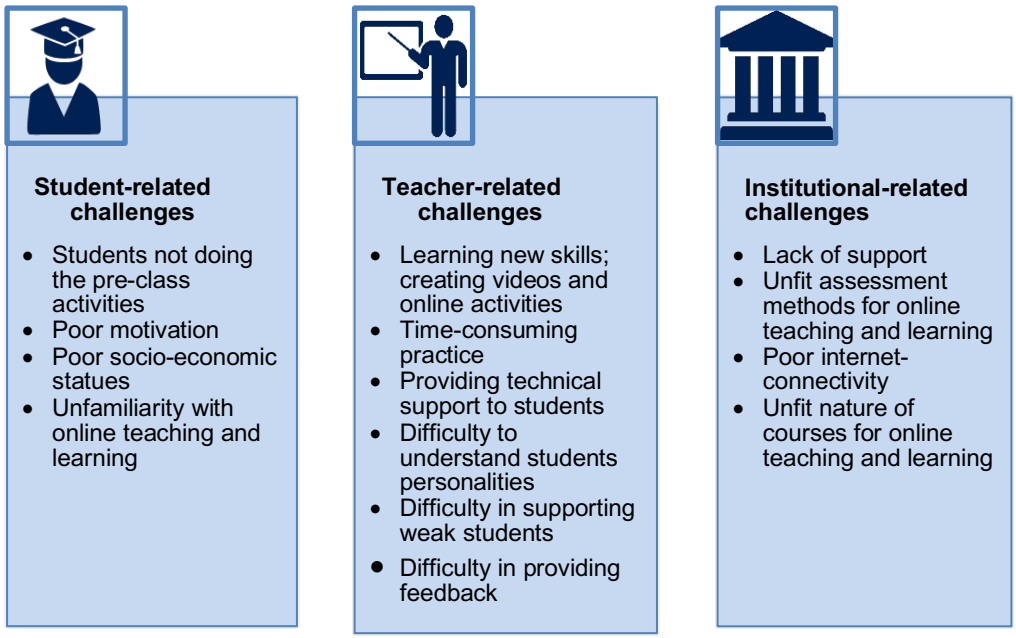

Figure 1: A summary of challenges faced in implementing flipped learning during ERT

Teachers in both discussion groups commented that students' socio-economic status affected the implementation of flipped learning. Since many of the students did not have computers at home, they were unable to attempt the pre-class activities and join the virtual classes. Also, these students were not able to be on camera. Instead of using a computer, they depended mostly on their smartphones that, according to Teacher 1D, were not very comfortable for doing the activities. Although the first institution provided students with computers and required their students to be on camera, poor home infrastructure and Internet connectivity posed various challenges for students. Since students in Institution 1 used laptops and were on camera during their virtual classes, teachers could notice an improvement in their performance.

The discussion revealed that some students in both institutions were not highly motivated to do the pre-class and during-class activities. Teacher 1A associated this challenge with the preparation of the material since the materials were prepared by the teachers during the teaching time. Since implementing a flipped learning method was a teacher-led initiative in Institution 2, students' lack of motivation was more serious. In addition to lack of motivation, teachers reported weak student interactions and engagement in the class discussion. Teacher 2B and Teacher 2C argued that students' poor language skills contributed to their weak participation in the class. Teacher 2D thought that the design of the pre-class and during class activities was the cause of students' weak class participation. She further explained that the materials were prepared by the teachers and were not evaluated and reviewed due to time constraints. Discussing the same issue, Teacher 2E reported that many of the materials in the textbooks were not engaging and motivating to

students. Most teachers in both institutions related weak students' interaction with poor assessment strategies. In both institutions, the ungraded pre-class activities made students unwilling to do them, which consequently contributed to their class interaction and engagement.

Whilst a minority of the teachers in both groups reported students' basic information technology knowledge as a challenge hindering the implementation of flipped learning, some teachers argued that many students were not familiar with online teaching and learning and this caused many challenges for them. Teacher 2A mentioned that her students were not comfortable studying online, and they needed some personal face-to-face support.

Different challenges related to teachers influenced the implementation of flipped learning in ERT during Covid-19. The sudden shift to ERT required teachers to shift, adjust and create the content for online delivery and this was the common challenge faced by the majority of teachers in both institutions. To further illustrate, the teachers in both institutions created the videos for their classes themselves. Teacher 2A and Teacher 2D tried to search for online videos from *YouTube*, but most of the videos were not suitable for their students and the course content. Teacher 1B stated that making videos for their classes was a new skill set that they had to learn. In Institution 1, teachers shared the videos they created with their colleagues to save time and collaborate in creating the content concurrently as teaching during the semester. However, in Institution 2, teachers created videos individually for their students.

Implementing flipped learning was a very time-consuming practice for teachers in both institutions. First, preparing the pre-class materials consumed a lot of time. They needed to create videos and they needed to learn and create the videos by themselves. Teacher 2C mentioned that the content of the courses was not suitable for online teaching and learning and consequently they needed an extra effort to transfer the content to videos and worksheets for online learning. Teachers also had to create exercises and quizzes in *Moodle* for students to answer before the virtual class. As some students were not able to view the content before the virtual class, teachers had to repeat and discuss the content in the class, and this took some of the class time.

In both institutions, teachers provided technical support to their students when needed. For example, they mentioned that they helped students in learning the basics of the learning management system and the video conferencing software. Teacher 1B said that she had to help her students to master the *Microsoft Teams* assignment feature because she asked her students to submit their written work using the assignment feature.

Since there was no physical contact with the students and since being on camera was optional in Institution 2, teachers faced difficulties in understanding students' personalities, characteristics, and needs. While a minority of the teachers were able to encourage their students to participate in the class discussion, most of them mentioned that supporting weak and passive students and comforting them was a challenging task.

The lack of pre-graded activities and the lack of a monitoring system that tracked students' progress made the situation worse in Institution 2.

Apart from identifying and supporting weak students, the teachers in both institutions reported that providing feedback was difficult and it consequently negatively influenced students' learning. Teacher 2A used voice notes to provide feedback to students writing. However, some students did not listen to them, and she could not realise the impact of the oral feedback on the students' written work. Teachers tried to provide delayed group feedback during the virtual class, but this was not very effective because some students were not able to relate the general feedback to their own work. Teachers used the share screen function to give feedback to students during the virtual class.

Some institution-related challenges were identified that influenced the successful implementation of flipped learning. Lack of support was one of the common challenges among teachers in both institutions. They stated that the management did not provide support regarding the implementation of flipped learning. Since flipped learning was initiated by the course leader in Institution 1, Teacher 1B mentioned that the course leader gave some suggestions and ideas, but he was not able to review the materials because of time limitations. However, the teachers in Institution 2 oversaw everything, as implementing flipped learning was their own initiative. The teachers expected some support in providing training opportunities on creating videos and preparing online activities and quizzes.

The assessment methods adopted posed some challenges in implementing flipped learning. Teachers reported that while content shifted to online delivery, traditional testing measures and objective tests remained the same throughout the ERT period. Since teachers opted for alternative assessment in pre-class and during class activities, such as observations, discussions, and group work activities, this did not match the objectives in summative assessment. In Institution 1, there was room for change, but teachers did not have sufficient time to do content creation and revision along with modifications to the assessment. Meanwhile, the teachers in Institution 2 were not able to modify the course assessment as that process was centralised. They stated that the central committee of assessment made some minor adjustments to the assessment and some modifications to the assessment criteria and marking rubrics.

In addition to lack of support, a minority of teachers reported facing some Internet connectivity issues when working from campus. This posed some difficulties for uploading and downloading content to their course pages. However, they later noticed some improvement to the Internet connection and technological infrastructure. Some teachers also reported that the quick shift to ERT and the nature of their courses made the implementation of flipped learning an overwhelming task.

Suggestions for better implementation of flipped learning during ERT

While most teachers showed willingness to continue using flipped learning, they provided some suggestions for better implementation, based on their current experience. Most

teachers stated the necessity for better Internet connectivity. Moreover, teachers suggested better learning management systems be used to facilitate the implementation of flipped learning. Teachers suggested working in small teams to create and review the content and activities used for flipped learning. Moreover, considering the different economic levels of students' families, they argued that the institutions should provide laptops and Internet access to students in low socio-economic circumstances. Furthermore, teachers called for professional development programs related to flipped learning.

Teachers suggested that individual differences and learning styles in one class should be considered. While some of the teachers from Institution 1 stressed that teachers could create or adapt materials that suit their students' needs, Teacher 2A emphasised the need to design some challenging materials for the students.

One of the suggestions was to develop students' information technology skills so that they can deal properly with virtual flipped learning. Teacher 1C indicated that students need to be trained and they need to master basic information technology skills before flipped learning could take place. Teachers suggested rewarding students for completing the activities. These rewards can be assigning marks for the activities or decreasing one hour of students' absenteeism.

Teachers suggested that flipped learning should be initiated and supported by the institutions. Most of the teachers realised the advantages that flipped learning could bring not only to the students' level but also to the teachers' and institutions' level. Teacher 2B expressed the rejection of some colleagues to work with her on a flipped learning project. Hence, according to her, once flipped learning is emphasised in the institution's teaching and learning process, it will be better implemented across the institution.

Conclusions

Emergency remote teaching (ERT) was rapidly adopted in Oman and all over the world. Its implementation was characterised by many challenges, for students, teachers and institutions. This study investigated how EFL teachers in Oman implemented flipped learning. It has identified significant implications for policy and teaching practice, given the Covid-19 pandemic continues to affect curriculum delivery and require the capacity to rapidly switch to ERT with short notice. The lessons learned from the initial phase of (rapid) curriculum adaption for ERT, in this case using a flipped approach, can inform further development of curricula and understanding of the benefits and challenges of using flipped learning approaches to deliver ERT curricula.

This qualitative explanatory case study method, with thematic analysis of the data, identified and analysed EFL teachers' implementation experiences, analysed discussion group responses to articulate significant themes, and contextualise the Oman research study with existing literature. Four themes were identified: advantages, strategies, challenges, and suggestions for better practice.

Implementing flipped learning in ERT

The literature identified three factors that contribute to the effectiveness of a flipped learning method for curriculum delivery. Teacher willingness to prepare out-of-class activities; students independently and responsibly undertaking out-of-class learning activities; and a learning environment that facilitates students acquiring knowledge and developing skills. These findings align with the literature and add that collaborative course redesign for flipped learning, institutional support and teacher training can enhance the effectiveness of flipped learning in ERT contexts.

The literature also identifies challenges related to teachers, students, and the technical and institutional environment. This study confirmed that technical issues for EFL teachers and students in Oman are consistent with the literature. Likewise, there is need for an institutional environment that supports flipped approaches – including adapting policies to enable flipped curriculum and assessment design and providing adequate resources (Internet connectivity and access to adequate computers) and training for staff and students in communications technologies and learning management systems. The study highlighted the need to redesign course assessment to align formative course assessment and summative assessment with flipped learning pre-class and in-class activities.

The study also confirmed the problems faced by teachers including workload and lack of time to adequately design and evaluate teaching materials for quality. The issue of motivating and engaging students in the learning activities and developing their capacity for independent learning was also identified. To increase students' motivation and engagement, the study highlighted the importance of teacher interaction with the students before, during and after class through emails, class meetings and learning management systems.

In addition, this study highlighted aspects of in-class group work and the need to accommodate different students' capacities and allocate group membership to ensure all students participate. Also, the study found that some students might require individual support and intervention that the teacher can provide virtually before or after the class.

Overall, it is been argued that not all flipped interventions are created equal and that the educational context influences the relative advantages of using a flipped learning approach (Bredow et al., 2021). However, the advantages: time-saving, language exposure, engagement, motivation and participation, found in the Omani context are similar to the flipped learning benefits highlighted in the international Australian context (Bond, 2019; Fisher et al., 2017; Tomas et al., 2019), Asian context (Lee et al., 2018; Kwon & Woo, 2017; Uosaki et al., 2015) and European context (López Belmonte et al., 2019; Kristensen et al., 2020). Therefore, it is obvious that when adopted in Middle Eastern nations such as Oman, flipped learning has the potential to achieve significant increases in foreign language learning, similar to the Australian, Asian and European contexts.

Differences in the setting in which flipped learning is implemented might be one source of variation in the outcomes of flipped learning. However, as far as the flipped learning

strategies are concerned, the results showed that EFL instructors followed the pre-class activities, in-class activities and post-class activities during ERT. The flipped learning activities practised internationally in European and US settings as in the studies by Christiansen et al. (2017) and Simko et al. (2019) were also practised locally by EFL instructors with some variations on implementation due to the sudden shift to ERT. Similarly, EFL instructors encountered obvious challenges addressed worldwide in the reviewed literature. Common challenges pause some concerns locally and internationally, such as the immense amount of time required for preparation, students' lack of independent learning and lack of institutional support.

Recommendations

For effective flipped learning, individual differences and learning styles should be considered in the design of learning activities and learning materials suited for students' needs, and also to provide challenges. Higher education institutions should provide resources and training to teachers and students to focus learning on the curriculum content rather than on how to use the technology to facilitate learning. Furthermore, the benefits of a flipped learning approach for ERT will be realised more effectively when the institution's policies and procedures enable flipped curriculum design, particularly for assessment.

Limitations

The EFL language teachers' experience of using flipped learning in the ERT context was not extensive and many of the challenges they reported may not be applicable to teachers' experiences in flipped approaches. Although the sample of the study provided in-depth data that can contribute to the generalisability of the results, the data is limited to two institutions and their EFL teachers. As the study is situated within the interpretive research paradigm using snowball sampling, it has been able to showcase only the statues of implementing flipped learning in Oman during Covid-19 rather than the extent of adopting the teaching method, so readers should be cautious when interpreting these results.

Future research

Further research is needed to determine the preferred types of pre-class and in-class activities that can better engage students in the learning process in ERT contexts. Future research might investigate teachers' strategies in adapting their curricula for flipped learning methods. There is a need for research in diverse geographical locations and diverse disciplines. Also, replicating the study with additional data sets (e.g. survey) and using different research designs (e.g. mixed methods) is suggested for future research. There is a need for scholarly investigations to indicate teachers' willingness to adapt the method and a need for further showcasing studies, aiming at comparing local endeavours with international examples. Further investigations might consider ways of implementing flipped learning methods for post-pandemic situations where students are back to campus, and how the current experiences might shape future implementations.

References

Abdekhoda, M., Maserat, E. & Ranjbaran, F. (2020). A conceptual model of flipped classroom adoption in medical higher education. *Interactive Technology and Smart Education*, 17(4), 393-401. https://doi.org/10.1108/itse-09-2019-0058

Ahmad, S. Z. (2016). The flipped classroom model to develop Egyptian EFL students' listening comprehension. *English Language Teaching*, 9(9), 166. https://doi.org/10.5539/elt.v9n9p166

Akçay, G. & Akçay, M. (2018). The flipped classroom: A review of its advantages and challenges. *Computers & Education*, 126, 334-345. https://doi.org/10.1016/j.compedu.2018.07.021

Al-Naabi, I. S. (2020). Is it worth flipping? The impact of flipped classroom on EFL students' grammar. *English Language Teaching*, 13(6), 64-75. https://doi.org/10.5539/elt.v13n6p64

Ali, M., Bilal, H. S. M., Razzaq, M. A., Khan, J., Lee, S., Idris, M., Aazam, M., Choi, T., Han, S. C. & Kang, B. H. (2017). IoTFLiP: IoT-based flipped learning platform for medical education. *Digital Communications and Networks*, 3(3), 188-194. https://doi.org/10.1016/j.dcan.2017.03.002

Amin, F. M. & Sundari, H. (2020). EFL students' preferences on digital platforms during emergency remote teaching: Video conference, LMS, or Messenger application? *Studies in English Language and Education*, 7(2), 362-378. https://doi.org/10.24815/siele.v7i2.16929

Bauer-Ramazani, C., Graney, J. M., Marshall, H. W. & Sabieh, C. (2016). Flipped learning in TESOL: Definitions, approaches, and implementation. *TESOL Journal*, 7(2), 429-437. https://doi.org/10.1002/tesj.250

Baytiyeh, H. & Naja, M. K. (2017). Students' perceptions of the flipped classroom model in an engineering course: A case study. *European Journal of Engineering Education*, 42(6), 1048-1061. https://doi.org/10.1080/03043797.2016.1252905

Bergmann, J. & Sams, A. (2015). *Flipped learning: Gateway to student engagement*. International Society for Technology in Education.

Bond, M. (2019). Flipped learning and parent engagement in secondary schools: A South Australian case study. *British Journal of Educational Technology*, 50(3), 1294-1319. https://doi.org/10.1111/bjet.12765

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Bredow, C. A., Roehling, P. V., Knorp, A. J. & Sweet, A. M. (2021). To flip or not to flip? A meta-analysis of the efficacy of flipped learning in higher education. *Review of Educational Research*, 91(6), 878-918. https://doi.org/10.3102/00346543211019122

Christiansen, M. A., Lambert, A. M., Nadelson, L. S., Dupree, K. M. & Kingsford, T. A. (2017). In-class versus at-home quizzes: Which is better? A flipped learning study in a two-site synchronously broadcast organic chemistry course. *Journal of Chemical Education*, 94(2), 157-163. https://doi.org/10.1021/acs.jchemed.6b00370

Christiansen, M. A., Nadelson, L., Etchberger, L., Cuch, M., Kingsford, T. A. & Woodward, L. O. (2017). Flipped learning in synchronously-delivered, geographically-dispersed general chemistry classrooms. *Journal of Chemical Education*, 94(5), 662-667. https://doi.org/10.1021/acs.jchemed.6b00763

Crawford, J., Butler-Henderson, K., Rudolph, J., Malkawi, B., Glowatz, M., Burton, R., Magni, P. A. & Lam, S. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*, 3(1), 9-28. https://doi.org/10.37074/jalt.2020.3.1.7

Creswell, J. W. (2018). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (6th ed.). Pearson.

Das, A. K., Nguyen, Q. T., Nguyen, A. T., Nomikoudis, M. & Dung, H. V. (2019). Course redesign to incorporate flipped delivery: A business degree case in Vietnam. *Issues in Educational Research*, 29(2), 363-383. http://www.iier.org.au/iier29/das.pdf

Dilshad, R. M. & Latif, M. I. (2013). Focus group interview as a tool for qualitative research: An analysis. *Pakistan Journal of Social Sciences*, 33(1), 191-198. https://www.bzu.edu.pk/PJSS/Vol33No12013/PJSS-Vol33-No1-16.pdf

Fisher, R., Ross, B., LaFerriere, R. & Maritz, A. (2017). Flipped learning, flipped satisfaction, getting the balance right. *Teaching & Learning Inquiry*, 5(2), 114-127. https://doi.org/10.20343/teachlearninqu.5.2.9

González-Gómez, D., Jeong, J. S., & Cañada-Cañada, F. (2019). Enhancing science self-efficacy and attitudes of pre-service teachers (PST) through a flipped classroom learning environment. *Interactive Learning Environments*, online first. https://doi.org/10.1080/10494820.2019.1696843

Halili, S. H., Razak, R. A. & Zainuddin, Z. (2015). Enhancing collaborative learning in flipped classroom. *Australian Journal of Basic and Applied Sciences*, 9(7), 147-149 http://ajbasweb.com/old/ajbas/2015/April/147-149.pdf

Han, Y. J. (2015). Successfully flipping the ESL classroom for learner autonomy. *NYS TESOL Journal*, 2(1), 98-109. http://journal.nystesol.org/jan2015/Han_98-109_NYSTJ_Vol2Iss1_Jan2015.pdf

Hartshorne, R., Baumgartner, E., Kaplan-Rakowski, R., Mouza, C. & Ferdig, R. E. (2020). Special issue editorial: Preservice and inservice professional development during the COVID-19 pandemic. *Journal of Technology and Teacher Education*, 28(2), 137-147. https://www.learntechlib.org/primary/p/216910/

Hodges, C., Moore, S., Lockee, B., Trust, T. & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educause Review*, 27 March. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Huang, Y.-N. & Hong, Z.-R. (2016). The effects of a flipped English classroom intervention on students' information and communication technology and English reading comprehension. *Educational Technology Research and Development*, 64(2), 175-193. https://doi.org/https://doi.org/10.1007/s11423-015-9412-7

Iglesias-Pradas, S., Hernández-García, Á., Chaparro-Peláez, J. & Prieto, J. L. (2021). Emergency remote teaching and students' academic performance in higher education during the COVID-19 pandemic: A case study. *Computers in Human Behavior*, 119, article 106713. https://doi.org/10.1016/j.chb.2021.106713

Kristensen, N. S., Kofoed, L. B., Bruun-Pedersen, J. R. & Andreasen, L. B. (2020). Flipped learning in a PBL environment - An explorative case study on motivation. *The European Journal of Social & Behavioural Sciences*, 27(1), 41-53. https://doi.org/10.15405/ejsbs.268

Kvashnina, O. S. & Martynko, E. A. (2016). Analyzing the potential of flipped classroom in ESL teaching. *International Journal of Emerging Technologies in Learning*, 11(3), 71-73. https://doi.org/10.3991/ijet.v11i03.5309

Kwon, J. E. & Woo, H. R. (2017). The impact of flipped learning on cooperative and competitive mindsets. Sustainability 2018, 10(1), article 79. https://doi.org/10.3390/su10010079

Lape, N. K., Levy, R., Yong, D. H., Eddy, R. & Hankel, N. (2016). Probing the flipped classroom: A controlled study of teaching and learning outcomes in undergraduate engineering and mathematics. *Proceedings ASEE Annual Conference & Exposition*, 14-17 June. https://doi.org/10.18260/p.24590

Lee, G. & Wallace, A. (2018). Flipped learning in the English as a foreign language classroom: Outcomes and perceptions. *TESOL Quarterly*, 52(1), 62-84. https://doi.org/10.1002/tesq.372

Lee, J., Park, T. & Davis, R. O. (2018). What affects learner engagement in flipped learning and what predicts its outcomes? *British Journal of Educational Technology*, 53(2), 211-228. https://doi.org/10.1111/BJET.12717

López Belmonte, J., Pozo Sánchez, S., & Del Pino Espejo, M. J. (2019). Projection of the flipped learning methodology in the teaching staff of cross-border contexts. *Journal of New Approaches in Educational Research*, 8(2), 184-200. https://doi.org/10.7821/naer.2019.7.431

Marshall, H. W. & Kostka, I. (2020). Fostering teaching presence through the synchronous online flipped learning approach. *TESL-EJ*, 24(2), 1-014. https://www.tesl-ej.org/wordpress/issues/volume24/ej94/ej94int/

Mills, G. E. & Gay, L. R. (2016). *Educational research: Competencies for analysis and application* (11th ed.). Pearson Education Limited.

Mursyidah, H., Hermoyo, R. P. & Suwaibah, D. (2021). Does flipped learning method via MOODLE can improve outcomes and motivation of discrete mathematics learning during COVID-19 pandemic? *Journal of Physics: Conference Series*. https://doi.org/10.1088/1742-6596/1720/1/012007

Ozdamli, F. & Asiksoy, G. (2016). Flipped classroom approach. *World Journal on Educational Technology*, 8(2), 98-105. https://doi.org/10.18844/wjet.v8i2.640

Özüdoğru, F. (2021). Turkish preservice teachers' experiences with emergency remote teaching : A phenomenological study. *Issues in Educational Research*, 31(1), 166-187. http://www.iier.org.au/iier31/ozudogru.pdf

Pierce, R. & Fox, J. (2012). Vodcasts and active-learning exercises in a "flipped classroom" model of a renal pharmacotherapy module. *American Journal of Pharmaceutical Education*, 76(10). https://doi.org/10.5688/ajpe7610196

Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the Nutrition Society*, 63(4), 655-660. https://doi.org/10.1079/pns2004399

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L. & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education*, 2, 923-945. https://doi.org/10.1007/s42438-020-00155-y

Simko, T., Pinar, I., Pearson, A., Huang, J., Mutch, G., Patwary, A. S., Lui, M., Carberry, J. & Ryan, K. (2019). Flipped learning – a case study of enhanced student success. *Australasian Journal of Engineering Education*, 24(1), 35-47. https://doi.org/10.1080/22054952.2019.1617650

Tang, T., Abuhmaid, A. M., Olaimat, M., Oudat, D. M., Aldhaeebi, M. & Bamanger, E. (2020). Efficiency of flipped classroom with online-based teaching under COVID-19. *Interactive Learning Environments*, 1-12. https://doi.org/10.1080/10494820.2020.1817761

Tomas, L., Evans, N. (Snowy), Doyle, T. & Skamp, K. (2019). Are first year students ready for a flipped classroom? A case for a flipped learning continuum. *International Journal of Educational Technology in Higher Education*, 16(1), article 5. https://doi.org/10.1186/s41239-019-0135-4

Turan, Z. & Akdag-Cimen, B. (2020). Flipped classroom in English language teaching: A systematic review. *Computer Assisted Language Learning*, 33(5-6), 590-606. https://doi.org/10.1080/09588221.2019.1584117

UNESCO (2020). Global Education Coalition: Covid-19 Education Response. https://en.unesco.org/covid19/educationresponse/globalcoalition

Uosaki, N., Ogata, H. & Mouri, K. (2015). Towards flipped learning using ubiquitous learning log system in L2 learning class. In G. Chen, V. Kumar, Kinshuk, R. Huang & S. C. Kong (Eds.), *Emerging Issues in Smart Learning*, pp.353-360. https://doi.org/10.1007/978-3-662-44188-6_49

Van Veldhuizen, B., Oostdam, R., Enthoven, M. & Snoek, M. (2020). Reflective movements in the professional development of teacher educators as supervisors of student research in higher education. *European Journal of Teacher Education,* 44(4), 452-467. https://doi.org/10.1080/02619768.2020.1777977

Veldthuis, M., Alers, H., Malinowska, A. & Peng, X. (2020). Flipped classrooms for remote teaching during the COVID-19 pandemic. *CSERC '20: Proceedings of the 9th Computer Science Education Research Conference,* October 2020. Article No.: 16. https://doi.org/10.1145/3442481.3442512

Yen, T.-F. (2020). The performance of online teaching for flipped classroom based on COVID-19 aspect. *Asian Journal of Education and Social Studies*, 8(3), 57-64. https://doi.org/10.9734/AJESS/2020/v8i330229

Yong, D., Levy, R. & Lape, N. (2015). Why no difference? A controlled flipped classroom study for an introductory differential equations course. *PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies*, 25(9-10), 907-921. https://doi.org/10.1080/10511970.2015.1031307

Zawilinski, L., Shattuck, J. & Hansen, D. (2020). Professional development to promote active learning in the flipped classroom: A faculty perspective. *College Teaching*, 68(2), 87-102. https://doi.org/10.1080/87567555.2020.1753643

Appendix A: Focus group discussion guide

Welcoming note

Good afternoon and welcome to our session. Thank you for taking the time to join us today to talk about your experience with flipped learning methodology in the ERT during COVID-19. My name is Ishaq Al-Naabi, an English Language Lecturer at the University of Technology and Applied Sciences and assisting me today is Amal Al-Badi, an instructional developer at the Virtual and Learning Environment Department, Military Technological College.

You have been invited for this discussion because of your experience and implementation of flipped learning methodology during COVID-19.

There are no right or wrong contributions, but rather differing points of view which are all respected, appreciated and add insights to our study. Please feel free to share your point of view even if it differs from what others have said. Comments and challenges faced are helpful to our study. You do not need to agree with others, but you need to listen carefully as others share their views.

We are video recording this session as the recording will help us capture all contributions and issues raised. We appreciate it if you would keep your cameras on as this will help us to capture the non-verbal data. We will not use any of your names in reporting and discussing the results of this discussion. You may be assured of complete confidentiality.

Let's begin this discussion by giving a brief introduction about yourself. Now, let us open this discussion on how you implemented flipped learning in the ERT during COVID-19.

Pool of questions:

Section 1 (implementation)

1. What do you describe your general experience with flipped learning?
2. To what extent was flipped learning helpful during ERT? Why?
3. How did you plan/design your online flipped learning?
4. What instructional/learning techniques did you use in your teaching to facilitate the use of flipped learning (before-during and after class)?
5. What technologies did you use in your teaching to facilitate the use of flipped learning?
6. What kind of materials/activities did you provide your students?
   - Before the class? How did you prepare these materials/activities?
   - During the class? How did you prepare these materials/activities?
   - After the class? How did you prepare these materials/activities?
7. How did your students respond to these materials/activities (before-during and after class)?
8. What evaluation measures did you use to monitor students' learning in the course?

Section 2 (challenges)

1. What challenges did you face in implementing the flipped learning during ERT?
2. How did you address these challenges?
3. To what extent were you able to address these challenges? Who supported you?

Section 3 (future plans)

1. If you were to implement this methodology again, what changes would you propose?
2. What recommendations would you give to your colleagues who are planning to follow this teaching methodology?

Closing remarks

Thank you very much for participating in this discussion. Your input on the implementation of flipped learning methodology in the ERT during COVID-19 has helped us achieve the purpose of our study. Please let us know if you would like to add anything before we end this discussion.

Once the research findings are published, we will notify you. We can provide you with a copy of the results, upon request.

Thank you.

Appendix B: Participants' demographic information

Pseudonym	Gender	Years of EFL teaching experience	Self-rating of previous experience with flipped learning
Teacher 1A	Female	16	Moderate
Teacher 1B	Female	17	Moderate
Teacher 1C	Female	6	Moderate
Teacher 1D	Female	9	Moderate
Teacher 2A	Female	13	Moderate
Teacher 2B	Male	10	Very good
Teacher 2C	Female	23	Moderate
Teacher 2D	Male	21	Very good
Teacher 2E	Male	15	Moderate

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