Smartphone Apps -based Teaching Method to Develop Oral English Communication Skills at the Tertiary Level in an EFL Context

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Abstract

Smartphones are the most used hand-held devices by people globally, whereas large class size is a common scenario in many EFL (English as a Foreign Language) contexts like Bangladesh. Besides, EFL learners get scarce opportunities to practice oral skills inside and outside the class to develop oral English communication skills (OECSs). Thus, this study investigates learners' experiences after the intervention of 9 weeks with a smartphone apps-based teaching method (SBTM) employing WhatsApp, call, and voice recorders in an EFL classroom at the tertiary level for managing large-size class for developing learners' OECSs in Bangladesh. For this purpose, a qualitative research design using interviews, reflective journals, and classroom observation was used to elicit learners' experiences and practices for soliciting a model of a smartphone apps-based teaching method (SBTM). The findings showed that learners had positive experiences, e.g., ubiquitous and flexible processes, opportunities for individual and partner practice, recordings facilitated oral practice, and inside and outside classroom oral practice for managing large-size classes for developing OECSs in an EFL context. On the other hand, the negative experiences that learners reported were that this method was challenging for teachers, e.g., for assessment, and the classroom became noisy. The findings of this study will leave implications for teachers, learners, app developers, policymakers, and researchers for practising, developing a new app, and adopting a policy for implementing technology inside the classroom.

Keywords: large-size class, smartphone apps, oral English communication skills, WhatsApp, recorders

1. Introduction

Both portable and affordable smartphones are home to various apps (applications) that influence most of human life. It is only natural that smartphones are increasingly used for language learning. Thus, its appearance in learning and teaching language skills, e.g., reading, writing, listening, and speaking, is increasingly visible and effective as a language pedagogy as a ubiquitous process (Hasan et al., 2022; Ibna Seraj et al., 2021; Oh et al., 2022;Subramaniam et al., 2020). Since oral communication skills cover a wide range of language usage, such as academic, linguistic, social, affectional, scientific, technological, and economic aspects of life, there is a need to pay much attention to teaching effectively at the tertiary level in EFL contexts like Bangladesh. Teaching oral English communication skills in EFL contexts is always considered a complex and challenging phenomenon for EFL teachers (Zan & Goh, 2011). Compared to reading and writing, oral communication skills get less attention from EFL teachers and learners due to pedagogical tradition, reflecting learners' oral skills in many EFL contexts (Chowdhury & Shaila, 2013; Ibna Seraj et al., 2021). Nevertheless, language learning can only be accomplished with effective oral communication skills. It has been said that without achieving reading and writing skills in the native language, a man in society can lead his life influentially, but without oral communication, he can lead merely.

Thus, if we look at language pedagogy, it is traditional and static and very difficult to deal with the problem in large size classes to learn and teach Oral English Communication Skills (OECSs) felt by teachers and learners in EFL contexts (Aoumeur, 2017; Chowdhury & Shaila, 2013; Zan & Goh, 2011), are not dealt with enough by the researchers (Ibna Seraj & Habil, 2021). These force teachers to fall into the discomfort zone of teaching OECSs, negatively influencing learners' oral performance in EFL contexts like Bangladesh. Nowadays, the features of smartphones/ mobile phones are being used globally in the EFL contexts to facilitate language teaching and learning (Crompton & Burke, 2018; Ibna Seraj & Rahmatullah, 2022; Tang & Hew, 2017). But most of the studies reported learners' and teachers' perceptions, as well as the impact of using features of mobile phones on learners' language performance, very few studies (Ibna Seraj et al., 2020), explored the impact of smartphone apps dealing with real-life problems like large-size classes for improving learners' OECSs. Thus, this study will explore the impact of smartphone apps, especially WhatsApp and recorders, on managing a large class to develop learners' oral communication skills in an EFL context like Bangladesh. Thus, the smartphone phone apps-based teaching method, using call and voice recorder and WhatsApp, was employed as an intervention for 3 months. The learners are divided into groups and pairs to practice oral English inside and outside the classroom. Using a voice recorder, learners can evaluate others' oral performance by posting it

into the WhatsApp group, and the teacher can quickly grade them accordingly. In this way, every learner gets an equal participatory turn to practice oral skills regardless of class size. Therefore, the findings of the three-month intervention in a classroom suggest that learners have positive experiences with using WhatsApp and recorders to develop their oral English communication skills in a large class in an EFL context.

2. Material Studied

It has been reported that achievement decreases if class- size increases (Glass & Smith, 1978). In the meta-analysis study, Glass & Smith (1978) found an evidential relationship between large-size classes and learning achievement, whereas small classes had a high achievement (Harfitt, 2012; Locastro, 2001; Todd, 2012a). There could be different opinions regarding the number of learners in a large class (Table 1). However, there is no doubt about its negative influence on teaching and learning language skills (Aoumeur, 2017). Moreover, EFL teachers seem afraid to teach oral communication skills in a large class (Ibna Seraj & Habil, 2021).   Nevertheless, large classes are the norm and the reason for concern for EFL language teachers. Attempts have been made to study learners' performance rather than how to minimize this problem using smartphone features through effective and innovative teaching methods.

The previous studies on large classes (Aoumeur, 2017; Bahanshal, 2013; Chowdhury & Shaila, 2013; Marais, 2016; Ibna Serajet al., 2021) mainly emphasized teachers' beliefs about the size and problems of large classes. According to Marcus (1997), large class sizes may result from several factors, such as lack of physical space, insufficient teaching staff, budgetary constraints, unexpected high enrollment, changes in degree/certificate requirements, etc. No matter the causes and the number of students, large class sizes are already a reality for language teachers and will undoubtedly be an increasingly common situation in the language classrooms of tomorrow in developing countries like Bangladesh. Nevertheless, different studies suggested different techniques or ways to deal with the large class in different EFL contexts. Some suggested that teachers should apply a personal way to cope with the challenge of a large class (Hayes, 1997; Aoumeur, 2017). The other suggested that various methods and strategies should be explored to minimize the impact of large classes for promoting effective teaching and learning to achieve a high standard (Bahanshal, 2013: Chowdhury & Shaila, 2013). Furthermore, some others mentioned that for a large class, teachers could divide students into groups and assign them to complete the task of conveying a telephone message, giving an opinion, greeting, introducing and making acquaintances, etc., for presentation (Bhattacharjee, 2013). In the context of the tertiary level in Bangladesh, Chowdhury & Shaila (2013) suggested that teachers in large classes, while teaching speaking, should follow techniques such as facilitating the listening recording of native, practicing English songs and rhythms, ensuring all learners' equal contribution in speaking practice. maintaining consistent turn-taking and ensuring learners' regular practice sessions. For this purpose, Scaffolding allows a teacher to set tasks for learners' problems, achieve goals, provide reinforcements, and evaluate and demonstrate models to solve learners' problems (Wood et al., 1976). Here, a teacher is an 'activator' or 'facilitator' who prompts the student's incremental mastery of a concept.

  Nevertheless, no study was found on teaching and learning oral English communication skills in a large class using smartphone features. However, Bangladeshi learners at the tertiary level had a positive attitude toward using smartphone features to manage large classes and develop oral communication skills (Ibna Seraj et al., 2020). Therefore, it is necessary to investigate smartphone app-based teaching methods to manage a large class size to improve EFL learners' OECSs, which will be feasible and lead to innovative pedagogy.

Table 1. Summary of the number of learners in a large size class

Studies	(Locastro, 2001)	(Todd, 2012b); (Chowdhury & Shaila, 2013); (Marais, 2016)	(Glass & Smith, 1978); (Almulla, 2015)	(Aoumeur, 2017)
Large size class (Number of Learners)	22+	25+	20+	15+

3. Theoretical and Conceptual Perspective

This study led to the unearthing of an innovative way of teaching OECSs using smartphone features like WhatsApp, call, and voice recorders to enhance learners' OECSs in managing large classes at the tertiary level. Concerning this, scaffolding theory (Feng et al., 2017; Jung & Suzuki, 2015), an aspect of socio-constructivist theory (Vygotsky, 1978), was underpinned in this study for effecting a smartphone-based teaching method for teaching OECSs to develop learners' OECSs performance managing large size class.

Scaffolding is a teaching method that allows a teacher to set tasks for learners' problems, achieve goals, provide reinforcements, and evaluate and demonstrate models to solve learners' problems (Wood et al., 1976). Here, a teacher is an 'activator' or 'facilitator' who prompts the student's incremental mastery of a concept. According to Dongyu et al. (2013), there were three significant concepts: self-regulation, the Zone of Proximal Development (ZPD), and Scaffolding in the Vygotskian sociocultural psychology, where Scaffolding was the heart of ZPD. According to this theory, learners should have appropriate assistance (Scaffolding) from a teacher or More Knowledgeable Other (MKO) just enough to obtain the skill. Here, all the learners get equal attention in class. In this study, scaffolding is adopted to concentrate all the students' equal participation in managing large-size classes and enhance learners' oral English communication skills using smartphone features.

Smartphones influenced the teaching paradigm and have undergone several changes in recent decades. Once, the transmissive teaching model, based on the content approach and teacher-oriented, shifted to constructivism, which refers to learning as an active process of learners' active, relatively passive role based on the learner's current understanding or intellectual paradigm. Later, social constructivism is adopted as a teaching paradigm instead of constructivism, which refers to the process in which learning has resulted in active participation in

a 'community' where new meanings are co-constructed by the learner and his / her community (Kukulska-Hulme et al., 2005). Scaffolding supports teaching and learning practices in technology-oriented environments (Sharma & Hannafin, 2007).

Managing large class sizes is a norm for developing oral English communication skills in EFL contexts because each student's participation should be ensured. Due to the large class size, oral activities are often difficult to conduct and even more challenging for teachers to monitor. Requiring students to repeat oral tasks would be challenging for most teachers who find maintaining motivation for task engagement paramount. Goh (2017) opined that scaffolding activities could assist learners' speaking practice to strengthen oral communication skills. Scaffolding is effective when technology like the smartphone is integrated, limiting the effects of large class sizes (Stecklein, 2014; Abdullah et al., 2013; San Martin, 2017; Fields & Marsh, 2017).

According to Jung & Suzuki (2015), Scaffolding supported grouping the class, ensuring the equal participation of the students, and peer assessment for wiki-based multicultural Japanese language learning and found their effectiveness. Again, Feng et al. (2017) stated that Scaffolding increases learners' learning output through learners' involvement and engagement in a large class. Thus, smartphone-based Scaffolding might engage learners, increase their motivation for learning, and allow the entire learning experience to increase oral communication skills in an anxiety-reduced environment in a large class (Awada & Diab, 2018).

Thus, based on the constructs, e.g., engagement, involvement, and grouping of Scaffolding, the following conceptual framework in Figure 1 was implemented to investigate learners' opinions regarding managing large-size classes with WhatsApp and voice recorders to develop Oral English Communication Skills at tertiary level in Bangladesh.
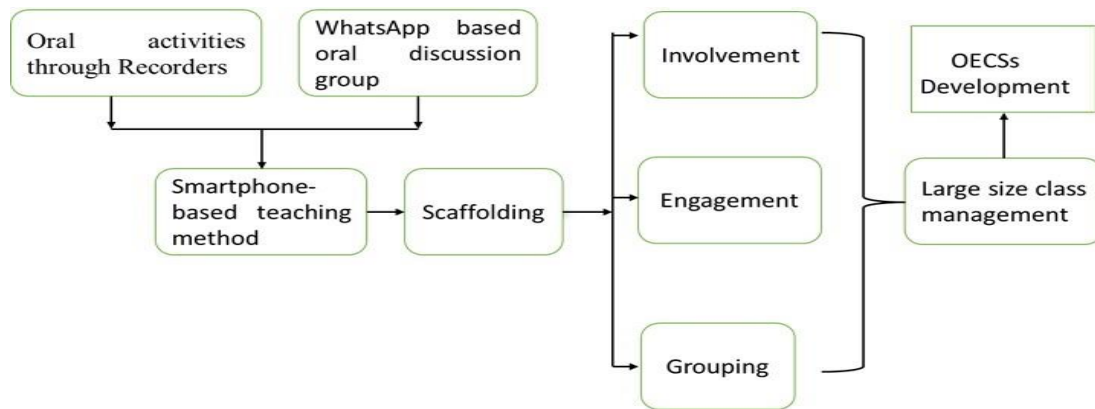

Figure 1. Conceptual framework of the study

Scaffolding is supported by managing large classes, dividing the class into different groups or pairs, and building WhatsApp oral discussion groups to perform oral tasks outside the classroom. Here, teachers got an opportunity to concentrate on all the classroom learners, prompting learners' oral English communication skills. Hence, the objective of this method was to involve learners actively in more oral activities managing a large classroom to develop their oral English communicative skills in an EFL context. These activities positively impact their fluency, accuracy, grammar, lexis, and pronunciation in English oral skills.

Based on the discussion of previous studies and theoretical perspectives, this study aims to identify the process and practices of managing large-size classes using smartphone app-based teaching methods to develop EFL learners' oral English communication skills at the tertiary level.

4. Methods

This study employed an exploratory qualitative case study to investigate the process and practice of managing large-size classes using a smartphone apps-based teaching method that employs WhatsApp, Call, and Voice recorder to develop EFL learners' oral English communication skills through learners' perceptions and experiences of a tertiary level classroom in Bangladesh.

4.1 Setting and Sampling

This study was conducted in a university classroom of the Department of English to teach oral English communication skills. There were 30 students registered for that semester at the Department of English in the spring 2020 session. The class was held virtually using ZOOM apps because of the COVID-19 Pandemic. Among them, 1 student was verbally challenged (a problem with vocal cords), 5 others were irregular in the class, and the activities of this intervention were not considered for this study. The demographic information of the students is presented in Table 2.

Table 2. Demographic information of the students

Students	Female	Male	Age
P-1	✓		20
P-2	✓		22
P-3	✓		20
P-4	✓		36

P-5	✓		22
P-6		✓	20
P-7		✓	20
P-8	✓		22
P-9	✓		21
P-10	✓		21
P-11	✓		20
P-12	✓		22
P-13		✓	22
P-14	✓		20

The pseudonyms were used for the names of students as P-1 to P-30. Among the students, 10 were male, and 20 others were female. The average age of the student was 20 years. Among 30 students, the data from 14 students were considered for this study. The researcher as a teacher conducted the intervention because the positionality of a qualitative researcher in interpretive research is crucial (Lincoln, 1995).

The mother tongue of all the students was Bangla. They had studied secondary and higher secondary education in Bangla. Now, they are studying at the tertiary level with English-medium instruction. This means the classroom instruction language was English at the tertiary level in Bangladesh. To them, English was a foreign language for learning.

4.2 Research Instruments

The research instruments employed in this study were learners' one-to-one post-interview over a phone call, reflective journals, and teacher's classroom observations for activities on using a smartphone apps-based teaching method to manage large-size classes and develop learners' oral English communication skills at the tertiary level in Bangladesh.

The semi-structured interview questions (see appendix) were prepared from the concepts of the researcher's personal experience, theoretical perspectives, and the previous literature (Al-Zahrani, 2015; Han & Keskin, 2016; Hazaea & Alzubi, 2016; Yudhiantara & Saehu, 2017). The language for the interview was English, and the average interview duration for an individual was 3 to 4 minutes. The observations were held through the researcher's lens and followed the observation guidelines (Al-Sobhi et al., 2018; AlSaleem, 2018). The observation form is attached in Appendix B. During the intervention, the teacher conducted the observation three times in weeks 4, 5, and 6. Furthermore, reflective journals were collected at the end of each week following the specific guidelines to elicit accounts of events, feelings, alternatives, and evaluations of the experience (see Appendix C).

4.3 The Intervention of Smartphone-Based Teaching Method

The intervention procedure started with a training session of learners by the researcher on how they will participate in this method. The researcher guided them through installing WhatsApp, voice, and call recorder and made a WhatsApp oral discussion group shown in Table 3.

Table 3. Learners' training session

Installation of apps	WhatsApp, Voice, and Call Recorder	Create a WhatsApp oral discussion group
Making pairs in the class	Make 10 fixed pairs for practicing oral skills outside the class, and each student will have an individual ID.	

At this stage, the class of 30 students was grouped into 15 fixed pairs for doing oral activities outside the classroom. Moreover, during class, the teacher asked students to select partners randomly to expose diversifications of oral partner tasks. Each group and member should have a specific ID. The intervention of the smartphone-based teaching method was held virtually using Zoom Classroom to close the physical classroom because of the impact of the COVID-19 Pandemic.

After the learners' training session, the class was ready to follow the smartphone apps-based teaching method from week 3 for teaching and learning oral English communication skills inside and outside the class. According to the University Grant Commission (UGC) of Bangladesh, a student needs to complete 30 credits on foundation courses out of 123 credits to achieve a Bachelor of Arts (B.A Hons.) in English. To maintain these principles, public and private universities in Bangladesh prepare several English language skills courses and other foundation courses.

The classes were prepared using the course during the 13-week intervention, covering up to the mid-semester of the academic session. The lesson plan for this course was designed to be suitable for using smartphone features, e.g., WhatsApp, Voice, and Call Recorder, to complete the course contents inside and outside the classroom.

During the class using the smartphone apps-based teaching method, there were two types of activities inside and outside the classroom. The activities in the classroom lasted 50 minutes and began with introducing the topic to be taught. The teacher also demonstrated a video on this topic that taught learners how to use the language in practical life. The teacher also asked the learners to follow the pronunciation and style of the presented videos. Then, according to the videos, learners performed oral practice individually and with partners in their assigned pairs, recorded with a voice and call recorder as a role play, and posted it to the WhatsApp oral discussion group. For feedback on posted oral activity in the WhatsApp group, learners were asked to make audio files with a voice recorder and post them to the WhatsApp group as the given outside classroom activity. The teacher gave feedback on their oral performance in class.

The activities outside the classroom began with uploading the video on the topic discussed in the class into a WhatsApp oral discussion group. Learners were asked to observe the video for the following presentation skills. Furthermore, they did oral practice individually and with partners as role-play activities, recorded it for the given times, and posted it to the group. They were also asked to talk with their peers, record with a call recorder, and post into the group. Again, they were also asked to make oral comments to evaluate others' posts in the group. Both teacher and students evaluated oral performance based on given IELTS Speaking Band Descriptors (available online) following the criteria of evaluating speaking skills of IELTS. The teacher explained IELTS Speaking Band Descriptors to students during the training session. Finally, the teacher gave feedback and evaluated their oral performance.

Thus, this study presents a smartphone-app-based teaching method through Scaffolding to manage large-size classes through several activities inside and outside the classroom. Based on these activities, the unit of analysis of interviews, reflective journals, and classroom observation data was analyzed through the thematic analysis technique to explore the usage of this teaching method for developing learners' oral skills.

4.4 Data Collection Procedure

The whole process of data collection is designed for 2 two () months at 9 weeks before, during, and after the intervention.

Before starting the session, the researcher conducted a training session on the process and implementation of a smartphone-based teaching method using WhatsApp, voice, and call recorder. The training session with learners will help them understand how they use this method for teaching and learning oral communication skills.

During the session, the researcher asked learners to keep a diary of their perceptions and experiences. Later, the researcher prepared a Google form for collecting learners' reflective journals 4 times on different occasions. As a teacher, the researcher was an active participant in the classroom and a member of the WhatsApp oral discussion group and observed learners' daily activities and movements inside and outside the classroom. Each learner's time practicing oral skills in class and outside was recorded and counted to reduce the researcher's bias. To avoid the researcher's biases, learners' oral activities were recorded and counted, including how much time he/she practiced inside and outside the class in class. After completing all 17 classes, the researcher conducted a one-to-one post-interview of learners over a phone call on their perception and experiences of using the smartphone-based teaching method.

In case study research and other forms of qualitative approach, the researcher plays an important role in data collection and analysis (Creswell, 2014; Merriam, 2009). Moreover, multiple data collection methods were used in the qualitative case study. Thus, the researcher collected data through interviews, reflective journals, and classroom observation in this study.

4.5 Data Analysis and Interpretation Process

Qualitative data, such as text formats from the interview, reflective journals, and observation notes, were analyzed and interpreted for research to the study's objective. According to Creswell & Creswell (2018), there are five steps to analyzing qualitative data, e.g., organize and prepare the data for analysis, read or look at all the data, start coding all of the data, generate a description and themes, and represent the description and themes shown in Figure 2.
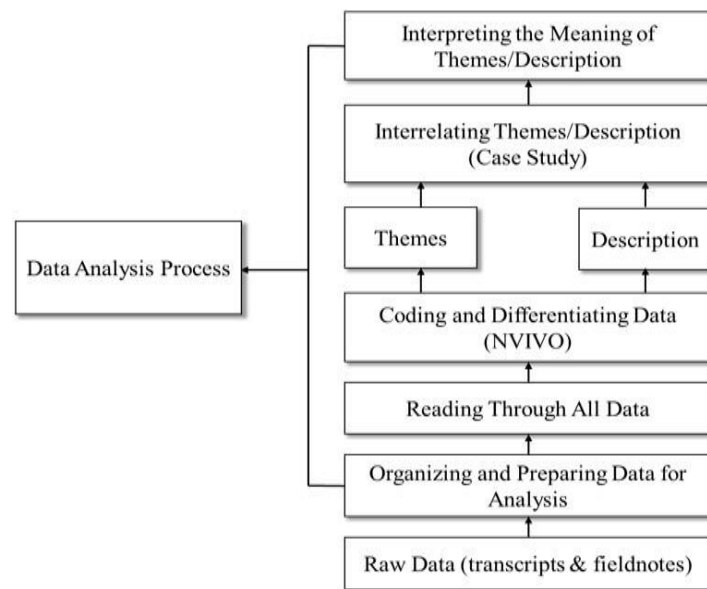

Figure 2. Data Analysis in Qualitative Research adapted from Creswell & Creswell (2018)

In this study, these five steps were followed for data analysis. Here, the software NVIVO-12 version was used to organize and analyze data to code the themes from all three data sources, e.g., interviews, reflective journals, and observation notes. NVivo was very helpful in

developing a rigorous database for the analyzed data. It helped to increase the rigour of the entire data analysis process (Ozkan, 2004).

5. Results

Themes regarding learners' experiences extracted from the interviews, reflective journals, and observations are categorized as positive and negative. The positive experiences that learners reported were ubiquitous and flexible processes, the opportunity for individual and partner practice, recording-facilitated oral practice, and inside and outside classroom oral practice. All the themes are evident in the extractions of the interview, reflective journals, and observations, with italic marks highlighting the keywords.

5.1 Positive Themes

5.1.1 Ubiquitous and Flexible Process

The data from the interview, reflective journals, and classroom observations revealed that the smartphone apps-based teaching method could manage large-size classes through ubiquitous processes. WhatsApp discussion groups provided learners with ubiquitous and flexibility as they could practice oral skills inside and outside the classroom and post into the group from anywhere. Moreover, they could participate in oral tasks easily. During the COVID-19 Pandemic, learners attended virtual classes using a smartphone-based teaching method for developing oral English communication skills, and they agreed that this method has a ubiquitous teaching process. Two participants acknowledged in their interview that with this method, they could join the class from anywhere and could do their home tasks from anywhere at any time. This ubiquitous teaching nature could manage large classes regardless of the number of students in the class. In this virtual class, many students can join from anywhere.

P1: It applies to a large class because students can easily participate from anywhere and be active. With WhatsApp oral discussion groups, students can participate and do their home tasks from anywhere and anytime. Inside the classroom, the teacher played all the students' recordings (voice and call); we listened and understood our mistakes.

P2: Outside oral activities can be managed if there are 100 students. With the help of a WhatsApp oral discussion group, we can attend classes from anywhere and do our home tasks from anywhere and anytime. Here, 100 students can be easily managed for oral practice tasks.

In the reflective journals, participants reported that they could not participate in oral tasks in the traditional classroom due to time constraints. However, with this method, they could do it easily and smoothly. The following extractions illustrate.

P1: This method applies to large classes. When we practice oral activities in the classroom, students cannot participate because of limited time. However, in this method, students do not face the problem of limited time, so they can easily participate in oral skills outside the classroom.

P2: Through virtual classes using smartphone-based teaching, many students can participate together. However, in a traditional class, if there are 30 students, there would be many problems. Because doing classes together with many students, there are nonsense talks during class. However, through virtual classes, every student can talk in classes smoothly.

The researcher discovered from observational data that participants completed their oral assignments outside the classroom at any time and from any location during the allotted time. The researcher discovered from observational data that participants completed their oral assignments outside the classroom at any time and from any location during the allotted time. The teacher gave them oral tasks outside the classroom through the WhatsApp group using recorders. Learners did their partner's oral tasks at convenient times and posted to the WhatsApp group

5.1.2 Opportunity for Individual and Partner Practice

The interview, reflective journals, and observation results showed that large-size classes were managed by learners' individual and partner practice. Participants recorded their individual and oral partner tasks using a voice and call recorder and posed in a WhatsApp group regardless of the number of students in the class. Even in the WhatsApp group, they commented on others' oral tasks. Inside the classroom, they recorded their oral tasks and later posted them in the WhatsApp group for an oral evaluation. In this way, smartphone apps-based teaching methods using WhatsApp, and recorders managed large-size classes to facilitate oral practice inside and outside the classroom. In the interview session, the participants mentioned.

P3: With the call recorder, I practiced oral skills with my speaking partner and posted it into the WhatsApp group; later, we heard it and tried to rectify our mistakes. I also practiced and recorded my oral practice several times.

P5: The call recorder facilitated our oral practice. When the teacher gave us an oral task, we practiced it several times with our speaking partner, recorded it, and posted it into the WhatsApp group.

P6: Yes, the teacher gave me the tasks, which I practiced individually and with my partner and recorded with a call recorder.

In the reflective journals, participants reported.

P2: Provided oral activities with WhatsApp and voice recorders effectively created an oral practice environment inside and outside the classroom. Inside the classroom, students watched sample videos and recorded them while speaking. Outside the classroom, we recorded our voices with a voice recorder and call recorder individually and with a partner.

P2: WhatsApp and voice recorders were not used directly in the classroom, but we heard other recordings to make oral comments for the feedback class.

The researcher observed that participants practiced individual oral tasks and dialogues and recorded their tasks for posting into the WhatsApp group inside the classroom. Outside the classroom, participants were assigned to do oral partner tasks over the phone and recorded their conversations for posting to the WhatsApp group. Later, they were assigned to comment on others' oral tasks in the group to identify mistakes that needed improvement.

5.1.3 Recordings Facilitated Oral Practice

The results from the interview, reflective journals, and observations stated that participants could participate in oral tasks through recordings in a large class. The following extractions are reported from the interview, reflective journals, and observations.

P2: We recorded our oral tasks inside and outside the classroom and posted them on WhatsApp. We also made oral comments on others' oral posts. In this way, learning large is not a problem for us.

P5: Yes, especially a WhatsApp group, managed a large class when the teacher gave oral tasks for recording individual and partner talks inside and outside the classroom. We did it and posted it on WhatsApp. I also listened to others' recordings here to compare my oral skills.

The results from the reflective journal supported the results of the interview.

P11: First, our course teacher made a group on WhatsApp. The teacher selected a speaking partner among us. We practiced with each other in class and at home using voice and call recorder. Then, each pair posted them on the WhatsApp group. So, I think applying to a large class size is possible.

The observer also reported that participants used recorders to record their individual and partner oral tasks. They posted their recordings into the WhatsApp group for evaluation by making oral comments. They also listened to their recordings via WhatsApp to make necessary corrections to improve their oral skills.

5.1.4 Inside and Outside the Classroom Practice

The results from the interview, reflective journals, and observations reported that WhatsApp, call, and voice recorders facilitated oral practice inside and outside the classroom in a large class. The following are the extractions from the interview in this regard.

P2: To record class activities, a voice recorder can be used inside and outside the classroom to manage a large class.

P3: Inside the classroom, we practised individual dialogue, recorded via recorders, and listened to oral posts through the WhatsApp group to correct our speech. For outside oral activities, if there are 100 students, they can do it using WhatsApp, voice, and call recorders.

P6: Inside class, yes. If we have 25 students, we can have an equal chance to practice oral skills outside the classroom. In this way, a call recorder can manage a large class size. Yes, the voice recorder can manage a large class size because we have individual oral tasks inside the class. For it, we had to use a voice recorder outside the classroom. We can send it to WhatsApp. We can also use these two apps inside the classroom.

The reflective journal findings support the themes gleaned from the interview, as mentioned below.

P1: This method applies to large class sizes. When we practice oral activities in the classroom, every student cannot participate because of limited time. However, in this method, students do not face the problem of limited time, so they can easily participate in oral skills inside and outside the classroom.

P4: Of course, it applies to the large size of the class. This method is interesting and skill-developing. If more students are in a large class, they can improve their oral skills by using recorders and changing speaking partners inside and outside the class.

The observer also supports the theme extracted from the interview and reflective journals. The observer reported that participants did individual and oral partner tasks and were recorded by recorders inside the class. They posted them to the WhatsApp group. Outside the class, participants were assigned to do individual oral tasks and were recorded to post them on WhatsApp. Similarly, participants were asked to converse over the phone with their partner outside the class, recorded with a call recorder, and posted to the WhatsApp group.

5.2 Negative Themes

5.2.1 Challenging for Teachers

In the interview session, one participant reported that employing SPBTM was challenging for teachers in controlling the class and evaluating learners' performance. This theme was not reported in learners' reflective journals and observation data.

P9: The WhatsApp oral discussion group cannot manage a large class because there may be many odd discussions among students, making it tough for teachers to control them. In the WhatsApp group, we may post many videos that will be challenging to check, and if there are so many call recordings, it will be tough for teachers to manage them.

5.2.2 Noise

The data from interviews and reflective journals reported that managing large classes employing SPBTM is difficult because of the noise problem.

The extractions from the interview are as follows:

P4: It will be challenging in a physical class with more than 40 students because every student will make noise.

P7: It is possible, but if there are many students there will be some problems, like noise problems inside the class

The extraction from reflective journals that mentioned this problem is as follows:

P9: No, this method is difficult to apply in a large class; there will be noise if there are many students.

6. Discussion

The results from the interview, reflective journals, and observation suggested positive and negative opinions and experiences where positive opinions are more prominent than negative opinions employing SBTM for managing a large class. The themes for exploring learners' opinions in favour of managing a large class from the data of interviews, reflective journals, and observations are ubiquitous and flexible processes, individual and partner practice, and recordings, inside and outside the classroom practice. Most participants reported that SBTM employing WhatsApp, call, and voice recorders could manage large class sizes to develop learners' OECSs and provide ample oral practice tasks. The findings showed that the ubiquitous nature of this teaching method could be used in the physical classroom, where learners could join the class regardless of the class size. Some participants mentioned that this method could be useful for outside oral practice regardless of the number of learners in a class. They mentioned that if the class consisted of 100 students, this method promoted an oral practice environment outside the classroom. The use of the WhatsApp group and recorders facilitated managing large size for a much larger oral practice environment in a large class.

The themes for exploring learners' negative opinions about managing large-size classes from the interview data are that SBTM is challenging for teachers to control the class and evaluate learners' performance. Few participants in their interview session reported these negative opinions. However, no negative opinion was mentioned in the findings from reflective journals and observations. These participants reported that this method was effective for the small class size of 10-13 learners in a speaking class. As everything on this earth has both sides of a coin, SBTM also has limitations. The researchers believe that this limitation will be reduced if more research is conducted in this regard.

Regarding the researcher's knowledge, there was a lack of studies examining the features of smartphones for managing a large class size to develop learners' oral English communication skills. Most of the research was conducted identifying the impact of large class (Aoumeur, 2017; Asodike & Onyeike, 2016), the use of Scaffolding without employing technologies (Goh, 2017), the impact of differentiated instruction (Turner et al., 2017), challenges of large size class (Marais, 2016) for learning and teaching language skills in different contexts. Only Ibna Seraj et al. (2020) pointed out students' positive attitudes toward using the features of a smartphone in a large size class in Bangladesh. From the guidance of the theory of Scaffolding, if there are the learners' involvement, engagement, and group in a class, the class should be managed regardless of the size (Feng et al., 2017; Jung & Suzuki, 2015). The analysis of the data indicated that learners in this intervention of smartphone-based teaching method got involved and engaged by the ubiquitous nature of this method, the assigned activities with WhatsApp and recorders and grouped as peers and individually inside and outside the classroom for oral practice regardless of the number of class size could develop oral English communication skills. Through Scaffolding, large sizes can be managed to develop learners' oral skills. Thus, the findings of this study entail new thinking to deal with the problem, like a large class integrating constructs of scaffolding and smartphone apps.

7. Implications

This study recommends a pedagogical model F that has implications for the practice by teachers, students, and university authorities. Teachers, students, and authorities must work collaboratively to implement SBTM in the classroom at the tertiary level of education, which is crucial during the COVID-19 Pandemic and the fourth industrial revolution era. Redefining and combining the constructs from the theory, e.g., engagement, involvement, and grouping from Scaffolding, the findings of this study produce a smartphone app-based teaching model shown in Figure 3 for developing learners' oral skills in a large-size class.

This teaching model would change the way English is taught as a foreign language (TESL) is taught to deal with problems such as large classes for teaching and learning oral skills in an EFL context.

In this model, there are 3 phases to implement, described in the following:

Planning phase: Teachers will prepare the lessons and install mobile apps according to the course materials. Teachers will install WhatsApp and voice and call recorders and explain these apps' functions inside and outside the classroom. Teachers also provide a plan for oral activities inside and outside the classroom.

Implementing phase: In this phase, teachers will use WhatsApp and call and voice records for different teaching and learning activities inside and outside the classroom. These apps can be used for ubiquitous processes, applying to physical classes for individual, group, and partner tasks inside and outside using WhatsApp and recorders.
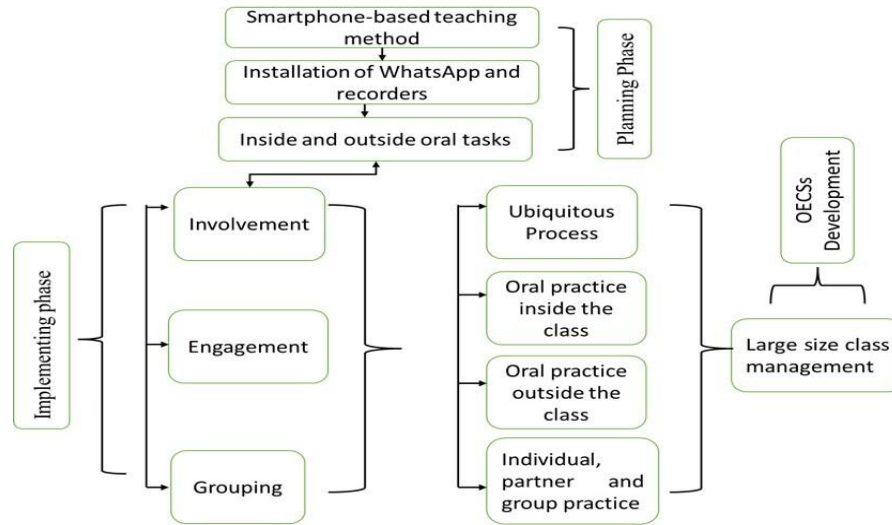
Figure 3. Model of Smartphone App-based Teaching Method

Outcome: At this phase, teachers can evaluate the oral performance to observe the development of learners' oral performance.

Secondly, the findings of this study suggest that SBTM provides learners with ample opportunity to practice oral skills inside and outside the classroom. Using WhatsApp as a learning and communication platform, learners can always do oral practice by sending voice messages or recordings that facilitate their oral practice and can also improve their oral skills. Again, using a voice recorder, they can record their oral tasks and listen to their voices later to discover their mistakes. They can also listen to others' recordings and compare their performance with others'. Further, using a call recorder, they can practice conversations with partners and record to listen later to find their mistakes. Finally, as per the lesson, YouTube videos can help learners conceptualize contextualized and linguistic knowledge on conducting oral communication reality. Thus, the findings of this study could support learners by providing real-life-like oral activities to develop their oral skills. Moreover, they can join or do activities outside the physical classroom.

Thirdly, the university authority should provide a conducive environment for implementing SBTM in the university, both for teachers and learners. Authorities should have taken the initiative to design the course materials in alignment with the favourable to teaching and learning oral skills. They also could identify learners and teachers who have taken courses through smartphone-based teaching methods to evaluate this method's outputs. The COVID-19 Pandemic forced educational institutions to conduct academic activities online or through distance learning. They could utilize this method by incorporating some other applications like Zoom or Google Classroom. All teachers and students in EFL contexts can benefit from these results' practical implications. As EFL learners do not get enough attention to develop oral skills, this method can help learners develop oral skills by providing ample opportunity to practice oral skills inside and outside, providing authentic materials, and managing large class sizes. Thus, the authority of tertiary level education should consider the abovementioned factors to implement this method for preparing learners orally skilled.

Fourthly, smartphone app builders can consider this teaching model to create an integrated app where the functions of WhatsApp (making virtual groups), voice, and call recorders will be accumulated. This new app will help teachers and learners use it inside and outside the classroom for oral skills instead of using three different apps. The researchers believe that with this new app, learners will get ample opportunity to develop their oral English communication skills in any context.

8. Conclusion

As smartphones are part and parcel of our daily lives, there is a need to investigate implementing their features in the classroom. Moreover, a large class is one of the barriers to developing learners' OECSs in many EFL contexts. This study reported the learners' experiences after 13 weeks of intervention with SBTM in dealing with a large class size to develop learners' OECSs at the tertiary level in Bangladesh. The findings showed that the employment of WhatsApp, call, and voice recorders mitigated the impact of a large size class through different types, e.g., ubiquitous and flexible processes, individual and partner practice, recordings inside and outside the classroom practice for developing OECSs in an EFL context like Bangladesh. Though most participants had positive experiences, few had negative opinions, as they stated that this method would be challenging for teachers to monitor and evaluate learners' performance. Based on the findings and guidelines of scaffolding theory, this study proposes a teaching method with the combination of three smartphone apps, e.g., WhatsApp, call, and voice recorder. EFL teachers can easily apply this method in the classroom to develop learners" OECSs development. Researchers can apply this method to investigate how much students improved in OECSs after going through this method. App developers can use the concepts of this teaching method to develop an app where all the functions of these three features will interact. Policymakers can use this study's findings to increase the use of technology in the classroom. This study has several limitations, e.g., this intervention was implemented only in a classroom and through a Zoom link instead of the face-to-face classroom.

Authors' contributions

Dr. Prodhan Mahbub Ibna Seraj was responsible for revising, designing the study, drafting and collecting data. Dr. Blanka Klimova was responsible for drafting the manuscript and revising it. All authors read and approved of the final manuscript.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Sciedu Press.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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No additional data are available.

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Appendix

Appendix A: Interview Questionnaire

How many students in a class is a large size class for a speaking class?

Do you think this teaching method can manage large-size classes?

How do you think students can easily participate in this class?

Do you think WhatsApp oral discussion groups can manage large-size classes?

Do you think voice recorders help manage large classes? how?

Can a voice recorder help manage large classes?

Appendix B: Observation Form	
Entry No	Week: 4 5 6
Date	Time:
Discuss classroom, WhatsApp oral discussion group and learners Describe the teaching and learning environment inside and outside the classroom Describe the use of WhatsApp, voice and call recorder-based activities Describe the learners (appearance, attire, characteristics, etc.) Describe the actions (movement, non-verbal cues) Describe the oral activities (how the lesson is introduced, what questions are asked, what remarks are made, what interaction occurs between students, etc.)	

Appendix C: Learners' Journal Form	
Entry No	Week: 1 2 3 4 5 6 7 8 9
Date	Time:
Please describe your experience on learning OECS with SBTM Guide for writing journals: • Provided oral activities effective? • Write about the process you observed. • Did you get equal attention for this method? • Did you get a chance to speak? • Did you have a problem with the peer? How did you solve it? • How did you get a chance to speak inside and outside the classroom? • What part of this method was difficult and why? • Did you want to continue using this method, and why? If you have any additional opinions, please write	