The Impact of Flipperentiation on Developing EFL Preparatory Stage Students' Speaking Skills and Reducing their Anxiety

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Abstract
The research aimed at investigating the impact of using flipperentiation on developing EFL preparatory stage students’ speaking skills and reducing their anxiety. To fulfill the purpose of the research, two instruments were constructed (an EFL speaking test with an analytic rubric, and a motivation scale). Participants of the study were sixty first-year preparatory stage students at Aldabousy Preparatory School, Al Dakahalia Governorate for the first semester of (2022-2023). Participants were divided into two groups: one control and one experimental, and each group consisted of 30 students. The experimental group students were taught through flipperentiation while the control group students studied through the regular method produced by the ministry of education. Results indicated that teaching speaking through flipperentiation led to a significant development in the students’ speaking skills and reduced their anxiety. Therefore, it was concluded that using flipperentiation as a means for teaching and practicing the speaking skills of the English language was highly effective in developing the participants’ speaking performance and reducing their anxiety.

Key words: EFL speaking skills, anxiety, flipperentiation, EFL preparatory stage students.

Introduction and Overview
English is one of 53 official languages and is spoken as a first language by about 400 million people globally, despite not being the most spoken language in the world. Therefore, it is highly important to help students develop their English language. One of the most important skills of learning English is speaking. Speaking skills have to be mastered by students throughout the learning process to help them express their thoughts, feelings and ideas without being afraid of committing mistakes.

Many students focus on improving their language competency since they study a language in order to be able to speak it (Griffiths, 2008).
Speaking in real-world circumstances as required is challenging for many EFL preparatory students. Researchers throughout different studies indicated that speaking is the most difficult skill to be mastered and by foreign language learners. For example, Dincer (2017) claimed that speaking is the hardest skills to master since it requires more than just understanding a language’s semantics and grammar. It also has to do with exercising control over various activities, including both physical and mental abilities.

Teaching speaking is very important part of foreign language learning. The ability to communicate in a foreign language clearly and effectively is one main element that contributes to the success of the learner in school and later success in every phase of practical life Gohar(2018). There are different activities and techniques that can be used by teachers to improve students’ speaking skills such as questioning, role-playing, storytelling, dialogues and picture description.

People may experience difficulties when speaking. Researchers have conducted several studies throughout different years to search for strategies that can help students overcome their speaking difficulties. For example; saqr(2020); El-Mistikawy(2020); El-Nashar(2019); Khalil, El-Nagar& Awad (2019) . These studies indicated that students have lots of difficulties when speaking such as incorrect pronunciation, misuse of vocabularies, poor grammar and fluency, and comprehensibility problems. As Khan (2005) noted, several of his participants had communication difficulties. There could be a number of issues that contributed to speech difficulty, including: linguistic Problems, psychological problems and less confidence. This research focuses on the psychological factors that affect learning speaking negatively such as anxiety.

Anxiety seems to be the main affective element that has particularly negative impacts on students' oral performance among the various affective factors that affect foreign language acquisition, especially speaking. According to Elmenfi and Gaibani (2016), stress brought on by the demands of language learning can lead to low productivity and a hate for or fear of speaking. Foreign language anxiety (FLA) has attracted the attention of researchers and educators over the past forty years, making it the most studied emotive variable in foreign language learning (Gkonou, Daubney & Dewaele, 2017; Teimouri, Goetze & Plonsky, 2019).

In order to help students overcome their speaking difficulties and control their fear of speaking, teachers can make use of flipperentiation as a combination of flipped learning and differentiated instruction.
Flipperentiation enables teachers to employ technology in the teaching process, satisfy the demands of the current generation of learners who are expected to take ownership of their own learning, and develop a broad range of language skills Mahmoud (2017). According to Tomlinson (2017), differentiation means tailoring or adjusting instruction in order to respond to students’ needs. Students come to class with a number of variances such as their language level, learning beliefs, fixed or growth mindsets, previous knowledge, learning rhythm, reading or speaking pace, learning preferences, interests, accessibility, cultural backgrounds, first language, etc.; the list goes on. When flipping, teachers cater to many of students’ variances as they are making the content accessible to students.

Several studies were conducted to support the positive impact of flipped learning and differentiated instruction on enhancing speaking skills and reducing anxiety. For example: Sheerah & Yadav (2022) conducted a study to look into how flipped classrooms affected the speaking skills. The study results showed that the students appreciated and thought the Flipped Classroom Method was sufficient in helping them become more fluent, confident, and competent in their production classes. Also, in order to determine how adopting diversified curriculum and instruction affected motivation, anxiety, and interest in learning English, Cheng (2006) conducted a study. According to the results of the study, differentiating curriculum and instruction boosted the motivation and interest of EFL students. The research showed, however, that adopting diversified curriculum and instruction did not result in an appreciable reduction in anxiety level.

The current study investigates the effectiveness of flipperentiation in improving preparatory stage students’ EFL speaking skills and reducing their anxiety toward it.

Speaking
Nature of Speaking

Speaking is the process of helping students in improving their communication skills to make it easier for them to express themselves. Without enhancing students’ speaking skills, it is impossible to improve communication skills. Dincer (2017) claimed that speaking is the hardest skills to master since it requires more than just understanding a language's semantics and grammar. It also has to do with exercising control over various activities, including both physical and mental abilities. Understanding the concept of speaking is necessary before understanding the nature of speaking. Several academics have discussed the idea of
speaking. Each description has a distinct conceptualization and significant elements that emphasize the precise meaning of speaking.

According to Gohar (2018), speaking is the process of creating and communicating meaning in a variety of circumstances by using verbal and nonverbal symbols. It is also regarded as a participatory process of creating meaning that entails information production, reception, and processing. Speaking is a crucial component in teaching and learning a second or foreign language. Irawati (2014) described it as an activity whereby sayings are produced verbally in the form of words and phrases in order to communicate with others.

**Importance of Speaking**

Speaking effectively is a crucial part of communication. People cannot interact with one another without speech, and language becomes nothing more than a script.

Speaking skills are crucial for professional success as well as for improving one's personal life by opening doors to foreign meetings, promotions, and travel. It is a procedure that involves steps that take place before, during, and following actual speaking practice (Richards, 2012). For instance, the speaker should be aware of the message's actual substance, the best way to communicate it, and the type of listener who will be receiving it before the actual speaking action even begins. At the conclusion of the speaking exercise, the speaker may offer comments, respond to inquiries, clarify concepts, evaluate the procedure, sum up, and offer feedback on the speaking subjects.

**Studies Related to Speaking Skills**

Several studies were administered in Egypt and other countries to evaluate learners’ speaking skills and to engage proper approaches for developing those skills. For instance:

El-Mistikawy (2020) investigated the effectiveness of a program based on using Synchronous Computer Mediated Communication in enhancing EFL student teachers’ speaking skills. The sample of the study consisted of (24) third-year preparatory students at Narmar Language School. Instruments of the study were speaking skills checklist, speaking scoring rubric, pre and post speaking test, and a program based on Synchronous Computer Mediated Communication (SCMC). The study's findings showed that the experimental group's speaking post-test scores were much higher than their pre-test scores as a result of the researcher's SCMC-based program, which was used in the study.
El-Nashar (2019) examined the effect of using task based language teaching strategies in improving speaking skills for preparatory school students. The sample of the study consisted of 70 preparatory stage students from Om-Elmoemmen Preparatory School. The instruments used in this study were: a questionnaire, a pre-posttest and a rubric. According to the study, there was a statistically significant difference between the mean scores of the experimental and control groups on the post administration of the speaking test in favor of the experimental group. The results suggested that task-based language learning techniques had a considerable positive impact on students' speaking skills.

**Anxiety**

According to Brown (2000), anxiety is a mental state accompanied by unease, irritability, self-doubt, or worry. It is "the subjective feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning." MacIntyre and Gardner (1994) (p. 284). In their study on foreign language anxiety, Horwitz, Horwitz and Cope (1986) defined it as "a distinct complex of self-perceptions, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 127).

**Causes of speaking anxiety**

Researchers who study foreign languages have looked at the factors that cause speaking anxiety and have identified a number of possible causes. Some of the main reasons why most language learners struggle are listed below:

1) **Lack of vocabulary**: Wilkins (1972) claimed that without vocabulary, "nothing can be spoken," and that without grammar, "very little can be transmitted." One of the causes of language speaking anxiety is a lack of vocabulary. Language learners frequently feel nervous and apprehensive while speaking because of their large vocabulary in the target language, especially when doing so in formal or academic settings.

2) **Low English proficiency**: Zhang (2009) claimed in a study he conducted on Chinese English learners that students with little English proficiency struggle to grasp what their lecturers are saying in class, which inhibits them from taking part in discussions or answering their questions. Most students do not ask their teachers to repeat what was said or to clarify a point because they feel it would diminish their value in their peers' eyes. They are preoccupied with worrying about being
viewed as inferior. They are unable to improve their English because of their "face keeping."

3) **Lack of preparation:** Language speaking anxiety can often be caused by a lack of preparation time and effort. The majority of Chinese language learners responded in Liu's 2007 research that they are most likely to feel apprehensive when they are underprepared and vice versa.

4) **Lack of practice:** Since practice makes perfect, a lack of it causes uncertainty and anxiety. To properly master and speak a foreign language fluently, more is required than merely classroom education. The language needs to be used and used a lot more outside of the classroom. English speaking anxiety is a result of the unavailability of opportunities to use English outside of the classroom, short class periods, and big class sizes in various parts of the world.

5) **Fear of making mistakes:** Because making mistakes is associated with receiving a poor rating, students tend to hold back on speaking up and expressing their opinions in class for fear of messing up and getting ridiculed by their classmates. In the words of Zhang (2009), "Students frequently feel afraid at the notion of making mistakes and receiving unfavorable feedback from the peers" (p. 35). One respondent to the 2007 survey stated: "I enjoy speaking English, but when I'm around other people, I get uncomfortable and can't say anything because I'm worried others will laugh at me if I make any mistake" (p. 130).

6) **Inability to express ideas:** Many English language learners find it difficult to communicate their ideas and deliver crucial messages. Speech anxiety is caused by a person's difficulty to convey their ideas in English from their original speech. Elaldı (2016) claimed that despite understanding English grammar well, Turkish English language learners frequently experience high levels of anxiety and are unable to speak in front of others because they lack motivation, confidence, or speaking practice.

7) **Fear of being focus of attention:** Due to shyness and the dread of being the center of attention because they believe everyone is listening to them, many English language learners feel speech anxiety. A study by Liu (2007) found that many students had anxiety when asked to speak in front of their peers in English. When speaking English in front of others, one of the students admitted, "I frequently feel anxious because I feel like there are too many eyes on me" (p. 130).

**Studies Related to Speaking Anxiety**
Zarei and Rezadoust (2020) carried out a study with 90 EFL learners, dividing them randomly into three groups: one given scaffolded feedback, one given unscaffolded feedback, and one given no feedback. The pre and posttest results of the three groups indicated that using scaffolded feedback decreased learners’ speaking anxiety.

Gohar (2018) studied the effects of employing a classroom environment that supports creativity on improving first-year secondary stage students' EFL speaking skills and reducing their speaking anxiety. A test, a rubric, and an anxiety scale were the instruments created for this study. Results revealed that the experimental group students outperformed their counterparts of the control group in the target EFL speaking skills. Besides, the speaking anxiety post-level of the experimental group was reduced compared to their pre-level and to the control group’s post anxiety level as well. Thus, the classroom that encouraged creativity demonstrated its efficacy in enhancing first-year secondary school students' speaking abilities and lowering their speaking anxiety.

**Flipped Learning**

In the conventional educational system, teachers are in charge of imparting knowledge by presenting the material during class time. To support the teacher’s explanations and encourage the assimilation of the materials presented during class, the students do tasks or exercises at home (Tourón, Santiago, & Dez, 2014). In this technique, students approach problem-solving independently, without the assistance of a teacher to address any potential queries and allow the students to go on to the task at hand. When this keeps happening, the students grow upset and hindered, which stops them from properly assimilating the material and developing the necessary skills and abilities (Goodwin & Miller, 2013).

**Types of Flipped Learning**

Different types of flipped learning have been recognized by researchers and language teachers. The teacher should choose the type which is suitable for students’ age, perspectives and learning styles.

1. **Traditional flip**

   Students are given video lectures as homework. The purpose of this assignment is to offer or provide a preview of the information that the students will need the following day. The students watch the videos and complete any required assignments. The following day in class, the teacher introduces the day's learning activity and addresses any questions the students may have. Students finish material that would ordinarily have been given as homework in class.
2. In-class flip

The in-class flip has many of the same characteristics as the traditional flip, with the exception that any home-based learning or video-watching assignments must be completed by the students. When adopting the in-class flip, the entire learning process—including the initial lecture or activity—takes place in the classroom. The classroom is organized into stations where groups of students work independently, collaboratively, or a combination of the two during project-based, critical thinking exercises. Gonzalez (2014) highlighted the importance of having a limited number of endless stations where the activity is never truly "finished," but instead offers a variety of possibilities and changes that can be useful for children who complete an activity early.

3. Mastery flip

Bergmann and Sams (2012) determined that the mastery flip has three essential components: Students can work independently or in small groups at a reasonable pace. The instructor assesses each student's comprehension levels informally. Students demonstrate that they have mastered the objectives on summative tests. Students who struggle to understand a certain aim are given remedial instruction. (p.107).

The Implementation of Flipped Model

No single, widely accepted model of the flipped classroom has been developed as a result of the diversity of methods offered by the research. The flipped classroom can be used in as many diverse ways as there are students who use it. A "flipped classroom" is any class that uses pre-recorded movies as part of the curriculum. A flipped classroom's strength, however, lies in the whole approach, which blends the usage of videos with novel ways to fill class time. Pre-recorded videos should be used in conjunction with technologically integrated lessons and in-class activities. Otherwise, class sessions could be inefficient and time-consuming. The fundamental idea behind the flipped classroom is that learning should take place through a mix of in-class and outside-of-class activities (Basal, 2015).

Using digital tools that enable teachers to present knowledge outside of the classroom, such as through films they have either produced themselves or chosen from a range of easily available sources, is another aspect of flipping the classroom. Explain Everything, Videoscribe, Powtoon, and PowerPoint presentations with sound are a few of the programs used to record videos. Additionally, to find out what students already know, resources like EDpuzzle and Playposit are employed. They permitted the instructor to add questions to the films before the class even began and view...
the student responses (Chica, 2016). This method can be used in the classroom as long as the Internet-based resources are appropriate for the students' learning objectives and serve a clear purpose. (Diez, 2017).

**Differentiated instruction**

**Nature**

Teachers in inclusive classrooms employ differentiated instruction (DI) as a teaching strategy to handle student diversity. According to Tomlinson and Allan (2000), differentiated teaching involves "a teacher's responsiveness to learner's requirements." As they continue, "differentiation" is defined as "attending to the learning demands of a specific student or small group of students rather than the more prevalent practice of teaching the class as if all of the students were basically the same." (p.4).

According to Tomlinson (2001), "Effective differentiation will typically be planned by the teacher to be robust enough to address a range of learner needs, rather than planning a single approach for everyone and reactively trying to adjust the plans when it becomes apparent that the lesson is not working for some learners for whom it was intended," (p. 4).

**Importance of Differentiated Instruction**

Differentiation creates a secure environment and learning opportunities for students, allowing them to develop the necessary neutral pathways to accomplish the teacher's learning objectives. This allows each student to learn in the manner that best suits his or her learning style, interests, and abilities. (Tomlinson & Sousa, 2011).

Additionally, Differentiation necessitates a shift in thinking on the part of the teacher in order to respond to the various and changing scenarios that may happen in the classroom. according to Tomlinson and Imbeau(2010) "Learning to differentiate instruction properly demands rethinking one's classroom practice and arises from an outgoing process of try, reflection, and modification in the classroom itself," (p.13).

Furthermore, differentiation allows every student to learn something new every day. The high expectations of American public school classrooms can easily be met if the true purpose of differentiation is met.

Also, Students exhibit a wide range of abilities, academic levels, learning styles, and learning preferences, necessitating individualized training to fulfill their specific requirements (Bender, 2012). Differentiated instruction respects the value and worth of each individual by allowing students from a variety of backgrounds and skills to exhibit what they know, understand, and can do. (Adami, 2004).
Finally, Differentiation allows teachers to alter the curriculum, their teaching methods, the educational materials used, the learning activities, and the evaluation methods according to and in line with students' unique needs in order to optimize learning possibilities for each student. (Bearne, 1996).

**Flipperentiation**

**Nature**

Joe Hirsch (2014) introduced the idea of flipperentiation, which he defined as a pedagogical method of instruction in which direct instruction shifts from the context of group learning to the context of individual learning. It mixes differentiated learning with the idea of flipped learning. Flipped learning is the fuel if differentiation is the engine. When used synchronously, flipped learning and differentiated instruction can offer a learning environment that pushes students to go further and quicker than ever.

Ober (2015) defined flipperentiation as a combination of differentiated instruction and flipped learning. According to Chuang et al. (2018), one advantage of flipping instruction is that it enables differentiated instruction to support students in overcoming language-learning challenges.

**Importance of Flipperentiation**

According to Chuang et al. (2018), flipperentiation enables the transformation of conventional instructional models through the use of technology while producing a differentiated blended learning model that fosters student engagement and fosters the development of the communication and teamwork skills necessary for the twenty-first century. Flipperentiation also enables parents to get involved in their kids' schooling. The opportunity for parents to be involved in what their children are learning at school is substantially enlarged as more pupils integrate technology into their daily routines, both at school and at home.

**Flipped instruction and differentiated instruction: a harmonious match**

It is clear that many of the guiding ideas that differentiated instruction and flipped learning both adhere to are shared by both concepts. However, it is possible to use the two models in a way that benefits both sides. The flipped classroom promotes differentiation, an instructional strategy that can assist teachers in maximizing the extra flexibility made available by a flipped classroom.

Although differentiated instruction and flipped learning can complement one another, there is overlap between what happens at home and in school on two different levels. In order to meet the diverse demands of today's students, teachers in both contexts must make an effort to
anticipate their needs. Teachers must specifically use strategies to promote student growth, foster classroom community, and spark intrinsic drive. Tomlinson, 2014; Dweck, 2006; Hattie & Yates, 2014).

Studies related to flipperantiation for improving speaking and reducing anxiety

Many researches were conducted to support the relation effect of flipped learning and differentiated instruction on enhancing speaking skills and reducing anxiety. For example:

Sheerah & Yadav (2022) conducted a study to look into how flipped classrooms affected the speaking abilities of Saudi EFL students. One of two student groups from the preparatory year was chosen at random by the researchers. There were 56 students in each of the groups. The first group, which had 32 students and was entirely female, used flipped learning. A questionnaire and instructor observations served as the study's instruments. The results of the intervention after one semester (13 weeks) showed that the students appreciated and thought the Flipped Classroom Method was sufficient in helping them become more fluent, confident, and competent in their production classes.

The usefulness of a differentiated instruction-based program (DIBP) in fostering students' speaking abilities in the EFL preparatory level was examined by Bahaa, Nadia, and Sara in 2019. Eighty students from two classes in the first preparatory grade participated in the study. An EFL speaking pre-post-test that was given to the entire sample before and after the program's implementation served as the study's instrument. The EFL speaking post test results showed that there were statistically significant differences in favor of the experimental group between the mean scores of the experimental group with its three levels and the control group with its three levels. It was determined that the suggested program, which was based on differentiated instruction, was successful in enhancing the speaking abilities and their constituent parts in EFL preliminary stage students.

It is obvious that various studies have investigated the effectiveness of using flipperantiation as a blend of flipped learning and differentiated instruction to improve speaking skills and reduce students’ anxiety toward speaking. Nearly all the studies have displayed a positive relationship among flipped learning, differentiated instruction, and speaking skills.

Statement of the problem

Based on the literature review, researcher’s experience, and previous studies, it is evident that EFL students suffer from low language command of English speaking skills which is observable on pronunciation,
vocabulary, grammar, fluency and comprehension. That is why the present study attempted to help them develop their competencies in EFL speaking skills through using a new teaching program which is flipperentiation as well as reducing their speaking anxiety.

Questions of the study
The current study attempted to answer the following questions:
1. What are the speaking skills required for first year preparatory stage students?
2. How can flipperentiation be used to improve preparatory stage students' speaking skills and reducing their speaking anxiety?
3. What is the impact of flipperentiation on improving preparatory stage students' speaking skills?
4. What is the impact of flipperentiation on reducing preparatory stage students' speaking anxiety?

Purpose of the study:
The current study aimed at:
1. Determining speaking skills required for first year preparatory stage students.
2. Determining the features of flipperentiation that can develop students’ speaking skills and reduce their anxiety.
3. Assessing the impact of flipperentiation on developing students’ speaking skills.
4. Assessing the impact of flipperentiation on reducing students’ speaking anxiety.

Delimitations
The study was delimited to:
1. A pre-post EFL speaking skills test to measure the EFL preparatory stage students speaking skills before and after applying flipperentiation.
2. An analytic speaking rubric for scoring students' speaking performance.
3. An EFL speaking anxiety scale in the EFL preparatory stage to measure anxiety towards speaking.

Hypotheses of the study
The current study verified the following hypotheses:
1. There is a statistically significant difference at the .05 level between the experimental and control groups' mean scores in overall speaking skills post-test in favor of the experimental group.
2- There is a statistically significance difference between the experimental group mean score on the pre and post EFL speaking skills test in favor of the post administration.
3- There is a statistically significant difference between the experimental and the control groups' mean scores in the post administration of the speaking anxiety scale in favor of the experimental group.
4- There is a statistically significant difference between the experimental group mean score on the pre and post speaking anxiety scale in favor of the post administration.

**Method of the study:**

**Participants**

Participants of the study were sixty first-year preparatory stage students at Aldabousy Preparatory School, Al Dakhahlia Governorate for the first semester of (2022-2023). Participants were divided into two groups: one control and one experimental, and each group consisted of 30 students. The experimental group students were taught through flipperentiation while the control group students studied through the regular method produced by the ministry of education.

**Design**

The present research adopted the quasi-experimental design to investigate the effectiveness of using flipperentiation in developing the preparatory stage students' speaking skills. In this research, students were selected randomly to present the experimental and control groups. The experimental group was taught through flipperentiation while the control group was taught through the regular method. Both groups received the pre- and post EFL speaking test and the speaking anxiety scale.

**Figure (1): presents the design of this research (original)**
For the purpose of the research, the following instruments were designed and used by the researcher:

1. An EFL speaking skills checklist for determining the most important speaking micro skills needed to be developed by preparatory stage students.
2. An EFL speaking skills test (pre-post) to measure the EFL preparatory stage students speaking skills before and after implementing differentiation.
3. An EFL analytic speaking rubric for scoring students' speaking performance.
4. An EFL speaking anxiety scale (pre-post) to measure anxiety level towards speaking performance before and after implementing differentiation.

Procedures
The following steps were carried out in order to answer the questions of the present study:

1. Reviewing the literature and related studies to flipped learning and differentiated instruction.
2. Preparing the instruments (speaking skills test, speaking rubric and anxiety scale).
3. Presenting the instrument to a group of jurors' for validation.
4. Modifying the instruments according to jurors' points of view.
5. Choosing and deciding on the number of participants.
6. Randomly assigning the participants into a control group and an experimental one.
7. Pre-administrating the instruments to the participants.
8. Training the experimental group using differentiation while the control group studies through the regular method.
9. Post-administrating the instruments to the participants.
10. Collecting and analyzing data.
11. Providing the study conclusions, recommendations and suggestions for further research.

Definitions of key terms
Speaking skill

Aqlisty (2011) stated that speaking is an interactive process of constructing meaning that involves producing, receiving, and processing information. Andryani (2012) defined speaking skill as the ability to speak target language to communicate with others that consists of accuracy, fluency, grammar, vocabulary, pronunciation and comprehensibility.
Speaking skill is operationally defined for the purpose of the study as "the ability to use verbal and non-verbal symbols in meaningful contexts to convey clearer meanings to the listener".

**Anxiety**

Anxiety is a feeling of tension, apprehension and nervousness associated with the situation of learning a foreign language (Horwitz et al. cited in Nascente, 2001). It is also defined as a complicated concept which reflects negative emotions such as frustration, apprehension, low confidence or fear (Goher, 2018). Anxiety is operationally defined in this study as "a state of uneasiness that hinders the learner from using the spoken language appropriately and fluently".

**Flipperentiation**

In (2015), Ober defines flipperentiation as a blend of flipped learning and differentiated instruction. It is also defined as the process which combines personalized and differentiated instruction in the way that enables each pupil to work according to his/her own abilities and at the same time receives options that match different types of intelligence (Gohneim, 2017). This term is operationally defined in this study as "a new technological teaching strategy that combines the benefits of both flipped learning and differentiated instruction to improve students' speaking skills and reducing their anxiety".

**Statistical Analysis and Results**

The results of the research were discussed in light of statistical analysis of each instrument. A discussion of the results was provided after each statistical analysis as well as a discussion of the overall results.

**Establishing the homogeneity of the two groups on the EFL speaking skills test**

In order to establish the homogeneity of the experimental and control group before implementing the treatment, the researcher calculated their speaking level.
Table (1): Establishing the homogeneity of the two groups on the EFL speaking skills test

<table>
<thead>
<tr>
<th>Skills</th>
<th>The group</th>
<th>N.of cases</th>
<th>Means</th>
<th>S.D</th>
<th>df</th>
<th>t.Value</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>Fluency</td>
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<td>30</td>
<td>8.83</td>
<td>3.007</td>
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<td>0.894</td>
<td>0.375</td>
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<td></td>
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<td></td>
<td>-0.601</td>
<td>0.550</td>
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<tr>
<td>Pronunciation</td>
<td>Control</td>
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<td>7.47</td>
<td>3.104</td>
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<td>2.704</td>
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<td>2.059</td>
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<td>Total score of test</td>
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</tbody>
</table>

Table (5) shows that there are no statistically significant differences between the mean scores of the students of the experimental and control groups in all speaking test skills and in the total score of the test. This means that the two groups are almost equal before the program is applied to them (this indicates the equivalence that exists between the two groups in the pre-test).

Establishing homogeneity of the control and experimental groups in the EFL Speaking Anxiety Scale

In order to establish the homogeneity of the experimental and the control group on the EFL speaking anxiety scale before implementing the treatment, the researcher calculated their speaking anxiety level.

Table (2): Establishing the homogeneity of the two groups on the speaking anxiety scale

<table>
<thead>
<tr>
<th>Skills</th>
<th>The group</th>
<th>N.of cases</th>
<th>Means</th>
<th>S.D</th>
<th>df</th>
<th>t.Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total score of the scale</td>
<td>Control</td>
<td>30</td>
<td>89.60</td>
<td>4.454</td>
<td>58</td>
<td>-0.184</td>
<td>0.855</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>30</td>
<td>89.80</td>
<td>3.960</td>
<td></td>
<td>-0.184</td>
<td>0.855</td>
</tr>
</tbody>
</table>

Table (6) indicates that there are no statistically significant differences between the mean scores of the students of the experimental and control groups in the pre-administration on the scale of speaking anxiety, where the value of \( t = 0.184 \) is not statistically significant. This means that the two groups are almost equal before implementing the treatment.
Results

In order to analyze the results, the researcher used the Statistical Package for Social Science (SPSS). Additionally, the researcher estimated the difference between the experimental and control group students’ mean scores before and after applying the test and speaking anxiety scale by using \( t \)-test. Eta square value (\( \eta^2 \)) was used to investigate the effect size of the experimental treatment upon the development of speaking skills and reducing students’ anxiety towards speaking. The following section tests each hypothesis individually.

*Testing the first hypothesis:
First hypothesis stated that:

There is a statistically significant difference at the \( \leq .05 \) level between the mean score of the experimental group and that of the control group on the post administration of speaking skills test in favor of the experimental group.

Results of \( t \)-test used for verifying this hypothesis are presented in the following table.

Table 3: Comparing the performance of the control and experimental groups on the post EFL speaking skills test

<table>
<thead>
<tr>
<th>Skills</th>
<th>The group</th>
<th>N.of cases</th>
<th>Means</th>
<th>S.D</th>
<th>df</th>
<th>( t ).Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluency</td>
<td>Control</td>
<td>30</td>
<td>9.90</td>
<td>2.187</td>
<td>-11.106</td>
<td>0.01</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>30</td>
<td>16.47</td>
<td>2.389</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pronunciation</td>
<td>Control</td>
<td>30</td>
<td>7.73</td>
<td>2.959</td>
<td>-9.297</td>
<td>0.01</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>30</td>
<td>14.80</td>
<td>2.929</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>Control</td>
<td>30</td>
<td>10.23</td>
<td>2.096</td>
<td>-12.435</td>
<td>0.01</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>30</td>
<td>16.90</td>
<td>2.057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammar</td>
<td>Control</td>
<td>30</td>
<td>9.90</td>
<td>1.647</td>
<td>-16.490</td>
<td>0.01</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>30</td>
<td>17.23</td>
<td>1.794</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehensibility</td>
<td>Control</td>
<td>30</td>
<td>9.73</td>
<td>1.780</td>
<td>-14.075</td>
<td>0.01</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>30</td>
<td>16.60</td>
<td>1.993</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Score of Test</td>
<td>Control</td>
<td>30</td>
<td>47.50</td>
<td>8.295</td>
<td>-15.855</td>
<td>0.01</td>
<td>Sig.</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>30</td>
<td>82.00</td>
<td>8.558</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table (3) shows that there are statistically significant differences between the mean score of the experimental and control groups in all speaking test skills and the total score of the test in the post-administration in favor of the experimental group where all the values of \( (t) \) were statistically significant at \( (0.01) \) level. Thus the first hypothesis is verified and accepted.
*Testing the second hypothesis:
Second hypothesis stated that:

There is a statistically significant difference at the ≤ .05 level between the mean score of experimental group on the pre and post administration of speaking skills test in favor of the post administration.

Results of t-test used for verifying this hypothesis are presented in the following table.

Table 4: Comparing the performance of the experimental group on the pre- post EFL speaking skills test

<table>
<thead>
<tr>
<th>Skills</th>
<th>Application</th>
<th>N.of cases</th>
<th>Means</th>
<th>S.D</th>
<th>df</th>
<th>t.Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluency</td>
<td>pre – test</td>
<td>30</td>
<td>8.23</td>
<td>2.112</td>
<td></td>
<td>-14.426</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>post – test</td>
<td>30</td>
<td>16.47</td>
<td>2.389</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pronunciation</td>
<td>pre – test</td>
<td>30</td>
<td>7.90</td>
<td>2.440</td>
<td></td>
<td>-10.746</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>post – test</td>
<td>30</td>
<td>14.80</td>
<td>2.929</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>pre – test</td>
<td>30</td>
<td>8.83</td>
<td>1.913</td>
<td>29</td>
<td>-15.113</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>post – test</td>
<td>30</td>
<td>16.90</td>
<td>2.057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammar</td>
<td>pre – test</td>
<td>30</td>
<td>9.03</td>
<td>2.157</td>
<td></td>
<td>-14.807</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>post – test</td>
<td>30</td>
<td>17.23</td>
<td>1.794</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comprehensibility</td>
<td>pre – test</td>
<td>30</td>
<td>8.63</td>
<td>2.059</td>
<td></td>
<td>-14.491</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>post – test</td>
<td>30</td>
<td>16.60</td>
<td>1.993</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total score of Test</td>
<td>pre – test</td>
<td>30</td>
<td>42.63</td>
<td>8.684</td>
<td></td>
<td>-17.404</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>post – test</td>
<td>30</td>
<td>82.00</td>
<td>8.558</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table (4) shows that there are statistically significant differences between the mean scores of the experimental group students in the pre-post-test in all speaking test skills and the total score in favor of the post-test where all the values of (t) came statistically significant at the level of significance (0.01) . Hence, these results confirm the validity of the second hypothesis.

*Testing the third hypothesis:
Third hypothesis stated that:

There is a statistically significant difference at the ≤ .05 level between the mean score of the experimental group and that of the control group on the post administration of The Speaking Anxiety scale in favor of the experimental group.

In order to verify this hypothesis, t-test was used to address the differences between the experimental and control group on the post administration of the speaking anxiety scale.
Table 5: Comparing the anxiety level of the experimental and control groups in the post administration of the anxiety scale

<table>
<thead>
<tr>
<th>The group</th>
<th>N. of cases</th>
<th>Means</th>
<th>S.D</th>
<th>df</th>
<th>t. Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score of the Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>30</td>
<td>89.57</td>
<td>5.117</td>
<td>58</td>
<td>27.923</td>
<td>0.01</td>
</tr>
<tr>
<td>Experimental</td>
<td>30</td>
<td>55.77</td>
<td>4.216</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table(5) indicates that there are statistically significant differences between the mean score of the experimental and control groups in the total score of the scale of speaking anxiety in the post-administration of the speaking anxiety scale in favor of the experimental group (m= 55.77), where the value of (t = 27.923) was statistically significant at the level of significance (0.01). Accordingly, the third hypothesis is verified and accepted.

*Testing the fourth hypothesis

Forth hypothesis stated that:

There are statistically significant differences at the ≤ .05 level between the mean score of experimental group on the pre and post administration of speaking anxiety scale in favor of the post administration.

In order to verify this hypothesis, t-test was used to address the differences between the experimental group pre & post administration of the speaking anxiety scale.

Table(6): Comparing the performance of the experimental group on the pre-post speaking anxiety scale

<table>
<thead>
<tr>
<th>Application</th>
<th>N. of cases</th>
<th>Means</th>
<th>S.D</th>
<th>df</th>
<th>t. Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score of the Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre – test</td>
<td>30</td>
<td>89.80</td>
<td>3.960</td>
<td>29</td>
<td>38.024</td>
<td>0.01</td>
</tr>
<tr>
<td>post – test</td>
<td>30</td>
<td>55.77</td>
<td>4.216</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table (6) indicates that there are statistically significant differences between the mean scores of the experimental group students in the pre-post Speaking Anxiety Scale administration in favor of the post-administration (m= 55.77), where the value of (t = 38.02) was statistically significant at the level of significance (0.01). Thus, these results are consistent with or confirm the validity of the fourth hypothesis.
Measuring the effect size of the treatment on improving students’ speaking skills:

To measure the effect size, the researcher estimated the values of (η²) as shown in table (7). Fouad Abu Hatab and Amal Sadiq (1991: 442) state that there is an empirical rule proposed by Cohen to evaluate the effect of the independent variable on the dependent variable as follows:

a. 1% from the total differences refer to small effect.

b. The differences which interpret 6% from the total difference refer to medium effect.

c. And finally the differences which interpret 15% from the total differences refer to large size of effect.

\[ \eta^2 = \frac{t^2}{t^2 + df} \]

\( \eta^2 \) is the total of the effect size of the treatment.

\( t \) is the value of t value.

\( df \) is the degree of freedom.

Table (7): The effect size of the treatment on improving the speaking skills of the experimental group

<table>
<thead>
<tr>
<th>Skills</th>
<th>η²</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluency</td>
<td>87.8%</td>
<td>High</td>
</tr>
<tr>
<td>Pronunciation</td>
<td>79.9%</td>
<td>High</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>88.7%</td>
<td>High</td>
</tr>
<tr>
<td>Grammar</td>
<td>88.3%</td>
<td>High</td>
</tr>
<tr>
<td>Comprehensibility</td>
<td>87.9%</td>
<td>High</td>
</tr>
<tr>
<td>Total Score of Test</td>
<td>91.3%</td>
<td>High</td>
</tr>
</tbody>
</table>

Results in table (7) represent the values of (η²) for each speaking skill and the total of speaking skills. It is clear that all the estimated (η²) values for all the speaking skills are 91.3 which indicate a large effect size for the experimental treatment for all the speaking skills.

Table (8): The effect size of the treatment on reducing students’ anxiety toward speaking:

<table>
<thead>
<tr>
<th>Skills</th>
<th>η²</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total score of the Scale</td>
<td>98%</td>
<td>High</td>
</tr>
</tbody>
</table>

Results in table (8) represent the values of (η²) for the total items of speaking anxiety scale. It is clear that the total score of the estimated (η²) value is 98 which indicates a large effect size for the experimental treatment for all the items of speaking anxiety scale.
Table (8) shows the strong effect size of flipperentiation on reducing the experimental group students’ speaking anxiety, where the value of $\eta^2$ equals 98% in the overall score of speaking anxiety scale. This supports the positive high effect of flipperentiation on reducing students’ speaking anxiety.

Discussion of the Results

The results of the research reflected the effectiveness of the experimental treatment. Flipperentiation was applied to develop EFL preparatory stage students’ speaking skills and reduce their anxiety toward speaking. The participants’ speaking skills were significantly improved. Additionally, their anxiety toward speaking was highly reduced. By the end of the implementation of the study treatment, the experimental group achieved a high level of speaking skills.

The results of this research revealed that the experimental group outperformed the control group in the post-test of EFL speaking skills. Besides, this group’s anxiety level decreased significantly. This development can be attributed to the implementation of flipperentiation.

The following results were reached:

1. The experimental group students outperformed their counterparts of the control group in the post administration of the EFL speaking skills test.
2. The experimental group students’ performance in the post speaking skills test was significantly better than that in the pre-administration. Thus, the flipperentiationed learning improved the first year prep students’ speaking skills.
3. The experimental group students had lower anxiety level compared to the control group as well as their pre-level before conducting the treatment. This indicated that flipperentiation reduced their speaking anxiety.
4. The flipperentiationed learning was highly effective on developing the students’ speaking skills and reducing their anxiety.

Recommendations

Based on the previous results, the current study recommends the following:

- The speaking skills should be given suitable attention.
- Schools should take into consideration the importance of technology in developing students learning abilities.
- Students should be given the opportunity to be responsible for their learning.
• Teachers should change their roles from a sage on the stage into a guide on the side who provide students with guidance and support if needed.
• Allowing students to practice using speaking skills activities, tasks and situations such as making presentations, would develop their speaking fluency.

Suggestions for more research:
The present study suggests the following researches:
1. Implementing flipperentiation for teaching all the skills of English language; reading, writing and listening.
2. Administering flipperentiation to different stages (primary, preparatory and secondary).
3. Conducting studies investigating the effectiveness of flipperentiation on self-motivation and self-learning.

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