

A Gamified Project-Based Learning Program for Overcoming Primary School Pupils' EFL Communicative Apprehension

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Abstract

This study aimed at investigating the effectiveness of Gamified Project based learning program on primary School pupils' Communicative Apprehension. To achieve the study aims, the researcher adopted the experimental approach on participants of seventy (70) pupils at Al Nagah Language school, Egypt. The participants were divided into two groups. Both groups were pretested to assure that they were equivalent. The experimental group was taught using the program while the control one was taught by the traditional method in the first term of the scholastic year 2023-2024. The experiment lasted for ten (10) weeks in which the researcher implemented the study instruments to investigate the effect of the program. The results were statistically analyzed by SPSS to get final results. The results revealed that there were statistically significant differences at ($\alpha = 0.01$) between the mean scores of the control group and those of the experimental one on the Communicative Apprehension posttest in favor of the experimental group. This positive result was attributed to the effectiveness of using the program. According to the findings, the researcher recommends that the English Language teachers need to activate Gamified Project based learning program approach in order to overcome their pupils Communicative Apprehension.

Keywords: gamified Project based learning program, communicative apprehension.

1.Introduction

It is believed that some people with excellent communicative competence may be unwilling to communicate when having the chance. Although learners' hesitation to communicate might be due to many reasons, their levels of communicative apprehension may also play a crucial role in affecting their desire to keep quiet. Accordingly, standing on learners' communicative apprehension and their speaking ability may enable teachers to gain a better understanding of the interaction within the class and make better predictions about learners' communicative behavior. It may also help teacher find out new techniques and methods for motivating students to talk. In cases students suffer from high levels of anxiety, language teaching tasks and class activities should be adopted in a way that lessens at least do not increase learners' degrees of apprehension (Fitriana1& Syahr, 2021)

Oral communication apprehension and anxiety have been examined in some studies which have reported that an oral communication context in which participants get together and discuss a problem, issue, or a special matter are effective and important tools in oral communication (Harris & Sherblom, 2018).

In the foreign language learning, project-based learning (PBL) is presented as a student-centered method for learning in which students collaborate on authentic tasks and achieve a project. In this approach, learners ask a question and are guided to do research under administration of the instructor. Project-based learning

allows learners to learn in an integrated way in which enables them take responsibility for their own learning in a collaborative environment (Bilgin et al., 2015).

Moreover, PBL as a learner-centered approach helps learners facilitate their own knowledge building and transform learning into authentic and comprehensive experience (Tamim & Grant, 2013). This method engages unwilling learners and provides a situation to improve learners' motivation (Bilgin et al., 2015). In addition, according to Artini, et al., (2018), PBL enables learners learn through solving problems, investigating, making decisions, and working strategically in EFL classes.

Further, as Khalili Sabet and Ravand (2017) suggested, the basic idea of PBL is that as learners obtain new knowledge through solving problems; their interest is caught up by real-life problems and triggered by serious thinking. Altogether, PBL offers numerous benefits to learners such as providing learners with opportunities to develop their confidence, increasing learners' self-esteem, enhancing learners' autonomy, increasing learners' cooperative skills, enhancing learners' motivations, developing problem-solving, and improving language skills.

At the present time, there is an educational trend which supports the integration of active methodologies in the classroom. One modernism which is progressively acquiring superior importance in the education context is gamification because of the benefits which it can achieve in terms of pupils' participation, involvement, motivation, learning and interest (Prieto, 2020).

To Lavoué et al., (2018), gamification is different from learning games, which refers to using games for teaching and learning. In contrast, gamification refers to using game design elements in learning activities.

Gamification is an integration of game elements and game thinking in activities that are not games. Games have some distinctive features which play a key role in gamification: • users are all participants (students for educational institutions); • challenges/tasks that users perform and progress towards defined objectives; • points that are accumulated as a result of executing tasks; • levels which users pass depending on the points; • badges which serve as rewards for completing actions; • ranking of users according to their achievements (Kiryakova et al, 2014).

The use of games in education acts as a facilitator to increase motivation of students to achieve educational goals and complete more learning tasks. Recently, greater attention is drawn to adopting gamification and gaming elements in the learning environment. gamification is commonly defined as using game design elements in non-game contexts. Principles such as play, interest, challenge, and control are always inserted in educational games, which make learning process as more meaningful and engaging, and facilitate knowledge and skills acquisition (Sobocinski, 2018).

In addition, gamification provides the opportunity for learners to engage and collaborate with their classmates while executing their assigned task. The technique includes point-scoring, levels, leader boards, badges, challenges, as well as time restrictions, which encourage students to achieve their educational goals ; as such, students are rewarded for positive behavior and motivated to achieve further learning objectives. Of course, reward procedures were applied to school activities before online games became popular: students successfully completing their assignments were awarded points and certificates at the end of their course. The difference lies in the wider possibilities offered by the new technology (Asiri, 2019).

Accordingly, numerous studies emphasized the importance of using gamification in TEFL. Research by (Klopfer, 2008; Kapp, 2013; Kingsley & Grabner-Hagen, 2015; Tan et al., 2019) has examined the effect of gamification on developing different skills and has identified several benefits of using gamification as an instructional and teaching tool.

Consequently, it can be concluded that integrating project based learning with gamification in a learning program can develop EFL secondary students' oral communication and strategic competence and reduce their communicative apprehension

2. Literature Review

2.1. Communication Apprehension(CA)

2.1.1. The Original Conceptualization

James McCroskey, 1977 was initially defined Communication Apprehension (CA) as an individual's level of fear or anxiety related to either real or anticipated communication with others. A more recent definition was expanded by Horowitz (2002) who defines CA as anxiety or fear suffered by an individual of either actual or anticipated communication that can greatly affect his oral communication, self-esteem, and social skills.

Communication Apprehension is a phenomenon that affects different areas of life whether one is aware or not. For some, it is seen as the obvious discomfort that comes when called upon to speak in front of an audience. It is defined by others as the bit of anxiety which is felt while having to interact within group setting or meeting. It can also exist in interpersonal communication when calling someone important on the phone or when entering the boss's office to discuss an annual review. The research outlined that some individuals experience communication apprehension to a greater extent than others and this level of apprehension individuals experience influence positively or negatively their performance in the task (Andrew C. Petry, 2016).

2.1.2. Oracy Skills and Communication Apprehension

Ability to communicate helps people to build relationship easily. Delivering the intention or wants to fill the need is the function of communication. In the sequence of communication, some components involved.

The existence of communication apprehension can be seen through oral communication mostly. Oral communication is the most use of the communication mode. It is used since the process of communication involved is required direct feedback. Communication apprehension links to the fear experienced by the individual in facing either real or anticipated communication. Since it focuses on oral communication, it deals with the individual's fear related to the oral communication activities. Oral communication apprehension concerns with a fear of speaking or talking to other people in different contexts, such as on a one-to-one, groups, in meeting, or public speaking (Marran et.al, 2014).

Generally the individual might experience low and high level of Oral Communication apprehension. However, those individuals experiences high level of oral communication apprehension becomes difficult to share their opinion or speak in certain communication situation. Individuals with high level of oral communication apprehension experience fear, tension, and physical symptoms such as increased heart rate and sweating (Beatty et.al, 2012).

Boston (2001) indicates that communication apprehension relates to the psychological response of an individual when given the communication setting. During the communication task, the individual's mental is involved. It is resulted a response on the communication situation. Furthermore, the response comes from the uncomfortable situation is the negative response.

In the context of Education, the existence of oral communication apprehension occurs in the classroom setting. Most of the students, even the English students are afraid of evaluation while speaking. The fail control of oral communication apprehension by the students in speaking activities influences the students' achievement besides psychological side (Ephraim A. Okoro & Peter Cardon, 2024).

2.1.3. Types of Communication Apprehension

In an attempt to better define the varying types of CA, a continuum model was employed which ranges from extreme trait-based apprehension to extreme state-based apprehension, though neither extreme is likely

possible. The four types of CA that were established help to better describe where an individual falls on the continuum between trait-based apprehension and state-based apprehension. The four points that have been established for the continuum include Trait-Like, Generalized Context, Person-Group, and Situational (McCroskey, 1983).

2.1.3.1. Trait Communication Apprehension (TCA).

TCA deals to the individual's reaction on the time and situation of the communication given. (Mc.Croskey, 1987).

Booth-butterfield(1992) shows that trait communication apprehension is the personality traits. Some individuals are afraid to face a certain situation given, but they are confident to face another communication situation given. It occurs as the consideration on different view that human being was created. Since people have its own view on a certain situation, the response depends on the view.

2.1.3.2. Context-based Communication Apprehension.

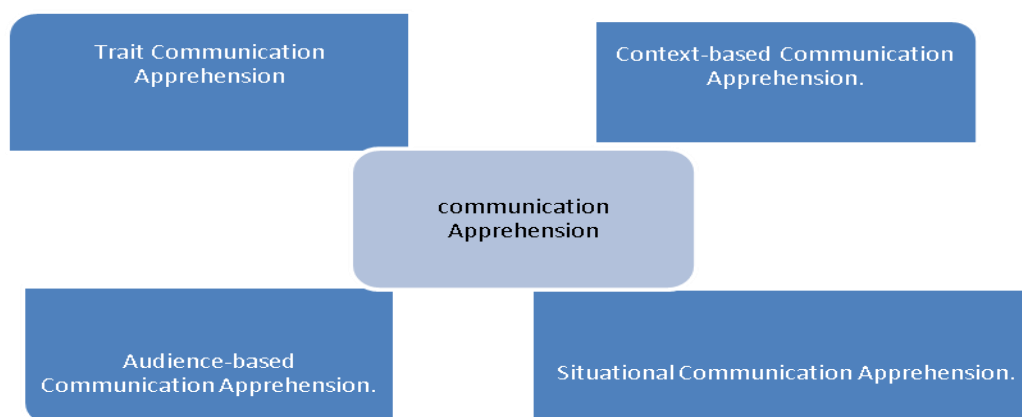
It deals with the communication tells about (mc.Croskey,1978). The material which is given on the communication caused apprehension for some people. The individuals might experience fear since they are not familiar on the theme of the communication given. It leads the uncomfortable feeling and results the negative response. Mc.Croskey (1997) adds that there are four common contexts where communication apprehension occurs: (1) public speaking, (2) meetings, (3) group discussion, and (4) interpersonal conversation.

2.1.3.3. Audience-based Communication Apprehension.

Mc.Croskey and Richmond (1995) state that audience is one of the factor causes the emergence of the communication apprehension. There are some underlying reasons of this, namely subordinate status. Communication is the process between sender and receiver. The communication between employee and the leader results the anxiety for the employee. The other setting is between the student and the teacher. The pupils might experience apprehension while interacting with the teacher. It seems that it is a personality-based. Some persons have audience-based communication apprehension while some others are not.

2.1.3.1. Situational communication apprehension.

Mc.Croskey and Richmond (1995) declare that situational communication apprehension is temporary resulted from communication with a person or group of people in a situation. Individual has apprehension in communication due to the uncomfortable feeling toward the combination of situation components such as context, place, and audience. However, it does not occur permanently, it might be experienced in communication when facing the communication situation given because the apprehension arises as part of the reaction of individual.



2.1.4. Causes of Communication Apprehension

Even though McCroskey (1977) suggested that it is difficult to get a complete list of communication apprehension causes, he tries to categorize sources of communication apprehension. While some researchers preferred to offer classifications of these sources, other researchers have just listed the sources of communication apprehension.

Rimkeeratikul (2016) ensures that communication apprehension can be discussed through environmental and genetic factors.

Molnar and Crnjak (2018) shows that while the genetic factors refer to the inherited characteristics that may be behind communication apprehension, environmental aspects (such as reinforcement, modelling, and learned helplessness) are factors that an individual has no control over.

Hsu (2004) investigated factors that contributed to the differences in communication apprehension between Chinese in Taiwan and Americans. She stated that Taiwan college pupils recorded considerably higher communication apprehension than Americans. She has also reported that differences in personality traits, cultural orientations, and other components can be the causes of communication apprehension. She also indicated that the desire of being unique, independent, and direct in communication may be another reason of communicating fear.

Thaher (2005) presented the following factors of communication apprehension within an EFL classroom: (1) psychological factors, which include emotion, self-esteem, anxiety, attitude, fear, and motivation; (2) instructional factors, which include goals, teachers, methods, texts, time, intensity, and means of evaluation; and (3) sociocultural factors, which include acculturation, social distance, second versus foreign language learning, and culturally accepted thought.

Manjet, al et (2011) highlighted international undergraduate students' problem of insufficient background knowledge and communicative experience with the English language in their native country during their experience as international students in a Malaysian public university. Class discussions, group discussions and open sharing of ideas on a voluntary basis are part of the requirements for an English course. It is difficult for researchers to agree on a complete list of causes of communication apprehension because they vary based on the context, age of the users of language, learning environment, and other sociocultural factors.

2.3.5 Effects of Communication Apprehension

Researchers and L2 educators have interested in oral communication apprehension for more than two decades. Research findings have shown that communication apprehension can have different negative effects on learners' motivation, participation, performance, cognitive processing, and course grades. One of the major effects of apprehension is the learners' negative perception of their abilities as compared to others (Christine Mary Jalleh, 2021).

Oral communication is the most use of the communication mode. It is used since the process of communication involved is required direct feedback. In the past, it has been argued that previous study on communication apprehension focuses on communication apprehension in oral communication apprehension. As mentioned above, communication apprehension links to the fear experienced by the individual in facing either real or anticipated communication. Since it focuses on oral communication, it deals with the individual's fear related to the oral communication activities (Vitri Angraini Hardi, 2017).

2.2. Project based learning (PBL)

4. 2.1. History of the PBL

Project-based learning is literally considered as learning through doing projects. It underscores constructivism theory, where students create rather than receive knowledge and the teacher guides or facilitates

this process of discovery. Nevertheless, PBL is a more multifactorial instructional concept than its term indicates (Stoller, 2006).

Project-based learning (PBL) is a learning model that refers to philosophical constructivism so that students can improve their own linguistics knowledge via real experiences. Thus, the application of the PBL model can enhance students' critical thinking skills and overall linguistics competence. PBL is proven to integrate all four language skills possessed by learners such as listening, speaking, reading, and writing to complete implemented activities. Project work makes learners deliberately involved in learning a language so that they can learn it in an authentic context. In the collaboration process carried out, learners will increase their communication skills, which can, in turn, open up opportunities for them to exchange information, negotiate ideas, and increase decision-making abilities (CarrioPastor et al., 2015).

Project-based learning (PBL) underlies Dewey's theory of experience which essentially relates the school, as a meaningful and authentic context for learning, to life to provide the Teaching English with Technology, learner opportunities to acquire knowledge and skills. It is also rooted in the constructivist theory of learning which posits that learners can make sense of their learning and construct new knowledge only if they actively engage in learning. Cognitive and social sciences have also contributed to PBL, as both promote social interaction in the learning process (Bataineh,2020).

Project-Based Learning (PBL) is an innovative and systematic teaching method that promotes student engagement through deep investigations of complex questions. That it is learning by doing. PBL focuses on imparting specific knowledge and skills while inspiring students to question actively, think critically, and draw connections between their studies in the real world (WIDIA ASTUTI,2021).

David Hill (1999) shows that project based learning is:

- Centered;
- Content-based;
- Integrates by tying up structures from one part of the project to another;
- Educational.

Mergendoller et al., (2006) stated that the following three stages had an effect on the establishment and development of project based learning in the current form.

1. The first stage, associated with John Dewey theory which considered the problems as the starting point for curriculum instantiation”.
2. The second stage, associated with the cognitive and constructivist theories which were concentrated on discovering problems essence and problem-solving processes.
3. The third stage, associated with the problem-based approach that was firstly applied with the involvement of medical students in Canadian medical university who suggested the problem and its solution as a central difficulty in a medical environment.

BIE established PBL by defining it as a teaching approach in which pupils are taught by actively involving in meaningful projects and real situations. The seven essential steps which represent the essence of the PBL are proposed. These steps are the essential points that distinguish the PBL from other categories of projects. (Tally, 2009).

According to Tally (2009) the difficulties in implementing the PBL were related to distinguishing the project-based learning from problem-based learning, thus leading to the use of these approaches interchangeably and incorrectly. The thorough review of already existing literature and research raises a suggestion that there is a

possibility of local and foreign teachers, dealing with uncertainty in differentiating between the “doing project” with rigorous “Project-based learning”, and that can seriously hamper the proper use of PBL.

Smakova, 2020 confirmed that Planning and designing the project under indicated features may facilitate the achievement of the target goals in learning and develop 21st-century skills which alongside with various abilities include critical thinking skills.

Larmer, 2015 indicated that the seven essential stages of PBL designed requires higher-order thinking skills to solve problems concerning the project, as well as indicated these steps as peculiarities of PBL in order to differentiate the approach itself from doing the project. Therefore, the below-mentioned seven essential steps should be taken into account while organizing the project process within the PBL approach, which consists of the following matters:

1. A challenging problem or question- which means that the project starts with identification of the actual problem or the question which is required to be solved and answered. This step claimed as “heart of the project” since it focuses on the real problem or question, which is useful not only for gaining the knowledge but moreover for implementing the findings to solve real problems interesting for learners.
2. Sustained inquiry-which means that the project requires the learners to be engaged in asking questions, searching for the necessary resources in order to find an appropriate solution. Students may use not only traditional methods such as reading books or searching information through the internet but combine it with “real –world” activities as interviewing experts or audience which will be useful in creating the final product.
3. Authenticity-which means that the problem or question should be taken from a student’s real life or should be related to authentic problems that people face in their daily lives. It is assumed that solving the real-life problems will facilitate students’ increase of motivation toward learning.
4. Student’s voice and choice - is one of the significant stages of PBL because it illustrates the student-centered position of the approach. This stage means that students are responsible for planning their projects and making decisions concerning the PBL.

Providing students with the opportunity to make choices individually and express their opinion through these choices, will train their leadership skills and prepare them to be good problem-solvers and initiative person in the future (Larmer, 2016).

5. Reflection-the process in which students and teachers discuss and reflect on the process of the project, on tasks that have been completed, problems that have been raised while working on the project, and ways of solving these difficulties.

Reflection allows making connections between the students’ personal view and the project process, thus leading to the development of self-confidence and increasing of the knowledge and skills (Cody, 2018)

6. Critique& Revision- the important process which allows students to revise and improve their products and process through receiving, giving the feedback, and applying this feedback in practice.
7. Final Product- is a key component of the PBL, in which students perform the results of their works and findings to their research questions, in the form of video, website, blog, podcast or other solution out of the classroom.

This is a main and final stage of PBL process, in which students’ “motivation, responsibility, creativity, 21st century skills, language proficiency and cultural competencies” are expected to be improved (Smakova, 2020).

Sari, et al., (2021) designed the PBL steps and performed them. He had created the class atmosphere of PBL. From the first until the seventh meeting, he implemented the steps of PBL, starting with basic question

determination, project determination, project planning, schedule arrangement, project implementation, presentation, and evaluation. The material that the students worked with was chosen based on their interests. Besides doing activities in the classroom, the students were also given a chance to do others at home. The integration of several learning strategies was intended to support the development of students' language.

2.4.2 The Importance of Project-Based learning

Project-based learning concerns with the professional and social fields, which plays an effective role in improving career opportunities for students. It also helps meet the need for a skilled workforce, supports all possibilities and capabilities of continuous training, and helps the growth of vocational education. (Udartseva, 2018)

In addition, project-based learning engages students in long-term and deep learning, instills in them a love of learning and connection with others through their experiences, blends mastery of content and hard work, and makes them ready and prepared for any new challenges in their lives through a sense of purpose, and the exchange of experiences with others, gain the value of work and their community participation, and deepen students' understanding of the course content through practical application (Al-Farani & Imran, 2021).

Nawar (2021) explained that the importance of project-based learning lies in several points, including:

1. Students become accustomed to organized research, whether in or outside the school.
2. On the other hand, students are accustomed to cooperative learning, in which they participate according to their ability.
3. It allows conditions in which individual differences appear.
4. It raises in the student curiosity, a sense of responsibility and self-confidence.
5. The student is accustomed to linking between vision and action and between thought and practice.
6. It enhances in the student the ability to work and self-activity.
7. It helps to modify the learner's behavior for the better.
8. The student is accustomed to the love of cooperation and meaningful teamwork.
9. The learner is the center of the educational process, rather than the teacher, who chooses the project and implements it under the supervision of the teacher.
10. The connection of subjects with each other.
11. It uses a great deal of available technology and teaches the student to take responsibility.
12. It matches the scientific skills of the different educational courses.

Faris (2018) has added several other things that highlight the great importance of project-based learning, including:

1. Project-based learning is a model of classroom activities that shift educational practices and activities away from the traditional teacher-centered classroom, where the focus becomes learner-centred activities.
2. Practicing project-based learning is a unique method that can motivate students to participate positively in learning and gaining experience.
3. Project-based learning provides the opportunity for students to pursue their learning objectives, identify questions that require answers, and make decisions about how they will arrive at the answers.
4. Project-based learning provides opportunities for interdisciplinary learning as students apply the learned content in different situations during the production process.

While Ratumanan (2015) summarized the objectives of project-based learning in two main aspects: Develop the internal independence of educating students by voting through activity to gather information and build knowledge & Develop problem solving skills.

On the other hand, he emphasized the great benefits that accrue to students as a result of using the project-based learning strategy. The researcher summarized these benefits as follows:

1. Students are in an active learning state.
2. Learning is more interactive and engaging.
3. Improving the educational motivation of students.
4. Upgrade mastery of knowledge, strength and retention.
5. Upgrade problem solving ability and critical thinking ability.
6. Upgrade the ability of cooperation and communication.
7. Responsibility promotion.
8. Upgrade management ability.

2.3. Gamification

2.3.1. Gamification in the Educational Context

According to Deterding et al. (2011), Researchers before 2010 considered gamification as a technical term and declared that it is the employment of the features of gaming elements to non-game contexts.

Lee and Hammer (2011) presented a definition for PBL which is related to the educational context: dynamics, applying game mechanics, and outlines to raise individuals' desired behavior.

Encouraging more positive behaviors, creating enjoyable experiences, generating a competitive environment and greater engagement are the central aims of utilizing gamification with learners (Kim and Lee, 2015).

Gamification provides learners with the chance to engage and communicate with their classmates while executing their assigned task. The technique includes point-scoring, levels, leader boards, badges, challenges, as well as time restrictions, which encourage students to achieve their educational goals; as such, students are rewarded for positive behavior and motivated to achieve further learning objectives. Of course, students are rewarded when successfully completing their tasks, but the difference lies in the wider possibilities offered by the new technology (Pho and Dinscore, 2015).

Sobocinski (2018) claims that terms of the individual grades, certificates and diplomas, and grade point averages used to classify pupils are the evidence that education is already gamified. Gamification has an important role in the emotional, cognitive, and social situations.

Lee and Hammer (2011) shows that the gamified context offers a compound system of cognitive content and rules that helps learners via the procedures of mastery learning and their involvement within gradual levels of difficulty, rewarding learners with a star or point for every achieved level. When a learner fails to get the required level, he has to repeat a specific task without failure fear and feedback is offered to him by gamified systems. Socially, gamification lets learners to monitor each other's performance, reward each other with points or virtual currency.

Frost et al. (2015) examined the effects of applying gamification on pupils' motivation and interest of elements involved in a learning management system. Their findings declared that gamification can increase pupil interest and meet their needs; furthermore, it has a positive effect on their motivation and suggests meaningful and individualized feedback on errors.

Sun and Hsieh (2018) revealed that English language teaching should integrate gaming elements to help learners be more interested in and pay more attention during their lessons in the classroom.

Su and Cheng (2015) stated that gamified classes encourage not only pupils' motivation but also their general achievements. Gamification is about a process of game thinking and game mechanics that has a purpose to increase user engagement and problem solving.

The use of Gamification is able to improve the learning process for example to increase students' motivation, engage students' behavior, and solve a problem in the learning process (Kapp, 2012).

It is strengthened by Marczewski, (2012:04) & Hamari et al., (2014) argued that, Gamification has an effect to improve students' behavior, engagement, motivation, and psychological outcome in learning process. In the learning process, Gamification is able to create different situation rather than conventional learning.

Gamification can provide fun, effectiveness, and enjoyable tasks in learning process. Gamification is an effective method for solving problems in learning process (Baptista & Oliveira, 2019).

Yanes & Bououd, (2019) claimed that the application Gamification has positive effect on achievement of English learning process. Gamification is an effective way to learn English especially listening comprehension.

Kapp (2012) believes that gamification is a growing trend among educational institutions, which use it to promote training, develop problem solving skills in learners, and enhance the learning experience. Recently, the term has been used by researchers to promote the use of games in educational settings. He describes gamification as utilizing game thinking and game-based mechanics to engage pupils, promote learning, motivate action, and solve problems.

Similarly, Kirillov, et al., (2016) point out that gamification means applying game mechanics, elements, and principles in non-gaming contexts such as education.

Lavoué, et al., (2018) write that gamification is different from learning games, which refers to using games for teaching and learning. In contrast, gamification refers to using game design elements in learning activities.

2.3.2 Gamification Elements

Gamification is described as activities that use game-like or fun elements to promote learning and engagement (Eleanor Leung, 2016).

The nine elements of a game, per Kapp, () are:

1. System – a set of interconnected elements of the game. Scores linked to actions, and actions limited by rules.
2. Players – a pupil interact with other pupils through a game content. In education, the players are learners, who will learn from playing the game.
3. Abstract – the game has some realistic situation elements.
4. Challenge – games challenge players to overcome barriers and achieve goals and outcomes that are not easy. The element of challenge leads to motivation to persist and complete the task.
5. Rules – rules define a game. They are the structure that is needed to set boundaries, keep score, identify what is fair and allowed.
6. Interactivity – players of a game must interact with one another, with the game system, and with the content of the game.
7. Feedback – it is a crucial point of games which is directly and clearly provided to the player.
8. Quantifiable outcome – the winning state or situation must be clear. A player achieving a winning state signifies the end of the game; this is different from the playing state, which has no quantifiable end state or outcome. Players know when they win.
9. Emotional reaction – this is the full range of emotions that comes from playing, winning, and losing a game. Games can evoke strong emotions.

2.3.3 Gamification Element Design

-Motivational Strategy:

The motivational strategy plays an important role in learner engagement with the instruction. Instructional designers can consider the intrinsic and extrinsic motivation, Self-Determination theory, Achievement Goal Theory, Social Learning Theory, Situated Learning Theory, and feedback to design the motivational strategies. For instance, if the learners have strong esteem and belonging needs, the instructional

designers should embed the device to meet the esteem and belonging needs in the motivational strategy (**Taylor et al., 2014**).

-Story and Dynamics Design:

Vogler and Montez (2007) indicated that the information on the preferred fun perspectives of games and the game player types can be used for determining the structure of the story. It is not essential for story designer to suit all of the types of game players, in contrast it is very important to prioritize the player types and their preferred fun perspectives of games.

-Mechanics Design:

Chang & Wei (2016) declared that the goal of mechanics design is to create a more detailed story and dynamics and to provide project members involved in the development phase with the story and dynamics in a usable format. Some or all of the following elements can be used for the game mechanics.

- Rewards: Points, levels, progression, badge, authority, virtual items, physical goods, severance, gifting, free items, virtual money.
- Reward schedules: Fixed interval reward schedules, fixed ratio reward schedules, variable interval reward schedules, variable ratio reward schedules.
- Avoidance: Disincentives, leaky bucket.
- Leader board: Macro leaderboard, micro Leaderboard, indirect competition, direct competition.
- Status: Avatar, social graph.
- Quests: Content unlocking, countdown, lottery, communal discovery, scaffolding.

Tinsman, (2008) suggested the following principles for the game design:-

- Playing Time: The players must have an appropriate period of time for the play. If they don't have enough time to play the game, they can't experience the game enough. On the contrary, if they have too much time to play the game, the learning effect will be reduced.
- Critical Decision Making Factors: It is important to clarify what critical decision making is in the game design. For example, trading real estate is critical decision making in the Monopoly game.
- Documentation of Rules: The game rules of the game should be easily understood without additional clarification.
- Stakes, Risks, and Rewards: The game players can receive rewards and a feeling of satisfaction for their efforts and investment in learning and playing the game.
- Luck versus Strategy: Relieving player mental pressure is the result of embedding luck to the game, but if luck affects the game too much, the player will lose the fun gained by making strategic decisions.
- Feedback: it is important to share information about the progress and game results of each player to keep dramatic tension.
- Catch-up Features: There should be chances to catch up by luck, magic, or making strategic decisions. If there is no chance to catch up, the player may feel bored.
- Meeting General Anticipation and Expectation: It is too risky making the structure and elements of the game strange.
- Reward: Virtual money can be awarded to the game player who successfully completes specific missions and quests.
- Salary: The game player can get paid for logging-in the game or playing the game for a specific period of time.
- Reselling: When the game player sells virtual goods through a store in the game, the player can receive virtual money.

2.4.Gamified approach of project based learning:

There is a need for education to adapt project based learning because it positively impacts pupils' deep learning by engaging them in learning activities, developing pupils' high-order skills and facilitating to relate

information to everyday life. However, the effective implementation of PBL has many obstacles. If the design of PBL lacks fun, pupils would lose attention (Krajcik, 2014).

1. THE PRESENT STUDY

Offercoming the primary stage students' communication apprehension is the main aim of using gamified project based learning program in this study. This program was modeled to the experimental groups. The steps and procedures, students were going to follow, were explained. Then, telling them how, when and why to use their materials.

The participants were divided into five students in each group depending on their achievement in the oral communication test, and gave each one his role. Each group consisted of participants of different levels. This served the program purposes.

The participants were helped to practice the program as much as possible in the regular classes. At the beginning, the teacher helped participants in applying the strategy. Gradually, they depended on themselves and implemented the roles perfectly.

3.1. Design of the study

The current study adopted the quasi – experimental design. Seventy primary school participants were assigned to two groups, experimental and control. The experimental group was instructed through the program. While the control one received regular instruction. A pre-post oracy skill and strategic competence tests, a pre-post Strategic competence scale and a pre-post communication apprehension personal report were administered to the two groups, before and after the experiment.

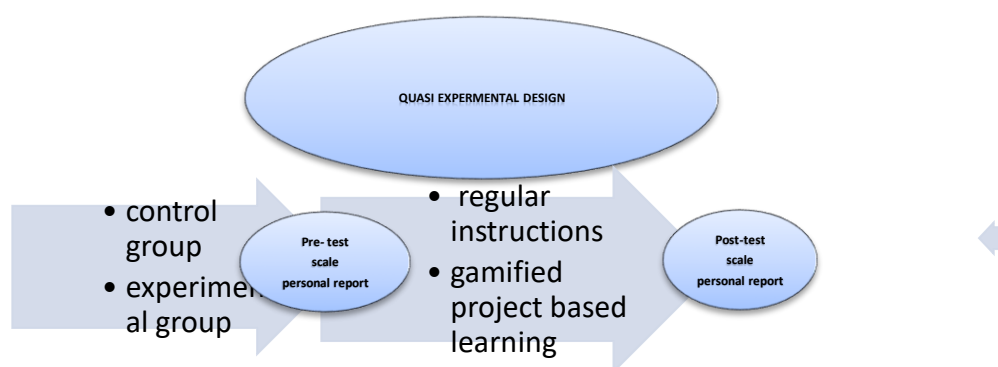


Figure (3): Design of the study (original)

3.2. Participants of the Study

The participants in the current study were fourth year primary stage pupils at formal Language School in the school year 2023/2024. They were divided into two groups: experimental group "taught through the program" and the control group "taught regularly" (35 students in each group). To make sure that the improvement of the participants' oracy skills, strategic competence and reducing communication apprehension in the experimental group was attributed to the use of the program based on "gamified project based learning program ". Some variables were controlled. These variables included the participants' age, which ranged from (10), to (12) years old. They were assigned into two groups, experimental (35 participants) and control (35 participants). It was assumed that the participants formed a homogenous group. So they were expected to have a lot in common and wouldn't differ much regarding the quality of experience or their age.

Participants were chosen because they are familiar with the English language; they have studied it for more than five years. In addition, they usually have four sessions of English instruction per week. Moreover, their previous knowledge about English paved the way for this study to help them be more aware of their strategic competence during studying English.

Above all, the Egyptian Ministry of Education highlights, in its directives for the primary stage, the importance of developing the language skills in an integrated way.

Before the experiment, it was important to make sure of the homogeneity among the two groups. So, the researcher pre-administered the oracy skill test, the strategic competence test and scale and communication apprehension personal report to the two groups. Tables (3:) show the findings of the statistical treatment of the data gained from pre-administering the study oracy skills test, strategic competence test and scale, and communication apprehension personal report.

Table (6) Both groups' communicative apprehension pre-results

Group	N	Mean	Deviation	Error Mean	T	df	Sig. p. value
Experimental	35	20.36	1.57	.29	.,.9	70	. 479
Control	35	20.42	1.48	.23	.,.9	70	.479

Table (6) shows that there was no significant difference between both groups in communication apprehension personal report, $t (, .9)$. This shows homogeneity between the two groups. That is to say, the two groups were almost at the same level of performance in the communication apprehension personal report. Thus, any variance between the two groups that might happen after the experiment could be attributed to the effect of the experiment. The pre-scale scores revealed the participants had a low proficiency in communication apprehension personal report.

3.3. The Instruments of the Study

After reviewing literature and the previous studies related to communication apprehension, Communication apprehension personal report was selected by the researcher.(See Appendix I)

Procedures to be followed during learning via the program:

- The participants listen to objectives and the required skills in order to be clear and achieved in their minds.
- They engage in strategic competence behavior before, during and after studying.
- The teacher makes a detailed schedule of the participants' daily activities.
- The teacher makes a timetable of all the activities they have to complete.
- The teacher highlights important concepts and information they get during their listening.
- The teacher pictures in their mind how the test will look like based on previous tests.
- The teacher uses note cards to write information they need to remember
- The teacher represents concepts with symbols such as drawings to remember them easily.
- The teacher makes sample questions from a topic and answers them.
- The teacher uses a variety of sources in making their research papers.
- The teacher engages in group works because they help one another.
- The teacher takes notes of the improvements on what they do.
- The teacher asks feedback of their performance from someone who is more capable.

The basic steps of a gamified project based learning program:

These three stages correspond respectively to:

1. Classroom Planning: in collaboration with their teacher, learners discuss the content and the scope of the project.
2. Carrying out the project: learners move out of the classroom setting to complete the tasks they planned like conducting interviews and collecting data.
3. Reviewing and monitoring the work: it includes discussion and feedback session to evaluate the project.

The researcher designed some basic steps through which, teacher should illustrate, taking into consideration the specific procedures of each project which is used. Three stages are applied.

5. Results

Comparing both groups communicative apprehension report

Group	N	Std. error Mean	Mean	Std. Deviation	Compared mean	t. value	Df
The experimental group Pre-test	35	.63	75.61	3.7	.01	40.51	70
The experimental group Post-test	35	0.37	40.44	2.2			

Table 22 indicates that there is a statistically significant difference between both groups in favor of the experimental in the post administration of the communicative apprehension report results.t-value (40.51). It is significant at (, 01) level. So, the tenth hypothesis was accepted.

Hypothesis 11:

It has been hypothesized that" there is a statistically significant difference between the mean scores of the experimental group in the pre - post communicative apprehension report administrations, in favor of the post results .

Table (22)

Comparing the pre to post results of the experimental group in the communicative apprehension report

Group	N	Std. error Mean	Mean	Std. Deviation	Compared mean	t. value	Df
The experimental group Pre-test	35	.36	40.00	3.7	.01	41.04	35
The experimental group Post-test	35	0.43	75.61	2.5			

Table 23 indicates that there is a statistically significant difference between pre -post administrations of the communicative apprehension report to the experimental group, t-value (41.04). It is significant at (, 01) level. So, the eleventh hypothesis was accepted.

Hypothesis 12:

The program has a positive effect on communicative apprehension report of the experimental group. Cohen's equation was used to verify this hypothesis as shown in Table 24.

Table (23)

Results of Cohen's Equation comparing the pre -post results of the experimental group in the communicative apprehension report

Group	N	Std. error Mean	Mean	Std. Deviation	Compared mean	t. value	Df	Cohens value
The experimental group Pre-test	35	.63	40.00	4.43	,01	41.04	35	0.989
The experimental group Post-test	35	0.43	75.61	2.82				

As indicated in Table 24, the final value of Cohen's equation for the experimental group, comparing its pre to the post results in the communicative apprehension report is (0.989). Based on that, there is a positive effect of the program on communicative apprehension. So, this hypothesis was accepted. At the end of the present study, the results of the study proved that:

- 1) The experimental group outperformed the control group in the post administration of the communicative apprehension report as there is a statistically significant difference at (0.01) level between the mean scores of the control and experimental groups in the post communicative apprehension report results, favoring the experimental group.
- 2) The post administration outperformed the pre one of the EFL communicative apprehension report as there is a statistically significant difference at (0.01) level between the mean scores of the pre- post communicative apprehension report results of the experimental group, favoring the post results.
- 3) The gamified project based program has a positive effect on the participants' communicative apprehension. This means that the gamified project based program contributed to an improvement in the participants' communicative apprehension level.

DISCUSSION

Students with higher levels of communication apprehension tend to limit their oral participation, opting for silence or minimal responses as a coping mechanism to manage their anxiety. This lack of confidence can hinder learners' fluency development and increase their apprehension. It is essential to recognize the unique experiences and challenges faced by minority learners in acquiring English as a foreign language. The findings contribute to the existing literature by identifying specific anxiety-inducing situations, such as impromptu tasks, where these students experience discomfort or anxiety when speaking in English. This aligns with Jalleh et al.'s (2021) findings, which highlighted public speaking situations and interactions with native English speakers as particularly nerve-wracking for learners. These anxiety-inducing situations can negatively impact the pupils' oral proficiency and hinder their active engagement in classroom discussions. Therefore, based on the integration of previous studies and the findings of this research, it is crucial for educators to address communication apprehension and create a supportive learning environment. Strategies should be implemented to build learners' confidence and self-esteem, allowing them to practice and interact with the language more comfortably. By designing appropriate instructional approaches and fostering a gamify and secure classroom environment, teachers can alleviate unnecessary anxieties and promote active engagement among learners with communication apprehension.

These results also revealed that there were statistically significant differences between the mean scores of the experimental and control groups in the post administration of communicative apprehension scale in favor of the experimental group score. Thus, the study participants' apprehension level was low. This is due to the gamified project based program and its different activities.

These results also revealed that there were statistically significant differences between the mean scores of the experimental and control groups in the post administration of communicative apprehension scale in favor of the experimental group score.

In relation to language skills, Fragoulis and Tsiplakides (2009) found that PBL has increased willingness of EFL learners to participate in activities designed for language learning. More specifically, results from their study showed that PBL improves all four language skills.

Artini et al., (2018) concluded that implementing PBL method enables learners to become aware of their learning ability. More importantly, PBL activities improve learners' language skills, promote their attitudes towards learning in EFL classes and develop their motivation to use EFL with a strong focus on writing skill.

Besides Helwa, (2021) used PBL in developing EFL receptive skills and English language learning satisfaction among prospective teachers at the Faculty of Education. The study revealed that PBL has positive results in developing EFL receptive skills.

In 2017, Astawa et al. examined the effect of PBL on 28 students' EFL productive skills. The results revealed a significant effect of PBL on students' productive skills in English.

Moreover, similar to Astawa et al., (2017), Artini et al., (2018) have investigated the impact of PBL on learners' English productive skills. They collected data through classroom observation, interview, and a questionnaire. The results of the study revealed that PBL had an impact on learners' positive attitudes toward foreign language learning; also, the findings indicated that PBL activities improved EFL learners' communication skills.

Conclusion:

Based on the results of the current study, the following could be concluded:

- 1-The program reduced participants' communicative apprehension such as participants' ability to control their behavior; they are more active, aware of their thoughts processes, motivated, like working in groups, not worry about what other people may think of their talking, feel comfortable when speaking, and speak English ideas smoothly, feel confident to express their ideas clearly and discussing with others.
- 2-In addition to the previous benefits of the program, it could be concluded that participants aware of their oracy skills, allowed practicing their skills, monitoring their thoughts, improving their communication skills and evaluating their performance.
- 3-Teaching oracy skills technique promoted understanding the content of a text. The experimental group became more active in learning. They showed their contribution in the discussion and participated well in the teaching and learning process by giving some opinions and asking for some information they did not know. They enjoyed participating in the lesson.
- 4- Giving students' positive feedback through the speaking process improved their speaking tasks.
- 5- Working in groups in some sessions was an opportunity to encourage low achievers to participate positively in different activities.
- 6- The program used to facilitate the educational material and help create a positive learning experience.
- 7- Using the program made students more excited about the educational material and helped them carry out their writing tasks with more enthusiasm and responsibility.
- 8- Creating a good social climate and a relaxed learning environment encouraged pupils to learn easily.
- 9- At the end of the experiment, the experimental participants asserted that they were interested in practice activities during the sessions, so they could apply it to other academic subjects. Thus, it can be concluded that the gamified project based learning program was effective.

5.3. Recommendations:

In the light of the current study results and conclusion, the following would be recommended:

- 1- EFL teachers should pay greater attention to reduce communicative apprehension.
- 2- Using the program in EFL context is emphasized as it may reduce communicative apprehension and the psychological problems encountered by EFL learners in such contexts.
- 3- Syllabi designers should design more effective textbooks and teachers' guides with strategies that reduce communicative apprehension.
- 4- Communication across the curriculum or communication in the discipline, have been used to help students develop their oracy skills through structured approaches.
- 5- Integrated communicative practices throughout education may be helpful.
- 6- EFL teachers should not direct all energy on errors and focus solely on mistakes. Make sure to identify some communicative strength and provide positive feedback which will strengthen communicative confidence.

5.4. Suggestions for further research:

In the light of the study results, the following are suggested for further research:

- 1- Designing other program base on project based learning and gamification to be used in developing the other language skills' listening, speaking, reading, and writing.
- 2- Developing remedial courses or programs for reducing students' communicative apprehension.
- 3- Further studies are needed to design many training programs for pre- and in- service English language teachers to help them develop their students' oracy skills.
- 4- Further studies are needed to determine the effect of psychological factors on communicative apprehension.
- 5- Further research is needed to investigate the effect of the program on developing other skills.
- 6- Designing a proposed program based on project based learning and gamification to train in-service teachers on how to teach the four English language skills (listening/ speaking /reading /writing).

References:

1. Andrew, C. P. (2016). *Communication apprehension and its effect on performance*. Journal of Communication, 22(3), 45-58.
2. Artini, L., et al. (2018). *Project-based learning in English as a foreign language classes: Enhancing problem-solving and strategic thinking*. Journal of Educational Research, 18(2), 155-169.
3. Asiri, A. (2019). *Gamification in education: A new trend in teaching and learning*. International Journal of Educational Technology, 10(4), 87-99.
4. Beatty, M. J., et al. (2012). *Communication apprehension and its impact on oral communication*. Communication Quarterly, 48(2), 119-133.
5. Bilgin, I., et al. (2015). *Project-based learning and its impact on students' motivation and learning outcomes in EFL classrooms*. Journal of English Language Teaching, 12(3), 210-223.
6. Boston, L. (2001). *Understanding the psychological response to communication apprehension in educational settings*. Educational Psychology Review, 15(1), 85-99.
7. Carrio-Pastor, M. L., et al. (2015). *Project-based learning: A constructivist approach to language learning*. Language Teaching Research, 21(1), 34-49.
8. Christine, M. J. (2021). *The effects of communication apprehension on learner motivation in the ESL classroom*. TESOL Quarterly, 55(1), 123-134.

9. Ephraim, A. O., & Peter, C. (2024). *The impact of oral communication apprehension on EFL learners' classroom participation*. Journal of Applied Linguistics, 12(4), 98-112.
10. Fitriana, N., & Syahr, I. (2021). *Reducing communicative apprehension through classroom activities in EFL teaching*. Language and Communication Studies, 4(2), 132-146.
11. Harris, T., & Sherblom, J. C. (2018). *Oral communication in the classroom: Approaches for effective discussions*. Communication Education, 67(2), 206-219.
12. Hsu, L. (2004). *Cultural and personality factors contributing to communication apprehension in Taiwanese students*. Journal of Asian Education, 14(3), 59-72.
13. Kapp, K. M. (2013). *The gamification of learning and instruction: Game-based methods and strategies for training and education*. Wiley.
14. Khalili Sabet, M., & Ravand, H. (2017). *Project-based learning in foreign language classes: A review of benefits and challenges*. Journal of Language Teaching Research, 8(1), 41-50.
15. Kiryakova, G., et al. (2014). *Gamification in education: A review of recent developments and future directions*. Educational Technologies Review, 7(2), 125-136.
16. Kingsley, T., & Grabner-Hagen, M. (2015). *Exploring the educational benefits of gamification in foreign language teaching*. International Journal of Educational Technology, 8(1), 27-39.
17. Lavoué, E., et al. (2018). *Gamification and its effects on learners' engagement and motivation*. Journal of Educational Research and Development, 22(1), 89-101.
18. Marran, T., et al. (2014). *Oral communication apprehension and its impact on classroom interactions*. Journal of Educational Psychology, 24(4), 188-199.
19. McCroskey, J. C. (1977). *Oral communication apprehension: A summary of recent research*. Human Communication Research, 3(3), 170-177.
20. McCroskey, J. C. (1983). *The communication apprehension perspective*. In C. S. Beck (Ed.), *Theoretical and methodological issues in communication* (pp. 35-50). Sage Publications.
21. McCroskey, J. C. (1987). *Communication apprehension: A review of the literature*. Communication Yearbook, 10, 5-58.
22. McCroskey, J. C. (1997). *Communication apprehension and its impact on education*. Communication Education, 46(2), 55-62.
23. Petry, A. C. (2016). *The relationship between communication apprehension and academic performance in higher education*. Educational Psychology, 14(1), 23-37.
24. Prieto, L. (2020). *Gamification in education: Motivating students to participate and engage*. Journal of Educational Technology and Innovation, 6(3), 114-126.
25. Sobocinski, M. (2018). *Gamification as a strategy for increasing student engagement in learning activities*. Journal of Educational Psychology, 30(2), 99-112.
26. Stoller, F. (2006). *Project-based learning: A vehicle for promoting active learning in language classrooms*. Language Teaching Research, 10(3), 217-231.
27. Tamim, R., & Grant, M. (2013). *The impact of project-based learning on student motivation and engagement*. Journal of Education, 49(1), 71-82.
28. Tally, B. (2009). *Defining and implementing project-based learning*. Journal of Project-Based Education, 3(1), 1-12.
29. Thaher, A. (2005). *Communication apprehension in the EFL classroom: Sources and strategies for overcoming anxiety*. ELT Journal, 52(3), 236-248.
30. Vitri, A. H. (2017). *Oral communication apprehension and its effects on EFL learners in university settings*. TESOL Journal, 28(2), 97-110.
31. Widia Astuti, P. (2021). *The role of project-based learning in improving critical thinking skills and language competence*. Journal of Applied Linguistics and Language Research, 13(2), 44-59.