

An Inquiry Into How Simulation Experiment Can Facilitate Speaking Skills of Foreign Language Learners

Abdulrahman Almosa*

Department of English, Faculty of Languages and Translation, King Khalid University, Saudi Arabia

Abstract—The oral proficiency of language learners has been bolstered through a variety of instructional methods. The goal of using simulated experiments to enhance conventional teaching techniques is to address various issues related to the acquisition of a FL through conversation. Difficulty acquiring fluency in an FL (Foreign Language) may be attributable to a number of factors, including inadequate educational materials, improper teaching technique, and an inappropriate learning setting. This study represents an effort to uncover how the use of simulation method can improve FL learners' speaking skills. One hundred Intermediate-level FL learners, fifty female and fifty males, were chosen at random for this research. In this scientific study, learners are randomly assigned to either "experimental" (EG) or "control" group (CG). Learners in the CG were instructed using more conventional lecture, the EG instructed using simulation models. The findings of a pre- and posttest are contrasted to evaluate the effectiveness of the simulation strategy on the EG's learning. The current study evaluated two hypotheses: (a) that learners in the EG performed better on the speech test than those in the CG; and (b) that there was a substantial difference in the performance of females and male learners in the EG. The research employs a quasi-experimental approach, with data gathered and evaluated numerically using SPSS. The findings revealed that the EG outperformed the CG, and that the female learners also outperformed the male learners by a small margin. The findings support both hypotheses, demonstrating the validity of the claim that simulation can be used to help learners of an FL improve their speaking skills.

Index Terms—simulation, speaking skills, FL Learners, Experimental Group (EG), Control Group (CG)

I. INTRODUCTION

In today's world, where communication across borders is increasingly important, the ability to communicate effectively is a vital asset. As can be seen, learners and workers who are able to master effective communication skills do extremely well in all areas (Gimpao, 2005). Many learners of English as an FL place a premium on improving their speaking proficiency. In an effort to improve learners' oral communication skills, teachers of English have traditionally relied on exercises or memorization of conversations. However, modern society recognizes the value of communication skills owing to their educational and applied importance for learners in real-world, cross-cultural settings. According to Richards (1990), those studying English as an FL should focus on improving their command of the language. Learners rate their own progress based on how well they can convey their ideas to others.

The linguistic assistance and language educational industries have experienced fundamental transformations in the 5G and AI era, with the conventional teaching and learning in academic institutions being converted into a smart system following the unavoidable trends in technology.

Researchers in the field of FL education are currently focusing their attention on the creation and implementation of "FL" data tools like MOOC (Han Yanhui, 2019), flexible classroom (Su Xiaoli et al., 2019), and mixed instruction (Liu, 2019). Sadly, neither domestic nor international study has been conducted on the topic. An investigation into the efficacy of direct instruction as a means of delivering the English language to English learners using computer-generated imagery is apt.

Using computer-generated imagery is apt. The goal of the simulation is to improve speaking skills (Bambrough, 1994). Effective simulation models foster fluent language acquisition. Once the process of acquiring a new language via simulation is underway, it provides motivation to continue. Just as nuclear power production doesn't require any outside spark or force to get going, an effective simulation method leads to further excellent interaction and the implementation of more models, culminating in a ripple effect of effective interaction. The forward momentum of simulation aids the student in maintaining effective communication (Jones, 1982).

Learners are better prepared for the actual world when they engage in simulation. In this manner, learners acquire a contextualized and practical command of the speaking skill. Unexpected events take place and genuine conversation takes place during a simulation. Theatrical activities, character playing, acting, and simulation models are just some of the theatrical methods that have been used to teach speaking skill. Learning through simulation is comparable to role-

* Corresponding Author.

playing, but it allows learners to bring special effects to class so that the performance feels more authentic. It is common practice to model a simulation's complex group interaction and individual idea sharing on actual real-world experiences (Brown, 2001). A simulation, as defined by Bygate (1987), is a decision-making activity in which the participants may either assume their own personas or those of other people in the group.

A. *Statement of Problem*

The ability to express oneself orally is honed using a wide variety of practices. Historically, the Auditory Lingual Technique was used to hone communicative speech skills. In response to its limitations, however, new approaches emerged, such as "Community Language Learning and Communicative Language Education", which focused on improving learners' ability to use the target language in everyday situations. Language teachers worldwide struggle with a common issue: learners don't get enough time to practice speaking the FL in class. Many learners avoid participating in class discussions out of fear of making fool of themselves or embarrassing themselves in front of their classmates, which contributes to a general atmosphere of nervousness among the learners.

Therefore, simulations may be useful for overcoming barriers like nervousness and turning speaking skills into a pleasurable experience. Learners can improve their pronunciation of phrases with the proper tone and intonation by using an exercise. In addition to bolstering learners' self-assurance, this strategy can aid in the development of their communication skills by providing a framework within which they can practice various kinds of discussion.

This inquiry seeks to answer the following question: When comparing the effects of modeling on the spoken language abilities of "male and female" language learners, is there a gender gap?

B. *Purpose of the Study*

The purpose of this research is to determine the impact of using simulation to improve English language speaking competence in the areas of verbal and nonverbal communication and ease, subject and information order, and speech, inflection, syntax and lexicon.

C. *Research Hypothesis*

- i. Learners in the EG (EG) performed better on the speech test than those in the CG (CG).
- ii. There is a substantial difference in the performance of male and female learners in the EG.

II. LITERATURE REVIEW

A. *What Is Simulation Experiment*

Simulation experiment is a teaching method where learners' current knowledge is assessed, real-world examples are addressed, learners are practically and intellectually prepared, and cognitive transformation is supplied in order to effectively manage their education. Concurrently, these classroom settings should provide learners chances to review and internalize new information. FL education must shift away from its conventional focus on the teacher in favor of a more student-centered approach if it is to foster the learners' cognitive development and improve their problem-solving abilities (Ergun, 2010). The adoption of unique approaches, such as making connections between the material and real-world examples and eliminating tedious grammatical procedures, would prevent learners from being forced to memorize and would encourage them to actively engage in the learning process.

The term "Computer-based education" emerged as computers were introduced into formal learning environments like schools and universities. Including computer usage in physics classrooms has numerous positive outcomes. It aids in making abstract ideas more concrete and facilitates learning at the student's own pace. Multimedia tools make learning more engaging and successful since they can be tailored to each individual learner. If we want a high-quality education system, we need to be able to quickly adapt new programs and materials in response to technological developments. Therefore, it is important to regularly update programmes that are designed for FL instruction, taking into account the developments in science, technology, and education. There is a critical need for student-centered learning in the field of FL education.

Present-day technological advancements have been quite quick. These technological advancements are also seen in the realm of education, necessitating the redesign of classroom settings. So, to simplify and understand in-class instruction and to stimulate learners' attention, educators must use a wide range of strategies that make use of technology resources.

One such method that has become integral to modern technologies is the simulation approach, which may be used in conjunction with computers as part of computer-assisted learning. This strategy, which is popular in classrooms throughout the world, offers invaluable chances to explain and demonstrate to learners a broad range of phenomena that would otherwise be challenging or difficult to study in the classroom. Simulation, a sort of technology that puts theoretical knowledge into reality, takes complex, abstract tasks and makes them concrete, allowing for rapid problem-solving. In this way, not only are resources conserved while also providing a more solid, realistic, and long-lasting setting for education, but education itself is also facilitated.

The fast progress of computing has made it feasible to do tests with values that are very similar to the real ones, utilizing software like simulation. When used to aid in the learning process, simulation—which may be thought of as

the actualization of a model of a topic, system, or phenomena inside a digital setting—plays a crucial part in preparing people for adulthood.

Simply put, simulation is the practice of utilizing computers to generate artificial environments that are meant to mimic their real-world counterparts as closely as possible. Especially when instructing the learners in a practical situation with actual instruments is difficult, risky, or expensive, simulation provides the most effective technique to educate the learner on a realistic environment. Teachers avoid waste and any mishaps this way. The learning settings it provides are also permanent and may be accessed at any time.

If a program or setting is to be considered a simulation, it must have certain characteristics with other simulations. The first step is for the simulation to be consistent with reality, or represent it in every detail. This element ensures that the actions taken and the events encountered are true to life. Additionally, users are assigned roles that have direct relevance to the actual world. This will allow the individual to practice for real-world scenarios. Lastly, the participant may use a variety of approaches depending on how the prevailing context, value, or other variable changes. If the simulations contain these qualities, then the learners will have the ability to transfer their learnings from the virtual world to the actual world.

Owing to their low price, accessibility, and capacity to be repeated independently of time and geography, simulations have become more popular in many facets of human existence in recent years. In addition to its security uses, simulations are utilized as a teaching tool in many application-based scientific disciplines, including business, aerospace, engineering, and medicine. It is also widely used in the fields of mathematics and language instruction. Thus, the simulations, as a newly developed tool, have succeeded to attract attention to their usage in learning in a short amount of time, from elementary school to higher education.

B. Application of Simulated Experiment in FL Learning

In higher learning, the quest for and validation of successful instructional techniques for teaching FLs to learners is one of the most major challenges. The needs of learners who want to explore more, learn new skills regularly, and gain access to more professional resources in languages other than their native one cannot be met by the conventional methods of education. There are currently a plethora of techniques and technological innovations available; among these, simulations stand out as ones that have not been examined thoroughly enough and could benefit from trial testing.

Jones (2013, p. 87) argues that simulation is the "reality of functions in a virtual and structured environment" to guide our understanding of this technique for teaching a language. Essentially, it means having learners act out or simulate the roles they will have to play in a variety of career and real-world contexts while learning a new language. In other words, the simulation is a technique for developing a transformed oral communication atmosphere (a projection of everyday life) in and structures, which integrates language education and the advancement of skill set, stimulates characterization with the social context and minimises the language intervention, and provides learners the realistic optimism (Methods, 2013, p. 39).

In light of its focus on application, simulation can be categorized as a practical learning strategy, the theoretical foundation for which was laid by Kolb and Kolb (2017). The basic principle of the idea is rooted in the reality that data is assimilated in learning via specific experiences and thinking critically, leading to four phases of development: encounter (first stage), interpretation (second stage), perception, extrapolation, and hypothetical sweeping statement (third stage), and ultimately, empirical validation and utilization of the procured experience (fourth stage). Researchers like Hawk and Shah (2019), Li (2019) and Li et al. (2022), Beames and Brown (2021), etc., expanded on the concepts of Kolb and Kolb (2017).

There are also some drawbacks to using a simulation approach; in some cases, it can find in miscommunication, a skewed comprehension of the material, and a failure to fully incorporate new words and grammar structures into one's speech. Learners who aren't interested in participating or haven't had enough time to practice their oral communication abilities can "hide underneath the backs" with their better prepared classmates in a group exercise. It's important to keep in mind that simulating a real-world situation is a slow method of instruction that necessitates a lengthy period for planning, execution, and debriefing. Learners participating in exercises should have some work experience and instruction in addition to a solid grasp of the target language. This is supported by a number of methods (Methods, 2013).

C. Review of Findings of Previous Studies

A large body of research has established the value of simulation for acquiring a FL. There are a multitude of studies looking at various approaches to improving one's communication skills, including the computer exercise, and each one has their own unique strengths and weaknesses. A summary of relevant research is required.

The effect of modeling and role-play on ESP (English for Special Purpose) pupils' oral communication skills is compared in Wahyuni (2012). The research found that the effect of modeling was greater than that of role play in helping pupils improve their public speaking abilities. The findings of this study indicate that compared to the group instructed through role play, the learners who participated in the exercise were more driven and liked the speaking action more. This confirms the theory put forth by Hammer (2002) and Hyland (2002), which states that learners are more likely to practice their public speaking skills in an enjoyable and encouraging setting if they are involved in an exercise. By expanding their vocabularies in this manner, learners are able to better express themselves in conversation

and gain insight into the intricacies of the English language. In a nutshell, the finding supports the claim that learners' 640 speaking proficiency is enhanced through modeling. This study provides preliminary evidence that using realia, such as pee and blood, can increase learners' interest in and enthusiasm for language learning.

Ayudhya (2015) investigated pupils of varying skill levels. In order to evaluate the simulation model, he used messaging software applications. Posttest scores were higher than pretest scores for all skill levels, indicating that pupils learned from the experience. In addition, the findings demonstrated that simulation was more effective in influencing learners with lower levels of competence. Lynch and Cross's (2009) proposed model, a "performance pyramid," correlates well with the findings of the research. A novel performance evaluation method can be developed with the aid of this model. As one moves up the grid, one's focus shifts from acquiring more general information to honing their specific abilities. Learners' communication abilities at all levels, from novice to expert, are impacted by this simulation strategy.

There is another study by Febrianti (2012), wherein learners in the "CG" were instructed through a role-playing method. Febrianti (2012) investigated the impact of simulation on enhancing learners' speaking abilities. The EG, on the other hand, received their education via simulation methods. Findings from this research demonstrated a statistically substantial improvement in learners' oral communication skills after utilizing the simulation method. The study's findings also indicated that this method could be used as a substitute by English language instructors to improve their learners' oral communication skills.

Silvia's (2012) research on the effectiveness of simulation versus more conventional methods of instruction led her to conclude that learners would benefit more from being taught through simulations, which would help them develop better communication skills. Castaneda (2011) argues that teaching a language through simulating rather than role-playing lets learners acquire the language more naturally, become fluent within a brief discussion, start asking short questions and words, and recognize and rectify the errors of their peers. Learners were observed to be open to new information and eager to learn. It was discovered that learners learned a language much faster when instructors played a more facilitative role in the classroom.

Ahmad and Khazaei (2015) argue that the basic tenet of using simulations in education is that it forces learners to work together to find solutions to issues, which in turn strengthens their interpersonal and communication skills. According to Ardriyati (2012), using a modeling approach is a great way to get pupils excited about learning. He thinks simulation is great for boosting learners' interest in corporate English courses. It is recommended that the teacher offer comments, writing prompts, and PowerPoint presentations.

Nugrahani (2011) argues that using simulation methods in the classroom can enhance the educational experience for both learners and teachers. After using the simulation method, learners are going to be quite invested in their education. Learners' high levels of drive and excitement indicate a positive reaction to the introduction of the simulation method.

According to Suryati (2010), a comparison of learners taught using a traditional technique with those taught using a simulation program reveals that the latter group has substantially better oral communication skills.

D. Theoretical Bases of the Study

The Social Constructivist Theory is the theoretical model proposed to be suitable for this research. Following the Social Constructivist Theory, learners ought to not only acquire information but also connect such material with their past knowledge in order for them to be able to gain a deeper grasp of the learning process. This philosophical basis of the constructivist paradigm emphasizes this point, and further proposes that the ability of an individual to converse socially between several people is a necessary condition for the creation of new knowledge. This is a foundational assumption of constructivism, and it suggests that learning requires communication and can only be accomplished in conjunction with other people. This might be accomplished with only a little bit of cooperation and coordination among classmates or with the assistance of professors. In the context of this research, the notion of simulation experiment was examined to unveil the impacts of learners' achievements in speaking skills, and the learning procedures were communicated to the participants via the use of simulation exercises led by the instructor. Learners are given the opportunity to engage in social interaction with both their instructor and the other learners in the class, to evaluate their experiences, and to develop a meaningful knowledge of the material being presented by virtue of using this simulation system. Learners' cognitive abilities were put to the test via the implementation of a self-guided inquiry exercise, which was made possible due to the simulation procedures.

III. RESEARCH METHODOLOGY

A. Research Approach

This research takes a quantitative strategy by utilizing a quasi-experimental methodology to randomly assign study participants to one of two groups: EG and CG.

B. Research Design

The participants have been split into two categories, as has been stated. In the CG, learners are exposed to the conventional method of teaching English as a FL, which involves reading aloud and breaking down challenging vocabulary. The EG, on the other hand, engages in virtual versions of the same conversations. After receiving

instructions from the researcher, participants play their designated parts. The learners also watched related movies during this time. Seven weeks passed with each week having a unique focus.

A final test was given after some time. Statistical methods are central to this approach because they allow for the precise demonstration of relationships between factors through the use of numerical data. Both teams took a pretest to measure their prior understanding of the topics and their level of oral communication competence. On the other hand, the posttest assessments were designed to evaluate the success of the simulation model and the acquisition of any new vocabulary or linguistic abilities.

C. Sampling Procedure

There is a total of one hundred learners used in this study; 50 male and 50 female participants were selected at random from different locations. The majority of these learners are secondary school learners taking English as a FL. There were two groups of learners used to gather the statistical data. Twenty-five female and twenty-five male learners make up the CG. There are also 25 female and 25 male learners in the EG. Participants in the research were divided into groups with specific instructions for achieving their goals. The 25 male learners in the EG were split into five groups of five. The same process is used with female pupils. It is necessary to divide the EG (EG) into subgroups to measure the effects of the simulation procedures as well as keep track of them easily.

D. Criteria for Rating Speaking Skills

The researcher used Vallette's "Foreign Service Institute" scoring method to evaluate the learners' performance on the speaking skills test (1975). James's (1985) work "FL Mastery in the Classroom and Beyond, National Association of Teachers of FLs." provides further explanation of this criterion for measuring speaking skills in FL learners. Learners' proficiency in pronunciation, syntax, vocabulary, speed, and understanding are evaluated using this grading method. One possible interpretation of this grading scheme is as follows:

TABLE 1
SPEAKING SKILLS RATING SCHEME BY FOREIGN SERVICE INSTITUTE (FSI) NUMERICAL

Proficiency Inputs	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Grammar	7	14	21	28	35	43
Pronunciation	4	9	13	18	23	28
Fluency	4	9	13	18	23	28
Total	15	32	47	64	81	99

The above is adopted from FSI document, and it is implemented in rating the speaking fluency of learners in FL learning. FL learners are consistently evaluated on the premise of the FSI criteria. A developed descriptive detail of the rating criteria from FSI are contained in the table below:

TABLE 2
DESCRIPTION OF FSI SPEAKING SKILLS RATING

Levels	Scores of Ratings	Description of Rating
1.	32	Able to meet the bare necessities of daily life, such as social expectations
2.	47	In a position to meet minimal job and societal expectations
3.	64	Possessing an adequate grammatical and lexical foundation for engaging in more official and casual discussion on interpersonal, realistic, and corporate subjects
4.	81	Capable of using the language in all the ways that are necessary for work
5.	99	Fluency comparable to that of a well-educated native person

The table provides the criteria and the description of the criteria for rating speaking skill as contained in FSI. The table indicates that the speaking ability of FL learning can be rated at different criteria.

E. Data Collection Procedure

Initially, the School Administrators and particular instructors all gave their confirmation to the selected classes. Two of the scripts are from the required reading list for the second year of Advanced Level. The school administration was consulted for their approval before proceeding. After obtaining permission, the researcher contacted English teachers to collect data, such as the details of 25 male learners who would serve as the EG and 25 male learners who would make the study's CG. Female participants went through the same steps. To guarantee that the Entrance Test is fair for all learners, the amount of points awarded to each section is kept relatively constant.

After talking with English teachers at different schools, the first discussion was set up. The "King Lear" lesson served as the basis for the practice test. Reading comprehension, proficiency, and pronunciation were the primary focus areas for evaluating the extent of the participants' FL proficiency. Each student is scored using the same factors used by the FSI criteria as listed in the Table 1 and 2 above.

Therefore, familiarizing themselves with literature presented no challenges for the learners. Each session has 5 learners, and those learners are split up into four for the CG and another the same number for the EG. They were instructed on the exercise method and provided written descriptions of their duties.

Their assigned parts required them to act accordingly. It was also utilized to seek the help of educators. Five to ten minutes were spent evaluating each class. All 25 learners were tested in a single 40-minute session. Identical processes were used in parallel with similar classes.

The learners were split up into five different sections at the second session. The script was distributed to each discussion group. The simulation method is explained to the learners. Videos from "The Merchant of Venice" were shown to them to set the scene. Learners were cautioned to pay close attention during these videos. Before beginning the simulation lesson, learners are instructed to get themselves ready. The learners are helped in choosing an appropriate outfit. The exercise method was discussed and taught to the pupils in the fourth gathering. Some of the more challenging terms and sentences are pronounced and explained. The learners were urged to be creative in their role-playing. They were provided with aids. There was an attempt to create a realistic scenario. Learners will put their newfound knowledge of modeling to use in the fifth and final gathering. During the role-playing exercise, various groups receive instructions and hints. The sixth gathering is when the final learners are invited to act out their parts. Some changes are made whether or not there is input from the final learners. Learners' ability to communicate orally was evaluated during the most recent encounter using the FSI evaluation method. It was the same for the remaining male and female groups.

F. Procedure for Analysis

The data were analyzed using the T-test method, which was used to find statistically substantial variations between the averages of the control and EGs. The purpose was to demonstrate the effectiveness of simulation in improving pupils' oral communication skills. The t-test formular is stated below, as adopted in the analysis:

$$t = \frac{M1 - M2}{\sqrt{\frac{\Sigma X_{12} + \Sigma X_{22}}{N(N-1)}}}$$

The above statistical model is explained as thus:

- i. M1 represents the mean value of the EG
- ii. M2 represents the mean value of the CG
- iii. ΣX_{12} represents a sum of combined square values of the EG
- iv. ΣX_{22} is the total of the square value of the CG
- v. N represents the total number of learners that participated in the study

Pronunciation, fluency, and syntax are tested in all of the assessments. Learners' oral communication skills were evaluated using a quantitative method developed by FSI. Totaling 99, with scores of 43 and 28, respectively, for grammatical proficiency and articulation. Statistical analysis was performed using SPSS -14. Comparisons between the experimental and CGs are made using both descriptive and inferential statistics. The purpose of this study's analysis was to find out how learners in the EG responded to the simulation method.

IV. FINDING AND DISCUSSION

A. Finding

Different tables are used here to present the finding of the study. The tables contain information on the values derived from the rating computed using the FSI criteria.

TABLE 3
COMPARING THE MALE AND FEMALE LEARNERS' FINDING IN EG FOR SPEAKING SKILLS TEST ON PRETEST

Variables	N	M	SD	T	p
Female group	25	45.66	5.09	-3.20	0.03
Male group	25	42.8	4.08		

The above Table 3 contains basic calculations of the outcome of the pretest of the EG. In the table, N stands for the total number of FL learners that participated in the EG pretest stage. M is the mean value; SD is the standard deviation. The rest include the t-test value and the p-value of the calculation. The outcomes of the EG's pretests can be found in Table 3. The number of learners of FLs who took part in the EG pretest is denoted by N in the table above. The standard deviation is the number of points from the mean. The remainder consists of the calculated t-value and p-value. It can be seen from the data that there is no statistically substantial disparity between the mean values of the male and female groups on the pretest (average mean for the EG = 43.7 and average mean for the female group = 45.66 with t= -3.20 and p > 0.03). According to the findings, the pretest levels of the female and male EG participants were practically comparable.

TABLE 4
COMPARING THE MALE AND FEMALE LEARNERS' FINDING IN CG FOR SPEAKING SKILLS TEST ON PRETEST

Variables	N	M	SD	t	p
Female group	25	42.53	6.44	-3.51	0.002
Male group	25	45.63	6.05		

As already explained, N represents the total number of FL learners in the group. The M is the mean value, the SD is the calculated standard deviation, then the t-score and p-values. The table 4 contains data on the pretest for the CG (CG). As can be seen in Table 4, there is no statistically substantial distinction between the mean values of female and male learners on the pretest (45.63 and 42.53, respectively; t -value = -3.51; $p > 0.002$).

According to the data, both the experimental and CGs start out at nearly the same measure of proficiency. It is clear from Table 3 and 4 that there is little to no variation between the female and male CG pretest scores in terms of cumulative accomplishment.

B. Validating the Impact of Simulation Experiment on the Speaking Skills of the FL Learners

One thing that can be taken from the data in Tables 3 and 4 is that there is no statistically different between the speaking skills performance of the male and female participants in both CG and EG at the pretest stage. The individuals in both groups have nearly the same degree of fluency in speaking, as shown by statistical analysis and comparing of the CG and EG ratings. After assigning learners to positions, showing them pertinent clips, and instructing them on their responsibilities, a simulation method was used to give assessment to the EG. In the final session, the researcher did a simulated role-playing and evaluated everyone's speaking abilities. The members of the CG, on the other hand, received their instruction via a seminar in which challenging terms were defined, pronunciation errors were addressed, and concluding tasks were assigned. This research also prioritized considerations of gender at every step of the process.

To properly validate the research questions, it is necessary to test the hypotheses. The two hypotheses are tested also. Hypothesis one proposes that learners in the EG performed better on the speech test than those in the control condition.

The posttest findings of the male participants in the EG and CG are presented in the table below:

TABLE 5
POSTTEST FINDING OF THE MALE PARTICIPANTS IN THE CG AND EG FOR SPEAKING SKILLS

Study Groups	N	Mean	SD	t-value	P-value
CG	25	25.23	4.31	15.76	0.000
EG	25	65	5.56		

A statistical analysis was performed on this data set utilizing "Independent Sample Test" module of SPSS. Table 5 shows that the average score of the EG was 65 on the test, which is substantially higher than the average score of the CG, which was 25.23. The substantial variation between the EG and CG of the male participants is also reflected in the values of $t = 15.76$ and $p > 0.00$. As a finding, there was a substantial difference in outcomes between the experimental and CGs. The table shows that the EG participants outperformed the members of the CG.

After obtaining the statistical values of the male participants in the posttest, for EG and CG, it is necessary to present the finding of the CG and EG posttest of the female participants in the speaking skills.

TABLE 6
POSTTEST FINDING OF THE FEMALE CG AND EG PARTICIPANTS IN THE SPEAKING SKILLS TEST

Participant Groups	N	Mean	SD	t-value	P-value
CG	25	54.33	7.55	18.53	0.000
EG	25	73.83	4.38		

As it is in Table 5, the data in table 6 shows substantial difference in the performance of the female participants at the EG and CG categories. Independent Sample Test is used to conduct statistical analysis on this data as well. In comparison to the CG, the EG had a higher mean test score (73.83, see Table 6). (54.33). The substantial variation between the EG and EG of female participants is also reflected in the t-test finding (18.53), with a value of $p > 0.00$. Participants in the EG group thus showed substantial improvement compared to those in the CG group. As can be seen in Table 6, EG learners outperformed CG learners. This points to a substantial effect of the experimental simulation process on the speaking proficiency of those learning a FL.

In the following table, it will be seen how the ratio of male to female participants in the EG different, comparatively.

TABLE 7
COMPARING THE FINDING OF THE POSTTEST OF THE MALE AND FEMALE PARTICIPANTS IN THE EG FOR SPEAKING SKILLS

Participant Group	N	Mean	SD	t-value	P-value
Female group	25	71.54	4.41	-4.28	0.000
Male group	25	65.29	4.58		

The data in Table 7 confirms the position of the second hypothesis proposed in the study. "The independent sample test" is used for statistical analysis of this data. According to Table 7, the average exam score for males is 65.29, which is marginally lower than the average score for females at 71.54. There was a statistically substantial variation between female and male participants, as indicated by the values of $t = -4.28$ and $p > 0.00$. Both groups, however, exhibit substantial increase in test scores after the simulation experiment. As can be seen in Table 7, the female group did moderately higher than the male sect altogether.

C. Findings and Discussion

Following the presentation of the data in the various tables, a couple of findings have been drawn. According to the findings of the examination of the pretest data, the performance of male and female participants in the CG and EG is not substantially different from one another. The cumulative mean value for the EG is 43.70, while the cumulative mean value for the CG is 44.56. The average cumulative score on the EG for participants who are females is 45.66 scores. On the other hand, the mean of the EG is 41.98, which also demonstrates that there was hardly any difference in the level of competency of the people prior to the simulation exercise.

Further analysis of the data reveals that the implementation of the simulation method findings in the observation of a substantial deviation from the expected outcome. The general mean value of male participants increased from 43.7 to 65, and participants who had previously been classified as falling into the sufficient degree are now promoted to the level "excellent" in compliance with the suggested FSI evaluation method developed by Vallette (1975). The average score that learners achieved on evaluation tests rose from 45.66 to 73.83 when female participants were involved. It was demonstrated that the simulation methodology has a substantial effect on enhancing the learners' ability to communicate orally, particularly in the case of female learners.

The data also indicates that there is not much of a difference in the learners' ability to communicate English after the conventional method of instruction has been implemented. The cumulative mean value of the male participants only increased from 49.56 to 25.18, whereas the cumulative mean value of the female learners increased from 48.48 to 54.34. Both sets of data point to the fact that the traditional method of instruction has not led to much of a development in the learners' speaking abilities.

In conclusion, the findings of the examined data that were gathered after the application of the simulation strategy demonstrate that the mean value of the female group increased by 25 points, in contrast to the 18 points gained by the male learners. It demonstrates the strong curiosity that people of both sexes have in gaining knowledge. It is further evidence of the disparity in attitude that exists between the sexes. A marginally greater interest in schooling was demonstrated by females.

V. CONCLUSIONS AND IMPLICATION

The findings of this study, which indicate that simulation has a beneficial impact, lend support to the findings of earlier studies such as Anggrahini (1996) and Suryati (2011). This research demonstrates that the simulation strategy is superior to any other traditional process by comparing it to those other methods. However, due to the fact that the population was comprised of both males and females, the procedure was not coincidental. The findings support the hypothesis that learners exhibited a higher level of interest in learning as a direct finding of the utilization of simulation. In comparison to the CG, this one had a higher level of interactivity and inspired greater participation from the learners. The members of the CG exhibited less activity. The findings provided support for the second hypothesis, which stated that there was a disparity between the ways in which male and female participants approached the learning process.

The majority of learners favor adopting more modern teaching strategies, such as learning by doing, which is a relatively new method. One of the methods that falls under the umbrella of "learning by doing" is simulation. After performing their assigned parts, learners reported feeling more self-assured. After completing this exercise, they were able to overcome my shyness. The learners improved their speaking skills by using their own thoughts when speaking about topics relevant to their roles. The learners' progress in enhancing their pronunciation was also aided by watching the recordings.

At the beginning of this investigation, the investigator was unable to find any previous research that had been conducted on speaking abilities. Learners will benefit from this research, which will also make a contribution to the field of education. The findings are encouraging to say the least. The only prerequisite is to adhere to this instructional method exactly as outlined, both in terms of its letter and its essence. By implementing this strategy, experts in the field of curricular development may also benefit from using it. It is possible to broaden the scope of this research to include additional contexts and stages. It's possible that there weren't that many questions on the exam because that was another reason for the restriction. Before oversimplifying the findings and applying them to other situations and settings, additional research must be conducted to resolve this limitation.

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Abdulrahman Abdullah Almosa has a Doctor of Philosophy (PhD) Monash University, Faculty of Arts, Department of Languages, Cultures and Linguistics in 2017. He also has Master of Arts in Applied Linguistics (Second Class Honours) Griffith University, School of Humanities, Languages and Social Science, Department of Linguistics in 2009.

He worked as a Dean of Academic Affairs and Development, Faculty of Languages and Translation since 2022. In 2018, he worked as a Vice- Dean of Quality and Development, Faculty of Languages and Translation. He also held the position of an Assistant Professor at English Department, KKU and a Coordinator, Building Leadership for Change Through School Immersion Program, Monash University Program offered to Saudi Teachers.