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## The effect of using a language games-based electronic program on the acquisition of language patterns among people with learning difficulties in the English language during the Covid-19 pandemic

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### Abstract

This study aimed at identifying the effect of using a language games-based electronic program on developing the language patterns of people with learning difficulties in the English language during the emerging Covid-19 pandemic. The study used the experimental approach and implemented the program on a sample of 84 students divided into an experimental group (n = 42) and a control group (n = 42). The

instruments of the study consisted of the training program, a test of language patterns, and a test for the evaluation of oral expressive performance.

The study found the existence of a statistically significant difference between the experimental and control groups in the acquisition of language patterns in favor of the experimental group.

**Keywords:** language games, learning difficulties, English language, language patterns, COVID-19

### Introduction

The new COVID-19 virus spread from China to the rest of the world resulting in the death of more than 300 thousand people. The number of confirmed cases is now more than 100 million cases. COVID-19 affects people in different ways, some cases result in severe illness and the need for hospitalization while the symptoms could be mild for some others. However, vulnerable groups, such as elderly people, persons with disabilities, and people with chronic diseases are the most exposed to the danger of the virus. The impacts of COVID-19 touched all sectors, including the education sector. The educational institutions shifted to online learning because of the lockdowns and curfews that governments decided to impose to reduce the spread of the virus. Online education, within these circumstances, faced several challenges.

The linguistic patterns are one of the requirements for proper linguistic communication, as they occupied a prominent position in the English language courses for the basic stage classes in the Kingdom of Saudi Arabia. They are defined as the grammar of the English language. They consist of syntactic concepts compatible with the mental growth of students in the early stages. These patterns consist of the parts of speech (noun, verb, etc.) and the structures these parts can compose, such as the nominative or verbal sentences and various methods, interrogation, exclamation...etc.

Teaching linguistic patterns at this stage is of special importance as it prepares students to learn grammatical rules in the future, trains them to use sound linguistic structures and patterns in oral expression, helps them formulate useful sentences and phrases, and organizes ideas (Al-Helah, 2018). Language games are very important in the educational field according to several studies that have shown their effectiveness. However, no studies have been conducted that have used language games in developing language patterns and oral expression skills, according to the researcher's knowledge. Therefore, the researcher investigated their use and experimented with the effect of using a program based on language games on developing language patterns and oral expression skills for those with learning difficulties in the English language in the Aseer region.

### Problem Statement

There is a large gap in communication between teachers with students with learning difficulties and their families during the Corona pandemic. The current world health situation imposed the application of distance online learning at all levels. This application of electronic tools revealed a clear weakness in the effectiveness of applications for electronic educational platforms, in addition to the general weakness in the infrastructure, whether in the availability of tools, or the Internet, and the teachers' ability and competence in applying online learning process. Several obstacles also face resource rooms' teachers represented in not being exposed to such a crisis and its repercussions before, and the difficulty of teaching students with learning difficulties in such circumstances.

This category of students suffers from problems with attention, concentration, memory, and perception, which also add to the problem. Therefore, this study aimed at developing an electronic educational program to mitigate the effects of the emerging coronavirus crisis on students and help teachers in providing online learning.

### Research Objectives

This study aims at achieving the following objectives:

- Identifying the effectiveness of a language games-based electronic program on the acquisition of language patterns among people with learning difficulties in the English language during the COVID-19 pandemic.

### Research Questions

The present study seeks to give answers to the following research questions:

- What is the effectiveness of a language games-based electronic program on the acquisition of language patterns among people with learning difficulties in the English language during the COVID-19 pandemic?

### Significance of the Study

The significance of this study comes through finding more effective ways to teach language patterns and oral expression skills in a manner that makes the student more interactive, responsive, and understanding of linguistic patterns. This study follows the recent trends that confirm the effectiveness of using games in teaching, because of their great impact on stimulating the learner's motivation and excitement (Sabarini & Ghazawi, 2014).

### Delimitations of the Study

There are several limitations to the generalization of the results of this study, which can be summarized as follows:

1. The sample of the study was limited to students with English language learning difficulties, registered with the Education Department in the Aseer region.
2. This study was limited to the following instruments:
  - a. The educational program was prepared by the researcher.
  - b. Pre and post-achievement test.
  - c. The test of oral expression performance.

### Definition of Operational Terms

#### Language games

In this study, language games are the games the researcher chooses or modified, and which students participate in (experimental sample), and which are applied in a specific time and place and according to specific rules to help students with learning difficulties acquire linguistic patterns and oral expressions in the English language.

#### Linguistic Patterns

The linguistic pattern refers to the division of speech that is independent of others: such as noun, verb, and adjective, and the combinations of these parts such as the noun phrase, the verbal phrase, the interrogative style, the exclamation style, and so on (Al-Helal, 2018).

#### The educational program

The program is a written document that includes the objectives, knowledge, activities, and skills or behaviors, which the training will strive to achieve among the trainees

(Hamdan, 2016).

As for the proposed educational program, it is defined in this study as a set of knowledge and activities that are prepared for students using the method of language games to create a change in the oral linguistic behavior and the linguistic patterns of the students.

### Literature Review

COVID-19 had negative impacts on persons with disabilities in the psychological, social, and economic aspects of this category of people (United Nations, March 2020). Although many protective measures were done to reduce the impact on persons with disabilities, these efforts face different challenges in implementation. The special health of persons with disability increase their vulnerability to being infected and affected by any kind of virus, and sometimes the cases become worse if the person is infected with COVID-19 (Singh et al. 2020).

Playing is an integral part of human life because of its great importance for young and old ages alike. Through playing, the child learns and develops the growth of mental and cognitive activity. Playing has also become an educational tool that contributes to the child's interaction with the environment, and a tool for communication between children regardless of the linguistic and cultural differences between them. It also helps them to individualize learning, highlights the internal motivations for learning, and is an opportunity for social interaction.

One of the most prominent projects that emerged in the revolution in the use of technologies, and focused on the use of language games in teaching English as a foreign language, was the project Schrand did to analyze English language curricula used in Britain at the end of the eighties of the last century. Schrand focused on linguistic models and concluded in his study that textbooks lack language games that attract students' attention, and push them to effective learning in the basic education stage in particular. The study included suggestions for training on specific skills through the use of language games, such as comprehension, developing the ability to question, suggesting the implementation of games, and training skills, either through cooperative learning within groups, or through bilateral work (Nimrat, 2005).

### Previous Studies

Research needs to investigate deeper into the impact of COVID-19 on students in general, and students with disabilities in particular. Because coronavirus is still new, there is a lack of information about the health conditions surrounding the infections. Few studies tackled the issue of the impact of coronavirus on students with disabilities and the measures taken to combat its effect on different categories. Mumtaz et al (2021) examined and highlighted the effectiveness and challenges caused by the change from traditional to online education during the COVID-19 pandemic from the perspective of developing countries such as Pakistan. To achieve this, the study reviewed 32 full-text articles published in the last ten years from 2010 to 2020. These studies were collected using websites and search engines such as Medline database, Web of Science, Google Scholar, and Google using keywords like " Covid-19, e-learning, mental health, social impact, academics and combination of words". This study concluded that the curfews resulted in a major change in the education world, such as the suspension of learning and shifting to online

education.

Zhang et al (2020) identified the academic and psychological effects of the COVID-19 pandemic on students with disabilities in the United States of America, with a study sample that included 147 students with and without disabilities. The results of the study showed that students with disabilities were more interested in lessons transmitted via the Internet than were their regular peers. Additionally, students with disabilities reported more difficulties accessing the Internet compared to their regular peers. Also, the results of the study indicated that psychological pressures related to anxiety and fear of studying were higher among students with disabilities than among their peers without disabilities.

Skalski et al. (2020) evaluated the relationship between the anxiety and trauma caused by a coronavirus and the resiliency of individuals and the social support. The study used the Polish adaptation of the Coronavirus Anxiety Scale (CAS). The sample of the study 515 individuals aged 18–78. The results revealed that social support and resiliency if they have higher rates, help in decreasing the level of anxiety caused by a coronavirus. The results also indicated that the participants need to engage in the intervention measures about raising resiliency and receiving social support to help to boost mental health during the COVID-19 pandemic.

Windak et al (2020) focused on the challenges academia faced, specifically in education, research, and quality assurance. This article concluded that the recent COVID-19 pandemic has brought different challenges to education, research, and quality assurance in health. The study stressed the need that health and medical research should change the styles and tools of research to face the challenges of COVID-19. The pandemic can also be an alert to change the primary care, especially in providing online consultations and supporting people to learn about self-care. The ultimate goal of the health sector should be to provide a higher quality of care, reducing health care costs, and reducing the workload on the physicians.

Al-Weissi (2019) investigated the effect of using computerized electronic games on the eighth-grade students' acquisition of the components of language and motivation. The study relied on the semi-experimental method. The sample of this study consisted of 58 eighth grade students from Suhaib Al-Roumi School in Anbar, and they were divided into two groups, an experimental group of 28 students who were taught by using electronic games, and a control group consisting of 30 students who were taught through the traditional method. This study lasted for 8 weeks, where students from both groups were subjected to a test to determine their level before the start of the study and then were subjected to a post-test. The results showed that the level of the two groups before the start of this study was almost equal, and there were no statistical differences between the performance of the two groups in the post-test concerning the language components: grammar, vocabulary, and culture. The results showed differences in the views of the experimental group towards the use of electronic games for education in a positive way.

Yukselturk et al (2018) identified the effectiveness of using game-based education with Kinect technology in foreign language learning courses on the self-efficacy and behavior towards the English language of students. This study was conducted at a government university in central Turkey, and the study sample consisted of (62) male and female students from the first year of university who are studying the English

language as a compulsory subject. The study was based on the semi-experimental approach, whereby students were subjected to a quasi-experimental test before and after starting this study. The study tools consisted of two questionnaires to measure the degree of self-efficacy and behaviors towards the English language. This study showed a significant positive increase in the results of some sub-factors for the behaviors and self-efficacy of students in the experimental group compared to the average scores of students in the control group. The study showed the importance of introducing educational activities based on games using Kinect technology in teaching foreign language courses.

### Research Methodology

This section provides information on the methodology of the present study, which includes population and sample, research instrument, and validity and reliability of the instrument.

### Population and Sample

The study population consisted of students with learning difficulties in the English language and their number was (3310) students, distributed over (54) schools and (85) classrooms. The sample of the study consisted of (84) students enrolled in the academic year 2020/2021.

### Research Instrument

#### First: the educational program

The researcher prepared the educational program on language games, to develop language patterns and develop oral expression skills. The program consisted of a set of language games, exercises, and educational activities that were designed to provide students with an opportunity to practice these activities, processes, and procedures in the experimental group. These exercises and activities were subjected to the formative evaluation and final evaluation processes, which is the same pre-test prepared by the researcher for the study, and it has sufficient indications of validity and reliability.

#### The validity of the educational program

To verify the validity of the proposed educational program, the researcher presented this program in its initial form to a panel of qualified judges in the field of education. In light of the observations made by the judges, the necessary modifications were made and the program was designed in its final form.

#### Second: Achievement test (pre-post-tests):

The researcher prepared an achievement test designed to measure students' knowledge and use of language patterns for this study. The test was derived from the objectives of the educational program to measure the achievement of the study sample before studying the content of the prescribed subject and after studying it. The test in its final form consisted of twenty items, all of the multiple-choice type.

#### The validity of the test

To verify the validity of the test, the researcher adopted the evaluations of the judges and their opinions to reveal the extent of agreement in their assessments, which is the approved method for determining the validity of the test.

#### Reliability of the test

Reliability is an important feature of any test. It indicates the

stability of the subjects' results if the test is repeated on the same group (Odeh, 2016). One of the methods used by the researcher in calculating the test reliability factor is the Test-re-Test method, which requires that the test be performed on a specific group of students, extract its results, and then repeat the same test on the same group after a specified period has elapsed.

To verify the stability of the test, the researcher applied the test to an exploratory sample from outside the study sample, consisting of (39) students. After two weeks of applying this test, it was re-applied to the same sample, and the Pearson correlation coefficient between the results of the two applications was calculated, which was (0.83). This correlation is a suitable reliability coefficient for the present study (Odeh, 2016).

### Data Analysis

The researcher used the appropriate statistical methods to answer the questions of this study:

- Calculating the mean scores and standard deviations for the performance of the study sample from the experimental and control groups on the tests of language patterns and oral expression skills, to make comparisons between them.
- The researcher used the t-test to determine the differences between the mean scores on the achievement test and the oral expression test and to detect differences at the statistical significance ( $\alpha=0, 05$ ).

### Results and Discussion

To answer the question of the study, the frequency distribution and percentage of the study sample scores were calculated on the post-test for language patterns, and for the members of the experimental and control groups, as shown in Table (1).

**Table 1:** The frequency distribution and percentage of students' grades on the post-test of language patterns according to the teaching method

Scores categories	Teaching method				Total	
	Traditional		Language games			
	Frequency	percentage	Frequency	percentage	Total Frequency	percentage
4 – 0	1	%2.4	0	%0.0	1	%1.2
9 – 5	6	%14.3	1	%2.4	7	%8.3
14 – 10	9	%21.4	2	%4.7	11	%13.1
20 – 15	26	%61.9	39	%92.9	65	%78.4
المجموع	42	%100	42	%100	84	%100

Table (1) shows that the number of students who got grades less than 10 was (8) students, while the number of students who got grades more than 10 was (76) students, The table also shows that the number of students who got marks less than 10 in the experimental group and the control group there were (7) students. The maximum mark for the test was (20) marks.

The number of students who obtained more than 10 grades

was (76) students, as their number in the experimental group was (41) students, and they constitute (97.6%). In the control group, there were (35) students and they constitute (83.3%). The mean scores and standard deviations of the students' scores were calculated on the post-test for language patterns according to the two study groups, where the results were as shown in Table (2).

**Table 2:** The mean scores and standard deviations of students' scores on the post-test in language patterns according to the teaching method

Teaching method	No.	Mean score*	Standard deviation
Traditional	42	14.167	4.515
Language games	42	17.071	2.191

\*Maximum score (20).

Table (2) shows that the mean score of the marks of the experimental group students was (17.071), and for the marks of the students of the control group was (14.167) on the total test. The maximum mark for the test is (20) marks. The standard deviation of the scores of the experimental group

students was (2.191), while the standard deviation of the scores of the students of the control group was (4.515). Table (3) shows the results of the T-test analysis of the scores of the students of the experimental and control groups on the language patterns test.

**Table 3:** The results of the "T" test analysis for the differences between the mean scores of the two study groups on the post-linguistic patterns test

Teaching method	Mean score	Standard deviation	Freedom value	T value	Sig.*
Traditional	14.167	4.515	82	3.751	* 0.000
Language games	17.071	2.191			

\*Statistically significant at ( $\alpha = 0.05$ ).

Table (3) shows the existence of fundamental differences between the mean scores of students of the experimental group and the scores of students of the control group on the test of language patterns. There were statistically significant differences at the level of significance ( $\alpha = 0.05$ ) between students' scores on the post-test of language patterns in favor

of the experimental group that was taught by the method of language games. This indicates that there is an effect of the educational program based on language games in developing the linguistic patterns of people with learning difficulties in the English language.

The result of the "T" test revealed the realization that there

was an effect of the training program based on language games in improving students' ability to acquire language patterns. The results showed the superiority of the experimental group students who were taught the language patterns using the language games strategy over the control group students who were not subject to the educational program.

The researcher believes that this result is due to the following reasons:

The training program included a variety of games that allowed students of the experimental group to actively participate in those games, as well as the exercises and activities that the program included, which contributed to the development of the language patterns of the students of this group.

Language games included in the program contributed to rationalizing the teacher's effort, focusing his role on specific tasks, such as distributing students into groups, defining the role of each of them, following up on their performance, and evaluating it, thus distinguishing his role with vitality, renewal, and diversity. This contributed to the development of their linguistic patterns, and that was the reason for the success of the training program and the achievement of its objectives.

The games also contributed to the positive interaction between the students because the game is characterized by the excitement of this aspect in the student at this age. It also increases their desire to learn, and this has led to the understanding of the linguistic pattern.

This result can also be attributed to the fact that the training program is characterized by the quality of its material, its good organization, and the good formulation of its material. The program was prepared according to the scientific foundations in terms of objectives, content, activities and educational aids, teaching methods, and evaluation methods. This led to the students' positive interaction with the program, in addition to the fact that students by their nature tend to everything new, especially if the innovation is in teaching methods and methods. This applies to the program as it included a new teaching method based on games, which contributed to achieving an appropriate level of competence. It is also due to the fun atmosphere that the program sparked during the classroom, giving the students a margin of freedom, and breaking the stiffness that characterizes the regular classroom, which all contributed to increasing students' interest in the lesson, and thus their familiarity with the required language pattern.

Likewise, the reliance on language games on competitive group activity led to an increase in active participation in the lesson. This is what the researcher noticed that competition was intense among students during the implementation of language games, and that their great enthusiasm towards playing led to positive understanding and mastery of the linguistic patterns.

### Recommendations

In light of the results of this study, the researcher recommends the following:

1. Designing language games to teach the linguistic patterns of people with learning difficulties in the English language.
2. Preparing some language games for selected topics in the first four grades, attached with the teacher's guide.
3. Conducting studies similar to the current study in grades

other than those in which the study was conducted.

4. Conducting studies similar to the current study on language skills other than (language patterns and oral expression).
5. Developing a methodology for teaching oral expression skills in the teacher's guide, and the different academic stages.

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