

Exploring The Effects Of Educational Games On The Learning Ability Of 6th Grade Students In English Language Education At The School Level

¹Mirza Muhammad Akhter , ²Syed Ghazanfer Abbas , ³Dr Asma Khalid ,
⁴Muhammad Ehsan , ⁵Amna Zahid , ⁶Anwar Mahjabeen

¹PhD Scholar, Faculty of Education, International Islamic University, Islamabad Pakistan

²PhD Scholar, Faculty of Education, International Islamic University, Islamabad Pakistan.

³Department of Sociology, Allama Iqbal Open University, Islamabad.

⁴PhD Scholar, Faculty of Education International Islamic University Islamabad, Pakistan.

⁵Lecturer English, Department of English, GC Women University Sialkot.

⁶English Lecturer at University of Hail, Hail City, Kingdom of Saudi Arabia.

ABSTRACT

The study aimed to exploring the effects of educational games on the learning ability of 6th grade students in English language education at the school level. The objective of the study was to examine the educational games that may affect the student learning ability in English language at school level. Experimental research design was used. Population of the study was comprised of 159, 6th grade students of Islamabad Model School for Boys G-8/4, Islamabad. The sample of the study was 60 male students from Islamabad Model School for Boys G-8/4, Islamabad. A random Sampling technique was used in the selection of the sample. Pre test and Post test were used as a research tool for the collection of the data. Data were analyzed with the help of SPSS (version 22). t- Test, one way ANOVA were used as a statistical tool. All the data were presented in the form of table, figures and graph. The findings suggest that educational games can enhance students' English language learning ability, promoting engagement, motivation, and overall academic performance.

Key Words: Educational Games, Academic achievement, Student Learning.

I. INTRODUCTION

As trade, travelling, and educational practices regularly targeted English, it becomes famous speaking terminology to the world and becomes very important international language (EFL) in different non-speaking English countries in such a style for students' speaking, reading, listening and writing qualities may improved has become crucial problem in those countries. Furthermore, developed, interactive and betterment styles to enhance real findings in real content, and

therefore enhance pupils educating context and commitment is became vital research work (Keisha, 2017). According to (Kuhn, 2014), it is often said that the best thing about games, and the main reason to use them in educational settings, is that they are fun. There is nothing practically wrong with it. Games reduces learner's affective filter and contributing to a relaxed atmosphere where they feel relax and therefore minimum worried about making mistakes. Increasing promotions in knowing and information

technologies have affected all segments of life especially in education and it has brought modification in structure and implications of education, and the personality of students in education. To this reason, many educational hubs have commenced new paradigm to meet the requirements of their pupils. (Arslan, 2016) stated that in order to make learning activities more effective, an atmosphere rich in stimulants should be provided to students. One of the elements which can provide such an atmosphere is computers. (Donmus, 2010) elaborated that the spread of use of computer in educational settings increases more interest in educational games which may bring into the mind that using educational games in teaching and learning atmosphere may be useful. In view of what discussed earlier, the researcher suggests a new style that contains a multiple sets of educational games in order to enhance pupils learning language 5 and to enhance their English language progress with interest and fun. The crafted educational games may contain different practices concerning to the sixth class curriculum. And implementing these I.C.T techniques may aid the pupils understanding of English and enhance the teacher's expertise. So, the research focuses on the effect of practicing educational games on improving the sixth graders achievement in English language in Islamabad Model School for Boys G-8/4 Islamabad.

LITERATURE REVIEW

EDUCATIONAL GAMES TECHNOLOGY

Kesha,(2018) states that Educational games have been documented since the late 80s and were then classified into different types. In Developed countries, games based learning has already been used for decades. By today's advanced technologies games helped in educational learning processes. Digital educational games have emerged as the new

teaching instrument to help the educational community. Educational games can broadly be defined as games that are designed particularly to teach people about a target subject, help enhance their concepts, reinforce their betterment or assist them in learning a skill as they play.

Gungormus, (2016) stated that we shall learn in detail about the types and ideas behind educational games the educational practicality of games has become a topic of discussion for a long time. Today, it has been noticed that educational gaming is a relevant trade and discussion is now more targeted on different aspects such as game design, student progress and analysis, integration aspects and so on. The educational community is not yet mentally prepared to accept educational games as a mean of learning but it is becoming more expanded to this idea. In this thesis, we are keen in knowing with educational games and we shall therefore more classify these games into different categories. .

EDUCATIONAL LANGUAGE IN GAMES

Donmus, (2010) narrated that these days we use educational games technology is very vital ingredients for teaching Language to become more useful. Computer TV, video, recorded amplifier, cell phone apps and web is used in educational games innovation and in aided teaching language.

Dudeney and Hockely (2017) stated that use of information communication innovation in classroom is effective and is more effective, and it may be a normal part of educational language teaching use in coming times for different reason, By using a variety of Information and Communication Technologies (I.C.T's) tools gives students horizon towards use at all of four Language skills: reading, writing, listening and speaking.

EDUCATIONAL GAMES BENEFITS

Dudeney, (2016) states that main idea behind games in education is that they aid in teaching specific learning subject and/or skills to the game player. The complex cognitive task is learning, as it demands tireless effort from the learners. Software's that is build for education is basically to aid and stimulate the learners beneficial, but now in technologically progressive world, kids and adults are fond to play games and therefore learning through computer games is more convincing and challenging. It shows to be true by researchers who had conducted empirical studies.

According to Hockley, (2017) the "educational games" rise between relations of 'fun' and 'learning'. Games are fun by themselves. People enjoy fun doing things. Education is learning. However, 'play' is also a mode of learning. By combination of these concepts, a new dimension of learning through fun and exploring was developed. These types of learning have been proven to be more effective and productive.

Prensky, (2015) as stated that "Play has a deep biological, evolutionarily important, function, which has to do typically with learning". According to Orwig, (2018), it is proven scientifically that it is easy to learn when the body is relaxed, which are exactly the educational games tried to achieve. In general, game is a fun when playing, hence it is relaxed the player, and on the counterpart the learning ability will enhance. Creativity is very important. Harnessing a player's creativity to get the goal of a game is more important. Every educational game being no exception has boundaries, artifacts, players, and a winning condition.

Orwig, (2018) narrated that goal encourages the player to play to their strengths and enhance their chances of victory. Educational games exist in a wide variety, such as computer games, card games and board games. The focus of this thesis is computer

games. A computer game usually has different levels; each with an enhanced stage of difficulty, to ensure player can play it for a maximum time. Gungormus, (2016) states that in instructional games, different stages can also be used to enhance the difficulty of understanding as the levels increases.

LEARNING COOPERATIVELY

Keisha, (2018) narrated that, even though there has been a rapid progression in communication technology, educational games still not used in schools widely. It maybe the result of different factors, such as, not every teachers and parents are fully convinced that educational games may be beneficial to their pupil's.

SKILLS THROUGH COMMUNICATION

Stewart, (2016) states that, games experts and relevant communities stated that games aid to produce their social and cognitive skills. But practicing games as educational tools need understanding of the game skill designed and game stages as individual likes.

INTER-CULTURAL EDUCATION

Sampath, (2017) narrates that; the rapid progression in innovation may aid students to get higher degree of understanding cultures. i.e., phonic communications made it easier to inter-connect the pupils and instructors in domestic and foreign exchanges. This technique helps pupils to built culture bridges by knowing common issues for many reasons.

Commitment

Hockley, (2016, p.9) stated that, communication technology may inspired student and (instructors) by makes learning interesting and enjoyable. i.e., learners searched it much committed to write through educational games.

Psychological Use Of Technology

Sampaith,
ett.all
(2017)
indicates
which
narrates
"I listen, I
forgot
totally;
I seen, I remembered totally;
I am doing, and I understand it totally"

According to Sampaith (2017), It is clear if instructor depends very well on oral communication, it makes hurdle to the individuals to see things and event, so it is leaded them to listen and neglect. On contrary, if a student sees, they remembered totally. It's quit natural that if the learning gets by sense of viewing, it will be vivid, exact and lasting.

By efficiently, if one is practically involved in any practice, he/she involved in any physical work, and the nall their senses are used to perceive learning through all the senses. Hence, the flow of learning is therefore through different channels and naturally it is quit, complete and accurate. It is called the learning by direct experiences. It is an ideal technique of making pupils to get all the understanding.

What previously get, one may assumed that a student benefitted much from exposures when they have been engaged through their self benefits and mean and this interest is beneficial when theories and concepts are comes to know him by selected educational instructional medium which may compelling through different senses. Such a student will become a creator.

Therefore, text educational computer games matches' pupils psychology, since it makes pupils to effectively participate in doing targets with interest and enjoyment.

E-learning definition

Zaitoon (2015) reveals that understanding of

educational learning is process offormatting by regular changes for it is relevant to e-technology that increases time to time. But the aim is that any place, time, path, or pace. Zaitoon finds that educational learning is function which comprises two actual processes:

1- Pedagogical approach is concerned with the submission of appendix through electronically to different computers, networks, multimedia, and so as to permit to interact learner efficiently.(Zaitoon, 2015).

2- According to Zaitoon,(2015) an administration system process relevant to implying a set of e-multimedia and working strength. Learning maybe termed as a type long distance learning consists of opportunities and based on foreign information network, the information communication network and studying computers a particular skillful content through regular contact with the instructor /, facilitator, learner, and the content.

EDUCATIONAL LEARNING PRINCIPLES

Few principles of Educational learning as revealed by (Abdual-Aziz, 2018):

Interaction

Aziz (2018) stated that the first concept of interactivity is the learner interacts with the contents during replying over content and attributes of some activity and awaits feedback from instructor, peers or the electronics program.

Other type of interactivity is the personal and social interactivity with instructors and students where is interactivity during questions and discussions among students and their instructors. The interactivity maybe synchronous or asynchronous.

Students Centered

Learners are only the beneficiaries of different use of educational learning instruments. These instruments involves in analyzing the instructor needs and their teaching techniques. It made this system ultimately unique comparison with traditional educational systems.

Promotion and Support of Continuous Motives of Learning

E-learning enhanced student's abilities and commitment and aids them depends upon themselves at education. Practices are important traits that educational learning depends on. Students may refer to different segments any time to get traits and information needed. Contrary, it assures that teachers get information according to their motivation

Computer Based E-Learning Tools

Smaldino, et.al (2016) cited that P.C's are key instructional technology used in education. The P.C's has a multiple roles to play in curriculum, completing from instructor to learner and learning tool. P.C's have multiple tasking instruments in teaching and learning, since it has been considered an efficient machine that aided in took lots of multi-tasking regularly such as writing, saving huge data, etc. So, it can managed all the things.

Following are points that shaded lighten this multi-purposive tool:

P.C As An Instructor

Newbey, et.al (2016) reveals that P.C is a device which gives commands directly to learners. This type of use is normally termed as P.C assistance instruction (PAI), Computers-Based Instruments (C.B.I), It may gives instruction, uses different channels (audio, video, graphics, and text), provides activities, tasks, quizzes and situations, or on the other hand requires interactivity from students, assessed and analyze students responses, give

(Donumus, 2015).

Equality and Flexibility

According to Smaldino (2016) narrated that the Communication Network aided the users to skim and scans electronic pages easily. E-learning is a type of elastic learning as it gives favor to students to learn at their favorable time and at their suitable environment according to their ability.

Learning Cooperatively

The instructors as facilitator able, with aid of the Students, to practice different instructional techniques to aided and achieved the collaborative learning, as brainstorming through regular discussions and solution of the problems.

response, and examine suitable feedback activities.

Computer As A Learner

Smaldino, et.al (2017) stated that teaching learners have shifted from giving Information to learners to open doors for them to find and to create peers learning experience for them. P.C's technologies have been incorporated into this phase. The implication is what that the teachers are moving from the concept that school as a place to acquire knowledge to that context that school is a place to learn that how to learn.

Abd Al- Azzez (2018) narrated that the computers may play the learner's role and to be as teacher. It meant that computer becomes a learner and the student becomes an instructor to the computers. The objective of the user is to taught computers to done its targets. In order to get this aspect, the user must learnt how to complete the target, then this accomplishment could reached computer in such a way that makes it to accommodate.

Computer As An Aided Tool

The computer as an assistant aids the students in doing their routine work targets. The computer programmes that falls into it, includes, presentation software, word processors, graphics tools, electronic spreadsheets, computer databases, , and Internet tools/ telecommunications. In reality, computer is a progressive instrument that aided the students.

ENGLISH LANGUAGE AND COMPUTER INSTRUCTIONS IN CLASSROOMS

Egbert and Jessup, (2016) revealed that the teaching of English is totally different in schools from other subjects specifically for the pupils at the elementary level. The teachers of English subject used specific instructions while they were dealing with the English textbooks because pupils found difficulty to learn it with them. As of language instruction, the computer has a remarkable impact on education,

1. Information Collecting
2. Teacher facilitating with a teaching
Experimental learning is involved Two way communication,
Creativity is expanded
3. New knowledge is tested
4. Murphy (2018) summarizes following learning outcomes which results in classrooms by using of computers:
 1. Growth Socially
 2. Solving the problem
3-Teaching Peers
 3. Exploration.
 4. Work Independently

As of result by using computers in classrooms to build choices which initiate their activities, learners looks computer technology as necessary active learning. This environment is computer for them to view as a "commemoration of learning"(Murphy,2018).

Bennett (2017) narrated that he had collect vital data about the computer use of

specifically teaching in foreign language. The Computers support the learning atmosphere and is predicted to be an authorized learning atmosphere and it aids learners to learnt English better than daily classroom text. Change in direction of the educational system to commit onto the social perspective opens wider chances to implement computers in learning.

COMPUTER AND ENGLISH CURRICULUM FOR ELEMENTARY PUPILS

Mcdonald and Hershman (2017) reveal that, a new edition of educational advancement dominates all necessary parts of teaching/ learning includes curriculum. instructors need to be ready to when using a new technological software and hardware when instructing learners through computers.

Morton (2015) stated that when used computers; the following learning processes are indulged:

advanced technology in a Native American classrooms. She is of the view that computers were a visual tool and it gives "concreteness" which is aided for many pupils, specifically those who are in special education. Learners learn very fast when they have visual and verbal clues; concept picturing aided learners to see and to remembered it. Bennett also narrates that promotion of communication skills may be another benefit of using computers at the classrooms. Computers working in sets and groups helped learners to talk with each other and participated to the "team spirit" and approach. Bennett finds that computers encouraged learner's eagerness to complete given targets, even when the process required very long periods of time.

METHODOLOGY OF THE STUDY

3.1 Research design

Experimental research design was used in this

study. It requires two groups of the students; an experimental group and a control one. The strategy of educational games was used in teaching the subjects of the experimental group while the traditional method was used with the control group subjects.

According to (Gay 2017 “In Experimental research the researcher

manipulates at least one independent variable, control other relevant variable and observe the effects on one or more dependant variables”.

The research design was based on a two group’s pretest and posttest design. The students were tested on words and sentence reading before and after teaching by traditional and through educational games instruction.

Sample	O1	X	O2
--------	----	---	----

Sample = Grade 6th students from Islamabad Model School for Boys G-8/4 Islamabad
 O1 = Pretest
 X = Educational Games Instruction
 O2 = Posttest

3.2 Population

The Population of this study was consisted of 6th grade (male) students at the Islamabad

Model College for Boys G-8/4 for the year (2020-2021). The total population of the study was (159) students male. Table 01 shows population and total No of students.

Table 3.2 Population

S. NO	Name of School	Total no of students
1	I.M.C.B G-8/4 Islamabad	159

Source: School record on November, 11, 2019.

3.3 Sample and Sampling Techniques

A sample of the study was (60) male students distributed into two groups. One experimental group consist of (30) students. One control male group of students consist of (30) students. The

researcher was used random sampling from 6th grade students from Islamabad Model School for Boys G-8/4 Islamabad where the researcher administered the experiment by himself with the latest teaching technique through educational games. Random Sampling techniques were used to select the sample.

Table 3.3 Sample

S.NO	Name of School	Group	Experimental	Control	Total no of Students
------	----------------	-------	--------------	---------	----------------------

I.M.C.B G-8/4				
Islamabad	Male	30	30	60

Since the sample had been chosen from Islamabad Model School for Boys (I.M.C.B) G-8/2, Islamabad, the two groups were equivalent in the cultural, economic, and social level. They were balanced in their general accomplishment according to their statistical treatment of their results in the academic term of the school year (2019-2020). Variables of the age sample were also controlled before the experimental application.

3.4 Research Hypothesis

H₀: There was no significant difference between the pupils who learnt English language through games (experimental group) and those who learnt English language through the traditional method (control group).

H₁: There was no significant relationship between the pupils who learnt English language through games (experimental group) and those who learnt English language through the traditional method (control group).

3.5 Variables of the study

This study includes following variables:

A- Independent Variable: represented in

1. Teaching Method
2. Educational Computer Games method
3. Traditional Method
4. Gender
5. Male
6. Students General Ability of English Language
7. High Achievers
8. Low Achievers

B- Dependent Variable: represented in
The student's achievement in English language

3.6 Controlling the variables

Before the study the researcher tried to controlled some variables, for assurance of the results accuracy and avoid any marginal interference.

1- Age Variables

The researcher recorded the student's ages from their school files at the beginning of the School year (2019-2020). t-Test and One Way ANOVA was used to measure any statistical differences.

3.7 Achievement tests

A pre-test completion arranged by the researcher and a gathering of master educators and bosses showed their proposals and recommendations to gauge the subjects achievement. It was utilized as a pre test applied before the investigation and as a post test applied after the analysis.

1. General Aims of the Test

The test was aimed to measuring the effects of the educational computer games strategy on the subject's achievement in English language. It was built as per criteria of test Specification.

2- The items of the test

The items of the test fell into following scope

3.7.1 E- Language (structures and words)

This scope incorporates fifteen things that measure student's information cognizance, applications and thinking abilities. The things are isolated into four classifications; pick the right answer, occupy in the spaces, right the underlined

mix-ups and circle the oddball.

3.7.2 The pilot study

To examine the appropriateness of the test items as well as their validity and reliability, the test was administered on a random sample of (30) students; of Islamabad Model School for Boys G-8/4 Islamabad. The results were recorded and statistically analyzed. The necessary revisions and recommendations were made in the light of the statistical results.

3.7.3 The validity of the test

Al Agha (2016) narrated that a test is valid that measures what it is designed to measure. The study used the reference validity and the internal consistency validity.

A) The Referral Validity

The test was introduced to panel of specialists in English language and methodology in NUML University, Ministry of Education and experienced supervisors and teachers in different Islamabad Model Schools under Federal Directorate of Education Islamabad. The items of the test were modified according to their recommendations.

B) The Content Validity

The test specifications were designed according to the general objectives of the content, the content analysis and the weight age of learning through game skills and the objectives of the test. The sixth grade English subject syllabus consists of (20) units each consists of (4) lessons; reading lesson, listening, language structures and words lesson with the proportion of 25% for each lesson. From these the words structure and grammar lesson were represented in the test specification and therefore their items in the test. The test items of words structure and English grammar skill accord with the general objectives of the skill and its nature according to the syllabus, structures are taught in the form

of application so there is a consistency between the items of the test and the cognitive levels according to the Bloom's Taxonomy.

C) The Internal Consistency Validity

Al Agha (2016) revealed that the internal consistency validity demonstrates the relationship of the level of everything with the complete normal of the test. It likewise shows the relationship coefficient of the normal of every extension with the all out normal. This legitimacy was determined by utilizing Pearson Equation. The relationship coefficient of everything inside its extension is huge at levels (0.01) and (0.05).

3.7.4 The reliability of the test

The test is solid when it gives similar outcomes on the off chance that it is reapplied in similar conditions. The unwavering quality of the test was estimated by KR20 and the Split-half strategies.

3.7.5 Educational Computer Games

1. Making of the Educational Computers Games

In this examination, "Instructive P.C games Strategy " contains a determination of 03 short games that empower the researcher to acquire 03 short PC games in his program by getting utilization of the PC games themselves in other contents. As such, there are three rehashed PC games that hold a similar name and a similar thought applied in different content. These games were gotten and modernized by the researcher from various sources. They are differed and advanced all the principle scholarly abilities addressed in grammar, vocabulary and words structure. These games are intended for individual, pair, and gathering work and individually entire class exercises. These games are evaluated by the 6th level.

The strategy includes the first four units

of “English” subject for sixth grade students of Islamabad Model School for boys G-8/2 Islamabad during academic year 2019-2020. It starts with a tablet screen; where it shows the units of textbook on the right margin. There are three buttons for three games under the four units of subject of English for sixth graders that enable them to click and enter easily to the game. Each game card shows the name of the game, the objectives, the skills, the unit number and lessons, the sound, pictures, questions, and immediate feedback. The pupils receive quick feedback as soon as completing the gadget whether it is right or wrong along with presenting the correct answer at the end of the game.

2. The characteristic of the current educational PC games programme

The games in the automated program are co-operative games, in which players or collaboration together towards a shared objective as per their speed. They are likewise informative games, in which players utilize the language through collaborating and including into errands. Additionally, they are considered as a necessary piece of the language prospectus, not as an interesting movement for the finish of term. They function as a steady material alongside the educational program.

They give, by and large, as much thought practice as a customary drill and, all the more critically, they give a chance to genuine correspondence, and in this way comprise an extension between the study hall and this present reality. Such mechanized program was set up to coordinate understudies' necessities and levels.-

3. The aim of the educational computer games programmes

The point was utilizing these games to show the initial four units of "English for Islamabad

Model School Boys G-8/2, Islamabad for the trial gatherings. This E- learning program considered the individual contrasts in learning unknown dialect in Elementary schools. Also, this program offers inspiration, self learning, focus, coordinated effort, and quick criticism.

4. The sources of obtaining the educational computer games program

As to thought, the researcher got incredible advantages and advanced his brain with different sources, for example, bosses, instructors, teachers, program architects, analysts, books and sites. The instructor could grow such conventional games to be mechanized. Agreeing the substance, the games fill in as a steady material alongside the educational program.

5. The Implementations of Educational Computer Games Program

The analyst applied the program on male students. To start with, the researcher got some information about the investigation to warm them for learning through tablet. The students were energized and they were associated with the instructing/learning measure.

The researcher enlightened the students regarding the Tablet games. The students were provided the tablets by the researcher. The researcher coordinated the students such that encouraged utilizing games exclusively, in pair and gathering work. Since the quantity of tablets did not surpass 05 tablets, this elevated the researcher to partition the class into five gatherings, each gathering has one tablet, and each tablet is saved for five students.

The researcher installed the educational games into tablets, let students to look, tune in, and cooperate with the tablets, and show his students the best approach to open it through Local Control Network method that the researcher utilized from the principle PC in the

lab. The researcher gives the students the guidelines to follow the tablet programme, and afterward the students were permitted to work autonomously on the tablet. The researcher went around and noticed student's execution. It ought to be referenced that the researcher disclosed to students from the earliest starting point that there are sure games that can be played exclusively as in perusing and listening abilities, and most games played two by two as recorded as a hard copy, talking, words and construction.

After consummation of each game, the researcher requested each from the five gatherings to sit along with their chiefs in each gathering and play the game thus. In this manner, the researcher supported gaining from peers, gaining from experimentation, and learning by collaboration, at long last, every understudy was given quick input for his answer whether it is correct or wrong from the tablet alongside right answer introduced on the screen.

3.8 Validity of the Educational Computer Games Program

To test the games validity, the researcher submitted CD rounds of the educational games first plan to a gathering of English Language administrators and instructors. The researcher did the necessary change as indicated by the experts.

1. Words Story Game

It is a group language game that is utilized as an arouser at the pre-essential stage. It intends to help students review words applicable to the exercise. There is a rundown of letters on the tablet screen. Students need to pick and tap the tablet screen on the right letters to finish and recall words. Students work two by two. They find criticism for their solutions from the tablet right away. The champ is the pair with the most right answers.

2. Wonster Words game

It is a word game utilized in the pre-essential stage. In this game the students conclude the Words through working out riddles at that point rework the letters to frame the word. In addition, the game builds up the students transcription expertise. It is a simple and recognizable game as the students are utilized to it in their book. The victor is the pair that work out all the riddles and structure the words accurately inside the most limited time.

3. Hidden Words Game

This game is familiar to the students for they have numerous in their exercise manual. The game depends on the student's capacity to discover some concealed words applicable to a specific theme whether vertically or on a level plane. Each pair cooperates to discover and tap on all letters of the shrouded word to be surrounded. The students cooperate to discover the words. The gathering with the most right discoveries is the champ.

3.9 The statistical analysis

The data were collected and computed through (SPSS) Statistical Package for Social Sciences, Pearson correlation, (KR20) and Split half coefficients of the test domains were used to confirm the test validity and reliability. On the other hand, T- Test, and One Way ANOVA were used to measure the statistical differences in mean between the experimental and the control groups due to the teaching method, the students' level in English language whether high or low achievers.

3.10 Limitations of the study

The study aimed to develop English language achievement for the sixth graders (male) in Islamabad Model School for Boys G-8/2 Islamabad. The study was applied during the academic school year (2019 - 2020) The study was limited to teaching English language

textbook for elementary level students (sixth grades) of 5" units through implementing educational computer games. The experiment lasted within four weeks in December 2020.

4. DATA ANALYSIS

The study aimed to investigate the Effects of Educational Games on Students learning ability in English Language at Elementary School Level on the sixth graders at Islamabad Model School for Boys G-8/2 Islamabad. This part presents the factual treatment of the data outcomes and information examination just as its measurable importance. T-test and One Way ANOVA, mean, and Standard Deviation were utilized to test the speculations of the investigation.

4.1 Data Analysis

Table (4.1)

Scope	Groups	N	Mean	Std.	T	Sig. value	Sig. level
Words, Structure and Grammar	Experimental	30	4.693	1.824	2.361	0.000	Sig. at 0.01
	Control	30	3.185	1.949	2.361		
	Total	60	7.878	3.773	2.361	0.000	Sig. at 0.01

“t” table values at (60) d f. at (0.05) sig. level equals 0.98 “t” table values at (60) d f. at (0.01) sig. level equals 1.29

Table 4.1 shown the “t-test results in differences between the experimental group and

$$\eta^2$$

1- Hypothesis

There were no statistically significant difference at ($\alpha \leq 0.05$) in achievement level who learnt English language through games (experimental group) and those who learnt English language through traditional method (control group).

To examine the principal speculation, mean and standard deviation of the test and the benchmark groups' outcomes were figured. (T-Test) was utilized to quantify the meaning of contrasts. Table (4.1) shows that "t" processed worth is bigger than "t" table an incentive in all extensions and the absolute degree. This implies that there are huge contrasts for the trial bunch because of the instructive games system. Subsequently the hypothesis is completely rejected.

the control group in the post-test results of the experiment”.

To mention the impact size of the educational games strategy, the researcher computed “ η^2 ” by using the following formula:

$$= \frac{t^2}{t^2 + df}$$

And the value of "d" using the following formula:

2t

df

Table (4.2)

Test	Volume Effect		
	Small	Medium	Large
η^2	0.02	0.05	0.12
D	0.1	0.6	0.7

'Table 4.2 shown the references to find out the level size effect of eta square and the value of the

'd' of the volume effect in the study'.

Table (4.3)

Domain	T value	η^2	D	Effect Volume
Words Structure and grammar	2.361	0.135	0.604	Large

Table 4.3 shown the significant 't' value, eta square" η^2 "and 'd' for the total degree and each domain

5.1 Findings

On the basis on results of this study, following findings have been observed:

1- There is a statistically significant difference in sixth graders accomplishment of English language because of the technique for educational games methodology.

Question inquired about the following:

Are there statistically significant difference at ($\alpha \leq 0.05$) in the accomplishment level between the students who learn English language through educational games (experimental group) and the individuals who learn English language through the traditional technique (control group)

To answer it, the researcher tested following

null hypothesis:

There was no statistically significant difference at ($\alpha \leq 0.05$) in the accomplishment level between the students who learn English language through educational games (experimental group) and the individuals who learn English language through the traditional technique (control group)

To test this theory, mean and standard deviation of the experimental and the control groups results was figured. (T- Test) was used to figure the significance of difference.

Moreover "d" and " η^2 " value was figured to calculate the effect margin of the educational games strategy.

The findings of the investigation was restricted to the test "Educational games program" since all factors, for example, age, general accomplishment and general accomplishment of English language was controlled before the experiment.

Finding indicated that "t" test value is larger than "t" table value on the whole extents of the test and the absolute degree. This implied that there were contrasts of factual importance in the students overall accomplishment of all the language abilities in the post test for the experimental group.

This outcome concurred with the after effects of practically all the past examinations like; Kangas (2017), Suh et.al (2017), Paraskeva et.al (2015), Falloon (2016), that all uncovered the constructive outcome of Educational games on the student's accomplishment and execution. Liu and Chu (2016) stated that uncovered the adequacy of educational games system on the accomplishment of learning abilities. Turgut and Irgin (2018) stated that uncovered the viability of educational games procedure on the accomplishment of English language jargon.

Warrens and Donglingers (2018), Rutherford (2016), Colby (2018) and Moberly (2018) narrated that the effectiveness of educational games strategy on the achievement learning skills. Thomas and Austin (2015) revealed that the effectiveness of educational games strategy on the accomplishment of structures.

As per "d" and " η^2 " values appeared in tables, it was seen that the effect size of the educational games system was enormous on the students collective accomplishment including tuning in, composing and jargon and constructions. The impact size was medium on understanding ability. It can be attributed to perusing ability being an intricate expertise that needs a larger and regular practice. Moreover, perusing ability has many sub abilities which are not previously procured for young students yet.

5.2 Discussions

One of the more pressing questions that an educator needs to ask in the initial stages of a game-based learning project is what kinds of gaming sessions their schedule and curriculum

allows for. In the studied cases, the curriculum demands and the availability of hardware informed both the choice of game and the plans of how gaming sessions were to be scheduled and conducted. In the class of 6th graders, the abundance of laptops, short classroom periods (45-60 minutes), and the stricter demands and educational goals established in the curriculum made the teacher gravitate towards shorter stand-alone sessions. In the stand-alone session setup, students collaborated in groups of two or played individually on assignments with fixed starting-and end points, which allowed for easier assessments of students' progress. Viewing each classroom session as a stand-alone exercise also had the benefit of allowing for changes in the design of the game assignments according to the rate with which the students mastered both game play and details of the taught subject matter.

5.3 Conclusions

As per findings, computed from the results of this study, following conclusions were given:

1. Educational games strategy had predominance over the conventional strategy in teaching English language.
2. Educational games changes up the range of learning situation.
3. Educational games give students a better learning environment which reflects their accomplishment of English language.
4. Educational games expanded student correspondence which gives familiarity rehearses and lessen the control of the class by the teacher.
5. Educational games empower students towards a independent practice of English language rather than direct guidance.
7. Educational games built up the helpful learning inside similar gathering and

competition with other groups.

8. Through educational games the students assumed several roles as scholars, issue solvers, observer, and researcher. These jobs assisted them with obtaining and utilize English language in various circumstances more easily without any problem.

Educational games methodology changes the speed of an exercise and help to keep students inspiration.

REFERENCES

- Al-Anany, Y, and Tait, M. (2016, July). A study on the rotational behavior of bonded and unbonded fiber reinforced elastomeric isolators. In Proceedings of the 11th Canadian Conference on Earthquake Engineering.
- Al Agha, K., Bertin, M. H., Dang, T., Guitton, A., Minet, P., Val, T., and Viollet, J. B. (2016). The development of OCARI technology. *IEEE Transactions on* 56(10),
- Arslan, A., Ilhak, O. I., and Calicioglu, M. (2016). Effect of method of cooking on identification of heat processed beef using polymerase chain reaction (PCR) technique. *Meat science*, 72(2), 326-330.
- Abo-Oda, A., Isa, K., Ogasawara, K., Kameyama, K., Okuda, K., Hirashima, M., and Kawa, K. (2010). A novel mutation of the GATA site in the erythroid cell-specific regulatory element of the ABO gene in a blood donor with the AmB phenotype. *Vox Sanguinis*, 108(4), 425-427.
- Abu Jabber, (2016); Alqadi, K., Alghamdi, O., Babbain, F., M., and Kayyali, H. (2020). Effects of fasting during Ramadan on seizure control and quality of life in patients with epilepsy. *Epilepsy & Behavior*, 112, 107440.
- Abdual-Aziz, A. S., (2018). Separation method in the problem of a beam-plasma interaction in acylindrical warm plasma waveguide. *Journal of Modern Physics*, 2011.
- Abdullah, M., and Hill, A. H. (2017). The Hikayat Abdullah. *Journal of the Malaysian Branch of the Royal Asiatic Society*, 42(1 (215), 85-106.
- Abed Latif, et.al, (2019) Youssef, M. M. A., Ouda, W. E. S., Adly, R. M., Al-Dakhkhani, A. M., Hassan, S. S., Ibrahim, S. S. E., ... and mc carter-Spaulling, D. Editors Committee.
- Abdel Al (2017) referred to in Harb (2015) Myerson, A. (2002). *Handbook of industrial crystallization*. Butterworth-Heinemann.
- AL-Ghunaimi, E. (2013). The Effectiveness of a Suggested Video Program on Developing the Communicative Skills of the 11th Grade Learners of English in Gaza Governorates. Unpublished Thesis
- Al Hela (2016) Fogh, J., Wright, W. C., and Loveless, J. D. (1977). Absence of HeLa cell contamination in 169 cell lines derived from human tumors. *Journal of the National Cancer Institute*, 58(2), 209-214.
- Al-Khawalda, M. I. (2015). Jihad: A victim of policy and misinterpretation. *Asian Social Science*, 8(7), 202.
- Al Rafee, A, (2018) N., Alduhaimi, N., Zainaldeen, F., ... and Alfayez, K. (2020). Psychological status

- assessment of medical and dental staff during the covid-19 outbreak in Saudi Arabia. *Med Sci*, 24(106), 4790-4797.
- Azzez, S. A., Hassan, Z., Hassan, J. J., Mukhlif, M. S., Mahdi, M. S., & Bououdina, M. (2016). Effect of temperature on hydrothermally grown high-quality single-crystals Mg-doped ZnO nanorods for light-emitting diode application. *Journal of Luminescence*, 192, 634-643.
- Abu-Zaitoon, M. (2015, October). Stabilization of delayed teleoperations using predictive time-domain passivity control. In *Proceedings of the IASTED International Conference on Robotics and Applications RA* (pp. 20-25).
- Abu Jabber, (2016) Alqadi, K., Alghamdi, O., Babbain, F., Ba'arma, H., Bajammal, S., Albalawi, M., and Kayyali, H. (2020). Effects of fasting during Ramadan on seizure control and quality of life in patients with epilepsy. *Epilepsy & Behavior*, 112, 107440.
- Akhila, J. S., Shyamjith, D., and Alwar, M. C. (2015). Acute toxicity studies and determination of median lethal dose. *Current science*, 917-920.
- Akel, S. (2018). The role of corporate identity in the higher education sector. *Corporate Communications: An International Journal*.
- Bennet (2017). López, J. F., Chalmers, D. T., Little, K. Y., and Watson, S. J. (1998). AE Bennett Research Award. *Biol Psychiatry*, 43, 547-573.
- Barbe, Y. L., Wild, P., Chandrashaker, A., Curak, J., Schmidt, M. H., Kalaidzidis, Y., and Schmidt, P. (2015). Regulation of epidermal growth factor receptor trafficking by lysine deacetylase HDAC6. *Sci. Signal.*, 2(102), ra84-ra84.
- Competencies for analysis and application. Columbus, OH: Merrill.
- Bacha, (2016) Roth, G. A., Abate, D., Abate, K. H., Abay, S. M., Abbafati, C., Abbasi, N., and Borschmann, R. (2018). Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, 392(10159), 1736-1788.
- Bottino et. al (2016) Biassoni, R., Cantoni, C., Falco, M., Verdiani, S., Bottino, C., Vitale, M., ...and Moretta, L. (1996). *The Journal of experimental medicine*, 183(2), 645-650.
- Bradshaw, A. D. (2016). Evolutionary significance of phenotypic plasticity in plants. In *Advances in genetics* (Vol. 13, pp. 115-155). Academic Press.
- Brewster (2017) Mead, G. H., Brewster, J. M., Dunham, A. M., Miller, D. L., and Morris, C. W. (1967). *The Philosophy of the Act*. Edited, with Introd. By Charles W. Morris in Collaboration with John M. Brewster, Albert M. Dunham [and] David L. Miller.
- Boqhoos and Ubaid (2015) Harb, A. I. The effectiveness of educational games on the sixth graders' achievement in English language in Gaza southern governorates.
- Carrier (2015) Swarup, K., Benková, E., Swarup, R.,

- Casimiro, I., Péret, B., Yang, Y., and Bennett, M. J. (2008). The auxin influx carrier LAX3 promotes lateral root emergence. *Nature cell biology*, 10(8), 946-954.
- Challup (2015) Adole, V. A., Pawar, T. B., Koli, P. B., and Jagdale, B. S. (2019). Exploration of catalytic performance of nano-La₂O₃ as an efficient catalyst for dihydropyrimidinone /thione synthesis and gas sensing. *Journal of Nanostructure in Chemistry*, 9(1), 61-76.
- Colby, D., Robertson, M., Nichols, J., Lee, S., Tweedie, S., and Smith, A. (2015). Functional expression cloning of Nanog, a pluripotency sustaining factor in embryonic stem cells. *Cell*, 113(5), 643-655.
- Crystal (2016) referred to in Qattami (2017) Pimpinelli, A., and Villain, J. *Physics of crystal growth* (p. 400).
- Criffiths and Hunt (2018) Howe, K., Clark, M. D., Torroja, C. F., Torrance, J., Berthelot, C., Muffato, M., and Teucke, M. (2013). The zebrafish reference genome sequence and its relationship to the human genome. *Nature*, 496(7446), 498-503.
- AE Bennett López, J. F., Chalmers, D. T., Little, K. Y., and Watson, S. J. (2017). AE Bennett Research Award. *Biol Psychiatry*, 43, 547-573.
- Deesri, A. (2016). Games in the ESL and EFL class. *The Internet TESL Journal*, 8(9), 1-5.
- Donmus, V. (2010). The use of social networks in educational computer-game based foreign language learning. *Procedia-Social and Behavioral Sciences*, 9, 1497-1503.
- Doran, G. T. (2016). There's a SMART way to write management's goals and objectives. *Management review*, 70(11), 35-36.
- Dudeney, G., and Hockly, N. (2017). How to teach English with technology. Dudeney, G. (2016). How to teach English with technology.
- Deaton (2016) Imbens, G. W. (2010). Better LATE than nothing: Some comments on and Heckman and Urzua (2009). *Journal of Economic literature*, 48(2), 399-423.
- Egbert, J., & Jessup, L. M. (2016). Analytic and systemic analyses of computer-supported language learning environments. *TESL-EJ*, 2(2), 1-24.
- Esa and Masalha (2015) Masalha, N. (2011). El problema de los refugiados palestinos sesenta años después de la Nakba.
- Ersoz (2016). Uberman, (2018) Zhang, Z., Ersoz, E., Lai, C. Q., Todhunter, R. J., Tiwari, H. K., Gore, M. A., ... and Buckler, E. S. (2010). Mixed linear model approach adapted for genome-wide association studies. *Nature genetics*, 42(4), 355-360.
- Fröbel, J., Svensson, C. M., Kotrba, J., Gerlach, M. and Dudeck, A. (2017). Mast cells acquire MHCII from dendritic cells during skin inflammation. *Journal of*

- Experimental Medicine, 214(12), 3791-3811.
- Faraj, S. (2015), Jarvenpaa, S. L., and Majchrzak, A.. Knowledge collaboration in online communities. *Organization science*, 22(5), 1224-1239.
- Frenandez and Hermana (2017), Aprender en red: Internet del revés. *EduTec. Revista Electrónica de Tecnología Educativa*, (17), a040-a040.
- Gungormus, M., Kacar, T., Oren, E. E., Hnilova, M., and Sarikaya, M. (2016). *Molecular biomimetics: GEPI-based biological routes to technology*. *Peptide Science: Original Research on Biomolecules*, 94(1), 78-94. Gay, L. R., Mills, G. E., & Airasian, P. W. (2017). *Educational research: George, D., Harb, J., Haven, C., Ferry, D., Lee, W. H., and Srinivasan, J. (2017). U.S. Patent No. 7,058,890. Washington, DC: U.S. Patent and Trademark Office.*
- Gordian, J. (2013). COVID-19 clinical trials: unraveling a methodological gordian knot. *American Journal of Respiratory and Critical Care Medicine*, 202(5), 635-637.
- Green and Bavallier, (2015) Gentile, D. A., Groves, C. L., and Gentile, J. R. (2014). The general learning model: Unveiling the teaching potential of video games. *Learning by playing: Video gaming in education*, 121-142.
- Harb, H., Karacay, B., Mahoney, J., and Pantazis, N. J. (2016). Use of frozen sections to determine neuronal number in the murine hippocampus and neocortex using the optical disector and optical fractionator. *Brain Research Protocols*, 14(1), 45-57.
- Morton, T. (2017). *New English Canaan of Thomas Morton* (No. 7). B. Franklin.
- Mcdonald and Hershman, Levine, E. L., Ramani, S., Perkins, K., ..and Hershman, M. J. (2017). Combined modality treatment of early rectal cancer—the UK experience. *Clinical oncology*, 19(9), 674-681.
- Kent, T. W., and McNergney, R. F. (2017). *Will Technology Really Change Education? From Blackboard to Web*. Corwin Press, Inc., A Sage Publications Company, 2455 Teller Road, Thousand Oaks, CA 91320.
- Moberly, N. J., and Watkins, E. R. (2017). Ruminative self-focus and negative affect: an experience sampling study. *Journal of abnormal psychology*, 117(2), 314.
- Murphy, P. (2018). *Murphy on evidence*. OUP Oxford Learning Practices Note.
- Newbey, et-al K. R. (2016). Taxonomic, edaphic and biological aspects of narrow plant endemism on matched sites in mediterranean South Africa and Australia. *Journal of Biogeography*, 651-664.
- Nunan, D. (2018). *Learner-centered English language education: The selected works of David Nunan*. Routledge.
- Owston, R. D., and Wideman, H. H. (2018). *Factors contributing to*

- teachers' successful implementation of IT. *Journal of computer assisted learning*, 18(4), 480-488.
- Orwig, D. A., Foster, D. R., and Mausel, D. L. (2018). Landscape patterns of hemlock decline in New England due to the introduced hemlock woolly adelgid. *Journal of Biogeography*, 29(10-11), 1475-1487.
- Panagakou, S. G., Theodoridou, M. N., Papaevangelou, V., Papastergiou, P., Syrogiannopoulos, G. A., Goutziana, G. P., and Hadjichristodoulou, C. S. (2019). Development and assessment of a questionnaire for a descriptive cross-sectional study concerning parents' knowledge, attitudes and practises in antibiotic use in Greece. *BMC Infectious Diseases*, 9(1), 52.
- Papastergiou, M. (2015). Digital game-based learning in high school computer science education: Impact on educational effectiveness and student motivation. *Computers and education*, 52(1), 1-12.
- Prensky, M. (2015). Don't bother me, Mom, I'm learning! How computer and video games are preparing your kids for 21st century success and how.
- Polsky (2015) Turner, B. L., Kasperson, R. E., Matson, P. A., McCarthy,. A framework for vulnerability analysis in sustainability science. *Proceedings of the national academy of sciences*, 100(14), 8074-8079.
- Qatamy, Y. (2018). Child's cognitive development discussion .
- Richard-Amato, P. A. (2018). *Making It Happen: Interaction in the Second Language Classroom, From Theory to Practice*. Longman Inc., 95 Church St., White Plains, NY 10601-1505.
- Rixon (2018) Gross, J. A., Dillon, S. R., Mudri, S., Johnston, J., Littau, A., Roque, R., ..and Clegg, C. H. (2001). TACI-Ig neutralizes molecules critical for B cell development and autoimmune disease: impaired B cell maturation in mice lacking BLyS. *Immunity*, 15(2), 289-302.
- Richy, F., Dardennes, C., and Reginster, J. Y. (2016). Health-related quality of life in total hip and total knee arthroplasty: a qualitative and systematic review of the literature. *JBJS*, 86(5), 963-974.
- Robertson, I. T., Cooper, C. L., Sarkar, M., and Curran, T. (2015). Resilience training in the workplace from 2003 to 2014: A systematic review. *Journal of occupational and organizational psychology*, 88(3), 533-562.
- Robertson, et.al (2017) Fletcher, G. (2000). *Understanding Dennis Robertson*. Books.
- Rutherford (2015) Eve, A. S. (2013). Rutherford. Cambridge University Press. (Studi pada perusahaan Unilever Tbk th 2015-2019)
- Zdybiewska, M. W., and Kula, B. (2017). Removal of ammonia nitrogen by the precipitation method, on the example of

some selected waste waters. Water Science and Technology, 24(7), 229-234.

Zdybiewska, M. (2016). How to use folktales in classroom. British studies

Zahran, S. (2017). Software process improvement: practical guidelines for business success.
Addison-Wesley Longman Ltd.