

## أثر استخدام الألعاب الإلكترونية في تطوير المهارات البديهية في اللغة الإنجليزية لطالبات الصف الأول الأساسي

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**الملخص:** هدفت هذه الدراسة إلى قياس أثر استخدام الألعاب الإلكترونية في تطوير المهارات البديهية في اللغة الإنجليزية لطالبات الصف الأول الأساسي في عمان. تم اختيار مدرستين أهليتين تستخدمان الألعاب الإلكترونية في التدريس. وقد تكونت عينة الدراسة من (٤٠) طالبة من الصف الأول الأساسي، للمجموعات التجريبية والضابطة. تم إعداد اثنين من الأدوات: الأول هو اختبار لقياس المهارات البديهية في اللغة الإنجليزية، في حين كان الثاني عبارة عن برنامج إلكتروني لقياس أثر استخدام الألعاب الإلكترونية في تطوير المهارات البديهية في اللغة الإنجليزية لطالبات الصف الأول الأساسي. استخدم المنهج شبه التجريبي للإجابة على السؤال الرئيسي التالي: ما أثر استخدام الألعاب الإلكترونية في تطوير المهارات البديهية في اللغة الإنجليزية لطالبات الصف الأول الأساسي، مقارنة بالأسلوب المتبع عادة في مدارس عمان؟ وقد أظهرت النتائج وجود فروق ذات دلالة إحصائية في المهارات البديهية في اللغة الإنجليزية بين التلاميذ التجريبية والمجموعة الضابطة، لصالح برنامج الألعاب الإلكترونية.

**الكلمات الدلالية:** الألعاب الإلكترونية، المهارات البديهية، مهارات تعليم اللغة الانجليزية

## **The effect of using electronic games in developing the intuitive English language skills for basic first grade female pupils**

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**Abstract:** This study aimed at measuring the effect of using electronic games in developing the intuitive English language skills for basic first grade female students in Amman. Two private schools which use electronic games in teaching were selected. The sample consisted of (40) basic first grade female pupils, for experimental and control groups. Two instruments were prepared: the first was a test to measure the intuitive English language skills, while the second was an electronic software to measure the effect of using electronic games in the development of the intuitive English language skills for basic first grade female pupils. The quasi – experimental methodology was used to answer the following main question: What is the effect of using electronic games in developing the intuitive English skills for basic first grade female pupils, compared with the ordinary style in Amman?. The findings showed that there were significant differences in the intuitive English language skills between the experimental and control groups’ pupils, in favor of electronic games software.

**Keywords:** Electronic games, Intuitive skills, English language skills.

## Introduction

The world is described currently, as the world of knowledge, and the rapid change technologically that control and affect different aspects of the social, economic and cultural life. Teachers and parents encounter modern problems, regarding how to deal with children, and teaching them under this huge technological development. The technological games have a great role in the development of children's thought, and help them to learn more skills. Today's children grown, while they were dealing with this huge quantity of information, and run complex daily problems, through acquiring energy, unprecedented thinking tools and creative thinking solutions, that were provided by information technology.

From this great technological development, the concept of integrating technology in education came, which considered the trainee or the pupils as the basic axis of integrating technology in the educational process. The main objective of this process is transferring the trainee or the learner from a rigid receiver to an active researcher in the new learning process (Ibrahim, 2015).

The new technology provides children with strong opportunities to learn and understand the age concepts. Learning by playing is the closest style to child's psychic and life. The child learns through this style, most of his life behavior. Play leaves clear fingerprints on his personality features, and forms a stock of knowledge that relates to child's understanding and thinking (Al-Shahreri, 2007).

The child can develop his physical mental and verbal abilities through games, as well as develops his abilities of expression and communication. Games can be used by the child as a tool to communicate with other children, who were different in culture, nationality and language (Al-Howidy, 2005).

Through joining the child with different kinds of games, his life will be joined with them. The child learns and acquires through games, most of his life behavior patterns. Games form the stock of knowledge that associated with the child's understanding and thinking. Games with their old modern aim, are considered as an effective tool of the thinking learning tools (Al-Shahreri, 2011).

The role of the child's interaction with his preferred games is classified modern aids to absorb anger, and coding enjoying times suitable with the requirements of the age. The concern of children is transferred to the electronic games such as: play station and video games that started attracting children from both sexes, since the third year old (Al-Shahreri, 2007).

Learning a foreign language like English is considered as an important thing in human life. Learning a foreign language earns him new educational and administrative skills. Therefore, we find that many of Arab States included English language in their educational and instructional curricula as a second language.

Learning English is reflected on the person positively. The studies proved that learning another language by children in their early years of life, benefits them to enrich the mother tongue, and helps better in learning reading and writing. Studies indicated also that teaching another language to the child, leads to develop his IQ, and helps him to develop his study skills, and achieves better outputs in his academic achievement.

### **Statement of the problem**

The process of learning intuitive skills in English for learners in the basic stage is considered as a necessary action, for a new language that should be learned in addition to the mother tongue.

Among the important methods of children learning is using games, to attract the child to learn, through utilizing electronic games in the development of children's intuitive skills that contain voice and image, which create a thrill in them.

Some studies such as Al-Harbi (2010) and Al-Shahreri (2007 & 2011) recommended to conduct some studies about the importance of electronic games in developing the intuitive skills for children. This study came to inquire the effect of using electronic games in developing intuitive skills in learning English language.

The problem can be determined in inquiring the effect of using intuitive skills in developing the English language intuitive skills for basic stage pupils in Amman.

### Questions of the study

This study aimed at finding out the effect of using electronic games in developing intuitive English language skills for basic stage pupils in Amman, through answering the following main question:

#### **Is there an effect on using electronic games in developing intuitive English language skills for basic stage pupils in Amman?**

To answer this question, the following hypothesis was tested:

There were no significant differences at ( $\alpha \leq 0.05$ ) between the performance means of the basic stage pupils, who study English language attributed to the method of teaching (electronic games and ordinary method).

### Importance of the study

The importance of the study stems from the following:

- Basic stage teachers may benefit from this study, by emphasizing the practical side of the electronic games in teaching children.
- Emphasizing the importance of developing intuitive skills in English language for basic stage pupils.
- Emphasizing the necessity of parents and teachers with regard to depend electronic games in English language to develop the intuitive skills of children.
- Emphasizing the necessity of integrating the theoretical side with the applied side in the basic stage curricula.

### Definition of terms

#### **Electronic games:**

They were defined as a kind of games that are presented on television screen (Video games) that provide the individual with enjoyment through using the hand with eye challenge (Visual Kinetic synergy), or a challenge of mental potential through developing electronic games (Al-Shahreri, 2008).

The operational definition of electronic games is: An electronic software that emphasizes the mental activity in a method differs from the method that other

activities are practiced by using it, depending on laptops, computers, mobiles and moving video games. These games may be practiced collectively or individually through the internet.

**Intuitive skills:**

The basic skills that the child learns outside his family, which include the ability to make friends, playing with others, cooperation and participation, the development of motor skills, understanding the physical world, developing talents in different fields such as: music, arts, reading and writing, developing self-awareness, self-confidence, as well as visual perception skill, the ability of concentration and memorizing skill.

**Visual perception skill:**

The way through which the individual sees and interprets all the visual information around him. This skill develops during the basic stage of study. It is characterized by the ability of the child to observe the similarities and differences between the forms, letters, numbers or colors, and the ability of the child to remember images, photos or letters.

**Memorizing ability skill:**

Keeping more information more efficiently, by repeating and other ways, through linking them with a picture, phrase or word, to help the learner to memorize, remember and reinforce the strength of memory.

**Concentration skill:**

Exposing the brain to sufficient time to one effect or a number of effects, to have a clear impression, and close the person's mind towards the other effects.

**Basic stage:**

Al-Ramini (2006) defined this concept as the stage through which the child starts playing and moving, asking questions, then helping him to reach convincing answers by himself, within the limits of his perception, simple experience, initial concepts and his linguistic abilities.

Basic stage is defined operationally as the first stage of the general education that sets the building blocks for all skills needed to continue education and to face practical life. This stage includes grades 1-4.

### **Limitations of the study**

This study is restricted to basic first grade pupils in a private school that uses electronic games in Amman Governorate, for the academic year 2014/2015.

### **Theoretical literature**

The literature included the following:

#### **The manifestations of the growth:**

The born baby undergoes a succession of changes through his growth that are characterized by intrinsic, and consisted of the individual differences and the individual characteristic of each born child, who takes two essential manifestations as mentioned by Al-Ramini (2006): the structural growth and the performance growth that accompanies the dimensions of his functional growth.

#### **Learning and playing through electronic games:**

Modern educational trends emphasize the importance of employing technology in education. The process of using electronic games in education is considered as the successful method in teaching children some basic skills. Electronic games are designed in an educational method that attract children. At the same time, these games are entertaining as a part of the programs for children in the basic stage, to form some scientific concepts and reinforce them, and to acquire some skills of drawing, coloring, formation and classification in the preparation of reading, writing, mathematical and geometric concepts by using interesting styles, that children like, through electronic games.

Taylor, who was mentioned in Mardan (2004), emphasized that children who play and learn how to use software, their thinking skills grow regarding the steps of the program, reasoning and conclusion styles, even the learning process was through games. Computer programs help children to think, initiate and the courage of asking questions, such as: why, how and when in every situation.

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Educational games are used in most educational programs, like electronic dictionaries such as word and letters games. Electronic games are used to make sure of learning, and making it more attractive for training on higher levels of learning and thinking. These various electronic games, that are called simulation games make teaching more attractive that prompted young and adult learners to continue learning, regardless of time, place and the age of the learner (Al-Ribawi, 2009).

### **Computer and languages learning:**

Salama (2013) indicated that computer can be used in teaching adults and children. Computer develops in children artistic, linguistic, social and mathematical abilities. Although computer helps in learning languages, but there are some difficulties in teaching languages by using it, among them the following:

1. The absence of speech element.
2. Most programs need huge storage space to save learning material in reading and writing areas.
3. The difficulty of simulating natural situations for language usages.

### **Play:**

Faraj (2004) defined play as an activity directed and undirected by the child, for enjoyment and entertainment and exploited by adults to contribute to the development of their personalities, mental, emotional and physical dimensions.

Al-Ramini (2006) defined play as an educational and learning activity as well as, physical and mental activity.

### **The Concept of Electronic Games:**

Electronic games defined as an educational game, played by an electronic device. They often characterized by using visual and sound effects, and concentrate on scoring or completing tasks, then transfer to another stage to achieve certain educational goals (Mandoor, 2006).

Electronic games can be defined as an activity in which players engage in an artificial dispute governed by certain rules, in a way that results are quantifiable (Al-Shahreri, 2008).

### Using educational games by basic stages pupils:

Salama and Abu-Reia (2002) mentioned the principles of using educational games by basic stage pupils, among them the following:

- Educational and psychological principles on which educational games that used in the basic stage are based.
- Choosing educational games that are related to the educational objectives directly, that build child personality, develop his mental and cognitive abilities, and form his national attitudes.

### Conditions of electronic games:

Moreno (2008) considered the following conditions as necessary for electronic games:

1. Adjustment.
2. Stimuli and positive responses.
3. Feedback.

While the Arabic Academy for Electronic Education (2010) mentioned a number of elements and foundations that educational games are based upon, whether they are traditional or electronic, as the following:

1. **Goals:** They have a clear educational goal, consistent with the aim that the player wants to achieve.
2. **Rules:** Each game has its own rules that determine how to play.
3. **Competition:** Games depend on competition to achieve their goals.
4. **Challenge:** The game should include a level of appropriate challenge that provokes the individual's abilities within possible limits.
5. **Imagination:** The game raises the element of entertainment and fun, taking into consideration, the balance between pleasure and educational goal.

### Intuitive skills for basic stage children:

Intuitive skills that range from (4-6) years occupy a distinct importance, with regard to the development of the growth of motor stage, as well as, they achieve much control over the primary motor skills that are acquired in the previous stage. They also

include the appearance of some new movements that represent an increasing importance, because of the child's adaptation to his environment.

Therefore, childhood is viewed as the most important developmental factor, in which the child had learned his basic skills. The intuitive skills that discussed in this study are the following:

1. **Concentration skill:** This skill starts with the pupil's basic stage, when he feels with a certain problem, or the existence of an issue, or a lack of some meanings. Concentration skill comes to the pupil automatically, and helps him to collect particles of information and neglect other information (Marzano, 1996).
2. **The skill of memorizing ability:** The child is born with the ability of memorizing. The memory of the child is described as automatic. The child does not depend in his memorization on his understanding of the meaning, but in literal sense of words. This means that the child's ability of memorizing doesn't depend on delivery of meaning, but depends on repetition (Hendi & Toon, 2006).
3. **Visual perception skill;** Visual perception means the discrimination between shapes, and perceive the similarities and differences between them in terms of color, size, style, clarity, depth and intensity. This ability is necessary for the child to learn reading, writing, drawing and arithmetic. This ability is associated with the speed of perception, and the ability to perceive the accurate details. Visual perception is considered as one of the intuitive skills for the ordinary child, who is able to see things and distinguish among them with the naked eye (Atef, 2002).

### **The importance of teaching English:**

The basic sage includes the children who are in the stage of acquiring English, as a second language, especially, it became as an important part for society. Bilingual education aims at developing the learner's knowledge through reading and writing skills and thinking skills in mother tongue while studying bilateral or foreign language as a separate subject (Benson, 2004).

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Bilingual program affects the intellectual and linguistic progress positively. Children with two languages seem more sensitive to linguistic meanings, and may be more flexible in their thinking, than monolingual children. Therefore, it isn't surprising that children with two languages must be more skilled in certain aspects of language therapy and control linguistic systems. The child is also more proficient in the analysis of meanings comparing with the child of one language (Cummis, 1998).

### **Relevant previous studies**

The study conducted by Dunn (2002) aimed at comparing between teaching by ordinary method and teaching with the help of computer, from the effectiveness of each method, in developing reading skill for secondary first grade students who suffer from weakness in this skill. The sample consisted of two groups: experimental group consisted of (78) male and female students who studied by computer, and the control group consisted of (63) male and female students who studied by the ordinary method. The findings indicated the superiority of the experimental group.

Al-Shahreri (2007) conducted a study aimed at investigating the effect of practicing electronic games on the cognitive processes and emotional intelligence of middle childhood stage children, in Jordan. The sample consisted of (75) elementary fifth grade pupils from both sexes. Two electronic games batteries were prepared. The findings showed that there were significant differences on the cognitive processes scale, in favor of the non-directed group as well as, there were significant differences on decision making dimension, according to the interaction between the group and sex variable in favor of the males of non-directed group.

The study conducted by Al-Neyadi (2008) aimed at designing an educational software in Arabic language, and investigate its effect on basic fourth grade pupils' achievement in Arabic language grammar in Al Ean District. The educational software and a test were used as tools for the study. Among the findings of the study is the following: there were significant differences on the performance of the study subjects on the post test, according to the group (experimental and control), in favor of the experimental group.

Al-Harbi (2010) conducted a study aimed at discovering the effectiveness of educational electronic games on academic achievement and retention of the effect of learning, in multiplications lessons for second grade pupils in al-Madena. The sample consisted of (36) pupils who were selected randomly. Suitable educational electronic games, and achievement test were used as the tools of the study. The findings showed that there were significant differences between the means of the experimental and control groups on academic achievement test, in favor of the experimental group, as well as, there were significant differences between the means of the two groups, with regard to the retention of the learning effect, in favor of the experimental group.

Marino (2013) conducted a study on the perception of teachers and students about using video games to improve the classes of science. The study aimed at testing students' abilities in science, by using video or electronic games, more than using the ordinary textbooks. The findings indicated that students prefer electronic games environment more than the internet, laboratories or textbooks.

### **Methodology**

A quasi – experimental methodology was used. Two groups were selected: the experimental group which was taught by using electronic games, while the control group was taught by using the ordinary method.

### **The sample**

The sample of the study consisted of (40) female pupils for both experimental and control groups. Each group consisted of (20) female pupils.

### **The tools:**

To achieve the objectives of the study, two tools were used: a test to measure the intuitive English language skills, and electronic software to measure the effect of using electronic games in developing English language skills. Validity and reliability of the test were assured.

**The study design:**

The study variables represented by the following:

1. The independent variable: Teaching strategy that has two levels:
  - a. Electronic games.
  - b. The ordinary method.
2. The dependent variable:
  - a. Visual perception skill.
  - b. The skill of memorizing ability.
  - c. Concentrating skill.

The control group design with pre-test and posttest design was used. It can be summarized by the following symbols:

$O_1 \times O_2$

$O_1 O_2$

**Findings:**

The findings related to the main question that states: **Is there an effect on using electronic games in developing the intuitive English language skills for basic stage pupils in Amman?**

To answer this question, means and standard deviations for the experimental and control groups' performance were calculated on the pre and post intuitive English language skills test. Table (1) clarifies that.

Table (1) Means and standard deviations of the two groups' performance on pre and post intuitive English language skills

Skill	Group	No. of pupils	Pre test		Post test	
			Mean	S.D.	Mean	S.D.
Concentration skill	Experimental	20	11.30	2.20	25.10	4.61
	Control	20	11.35	2.03	18.00	5.19
	Total	40	11.32	2.09	21.55	6.03

Skill	Group	No. of pupils	Pre test		Post test	
			Mean	S.D.	Mean	S.D.
<b>Memorizing ability skill</b>	Experimental	20	9.00	1.56	16.15	1.90
	Control	20	8.70	1.56	12.05	2.86
	Total	40	8.85	1.55	14.10	3.17
<b>Visual perception skill</b>	Experimental	20	7.50	0.76	9.35	0.81
	Control	20	7.35	0.75	7.80	1.20
	Total	40	7.43	0.75	8.58	1.28
<b>Total</b>	Experimental	20	27.80	2.61	51.90	10.00
	Control	20	27.40	2.50	37.85	7.11
	Total	40	27.60	2.53	44.88	11.13

Table (1) shows that the mean of the experimental group on the post intuitive English language test, that learned by the electronic games was the highest. The mean of the total score was (51.90), while the mean of the control group that studied by the ordinary method was (37.85). The means of the experimental group on all skills were higher than the means of the control group.

To determine whether the differences between the means were significant at ( $\alpha \leq 0.05$ ), MANCOVA was applied. Table (2) shows the findings.

Table (2) MANCOVA findings for the differences between the means of the two groups' achievement on the post intuitive English language skills test

Source of Variation	Skill	Sum of squares	df	Mean square	F-value	Level of sign.	Eta square	Lambda value
Post application of intuitive English language skills test	Concentration skill	6.323	1	6.323	0.257	0.615		* 8.995
	Memorizing ability skill	12.109	1	12.109	2.119	0.154		
	Visual perception skill	1.032	1	1.032	0.986	0.327		
	Total	66.271	1	66.271	0.878	0.355		
Teaching style	Concentration skill	509.921	1	509.921	* 20.745	0.000	* 0.359	
	Memorizing ability skill	174.301	1	174.301	* 30.508	0.000	* 0.452	
	Visual perception skill	23.083	1	23.083	* 22.059	0.000	* 0.374	
	Total	2019.527	1	2019.527	* 26.743	0.000	* 0.420	
Error	Concentration skill	909	37	24.58				
	Memorizing ability skill	211.391	37	5.713				
	Visual perception skill	38.718	37	1.046				
	Total	2794.079	37	35.516				
Total	Concentration skill	1419.9	39					
	Memorizing ability skill	391.6	39					
	Visual perception skill	63.775	39					
	Total	4834.375	39					

(\*) Significant at ( $\alpha \leq 0.05$ )



Table (2) shows that lambda value was (8.995) which means that there were significant differences between the two groups on intuitive English language skills test. The table also indicates that the “F” value of the teaching style was (26.743) at (0.000) for the total score of the test. The “F” value of memorizing ability skill was (30.508) at (0.000), while the “F” value of the visual perception skill was (22.059) at (0.000). All these values were significant at ( $\alpha \leq 0.05$ ), which mean that there were significant differences between the means of the two groups’ performance on the total score of the post intuitive English language skills test and all its skills. According to this result, the null hypothesis that states “There were no significant differences at ( $\alpha \leq 0.05$ ) between the performance means of basic stage pupils who study English language attributed to (Electronic games and ordinary method) was rejected”. Then, the adjusted means were calculated, to find the return of difference. Table (3) clarifies that.

Table (3) Adjusted means and standard errors for the two groups’ performance on post intuitive English language skills test

Skill	Group	Adjusted mean	Standard error
<b>Concentration</b>	Experimental	25.13	1.11
	Control	17.97	1.11
<b>Memorizing ability</b>	Experimental	16.19	0.54
	Control	12.01	0.54
<b>Visual perception</b>	Experimental	9.34	0.23
	Control	7.81	0.23
<b>Total</b>	Experimental	52.00	1.95
	Control	37.75	1.95

Table (3) indicates that the adjusted mean of the experimental group that learned by using electronic games was the highest. It was (52.00). While the adjusted mean that learned by employing ordinary method was (37.75). The means of the experimental group for all skills were higher than the means of the control group.

These findings indicate that the difference was in favor of the experimental group, which means that electronic games are effective in developing the intuitive English language skills. The effect size (Eta square) for the total score of the test, as mentioned in table (2) was (0.420), and (0.359) for the concentration skill, (0.452) for memorizing ability skill, and (0.374) for visual perception skill.

### **Findings discussion**

The discussion of the findings related to the null hypothesis of the study, after testing the hypothesis by using MANCOVA, which showed the following result:

- There were significant differences between the means of the two groups' performance on the total score of the post intuitive English language skills test, and all its skills. According to this result, the null hypothesis was rejected. This may be attributed to the following reasons.
- The attraction of the children in the basic stage to electronic games, that include forms and colors.
- Electronic games have the potential to motivate learners toward learning, through the electronic games are provided by means of audio – visual and kinetic, which help to involve more than one sense in perception, and the role of reinforcement after answering a part of the game.
- Allow all pupils to participate, taking into account, and the individual differences among them.
- Helped in saving time and effort for both teacher and learner. The teacher is going to give instructions for electronic game, and the learner engaged in learning.

The findings of the present study are consistent with the results of Dunn (2002), Al-Neyadi (2008) and Al-Harbi (2010) studies, which emphasized on the positive effect of modern technology in the learning process from different age categories.

### **Recommendations**

Among the recommendations of the study were the following:

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- Teachers should know the intuitive skills for pupils at the basic stage, and how to apply them within the classroom.
- Organizing training courses for teachers to train them on using electronic games in teaching.

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