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Effective Audio and Video-Based Learning for Youngest Age



Abstract: - The research project is an interactive educational book and it is a game, but in reality it is a measure of intelligence through which intelligence breakthroughs are achieved through the accuracy of answering questions with the speed of answering. The focus was on children under the age of six, but it included a number of those who are older. Discussing through research on the types of education, focusing on interactive and electronic education, explaining the difference between the two, explaining the types of human intelligence, how to build a school system through the use of a calculator, and what are the requirements and types for that, leading to the importance of the impact of the diversity of educational media, the importance of learning through play, and the benefits and harms of each case. Reaching results indicating that students prefer studying in class to studying electronically, it was noted that there are mental mutations for every age, but the age that responded most and most quickly was the age of youth and advanced youth. The reasons for this result were explained through the research and what we reached, and some methods were presented to increase mental efficiency.

Keywords: E-Learning, Effective Book, youngest age, Learning Management System, IQ Exam, IQ Test, Emotional intelligence, Learning Management System, learning with playing.

1. Introduction

1.1 some concept of Learning

Some concepts in education

A group of important concepts in education will also be discussed, as well as the most important types of education. In the past, education was limited to books, but at the present time, technology has become an important part in developing science and learning methods.

Education has become closely linked to the calculator, especially after the use of interactive educational means to convey the lesson idea more quickly[1]. There is a big difference between an interactive electronic book and a paper book. It should also be noted that not every electronic book is an interactive book. An interactive book is what engages all the human senses, including hearing and sight. Touch and movement in the learning stages differ from others because the learner participates in the lesson experience in a practical way, which helps to consolidate the idea of the lesson. In addition to that, it strengthens relationships between students by sharing information with each other, and this is known as playing the role of the teacher.

Here, it can be said that the quality of education is more important in this regard than the intensity of learning. One interactive lesson is enough to convey the idea of the lesson more clearly than ten lessons. The lesson can also be made more dynamic by learning a foreign language, as it is faster than taking long lessons, as the new words are implanted in the mind. The learner learns most while playing, and this is known as learning while playing. The matter is not limited to learning a language only, as the learner can learn geographical locations, scientific facts, or even scheduling work.[2]:[5]

Each age group has requirements. Younger ages prefer drawings, shapes and colours, so this was taken into consideration through the research questions, where the writing is in a small size compared to the pictures, which were larger in size so that the learner can focus on them more than writing. As for the older group or the ages that can read, they preferred reading and watching. Images were also accepted for video more than sound, images more than sound, and with the presence of mutational differences between people, which indicates that the development of a certain part occurs during the stages of life and does not depend on a group or age group.[4][6]

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1.2 Interactive e-learning and its educational systems:

E-learning appeared a long time ago for older school ages, but in recent years education has become more in need of developing teaching methods, especially during the quarantine period and the period of the spread of the Corona epidemic [7]. The need to provide a place or educational environment without moving around has increased. The students faced a number of problems, the first of which was how to communicate with the teacher or with each other, but with the passage of time, the teacher and students found ways to make e-learning more flexible and interactive, which resulted in interactive e-learning, through which the teacher used technology to deliver information to students in a faster and simpler way for them. This ensures for students an education that is rooted in the mind [8][9]. Thus, the rejection of most requests for e-learning turned into acceptance in a significant way, and an improvement in the level of students was observed for those who made good use of the teacher and also took information through electronic websites, which expanded their horizon of knowledge even more.[10]

From this it becomes clear that one of the basics of e-learning is that connecting devices must be available for each party, whether a teacher or a student. The powers of each party differ according to their level. The teacher has information about all the students, and the student has access to the content proposed by the teacher, and a network or cloud connects the two. In addition to the importance of having a database. It contains private information, and the teacher maintains its confidentiality. There may also be a part that supervises the teacher. The school principal can view the students' information and can also observe the teacher's work progress with the students.[11][12] that is named leading management system (LMS) [13].

Among the components of the learning system are three main components: the first contains basic information for the learner, the second part contains test information, which is fixed information, and through the first and second parts, inferential information is formed, which saves effort on the teacher. It serves as a basis for suggesting sites for students, and it is possible to add a cloud for communication between the teacher and students, and the students between them. Some add a database to save data.[14][15] for that you can see figures 1.1,1.2

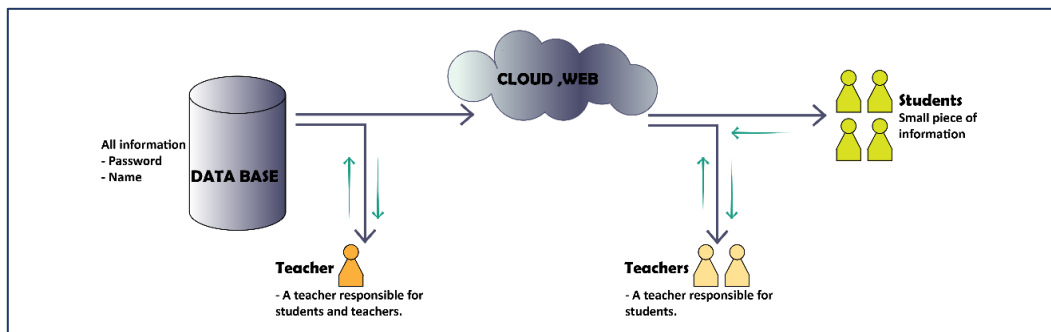


Figure 1.1: Secure fog-based E-learning scheme.

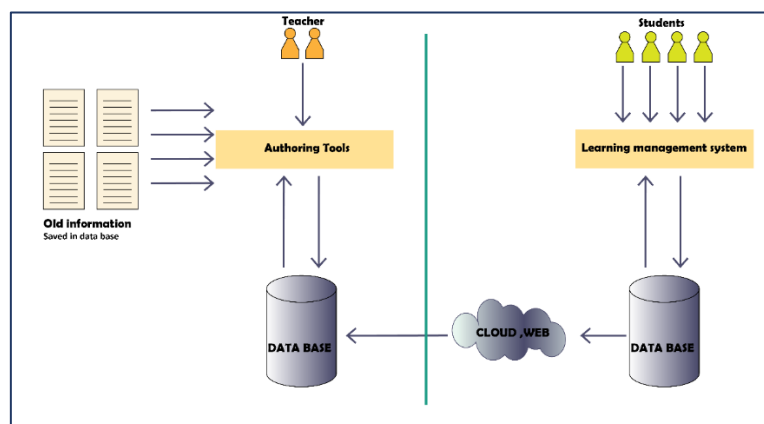


Figure 1.2: Secure fog-based E-learning scheme.

2.Related work:

After starting with the idea of the work, works similar to the work were taken as sources for the work, including Internet sites, other scientific research for the graduation of former students, and international and local books and magazines. The most important works similar to our work were some of them that dealt with explaining the structure of e-learning, and some of them that dealt with the importance of emotional intelligence during learning or the importance of Electronic games or playing the role of a teacher. As for the research we conducted, it links all of this research with important additions that make education more flexible and provide a more interactive learning environment, which makes the learner more receptive to learning.

2.1 Human intelligence and types of intelligence:

A part of human intelligence is transmitted from the father and mother to the child through genes, but the bulk of human intelligence is acquired in life through learning and during the stages of life. It is possible to know during the stages of the first years the genetic mutations and human tendencies to develop during life, and this was clear through Our experience in researching a number of children has shown that some of them are very attentive, have social intelligence, or prefer movement, which confirms the importance of developing abilities during life. Human intelligence is at its highest levels during youth and the age before forty, when it is quicker to answer and has the ability to read and observe well[16].

There is different between intelligence tests , intelligence quotient exam (IQ exam),and emotional intelligence (EQ)[17].the IQ exam is more complex than the IQ test itis contains more 30 questions, in another hand the EQ test It includes several aspects, including self-esteem, self-control, knowing how to deal with others, and empathizing with them when necessary, while maintaining self-motivation when needed, whether from the person himself or from others. The importance of this intelligence appears in the way of dealing with people, and its problems begin with the bullying that may occur. During schools and its impact on a person throughout his life[18].

3.Methodology:

3.1 Examples of education linked to intelligence:

It is one of the methods of education that have a clear impact on students. It provides prior knowledge and increases stored information, which increases the level of intelligence by recalling information when it is needed. Here, individual differences appear through the speed of recalling information and its application in areas of life. The most important of these methods that ensure an increase in prior knowledge are the method of learning is through play, whether playing electronic games, playing the role of the teacher, learning through movement, or performing activities during learning.

3.2 Electronic games:

whether educational or entertainment, have a role in acquiring information faster. It develops a number of skills, including the skill of communication between players, which helps in learning a foreign language, solving problems in faster ways, and learning about geographical locations. This makes the lesson easier, as it provides useful prior knowledge. Among them during the stages of life, but it must be noted that the type of electronic games has a negative part, as it may convey some unwanted negative concepts. Therefore, the role of parents in guiding their children to know what is right from what is wrong appears here.[19]

3.3 Role-playing:

or playing the role of the teacher creates an entertaining learning environment for the students, where the students experience playing the role of the teacher, which helps to strengthen their personality and consolidate the information in the mind. Some students may prefer to understand the subject from their colleagues more than from the teacher because the student is closer to their way of thinking.[20] [21]

3.4 Learning in an interactive way:

It is when students move or speak actively during learning, where the teacher directs the students to do activities to deliver information in an easier way. Interactive learning may be electronic, which is the availability of

movement or video while presenting information to students, or non-electronic. But in general, students prefer learning, Interactive.[22]

For example, when watching an educational video through screens and under the guidance of the teacher, students perform some of the movements required to consolidate the idea of the lesson and increase cooperation between them, and this is what achieves all the previous points and results in prior knowledge.

4.experiments:

To ensure the validity of the project and the soundness of the idea, the project was tested on a number of private kindergartens and primary schools that provide their students with interactive electronic education through screens. These schools were the most appropriate to try the idea on them. A group of opinion polls was collected for these students and teachers, which expanded the circle of the group to for older ages, the results were somewhat satisfactory and confirmed what was proposed in the research. The test was repeated on more than one group to confirm the first results, and the second results were close to the first to prove the validity of the work.

5. research results:

The research included different types of media, including still colour images, moving images, video, and audio. Students’ interest was different, some of them preferred the video and some preferred the image. The results were in good proportions, taking into account age, and leaps were noted in the results through the speed and correctness of answering the questions. Attracting students to questions by asking them: Would you prefer to play a game? The answer of most students is yes. We begin asking questions, and after a number of questions, we notice a significant interest from students.

5.1 The first group testing:

The research's central concept is an engaging educational program for students, and kindergarten-aged youngsters under the age of six have received the majority of attention. In addition to the challenge of pleasing children due of how blunt they are, we think this age is the most crucial for education. Either people engage with the project and accept it, or they just discard it. As a result, it was decided to design a child-friendly interface that is easy to use, straightforward, and colorful with big graphics and little words. The official GUI interfaces were created using the Python programming language, providing a variety of benefits for creating buttons and pictures [23].

Samples were taken from the ages of 3-7, and their results were closer to the older age groups who are over the age of 40. As for the higher age groups, the results were between the ages of young and late youth, according to the following table 4.1:

Sequence	Name of the age group	Age	Pictures results	Motion output	Audio results	Feelings results	Video results	Rate of results
1	Junior	3-7	6out of11	3 out of4	2out of 4	2out of 4	2out of 2	20-15
2	boy	7-12	9out of 11	3out of 4	3out of 4	4out of 4	2out of 2	22-21
3	youth	22-30	10out of 11	3out of 4	3out of 4	4out of 4	2out of 2	24-22
4	Late Youth	30-40	11out of 11	2out of 4	4out of 4	4out of 4	2out of 2	23-21
5	old people	Older than	6out of 11	3out of 4	2out of 4	3out of 4	1out of 2	20-15

Table 5.1: showing the results of first group testing.

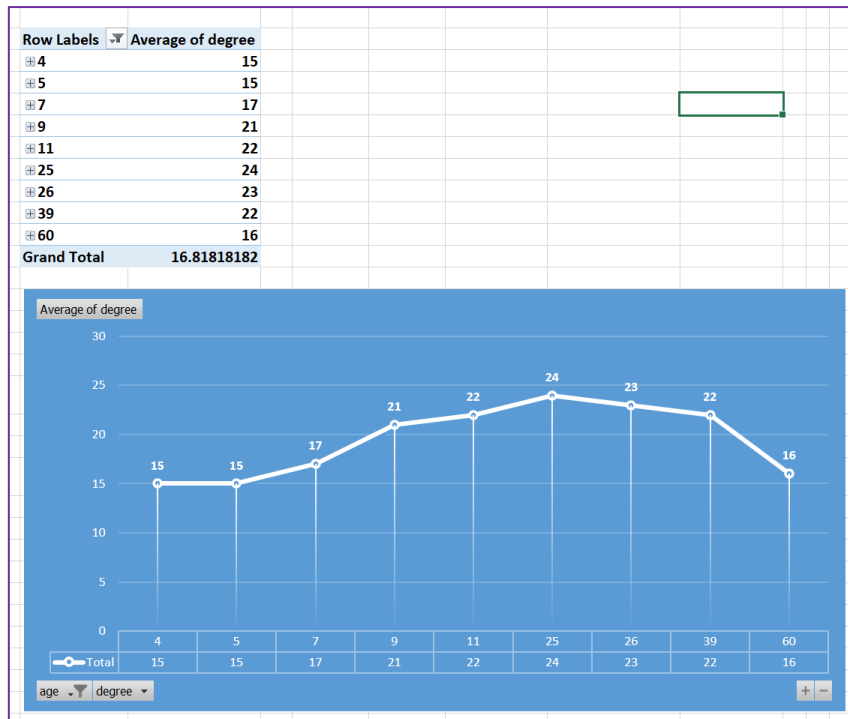


Chart 5.1: showing the results of group testing.

From table 5.1 and chart 5.1 we can say that the human mind, like the rest of the muscles of the body, needs training and practice. The results for those of young ages were similar or closer to the results of those of the elderly, and the mind muscle, like the rest of the muscles of the body, is at its peak in youth and late youth. Let us not forget the genetic factor and the surrounding environment, each of which has an impact on the level of concentration and the speed of a person’s intuition, along with a commitment to eating the right way that nourishes the mind. The human mind cannot stop thinking.

One of the most important results obtained was the identification of a number of students with quick intelligence, which helps the teacher follow up on these students in a more correct way to invest in their intelligence. This is the goal of the project, to find differences between students, to work on developing them and reducing their weaknesses.

5.2 The second group of testing:

To increase the accuracy of the work, a second group of different ages was tested, starting with pre-school age, and the results were close to the results of the first group, as the human mind is at its peak in youth and late youth, with mutations occurring within the ages of young and old alike. You can see table 6.2 and the chart 6.2 the show the results of the second group.

sequence	Name of the age group	age	Rate of results
1	Junior	4-7	13-20
2	Boy	7-12	15-23
3	Late young	30-40	20-23
4	Old people	40-50	20-21

Table 5.2: showing the results of second group testing.

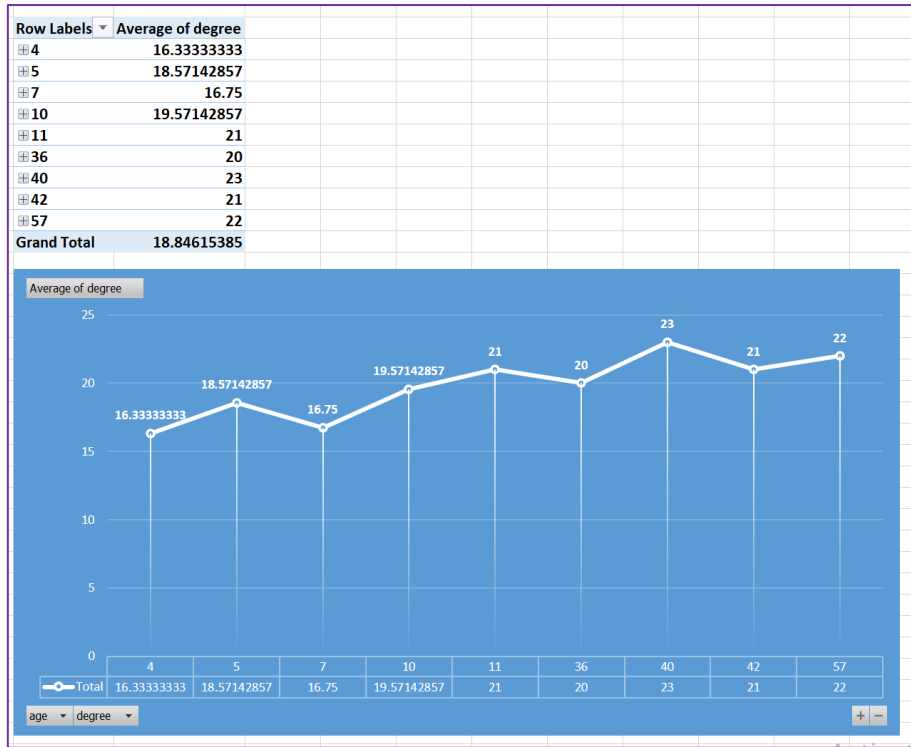


Chart 5.2: showing the results of second group testing.

At the end we must comparing our work with other related work that we using three tables in numbers 4.3,4.4,4.5.

Table 5.3: Showing the comparing between ours work with related work in features of: focus on education, E-learning, SML, find new way, effective learning.

Reference	year	List of related work	Focus on education	Focus on E-Learning	System management learning	Find new ways to learn	Effective learning	Summary
[24] V. Vagale	2018	First related work						Focus on electronic education and personal information, and the architecture of system main parts.
[25] P. Chatwattana	2018	Second related work						Display the challenges of interactive and self-learning by active or non-active learn
[26] B. León-Del-Barco	2020	Third related work						Emotional intelligence is growing requirement
[27] C. Y. Lee and M.-J. Chen	2014	Froth related work						It is about the prior knowledge by using gaming, libraries or whatever
[28] J. C. Yang and B. Quadir	2018	Fifth related work						Focus on the goodness of using gaming
[29] A. N. Yousef	2022	Sixth related work						Input information and get results help the sense student of hearing
My working	2023	My working						Focus on effective learning with moving by using different type like prior knowledge and gaming

	Provides search feature
	Feature is not available

Table 5.4: Showing the comparing between ours work with related work in features of: focus on emotional, intelligence, knowledge, game, computer.

Reference	year	List of related work	Focus on Emotional intelligence	Focus on intelligence of students	Prior knowledge	Using games	Using computer	Summary
[24] V. Vagale	2018	First related work						Focus on learning without the interactive
[25] P. Chatwattana	2018	Second related work						Focus on learning by connecting the students with each other and with his teacher
[26] B. León-Del-Barco	2020	Third related work						Emotional intelligence related to bullying in schools
[27] C. Y. Lee and M.-J. Chen	2014	Froth related work						Special in class of mathematics
[28] J. C. Yang and B. Quadir	2018	Fifth related work						Develop knowledge of student
[29] A. N. Yousef	2022	Sixth related work						By remember the previous working help student
7	2023	My working						Focus on all types of intelligence of student by using intelligence questions

	Provides search feature
	Feature is not available

Table 5.5: Showing the comparing between ours work with related work in features of: focus on special cases, intelligence mutation, generate questions, result, easy learning.

Reference	year	List of related work	Focus on special cases of students	Focus on Intelligence mutations	Generate questions	Get result	Learn with easier way	Summary
[24] V. Vagale	2018	First related work						Standard system management for learning
[25] P. Chatwattana	2018	Second related work						System management with connection feedback
[26] B. León-Del-Barco	2020	Third related work						By understanding the student, himself and what they need
[27] C. Y. Lee and M.-J. Chen	2014	Froth related work						Prior knowledge given the students more liberation from anxiety and fear
[28] J. C. Yang and B. Quadir	2018	Fifth related work						Helping students how are shying
[29] A. N. Yousef	2022	Sixth related work						Helping the students to communication
7	2023	My working						Help the special case of students by using different types of questions

	Provides search feature
	Feature is not available

6.CONCLUSION

For future work we can also taking more additional samples to increase the accuracy of the results and working to develop the idea of the system in terms of increasing the quantity, quality and number of questions, developing the database and improving the computer interfaces.

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