

Visual Intelligence and Its Psychological Relationship to the Skill of Reading Aloud among Middle School Students

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Research summary: -

The current research aims to reveal the correlation between visual intelligence and the skill of reading aloud for middle school students , and sample of the study consisted of middle school students in the fourth scientific grade in Babil Governorate , and the basic sample reached (374) students , while the exploratory sample was (40) students , and the research tools consisted of a test for visual intelligence and a note card for the skill of reading aloud , and It was found that there is a positive correlation between visual intelligence and the skill of reading aloud for middle school students.

Keywords: visual intelligence, skill, Oral reading, middle school students, Visual-spatial, Spatial intelligence.

Chapter One : Introduction to the research

First : the research problem :-

What we are facing today in terms of regression in the process of reading , and the weakness in understanding the reader may be due to the nature of reading itself , as it is a very difficult and complex process. Mastering reading aloud requires a sound audio system , and we have mastered the phonetic , grammatical , morphological , and semantic systems of the Arabic language. And this does not happen overnight , and perhaps this demand is the reason behind many evading it , because it will be a difficult choice for them on many occasions , and therefore they resort when necessary to soften the last words , so that their reading appears confused , truncated and difficult to understand , And a source of boredom (Ammar , 118 : 2002) , in addition to that , the student in reading aloud does not focus on the meanings , but rather pays attention to correct pronunciation , and it takes a long time , so the teacher cannot read all the students in one lesson , and this leads to distraction. This causes the teacher to re-read the lesson from the students many times , which causes boredom due to the lack of suspense. (Atiyah , 2006 : 250)

And reading is not a simple process , but rather a complex process in which different powers , senses and skills enter , and the experience and intelligence of the individual is of great importance in the reading process , which necessitates seeing the printed or written words , and here the importance of sight and the role it plays with the device appear. The nervous system in the reading process (Ashour and Muhammad , 2007 : 64) , The physiological aspect of reading requires the reader to have the safety of the visual perception outlets , from the safety of the eye from diseases , visual discrimination , and the health of the articulatory system. (Jaballah et al , 2011 : 28)

Second : the importance of research :-

Language is a tool for understanding and exchanging experiences and interests between individuals and groups. Without it , it is difficult for understanding between peoples and the transfer of civilizations from one society to another. It is the measure of the progress and development of nations (Ali , 17 : 2010) , It is the most powerful communication tool , and the most important means of acquiring knowledge and information. Cultures , and their role In the life of society , it is a tool of understanding , and it is the weapon of the individual in facing

many situations , and this function is one of the most important social functions of the language. (Al-Hashemi and Ali , 2007 : 101)

The Arabic language is a strong , great language , upright for a great , noble nation. It has preserved its strength , its system , and its speech by its dear Qur'an and its brilliant literary heritage , throughout the ages that passed between the time of ignorance and this era , and it is still strong in entity , lofty in place , continuing to flourish , and sustaining altruism (Jawad , 2001 : 7) , since it is the most powerful of languages , the clearest statement , the most eloquent of its language , the longest gallery , and the sweetest of tastes , and then God Almighty chose it for the most honorable of His messengers and the seal of His prophets and the best of His creation and His elite from His creation , and He made it the language of the people of His heavens and the inhabitants of Paradise and sent down his clear book. (Al-Qalqashandi , 1963 : 148)

And since language is a system of signs and symbols to express human intellectual states, through which images and ideas can be analyzed into their characteristics or parts , and the image or idea can be reconstituted in our minds and the minds of those around us , and this is what is known as the intelligence of “image”. Intelligence is represented by the ability to accurately perceive the spatial world and to perform or make transformations on those perceptions , the ability to visualize and graphically represent visual or spatial ideas , and the ability to orient oneself appropriately in a spatial-visual template (Armstrong , 2006 : 2) , As students who possess visual intelligence obtain higher degrees in engineering and art , and draw maps of all kinds , tables and data , and respond better to information and lessons that are explained visually , and then understand new information. (Al-Husamiyeh , 2017 : 44)

And the relationship of visual intelligence with reading takes place through the symbolic treatment of words , sentences and symbols. Reading is a cognitive process based on decomposing symbols called letters to form meaning , and reach the stage of understanding and realization. Reading is a mental , emotional , and motivational process that includes the interpretation of symbols and graphics that the reader receives through his eyes , understanding the meanings , and linking previous experience with these meanings. (Youssef , 1990 : 23)

Reading is the key to knowledge and the window for the individual to see human thought , knowledge and different sciences in the past and present times by turning around looking and researching the sciences of the past , and what scientists , writers , artists and leaders have reached , and it is the way of knowledge because it opens the windows of the mind to knowledge. Science and its secrets are the window of the human mind with its knowledge (Taqi , 2007 : 60) , and through it communication takes place between individuals , even if the distances between them are far apart. Without reading, communication with developments would be non-existent , and human relations would not be defined without it, and if there was a desire to learn. It is necessary to read , as it is the key that one enters from its doors to all fields of science. (Al-Samuk and Huda , 2005 : 172)

One of the types of reading is reading aloud , and its importance lies in the fact that it plays a fundamental role in the learner's cultural development , as it helps him express clearly , increase his linguistic wealth and improve his literary taste , and it has a great place in the learner's future and present , especially in situations that require confrontation Al-Jumhur (Harashah , 297 : 2013) , and it facilitates for the teacher to detect errors that students make in pronunciation , and thus gives him the opportunity to treat them. Students enjoy it , especially if the material read is poetry , prose , a story , or a deep dialogue. (Madkour , 1991 : 143)

The researcher chose the preparatory stage to conduct her current research because of its importance in preparing students to continue studying at higher levels. The role of the preparatory stage is distinguished in shaping the students' personalities , as students' inclinations , attitudes , values , and abilities crystallize in it , so that their complex personalities take the characteristic of relative stability. It is considered the social educational institution in which students discover themselves and achieve themselves. school, or when they enter the labor market or join university studies (Ismail and Abd al-Hamid , 1974 : 2) , and students at this stage show good preparations at the level of their different perceptions and abilities , and they are provided with great mental strength in their growth and integration. (Al-Zubaie and others , 1981 : 134)

The importance of the research can be summarized in the following points :-

- 1- The importance of language , as it is the most informative form of communication , as through it a person can communicate with other members of society.
- 2- The importance of the Arabic language , as the language of the Holy Qur'an and the language of the Arabs.
- 3- The importance of visual intelligence , being one of the many types of intelligences responsible for processing visual images , storing them , remembering them , retrieving them , imagining and visual perception.
- 4- The importance of reading , because it is the main key to learning and a window for the individual to learn about the different sciences , and a means of acquiring knowledge and experience.
- 5- The importance of reading aloud , by establishing a common basis for discussion and exchange of views.
- 6- The importance of the preparatory stage, being a stage of preparation for the university , as it is the stage of psychological and cognitive building for students female students , and in it they move into the field of practical life.
- 7- To benefit those in charge of the educational process from the results of this research by giving them a complete picture of the relationship of visual intelligence with the skill of reading aloud.

Third : Research Objectives :-

- 1- Visual intelligence of middle school students.
- 2- The skill of reading aloud for middle school students.
- 3- The correlation between visual intelligence and oral reading among middle school students.
- 4- The extent of the contribution of visual intelligence to the skill of reading aloud for middle school students.

Fourth : Research Limits :-

The current research is determined by a sample of middle school students, the fourth scientific grade in Babylon Governorate , for the year academic year 2022-2023.

Fifth : Define terms :-

- 1- The visual intelligence

Language : sight is the eye , but it is masculine , and it was said : sight is the sense of seeing. Ibn Sayyidah said : Sight is the sense of the eye , and plural is sight. And I saw the thing : I saw it. (Ibn Manzoor , Vol. 1 , 1991 : 212)

Conventionally : it is the ability to accurately perceive the spatial visual world and to make transformations based on perceptions , and this includes and requires sensitivity to color , line , shape , nature , field or space , and the relationships that exist between these elements , and includes the ability to visualize and represent The individual graphically depicts visual or spatial ideas , and orients himself appropriately in a spatial matrix. (Gardner , 1999 : 87)

Procedurally : It is the ability of the students of the research sample to answer the paragraphs of the visual intelligence test prepared for the purposes of the current research , and it is measured by the grades obtained by the students in the test.

2- Skill

Language : The one who is skilled in something. And the skilled one : The one who is skilled in every action , and what is most described by the glorious swimmer. Dowry , skill, and skill. (Ibn Manzoor , vol. 6 , 1997 : 104)

Idiomatically : it is an acquired ability that enables the individual to accomplish the work efficiently and proficiently. (Zeitoun , 1994 : 33)

Procedural : It is the linguistic performance provided by the students of the research sample with high speed and accuracy in the skill of reading aloud according to the skills prepared in the test.

3- Oral reading

Language : Al-Jahra : What appeared behind him. It is said : I made something loud when I revealed it. And out loud : openness. It is said : He spoke out loud if he raised his voice. (Ibn Manzur, Vol. 1 , 1997 : 477)

Conventionally : it is the reading in which the vocal apparatus is used , as we hear it and we hear it to others. It is the translation of written symbols into spoken words that are understood by the reader. (Al-Jubouri and Hamza , 267 : 2020)

Procedural : it is audible sounds , taking into account the soundness of pronunciation and the appropriate speed , measured by the scores of the test prepared for the purposes of the current research.

4- Female students of the preparatory stage : It is a stage of study located within the secondary stage that follows the intermediate stage complementing it , and its duration is three years. Intellectual and applied , as a prelude to continuing higher education , and preparing for practical and productive life. (Ministry of Education , 1990 : 25)

The second chapter : the theoretical framework and previous studies

First : visual intelligence :-

Intelligence is called the concept of visual intelligence : Cardner classified visual intelligence as one of the sub-abilities of a type of spatial or spatial intelligence, which is represented in its simplest level in the ability to recognize different colors and shapes and respond to them , and in the creation of drawings , shapes , models and images Simple , and in the physical processing of things and assembling them manually , and moving within space or the coordinate plane and moving from one place to another , and the ability to understand and assimilate forms of two dimensions , as information reveals depth and dimension and is known as two dimensions because it can be represented in two surfaces Dimensions such as drawings , diagrams , and images , and the third dimension is the strong sense of depth , as stereoscopic images give a sense of depth , innovation and formation of mental images , dealing with them , making adjustments , and converting information into symbols. (Coon , 1989 : 4)

Visual intelligence strategies :-

1- Visual perception : It is used to help students translate the material of the book into a mental image , by closing their eyes and imagining what they have studied.

2- Color sticks : Teachers can use different colors of chalk and pens , and students can use colored pens and colored paper to write on.

3- Pictorial metaphors : It is the formation of connections between what a student knows before and what is presented to him or presented to him , and the teacher has to think about the key point or the main concept that he wants his students to master , then link the idea visually. (Jaber , 2003 : 95)

4- Drawing the idea : The teacher asks his students to draw the key point and the central concept that is in their minds , and after completing the activity of drawing the idea , the relationship between the drawings and the study material is discussed.

5- Pictorial Symbols : It requires the practice of drawing in part of the lesson , for example , representing historical events by drawing a line representing time , and then distributing the images symbolizing those events on the time line. (Nofal , 2007 : 220)

Visual intelligence skills :-

1- Visual Discrimination : The ability to see differences and similarities in the shapes and patterns of objects.

2- Defining the vision : is the ability to define a target or a shape that is not clear in vision.

3- Visual motor integration : is the coordination and integration of muscle movements

4- Perceiving spatial-visual relationships : It is the ability to perceive more than one situation at the same time. It also includes the ability to correctly perceive the direction and path of things.

5- Connecting the point (labyrinths) : It is the visual ability to move between the specified point in proper sequence and at a high speed.

6- Visual memory (sequence) : It is the ability of a person to remember in the current recall the characteristics of the form presented to him. (Al-Lihyani , 2015 : 34)

7- Recognizing the visual shape : It is recognizing the visual shapes , determining their nature and dimensions , and distinguishing them from other shapes.

8- Linking relationships in visual form : It is the ability to link relationships between visual shapes and place them in space, in proportion to the forces and laws of nature.

9- Visual Shape Analysis : It is the ability to focus and pay attention to the details and dimensions of shapes and elements and to see the relationships between these shapes as an overall structure.

10 - Extracting meanings : It is reaching new concepts , principles and meanings through the visual form , taking into account its inclusion of the previous steps. (Abu Shaira , 2018 : 21)

Second : the aloud reading :-

The concept of reading aloud : The modern concept of reading aloud combines the stages through which the concept of reading has gone through , in addition to the element of speed in reading imposed by the requirements of the age , the element of interaction with the reader , and the modification of behavior according to the values and ideas in the reader (Al-Abdullah , 2007 : 10) , if it is in a book or the like , or it is by heart , its condition is that it raises the voice , and it is based on deciphering the written symbols and linking them to their phonetic and semantic values in a clear and correct voice (Al-Abbad , 2006 : 27) , and it should be Consistent with the meaning , free from pretense , labor , and affectation in straining the voice or cutting intonations (Al-Dahan , 1962 : 127) , and all of this requires quality pronunciation and influence with verbal expression of meanings, adherence to grammatical and morphological controls , and diversification of methods in order to ward off boredom , the listener , and causes him to pay attention and alertness. (Amer , 2000 : 71)

Oral reading skills :-

- 1- Pronunciation of sounds and words correctly.
- 2- Pronunciation of the long and short vowels , by which we mean the vowels and vowels.
- 3- Diversifying the voice according to the methods used , such as interrogation , exclamation , and call.
- 4- Reading in complete sentences , and avoiding intermittent reading. (Al-Jubouri and Hamza , 2020 : 297)
- 5- Using signs with the hands and head to express meanings and emotions.
- 6- Ejecting sounds from their correct exits.
- 7- It is good to stop when the meaning is complete.
- 8- Pay attention to stress and intonation , and distinguish between different sounds.
- 9- Speed in reading. (Al-Busais , 2011 : 59)
- 10- Extracting the conclusions and meanings behind what is read.
- 11- Distinguishing between reading methods and knowing the real structures and the metaphorical structures in them.
- 12- Determine the objectives of the subject read.
- 13 - Use some dictionaries.
- 14- Proficiency in general reading , recognizing ambiguous and ambiguous meanings , summarizing the main ideas in reading , presenting expected results , and balancing between one reading and another.
- 15- Using some of the evidence mentioned in the topic in discrimination situations. (Al-Jaafrah , 2011 : 171)

Previous studies dealing with visual intelligence and oral reading skill

1- Study (Al-Qazzaz , 2015)

Study Title : Spatial intelligence and artistic taste among university students.

Study Objective : To identify spatial intelligence and artistic taste among university students , in addition to identifying the correlation between spatial intelligence and artistic taste among university students.

Study method : descriptive method.

Study sample : It consisted of (330) male and female students from the architectural department in the College of Engineering.

The study tool : Preparing a test for spatial intelligence , and adopting the Al-Jizani test for artistic taste.

Results of the study : The students of the Architectural Department have above average spatial intelligence and artistic taste , in addition to the presence of statistically significant differences according to the change of stage and according to the change of gender. (Al-Qazzaz , 2015 : 9-115)

2- Study (Al-Owaidi , 2015)

Title of the study : The level of literary fifth grade students in the skills of listening and reading aloud.

The aim of the study : To know the level of literary fifth grade students in the skills of listening and reading aloud.

Study method : descriptive method.

Study sample : (286) students from the fifth literary grade.

Study tool : constructing an achievement test to measure listening skills , and constructing a note card to measure listening skills.

The results of the study : a sharp drop in the level of students in listening skill , and students excel in reading skill.

The third chapter : research methodology and procedures

First : Research methodology :- The researcher adopted the descriptive approach because it is the appropriate approach to achieve the research objectives.

Second : the research community :- The current research community consists of female students in the preparatory stage of the fourth scientific grade , where the community consisted of (13729) female students distributed in (81) schools in Babylon Governorate , for the academic year (2022-2023).

Third : the research sample :- The sample consisted of (374) students from the fourth scientific grade.

Fourth : Search tools :-

1- Visual intelligence test : The researcher prepared a visual intelligence test consisting of (18) items , In it you want to know the extent to which students possess visual intelligence and measure it , and the sources of the test were to familiarize them with previous studies and research , and then rely on the test (Al-Qazzaz , Youssef , and Abd al-Rahman).

Validity of the test :

A- Virtual honesty : The researcher presented the visual intelligence test to a group of specialized arbitrators , to ensure its validity for application and to express opinions about it.

B- The validity of the construction : The validity of the construction of the tool was extracted based on the extraction of the discriminatory power and the difficulty of the paragraphs, and the effectiveness of its alternatives, which is a valid indicator of the validity of the construction.

Reliability of the test : The researcher used the equation (Queder-Richardson 20) and the split half method.

2- The observation card for the skill of reading aloud : After examining the researcher with the specialized literature, letters and theses , the researcher built the observation card in the light of (10) skills.

Validity of the note card : The researcher presented the note card for the skill of reading aloud to a group of experts and arbitrators to ensure its validity , as some modifications were made to the skills of reading aloud according to the opinions of specialists.

Persistence of the observation card : The researcher used the Holsty equation.

The final application : After completing the preparation and construction of the two research tools, and after verifying the validity and reliability , the researcher applied the two tools to the research sample , which numbered (374) students from the preparatory stage for the fourth scientific grade in Babil Governorate , and the application period lasted thirty days.

Chapter Four : Presentation and interpretation of the results

First : View the results :-

The first objective : visual intelligence among middle school students :- The results showed that the arithmetic mean reached (8,406) degrees , with a standard deviation of (5,533) degrees , and when comparing the arithmetic mean with the hypothetical mean of the test of (9) , it was found that The calculated t of (3,249) degrees is greater than the tabular value of (1,96) degrees at the level of significance (0,05) and the degree of freedom (373) , which indicates that there is a statistically significant difference between the arithmetic mean and the hypothetical mean. And in favor of the hypothetical mean , which indicates the weakness of the sample in visual intelligence.

The second objective : the skill of reading aloud among middle school students :- To achieve this goal, the researcher used the t-test for one sample , as the arithmetic mean was (21,3529) , while the standard deviation was (3,18652) , and the hypothetical mean was (20) , and The calculated (t) value amounted to (19,733) , which is greater than the tabular value of (1,96) at the level of significance (0,05) and the degree of freedom (373) , which indicates the existence of statistically significant differences between the arithmetic mean and The hypothetical mean is in favor of the arithmetic mean , and this indicates that the research sample has the skill of reading aloud.

The third goal : the correlation between visual intelligence and oral reading among middle school students :- To achieve this goal , and after applying the two tools to the research sample and calculating the total score for each member of the sample , the Pearson correlation coefficient was calculated between the scores of the two variables , and it reached (0,779) , and To calculate the significance of the correlation coefficient , the researcher used the second test , and the calculated t-value was (30,360) , which is greater than the tabular t-value of (1,96) at the significance level (0,05) and the degree of freedom (373) , which indicates the existence of a correlation

Statistically significant between visual intelligence and oral reading skill.

Second : Interpretation of the results :-

1- The lack of a preliminary test to measure the visual intelligence of middle school students in the subject of reading , and this is confirmed by Gardner's theory.

2- Lack of employing visual intelligence in school subjects , such as pictures , drawings , maps , charts , and illustrations, which loses focus on the visual representation of what they read.

3- Focusing on indoctrination and neglecting other senses.

4- The skill of reading aloud is practiced permanently and continuously in all stages , and it receives a good percentage of care from the teacher and the students alike , not only in the Arabic language lessons , but in most other lessons.

5- The ability of the students at this stage is one of the factors that helped them to have this skill well , because the students at this stage tend to read all the books that fall into their hands that are commensurate with their mental level.

6- This type of intelligence deals with the field of reading , and accordingly , there appears to be a correlation coefficient between this type of intelligence and aloud reading.

7- Reading is a complex process involving different powers , senses and skills , and the experience and intelligence of the individual is of great importance in the reading process , which necessitates seeing the printed or written words , and here the importance of vision and the role it plays with the nervous system in the reading process appears.

Third : conclusions :-

- 1- The middle school students have visual intelligence at a weak level.
- 2- The middle school students have a good skill in reading aloud.
- 3- The emergence of a positive correlation between visual intelligence and oral reading skill.

Fourth : Recommendations :-

- 1- The Curriculum Directorate in the Ministries of Education and Higher Education should include the curricula in all academic levels , in a way that develops visual intelligence and the skill of reading aloud among female students.
- 2- The teacher's consideration of the individual differences among her students in visual intelligence when she teaches the reading material and conveys it to their minds.
- 3- Developing the students' ability to visualize shapes or ideas , and also to describe these clear visual images to them in their imaginations.

Fifth : Proposals :-

- 1- Conducting studies similar to the current research on other age stages, and comparing the results of those studies with the results of the current research.
- 2- Conducting other studies dealing with the relationship of visual intelligence with other variables that were not dealt with in this research , such as writing , spelling , and expression.

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