

# Multiple Intelligences and Their Relation to Blood Group Among University Students

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The present research aims to identify (multiple intelligences and four blood groups among university students, and differences in multiple intelligences and four blood groups among university students according to sex variable (males, females) and blood group, through a number of hypotheses, the research is determined on the students of Baghdad University College of Education For pure sciences (Ibn Al Haytham) for the academic year (2017, 2018) and for both morning and evening studies and on the four stages of education and for both sexes (males and females), the basic sample consisted of (400) students were selected randomly and equally from the four grades, and the researchers adopted a scale Intelligences The multi-adopted (Tai, 2011) and based on the definition of multiple intelligences theory (Cardner, 1997) and consists of (8) areas (linguistic, logical, mathematical, spatial, physical, music, and interpersonal, personal, and natural) and each field (10) After using the appropriate statistical methods and analyzing the data, the results and after testing the difference between the two averages with the test (t, test) for one sample, The calculated value of personal intelligence was (39,394), which is greater than the tabular T value (1,96) at the significance level (0.05). The degree of freedom (399) This means that the university students have personal intelligence and then have social intelligence where the calculated value (26,126), and then logical intelligence where the calculated value (24,493), and then visual intelligence where the calculated value of visual intelligence (14,789 They had musical intelligence where the calculated value was (20,004), and the calculated value of linguistic intelligence (14,749) and then natural intelligence and the calculated value (14,076), then the calculated value of physical intelligence (10,958). The second goal was that there were no statistically significant differences between multiple intelligences and blood type according to the sex variable. Thus, the zero hypothesis accepted only six intelligences at the level (0.05) between the mean

scores of linguistic intelligence, then logical intelligence, musical intelligence, social intelligence, personal intelligence and intelligence. Normal), by sex variable (male, female) according to the following blood groups (O +), (AB -), (AB +)), (B -), B +)), A -)), ((+ A Zero hypothesis rejected and accepted the alternative to only two types of intelligence: visual intelligence and physical intelligence, it became clear that there are statistically significant differences between the average degrees of visual and physical intelligence h Transsexual insults (males - females) according to blood groups, and reached a number of conclusions, recommendations and proposals.

**Key words:** *hypothesis, musical intelligence, social intelligence, personal intelligence*

### **Introduction:**

We live today at the beginning of the twenty-first century characterized by a scientific and technological revolution and this requires attention to the development of the capabilities of individuals and their capabilities that help them in the face of current and future situations and problems, as the human mind has become the first investment of developed countries, the strongest countries are improving the process of investment of their children and the increasing need in society to Who can provide new solutions to the problems we are facing and to those who provide new ideas that help to develop life in this information age. Therefore, all sectors of society require leaders who have multiple capabilities and who can manage them. Their communities and work to develop them. (Carlson et al., 2000) We present this research to present a new paradigm in dealing with the data of the modern age and with individuals from a broader and wide perspective, namely the term multiple intelligence, the multiple intelligence and its difference in individuals requires the adoption of various educational learning approaches to achieve communication with each Individuals in educational learning environments, and the educational system until recently was and still neglect many of the abilities and potential of learners. (CardNer, 1983) and that the choice of educational experiences that should be appropriate to the intelligence of the students so that they are diverse to allow each student to choose what suits his intelligence, and thus increase the ability to learn and harmony, and each student can achieve itself through which we can summarize The problem of searching by answering the following questions: -

- Are there multiple intelligences among university students?
- Is there a relationship between multiple intelligence and blood type.?

## Research Importance

The current era is characterized by a lot of changes and rapid transformations, which require a review of the curricula and methods of teaching in education, which is considered intelligence is what is measured by the intelligence test of a single product is what is called the factor of intelligence and the resulting educational and pedagogical practices proved over time. The importance of the current research in the presentation of the theory of multiple intelligences as a modern perception of human intelligence and the relationship of this theory with blood type, and the theory of multiple intelligences is a product of developments in the field of study of human intelligence, it draws attention to the potential of the human mind, and the detection and measurement of the capabilities of the individual on the one hand, It shows these abilities and the ways in which the processes of learning and knowledge on the other (Abdul Halim et al., 2009). In fact, the theory of multiple intelligences has since revolutionized the field of pedagogical and educational practices, where this theory welcomed the disparity between individuals in the types of intelligence that they have other than the traditional concept of intelligence and the theory of multiple intelligences believes that each individual special mix or combination of these intelligence called some Al-Mufti, 2004:) According to this theory, students who have difficulty in a particular field can overcome these difficulties. During use M alternative ways to invest Zkaouathm the most powerful. (Jaber, 2003) Meden and Ross explained that competence as students do to help them succeed in their lives may have an impact on drawing, music, folk dance, sports or computer work, not academic science and passing achievement exams alone. In summary, the theory of multiple intelligences provides us with a flexible and pragmatic framework through which we can achieve the specific objectives of education. This study is a comparative descriptive research that seeks to detect differences between individuals in a particular property. The subject of this research combines genetic biological factors and psychological environment of intelligence, its importance is reflected in the description, analysis and disclosure of the basic characteristics of the subject of intelligence can be summarized the importance of the current research in the following points:

- Assists the State in distributing graduate students to specializations that suit their multiple intelligence.

**Research Objectives:** - This research aims to identify:

- 1- Multiple intelligence and four blood groups among university students.
- 2 - differences in multiple intelligences and four blood groups among university students according to sex variable (male - female), and through a number of hypotheses:

1- There are no statistically significant differences at the level of significance (0.05) between the mean scores of linguistic intelligence by sex variable (males - females) according to the following blood groups: (O +), (AB-), (AB +)), (B- ), (B +)), (A -)), (A +)

2 - There are no statistically significant differences at the level of significance (0.05) between the average scores of logical intelligence by sex variable (male - female) according to the following blood groups:

(O +), ((AB -, ((AB +, B -)), B +)), ((A -, (A +)

3 - There are no statistically significant differences at the level of significance (0.05) between the average degrees of visual intelligence by sex variable (males - females) according to the following blood groups: (O +), (AB -), (AB +), (B- ), (B +), (A -), (A +)

4 - There are no statistically significant differences at the level of significance (0.05) between the average degrees of physical intelligence by sex variable (male - female) according to the following blood groups: (O +), (AB -), (AB +)), (B- ), ((B +, A -)), (A +)

5 - There are no statistically significant differences at the level of significance (0.05) between the mean scores of musical intelligence by sex variable (male - female) according to the following blood groups: (O +), (AB -), (AB +), (B- ), (B +)), (A -), (A +)

6 - There are no statistically significant differences at the level of significance (0.05) between the average scores of social intelligence by sex variable (male - female) according to the following blood groups: (O +), (AB -), (AB +)), ((B -, B +)), (A -)), (A +)

7 - There are no statistically significant differences at the level of significance (0.05) between the average scores of personal intelligence by sex variable (male - female) according to the following blood groups: (O +), (AB-), (AB +), (B- ), (B +), (A -), (A +)

8 - There are no statistically significant differences at the level of significance (0.05) between the average degrees of natural intelligence according to sex variable (male - female) according to the following blood groups: (O +), (AB-), (AB +), (B- ), (B +), (A -), (A +)

Research Limitations: This research is limited to students of Baghdad University College of Education for Pure Sciences - Ibn Al-Haytham for the academic year (2017-2018) and for both morning and evening studies and for the four grades and both sexes (males, females).



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## Search Terms

### *Multiple Intelligences*

1. Howard Gardner, 1997: "Psychological biological potential to process information that can be activated in the cultural environment or create products of value in a culture (1997: Gardner).
2. Mason, 2004: the ability to solve problems, creative production or add new output that is valuable in the culture in which an individual lives (Mason, 2004)

### **Methodology:**

First Chapter: Theoretical Framework and Previous Studies

The emergence of multiple intelligences theory: The theory of multiple intelligences was not the result of the day, but the fruit of efforts extended over a long period of time, and was part of a long debate on the unity of intelligence or pluralism,

Principles underlying the theory of multiple intelligences:

1. Everyone has all the intelligences: Multiple Intelligence Theory suggests that each person has the capabilities and capabilities in different intelligences ie that each person has a unique mixture of a variety of active and diverse intelligences, as these intelligences function in unique ways for each person, and people differ among them in terms of levels Performance for those intelligences. (Khataybeh and Adnan, 2006)
- 2 - Most people are able to develop all intelligence to reach an appropriate level of efficiency: This principle believes that everyone can really develop his intelligence to an appropriate level of performance if provided with the appropriate encouragement, training, guidance and information that means that these intelligence differ in growth. (Abdel Halim et al., 2009)
- 3 - Intelligence works in a complex way usually: This principle believes that different intelligence does not work individually, but always interact and unite with each other, and then used by the individual in the face of different situations and problems faced in his life, that is, there is no autonomous intelligence in the individual (Yahya and Ahlam, 2004).
4. The variety of ways in which an individual can express his possession of multiple types of intelligence: There is no specific set of qualities that must be possessed by the individual in order to be intelligent in a particular area, it may not be able to be able to sport activities, yet it

has a high physical activity For example, “he can weave a carpet or sculpt something, that is to use his hands skillfully.” (Khalidi, 2005).

A description of the multiple types of intelligence that the researchers addressed in this research:

**First:** Linguistic intelligence: It refers to the ability to use the language and skills of speaking, listening, reading and writing and the ability to explain, clarify and persuade and the use of verbal phrases to facilitate the process of retrieving information stored in memory, and that this ability is growing quickly and regularly in normal people (Afanah and Naela, 2004: 68) This type of intelligence is recognized by the learner through a number of characteristics and indicators, including:

- Ability to read and read and desire to collect books and roam in libraries.
- Have the ability to use language in remembering information (recall)
- Writing poetry, stories or speeches.
- Ability to convince others and express themselves in language through language (Jamil and Zaid, 2003)

**Second:** for logical intelligence (mathematical). It refers to the ability of the individual to analyze problems based on logic, reasoning and logical reasoning and dealing with mathematical operations and numbers with high efficiency, and has the skills of critical thinking and problem-solving, and also has the ability to classifications and relationships between various things not understood, and organization Thoughts and sequences, presenting proofs for doing things, this kind of intelligence is clearly shown by mathematicians, statisticians, engineers and computer programmers. Mathematical logical intelligence is recognized by the learner through a number of indicators and characteristics, including that:

1. Prefer science and mathematics books over others, and has the ability to discover patterns and relationships.
- 2 - loves counting and classification of things and the use of computer programs.
- 3 - loves games that use logical reasoning, equations and mathematical operations.
- 4- Developing and testing hypotheses and mastery of drawings and graphs.

**Third:** Spatial Intelligence (Visual). refers to the ability of the individual to perceive the visual space and visual thinking through images, maps, diagrams, drawings, shapes, and the ability to use colors and to recognize the relationships between things, and the formation of images and mental imagery used to solve problems and requires this type of intelligence sensitivity For the color, calligraphy, shape, nature, field and space, this type of intelligence appears among sculptors, painters, interior engineers and plastic surgeons in particular. The spatial intelligence

(visual) of the learner is recognized through a number of indicators and characteristics, including the speed of response to colors, shapes and images and classification.

**Fourth:** physical intelligence (motor). It refers to the ability of the individual to control the movement of the body through the mind and skill as well as the ability to express through the movements of hands, face, eye and gestures, and also includes the ability to do physical movements such as sports, games and drama, which requires skills Specific physics, such as synergies, balance, strength, speed and flexibility, appear in actors, surgeons, mechanics, blacksmiths and carpenters (Adas, 1998),(Adas, 2000) (Abdel Samie and Samar, 2006). Physical intelligence (kinetic) is recognized by the learner through a number of indicators and characteristics, including movement and activity (Afana and Nayla, 2004), (Al-Ajili, 2009).

**Fifth:** Music intelligence (rhythmic). It is the ability of the individual to understand the melodies, rhythms and patterns of sounds and distinguish between musical instruments and distinguish between sounds and taste of melodies, and note that the growth of this intelligence is earlier than other intelligence through the presence of miracle children such as (Beethoven, Mozart), He appears with composers, singers, sound engineers and the orchestra leader. Musical intelligence is recognized by the learner through a number of indicators and characteristics, including memorizing rhythms quickly and playing musical instruments.

**Sixth:** Social intelligence (interpersonal). It is the ability of the individual to form relationships with others and adapt and respond to them and work as groups and participate in clubs and activities as groups, and that this type of intelligence is learned through interaction with others, and is clearly visible to the successful teacher or social worker (Al-Sorour, 1998) The social intelligence of the learner is recognized through a number of indicators and characteristics, including the desire to collaborate with groups, understand the intentions of others, inform others, resolve differences between individuals, enthusiastic about positive relationships and spend free time outside the home rather than staying alone (Ezz El-Din and Wafaa, 2006) (Checkley, 1997), (Chapman, 2015), (Camel and Huwaidi, 2003), (Bouزيد, 2017).

**Seventh:** personal intelligence (self). It refers to the individual's knowledge of himself and behave in different situations and that the individual has an accurate picture of himself and his beliefs, thinking and motivation and use of information available in the disposition, and intelligence is clearly shown by scientists, philosophers, and theorists, and is recognized intelligence (Deing, 2004) The personal (self) of the learner through a number of indicators and characteristics of which seem often overwhelmed in meditation determines what he wants from life and has projects he seeks to achieve and prefer individual activities and loves inference and strong will and can know the strengths and weaknesses in his personality, where the individual becomes as He wants a musician, engineer, painter (Ghanem, 2009).

**Eighth:** Natural Intelligence: the ability of individuals to distinguish between living organisms (animals and plants) in the world of nature, manifested in the ability to identify natural objects and classification of plants and animals (Gardner, 1997) (Hasnawi, 2010)

**Second:** Previous Studies on Multiple Intelligences

1- (Omran, 2006). (multiple intelligence of Bahraini students in the university stage according to gender and academic specialization) The study aimed to identify the differences in multiple intelligences among university students, according to gender variable (males and females) and academic specialization (Khatabiya and Adnan, 2006), (Katami and Rami, 2010), (Katami, 2001). And applied the scale of multiple intelligences prepared by the researcher to (238) students belonging to thirteen academic majors. Comparing the averages of students in different disciplines shows that most of the students chose disciplines commensurate with their multiple intelligences, and the most common intelligence among all students of both sexes was social intelligence and personal intelligence (Left-handed, 2000), (Koushaha, 2003). Using the multi-directional analysis of variance, it was found that there is a gender effect in multiple intelligence (Mahmoud, 2006), where males excel in physical intelligence, and also showed a significant impact of specialization for sports and music intelligence, where the results showed the superiority of mathematics students on the students of languages and social sciences, media, arts, and superiority The results of the study showed the superiority of the students of management, computer and engineering over the students of languages (Linda, 2011). As for musical intelligence, the results showed that the students of the media outperformed the students of engineering, science, law, and Islam. Loggia education, and the superiority of the arts students to science students. (Al-Omran 2006)

**Third:** Previous studies on blood type

1- (Yassin, 2008) (Medin and Ross, 1997). A descriptive study in the skin lines Lebanon fingers and their relationship to blood groups according to the system (ABO). aimed at the distribution of the three main types of fingerprints and branches blood groups according to the system (ABO) and the sample consisted of 120 male only, which ranges Aged between (20-26) years of students of the Department of Life Sciences in the College of Education, University of Anbar, and adopted the method (Cummins + Midol) in the examination and distribution of different forms of fingers and then arrange the results in tables indicating the distribution of fingerprint forms by blood groups and arranged in tables In particular, the ten fingers were included for both hands, showing the most common models among the sample is flew G lugs (56.67%) followed by rounds (36.38%) and the lowest brackets (6.33%) (Mohammed Abdul-Hadi, 2003).

### **Chapter Three: Research Methodology and Procedures**

The research community and its sample: consists of students of the preliminary studies of the Faculty of Education for Pure Sciences - Ibn Al-Haytham, for the morning and evening studies and for both sexes and the four academic stages of the academic year 2017-2018, where the research community reached (2654) students, the number of males (1262) and the number of females (1392) for all scientific departments. The research sample was chosen by random and equal method, from the physics and computer departments to apply the scale of multiple intelligences to students and from the four grades where the basic sample reached (400) students (Nawfal, 2007) (Altaie, 2011) (Amer and Rabie, 2008) (Amezian, 2006).

#### ***Psychometric Characteristics of the Scale***

**First:** (validity of the scale) Virtual honesty: Arbitrators agreement is a kind of virtual honesty, it refers to what appears to be measured by the measure that means that the measure includes paragraphs that appear to be related to the variable being measured, and that the content of the scale consistent with its purpose. (Imam et al., 1991) Presented the scale of multiple intelligences in its initial form to a group of arbitrators in education and educational psychology, each of them to express their opinion in the areas of scale, suitability and formulation and propose appropriate amendments on the alternatives used to answer each paragraph of the scale and weights specified to her (Salem, 2000), (Nolen, 2003).

#### ***Second: Stability of the Scale***

1- The method of re-testing: The method of re-testing depends on the idea of the application of the scale on an example sample, where (64) male and female students (32) male and female students from the Department of Chemistry and (32) male and female students from the Department of Mathematics (8) male and female students. For each of the four rows of each section, re - application after a period of time (14) days from the first application on the same sample is an appropriate time period as some literature suggests. (Physical, 1984, 306) and then calculate the (Brody, 1972), (Brody, 1972) Pearson correlation coefficient between the two application scores and the stability coefficient (0.74) which is a good indicator of the constant test as it indicates that the stability between (70-90) is a good indicator of the constant test (Issawi, 1985) (Sheep, 2016) (Armstrong, 2005).

2 - Split - Half method ((Split - Half method) has been extracted the stability of the multiple intelligence scale half way, which requires the division of paragraphs of the scale after answering it into two sections (odd, even) where the odd numbers represent the first part of the scale and even numbers the second part, and according to the correlation coefficient between The two-part scores (0.85) and when corrected (Spearman - Brown) was the coefficient of

stability (0.89) This is a good indicator of the internal consistency of the scale, and after extracting the validity and stability of the scale can be considered ready for application.

### ***Third: Application of the Scale***

1 - Exploratory research sample: for the purpose of ensuring the clarity of the instructions and the safety of the formulation of the paragraphs applied the scale on a sample of students of the third stage of males and females reached (30) male and female students and it became clear through the application that the instructions of the scale is clear to the respondent and its paragraphs understandable and the duration of the answer to the scale (25) Accurate.

2- The basic research sample: The researchers applied multiple intelligence scale to the research sample of (400) male and female students (100) male and female students for each of the four grades of the students of the University of Baghdad College of Education for Pure Sciences - Ibn al-Haytham for the period (22/10/2017) ) And until (19/4/2018).

**Fourth:** the statistical methods used: The researchers used statistical bag spss))

## **Chapter Four (Presentation and Interpretation of Results)**

**First Objective:** Identify Multiple Intelligences among University Students: To achieve this goal, the researchers applied the Multiple Intelligence Scale on the research sample of (400) male and female students, and after processing the data obtained where:

- The mean of linguistic intelligence was (22,1650) and the standard deviation (2,93587), while the hypothetical mean of the scale was (20) degree. This is greater than the t - tab value of (1.96) at the level of 0.05 and the degree of freedom (399).
- While the mean of logical intelligence (23,6200) and standard deviation (2,95592), while the hypothetical mean of the scale (20) degrees, and after testing the difference between the two averages test (t, test) for one sample, the calculated value ( 24,493), which is greater than the tabular T value of (1.96) at the level (0.05) and the degree of freedom (399), it turns out that the difference between the two averages is statistically significant and this means that the university students have a logical intelligence.
- The mean of visual intelligence was (22,2450) and the standard deviation (3,03612), while the hypothetical mean of the scale was (20) degrees. After testing the difference between the two averages with one test sample, the calculated value was (14,789). This is greater than the T - value (1,96) at the level of 0.05 and the degree of freedom (399).

- The mean mean of physical intelligence (21,6800) and standard deviation (3,06612), while the hypothesis mean of the scale (20) degrees, and after testing the difference between the two averages test (t, test) for one sample, the calculated value (10958 This is greater than the T - value of (1,96) at the level of (0.05) and the degree of freedom (399), it is clear that the difference between the two averages is statistically significant and this means that university students have physical intelligence.
- The mean of musical intelligence was (22,8900) and the standard deviation (2,88942), while the hypothetical mean of the scale was (20) degrees, and after testing the difference between the two averages with a test (t, test) for one sample, the calculated value was (20,004). This is greater than the T - value (1,96) at the level of 0.05 and the degree of freedom (399).
- The mean of social intelligence (23,5850) and the standard deviation (2,74438), while the hypothetical mean of the scale (20) degrees, and after testing the difference between the two averages test (t, test) for one sample, the calculated value (26,126 This is greater than the T - value (1,96) at the level of 0.05 and the degree of freedom (399).
- The mean of personal intelligence (25,4050) and the standard deviation (2,74405), while the hypothetical mean of the scale (20) degrees, and after testing the difference between the two averages test (t, test) for one sample, the calculated value (39,394 It is greater than the T - tab value of (1.96) at the level of 0.05 and the degree of freedom (399).
- The mean of natural intelligence (22,5950) and the standard deviation (3,68713), while the hypothetical mean of the scale was (20) degrees, and after testing the difference between the two averages with test (t, test) for one sample, the calculated value (14,076) This is greater than the T - value (1,96) at the level of 0.05 and the degree of freedom (399). Table 1 illustrates this.

**Table 1:** T-test for one sample

Significance 0,05	VALUE T		Hypothetical mean	standard deviation	SMA	No.	variable
	Table	Calculate					
FUNCTIONIOI	1,96	14,749	20	2,93587	22,1650	400	Linguistic
FUNCTIONIOI	1,96	24,493	20	2,95592	23,6200	400	Logical
FUNCTIONIOI	1,96	14,789	20	3,03612	22,2450	400	Optical
FUNCTIONIOI	1,96	10,958	20	3,06612	21,6800	400	Physical
FUNCTIONIOI	1,96	20,004	20	2,88942	22,8900	400	Music
FUNCTIONIOI	1,96	26,126	20	2,74438	23,5850	400	Social
FUNCTIONIOI	1,96	39,394	20	2,74405	25,4050	400	Profile
FUNCTIONIOI	1,96	14,076	20	3,68713	22,5950	400	Normal

T-value is (1,96) at the significance level (0.05) and the degree of freedom (399)

**Second Objective:** Identify the differences in multiple intelligences according to the sex variable (males, females) and blood type O (, AB, B, A).

1-Differences in linguistic intelligence according to sex and blood type variables. In order to identify the significance of statistical differences between males and females in linguistic intelligence and blood type, the researchers showed that there are no statistically significant differences at the level (0.05) according to the sex variable. As well as according to the blood type and variable, a study confirmed that both sides of the brain are affected by individual differences between the sexes, as the differences are not in the general capabilities, but according to the partial function of the two hemispheres (Nial, p. (Qoshha, 2003) and Shuaiqi, 2005. The researchers explained that intelligence tests focus on These tests are not fair to intelligence, they originally require individuals to translate their solution of problems into language or symbolic images, and show male superiority over females in spatial abilities and weakness compared to females in language abilities. Spatial ability tests do not allow for manipulation of objects or the construction of three-dimensional shapes, as well as for language tests that require the completion of spaces rather than storytelling (Al-Sharif and Sayed, 2003) and Table 2 illustrates this.

**Table 2:** analysis of binary variance to find out the differences in linguistic intelligence according to sex and blood group variables

Significance (0,05)	Value F	Average squares	Degree Of Free	Groups of squares	Contrast Source
NO a function	0,353	3,027	1	3,027	Gender
NO a function	0,033	8,865	3	26,595	blood type
NO a function	0,952	8,071	3	24,513	Sex * Blood type
		8,584	392	3364,876	The error
			399	3439,110	Total

Total 3439,110 399

\* Tabular value is equal to (3.84) at the significance level (0.05) and the degree of freedom (392.1)

\* Tabular value is equal to (2.60) at the level of significance (0.05) and the degree of freedom (392.3)

Thus, the zero hypothesis accepted that there are no statistically significant differences at the level of (0.05) between the mean scores of linguistic intelligence by sex variable (male - female) according to the following blood groups:

(O +), (AB -), (AB +)), (B -)), (B +)), (A -)), ((+ A)

2-Differences in logical intelligence according to sex and blood group variables. As well as according to blood type and variable, the researchers interpreted the result that people who use the right half of the brain are characterized by a holistic view of things and raised by forms and models and are more imaginative and aware and intuitive, while others who use the left side of the brain are successful people in their study and stick to logic (Iamb, 1980 , P. 68), and the result differed With a study ((Lindley, 2001 study (Qoahh, 2003), study (Alhoiqi, 2005) and study (Rashid, 2005) and Table 3 illustrates this.

**Table 3:** Analysis of binary variance to see the significance of differences in logical intelligence depending on the sex variable and blood type

Significance (0,05)	Value F	Average squares	Degree Of Free	Groups of squares	Contrast Source
NO a function	0	0,0000802	1	0,000802	Gender
NO a function	0,830	7,196	3	21,588	blood type
NO a function	1,313	11,386	3	34,158	Sex * Blood type
		8,666	392	3396,978	The error
			399	3452,724	Total

Thus, the zero hypothesis accepted that there are no statistically significant differences at the level of (0.05) between the mean scores of the logical intelligence by sex variable (males, females) according to the following blood groups: (O +), AB -), ((AB +, B -)), (B +)), ((A -, (A

3 - differences in visual intelligence according to the variables of sex and blood type, in order to identify the significance of statistical differences between males and females in visual intelligence and blood type, the researchers showed the presence of statistically significant differences at the level (0.05) according to sex variable and for females Because the average of females (22,7476) is greater than the average of males and adults (21,7113), and there are no significant differences according to the blood type variable, the researchers explained this to the differences in methods of socialization of males and females in the family and school (Nabal, p. 130) The results were consistent with the study (Shuaiqi, 2005) and the study (Qoshha, 2003), and study (Lindley 2001) and disagreed with the study (R. (Constructed, 2005), and Table 4 illustrates this.

**Table 4:** Analysis of binary variance to see the significance of differences in visual intelligence depending on the sex variable and blood type

Significance (0,05)	Value F	Average squares	Degree of Free	Groups of squares	Contrast Source
function	10,482	94,210	1	94,210	Gender
No function	1,090	9,800	3	29,401	blood type
No function	1,357	12,196	3	36,587	Sex * Blood type
		8,987	392	3523,089	The error
			399	3677,990	Total

Thus, the zero hypothesis rejected and accepted the alternative that there are statistically significant differences at the level of (0.05) between the mean scores of visual intelligence by sex variable (male - female) according to the following blood groups: (O +), (AB -), (AB +),

(B -), (B +), (A-), (A) +)

2 - differences in physical intelligence according to sex variable and blood type, and in order to identify the significance of statistical differences according to sex variable (males, females) in physical intelligence and blood type, it was found that there are statistical differences according to the sex variable and favor (females) because the average female adult (22,5340) is greater than the average male (20,5340), while there are no statistically significant differences according to blood type variable. The results are consistent with the study (Shuaiqi, 2005) and the study (Rashid, 2005) and study (Qushah, 2003) and study Lindley 2001) and study (Shuaiqi, 2005) and the researchers explained that the individual or the ability to use his mental abilities to regulate his body movements, Or their ability to understand others, or to understand and feel for themselves (Al-Sharif and Sayyed, 2003) and Table 5 illustrates this.

**Table 5:** Binary variance analysis to determine the significance of differences in physical intelligence depending on the sex variable and blood type

Significance (0,05)	Value F	Average squares	Degree of Free	Groups of squares	Contrast Source
function	11,850	102,789	1	102,789	Gender
No function	0,547	4,743	3	14,229	blood type
No function	0,922	8,000	3	24,001	Sex * Blood type
		8,674	392	3400,222	The error
			399	3751,040	Total

Thus, the zero hypothesis rejected and accepted the alternative that there are statistically significant differences at the level of significance (0.05) between the average degrees of physical intelligence by sex variable only (male - female) according to the following blood groups: (O +), (AB -), (AB +), (B -), ((B +, A -)), (A +).

3 - differences in musical intelligence according to sex variable and blood type: In order to identify the significance of statistical differences according to sex variable (males, females) in musical intelligence and blood type, it was found that there are no statistical significant differences according to sex variable and blood type. The researchers recognize that the perception or sensation of musical tones and rhythms, or the ability of the individual to use his mental abilities to regulate the movements of his body. The mental abilities are distributed and not necessarily all of them in the same person, which helps in directing the individual to the job that suits him and his capabilities, He is expected to succeed. (Sharif and Sayed, 2003:

53) The result is consistent with the study (Rashid, 2005) and the result differed with the study (Shuaiqi, 2005) and the study (Qushah, 2003) and study (Lindley 2001) and Table (6) illustrates this.

**Table 6:** Analysis of Binary Variance to Know the Significance of Differences in Musical Intelligence by Gender and Blood Group

Significance (0,05)	Value F	Average squares	Degree of Free	Groups of squares	Contrast Source
No function	0,967	8,134	1	8,134	Gender
No function	0,559	4,699	3	14,098	blood type
No function	0,270	2,274	3	6,821	Sex * Blood type
		8,408	392	3295,808	The error
			399	3331,160	Total

Thus, the zero hypothesis accepted that there were no statistically significant differences at the level of (0.05) between the mean scores of musical intelligence by sex variable (males - females) according to the following blood groups: (O +), (AB -), (AB +), (B -), (B +)), (A -), (A +)

4 - differences in social intelligence according to sex variable and blood type: In order to identify the significance of statistical differences according to sex variable (males, females) in social intelligence and blood type, it was found that there are no statistical function differences according to sex variable and blood type. Researchers have explained that social intelligence is more extensive than psychological and biological. Studies (Heb and Katamy, 1949) suggest that an individual has multiple intelligence and can develop these intelligence if the right conditions exist (Gardner, 1983) and has supported (Mason, 2004). Intelligence is the ability to solve problems and creative production or to add new products that are valuable in the culture in which one lives (Mason, 2004). The result differed with (Al Omran, 2006) and Al Shuaiqi, 2005. The study (Koshha, 2003) and the study (Lindley 2001) and table (7) illustrates this.

**Table 7:** Analysis of Binary Variance to Determine the Significance of Differences in Social Intelligence by Gender and Blood Group

Significance (0,05)	Value F	Average squares	Degree of Free	Groups of squares	Contrast Source
No function	0,009	0,06817	1	0,06817	Gender
No function	0,479	3,652	3	10,956	blood type
No function	0,056	0,431	3	1,292	Sex * Blood type
		7,627	392	2989,660	The error
			399	3005, 110	Total

Thus, the zero hypothesis accepted that there are no statistically significant differences at the level of (0.05) between the mean scores of social intelligence by sex variable (males - females) according to the following blood groups: O +, (AB -), (AB +), (B-, B +), A -, + (A

5 - differences in personal intelligence according to sex variable and blood type: In order to identify the significance of statistical differences according to sex variable (males, females) in personal intelligence and blood type, it was found that there are no statistical function differences according to sex variable and blood type. The results differed with the study (Qoshah, 2003) and the study (Lindley, 2001) and the study (Shuaiqi, 2005) and the study (Rashid, 2005) and the study (Urban, 2006), and Table (8) shows that.

**Table 8:** analysis of binary variance to see the significance of differences in personal intelligence according to sex variable and blood type

Significance (0,05)	Value F	Average squares	Degree of Free	Groups of squares	Contrast Source
No function	0,519	3,927	1	3,927	Gender
No function	0,506	3,836	3	11,507	blood type
No function	0,373	2,825	3	8,476	Sex * Blood type
		7,573	392	2968,528	The error
			399	3004,390	Total

Thus, the zero hypothesis accepted that there were no statistically significant differences at the level of (0.05) between the mean scores of personal intelligence by sex variable (male - female) according to the following blood groups: (O +), (AB -), (AB +), (B -), (B +), (A -), (A +)

8 - differences in natural intelligence according to sex variable and blood type: In order to identify the significance of statistical differences according to sex variable (males, females) in natural intelligence and blood type, it was found that there are no statistical significant differences according to sex variable and blood type. The results were in agreement with the study (Rashid, 2005), and differed with the study (Shuaiqi, 2005) and study (Qosha, 2003) and study (Lindley, 2001) and Table (9) shows that.

**Table 9:** Analysis of Binary Variance to Determine the Significance of Differences in Natural Intelligence by Gender and Blood Group

Significance (0,05)	Value F	Average squares	Degree of Free	Groups of squares	Contrast Source
No function	1,361	17,993	1	17,993	Gender
No function	1,028	13,590	3	40,770	blood type
No function	1,478	19,549	3	58,646	Sex * Blood type
		13,222	392	5183,154	The error
			399	5424,390	Total

Thus, the zero hypothesis accepted that there are no statistically significant differences at the level of (0.05) between the mean scores of natural intelligence according to the sex variable (males - females) according to the following blood groups: (O +), (AB -), (AB +), (B -), (B +), (A -), (A +)

## Conclusions

- University students have multiple intelligence.
- The multiple intelligences were according to the priority of university students began in terms of the greatest calculated value (39,394) of personal intelligence, the lowest of physical intelligence (10,958) respectively, (personal intelligence followed by social intelligence, logical intelligence, and musical intelligence, visual and linguistic, natural intelligence and finally intelligence Physical).

- There are no statistically significant differences between multiple intelligences and blood group according to the sex variable. Thus, the zero hypothesis was accepted for only six intelligences (that there are no statistically significant differences at the significance level (0.05) between the mean scores of linguistic intelligence, logical intelligence, musical intelligence and intelligence. The alternative hypothesis was rejected for only two types of intelligence, visual and physical intelligence (it was found that there were statistically significant differences at the level of significance (0.05) between the average degrees of visual and physical intelligence by sex variable (males, females) and for females according to For blood groups.

### **Recommendations**

Attention to physical and visual intelligence of males.

Strengthening family relations and attention to the role of males in the family and social upbringing.

Provide job opportunities for males to restore self-confidence.

### **Proposals**

Conduct a study on multiple intelligences and their relationship to family upbringing and self-confidence.

Conducting a study on blood type and its relationship with fingerprint.

### **REFERENCES**

- Abdel Samie, A. & Samar, L. (2006). The effectiveness of a program based on multiple intelligences for developing mathematical thinking and attitude towards mathematics among primary school students. *Dirasat Journal in Curricula and Teaching Methods*, November, Cairo, 3(63): 172 – 178.
- Abdul, H., Ahmad (2005). Early detection of multiple intelligence capabilities, Dar Al Fikr for Publishing and Distribution, Amman, Jordan, 8(52): 162 – 168.
- Abdul, H., Ahmad, A. – M. and others (2009). The contemporary school curriculum (foundations - building - organizations - development), I 2, Dar Al - Masira, Amman, 6(47): 162 – 168.
- Adas, A. R. (1998). Educational psychology, contemporary theory, Amman, Dar Al Fikr, 4(25): 156 – 161.



- Adas, M. A. R. (2000). school and teaching thinking), Dar Al-Fikr for Printing and Publishing, Amman, 1st floor Vol 6 ( 73 ): 115 - 121
- Afana, I. I. & Nayla, N. A.-K. (2004). Levels of multiple intelligence among students of basic education in Gaza and its relationship to achievement in mathematics and tendencies towards it, *Journal of the Islamic University*, 12(41): 2 -2.
- Al-Ajili, M. S. B. (2009). *Methods of scientific thinking*, I (1), House of Books and Documents, Baghdad, 2(36): 67 – 72.
- Al-Sorour, N. H. (1998). *Introduction to the education of the distinguished and talented*, 1st floor, Dar Al-Fikr Al-Arabi, Amman, 3(93): 89 – 115.
- Altaie, F.A. H. O. Y. (2011). *The effectiveness of instructional design according to the theory of learning based on the brain in achievement and motivation among students of the College of Basic Education and the development of multiple intelligence*, College of Education, University of Baghdad, PhD Thesis, 8(25): 221- 229.
- Amer, T. A. R. & Rabie, M. (2008). *Multiple intelligences*. 2nd Floor, Dar Al Yazouri, Amman, 6(20): 161- 169.
- Amezian, M. (2006). *Linguistic intelligence and problem solving among a sample of Moroccan children in primary education*. *Journal of Educational and Psychological Sciences*, College of Education, University of Bahrain, Volume IX, 6 (64): 23 -29.
- Armstrong, T. (2005). *Multiple intelligences in the classroom*, translation of Dhahran National Schools, Educational Book House, Dammam, Saudi Arabia, 5 (23): 23 – 34.
- Bouزيد, K. (2017). *Teal, Hematology*, office des publication, universitaires, Alger, 8(27): 28-32.
- Brody. (1972). *Personality research and theory*. New York Academic Press, 5(27): 232 – 237.
- Brody. (1972). *Personality research and theory*. New York Academic Press, 7(62): 163 – 169.
- Camel, M.J. & Huwaidi, Z. (2003). *Methods of disclosure of creators and excelling and the development of thought and creativity*, House of University Book, Al Ain, United Arab Emirates, i 1, 7 (34): 216 - 222.
- Carlson, N., Buskist, W., Martin, G., Hogg, M. & Abrams, D. (2000). *Psychology: The Science of behavior*. Boston: Allyn and Bacon, 4 (35): 211 – 219.
- Chapman, C. (2015). *If the she fits: How to use develop Multiple intelligences in the classroom*. palatine, IL: IRI / Skylight Publishing, 2(56): 128 – 131.
- Checkley, K. (1997). *The first seven... and the eight*. *Educational Leader Ship*, 2 (55) (1): 8-13  
Cooper, Colin ---
- Deing, S. (2004). *Multiple intelligences and learning styles: two complementary dimensions*, 5(65): 152 – 161.
- Ezz El-Din, S. & Wafaa, A.E. (2006). *Methods of learning the students of the College of Education for Girls according to the theory of multiple intelligences in the Kingdom of Saudi Arabia*, Jeddah, *Reading and Knowledge Magazine*, Egyptian Association for Reading and Knowledge, Faculty of Education, Ain Shams, Cairo, 7(81): 151 – 157.



- Gardener, H.E. (1997). Multiple Intelligent as a partner in school improvement Educational Leadership, 8(55): 78-82.
- Ghanem, M. H. (2009). Introduction to clinical psychology assessment, Diagnosis, Treatment, 1st Floor, Egyptian Library, Cairo, 9(13): 124 – 131.
- Hasnawi, K. H.O. (2010). The trend towards modernity and its relationship to multiple levels of intelligence among university students, 4(42): 124-129.
- Imam, M., Ajili, S. H., Abdul, R. & Anwar, H. (1990). Evaluation and measurement, Dar al-Hikma, Baghdad, 8(15): 157 – 168.
- Karen, (2002). Multiple intelligences theory: A frame work personalizing science curricula. Journal of School Science and Mathematics, 4(16): 3-14.
- Katami, N. (2001). Teaching thinking in the basic stage, I (1), Dar Al-Fikr for Printing, Publishing and Distribution, Amman, 8(25): 255 -261.
- Katami, Y. & Rami, A.-Y. (2010). Social intelligence for children theory and practice, 1st Floor, Dar Al-Masira, Amman, 4(63): 146 – 151.
- Khatabiya, A. M. & Adnan, A.-B. (2006). The effect of multiple intelligence strategies in teaching science on the acquisition of seventh grade students for learning operations, Arab Gulf Resala Journal, Issue No. 99, Arab Bureau of Education for the Gulf States, Riyadh, 5(36): 168 – 172.
- Koushaha, R. A. R. (2003). Study of differences in multiple intelligence among students of some theoretical and practical faculties, (unpublished doctoral dissertations), Institute of Educational Studies and Research, Cairo University, 3(63): 16 – 22.
- Left-handed, S. (2000). Creativity in problem-solving, Dar Quba Printing, Cairo, 2(64): 135 – 143.
- Linda, B. D. (2011). Differences in intelligence (verbal, practical, and total) among children aged 6-14 years according to different blood groups, unpublished Master Thesis, University of Tizi Ouzou, 5(18): 88 – 91.
- Mahmoud, S. A. (2006). Thinking without borders contemporary educational visions in the teaching and learning of thinking, I 1, the world of books, Cairo, 8(45): 154 – 161.
- Mason, (2004). Integration of multiple intelligences and learning methods, translation (Murad Saad, Walid Khalifa), Dar Al Wafa, Alexandria, 9(46): 152 -157.
- Medin, L. & Ross, B. (1997). Cognitive psychology. New York, Harcourt Brace & co, 3 (36): 185 – 192.
- Mohammed Abdul-Hadi, H. (2003). Human brain education, I (1), Dar Al-Fikr for Printing, Publishing and Distribution, Amman, 2(63): 147 – 156.
- Mufti, M. A. (2004) multiple intelligences theory and practice, the sixth scientific conference, the Egyptian Association for curricula and teaching methods, Cairo, 2(52): 126 – 131.
- Nawfal, M. B. (2007). Multiple Intelligence in the Classroom Theory and Practice, 1st Floor, Dar Al - Masira, Amman, 1(35): 157 – 161.
- Nolen, J. (2003). Multiple intelligences in classroom, Journal of Education, 1(24): 115-119.



- Omran, J. A.R. (2006). multiple intelligences of Bahraini students at the university level according to gender and academic specialization, *Journal of Educational and Psychological Sciences*, University of Bahrain, College of Education, 12(3): 43-44.
- Salem, M. A. (2000). Recent trends in the study of multiple intelligences, analytical study in the light of gardner theory, Eighth Annual Scientific Conference, The Future of Learning and Training Policies in the Arab World in the Age of Globalization and the Information Revolution, Volume 1, Faculty of Education, Helwan University , 9(26): 134 – 141.
- Sheep, H. H. (2016). (Animal Physiology) Dar Al Hayat Press, Damascus, 2(84): 216-228.
- Shuaiqi, A. Z.S. (2005). Multiple intelligences and their relationship to the academic achievement of a sample of university students, (a study of the sincerity of Cardner theory), *Journal of the Faculty of Education, Mansoura University*, 2(59): 236- 242.