

**Intuitive thinking and its relationship to mental alertness among students of the College of Education for Pure Sciences / Ibn Al-Haytham**

**Dr. Anwer abbas mohammed**

**Chemistry teaching methods**

Abstract

The present research aims at identifying the relationship between intuitive thinking and mental alertness. The researcher used two tools: the intuitive thinking scale built by the researcher and consists of (40) paragraphs fall under four alternatives, while the second tool is the mental alertness scale consists of (70) paragraphs that the researcher built, and was verified psychometric properties of the two scales of honesty After the collection of information and statistical processing, the researcher reached the following results:

1. The results showed that the students of the third stage / Faculty of Education enjoy intuitive thinking.
2. The results showed that the students of the third stage / Faculty of Education enjoy mental alertness.
3. The results showed a significant relationship between the degrees of intuitive thinking and mental alertness in students

## Chapter one

### Research problem:

Intuitive thinking is a cognitive product that prepares for reaching results in a shorter time, with higher efficiency and with less effort without the need for research, investigation and experimentation activities. The effectiveness of the learner, especially in the practice of intuitive thinking depends largely on the extent of his knowledge of the information and knowledge necessary for that field because knowledge exists a kind of familiarity That predisposes to the practice of intuitive thinking even though those with good intuition may have been born with this ability, but the effectiveness of that ability depends on how well they know the necessary information, it is clear from this that the approval of teaching intuitive thinking and its inclusion in the list of materials Assia is an educational necessity that can not be dispensed with if the aim was to build a generation thinker and create a cohesive society characterized by his sons and perception of consciousness.

The experiences that the student acquires when practicing intuitive thinking leads to making good decisions and to adapting to new situations, learning new skills quickly to understand complex and hidden relationships, and thinking flexibly and thus the behavior of these students is attentive which helps them focus on everything at the same time and this is what We call it Mindfulness, and mindfulness refers to a careful examination of the expectations and continuous thinking based on the individual's dependence on his experiences and the valuation of the important things in the context and the identification of new aspects of the context that would lead to foresight and the performance of the individual during his dealings Social also means accepting new ideas as individuals usually form opinions based on first impressions and hold onto these opinions even when the opposing evidence appears.

The researcher felt through his teaching to university students that some students are distinguished by their weak awareness of the meanings or significance, or the structural organization of a position of attitudes without explicit reliance on the analytical process, as well as their cognitive skills or mental activity that aims to reach a solution or conception of initial solutions that are simple, direct and without resorting to Analytical steps by which we see whether these solutions or perceptions are true or false, and they lack the ability to pay attention or focus in their work and

that they perform their work without awareness of them and are characterized by mental distraction in the classroom and their limited use of their previous experiences in the face of new problems.

The research problem lies in answering the following question:

Is there a relationship between intuitive thinking and mental alertness for third-year students / College of Education?

research importance:

Intuitive thinking training requires that the teacher, teacher, and educator be able to bring students to a stage that they intuitively think, and that collaborators, educators, cognitive psychologists, curriculum authors, and designers of education plans design for success in preparing a comprehensive training program for thinking training. Intuitive, but that lies in the problem of using intuitive thinking among teachers themselves, as the teacher who thinks automated routine thinking cannot advance the level of his students in order to think intuitively, so it requires preparing the teacher and training him to do this kind of thinking, and this saves time in teaching. And For you, the teacher needs courses to do this task in order to be able to succeed and excel in achieving that goal and achieving it (Katame, 1990: 555).

In addition, mental alertness works to increase the will, by promoting awareness of self-observation that promotes the reduction of literal commitment to ideas and beliefs, and cognitive therapy enhanced mental alertness has been used in treating many cases of depression, anxiety disorders, chronic pain, schizophrenia, addiction to smoking and psychological stress in the field of Work (Perkins & Richhart, 2000: 28-29). Mindfulness is often used as a synonym for conscious meditation, but more recently it has been studied as a psychological tool capable of reducing stress and stress (Jain et al, 2007: 123) and has an important impact in improving Ga confrontation strategies Ah (Weinstein et al, 2009: 3).

Research goal:

The current research aims to define the relationship between intuitive thinking and mental alertness for third-year students / College of Education?

research assumes:

1- There is no statistically significant difference ( $H_1 = H_0$ ) between the theoretical average and the arithmetic mean for the grades of third stage students / faculty of education from the research sample in intuitive thinking.

2- There is no statistically significant difference ( $H_1 = H_0$ ) between the theoretical average and the arithmetic mean for the grades of students of the third stage / college of education, from the research sample in mental alertness.

3- Is there a correlation between the degrees of students of the third stage / College of Education in the test of intuitive thinking and their degrees in the measure of mental alertness.

search limits:

This research is limited to:

1- Third stage students / College of Education / Ibn Al-Haytham / University of Baghdad.

2- The first semester of the academic year 2018/2019

Defining terms:

First: the concept of intuitive thinking (Intuitive Thinking): defined by each of (2006, Woolfolk) defined Intuitive thinking as a type of mental and mental response based on conscious cognitive analysis of external sensory influences when receiving it. On the other hand, it is brought about by the conscious, internal and generated emotions as an aspect of cognitive thinking and intellectual activity, so that it is also subject to conscious analysis, in a distinct manner. (2006: 54, Woolfolk)

Procedural definition: A mental process through which the learner can do something meaningful through the experience that he is going through as it is a cognitive way without using the senses, which is a decision-making method, and is measured by the total degree that the respondent gets by his response to the paragraphs of the intuitive scale of measure prepared in the research Present.

Second: The concept of Mindfulness: (Kettler, 2013) that method or method of thinking that emphasizes the importance of paying attention to the environment in which the individual works and its internal feelings without issuing positive or

negative judgments, as well as the individual when he refuses to pass judgment on an experience as positive or negative , It can display it more realistically and achieve adaptation response. (Kettler, 2013: 85)

Procedural definition: The total score obtained by the respondent through his response to the paragraphs of the mental alertness scale prepared in the present study.

## Chapter II

### First: intuitive thinking

Intuitive thinking represents the conscious reflection of reality in terms of the characteristics, linkages, and objective relationships in which it manifests itself, i.e. a reflection of those topics that are not covered by direct sensory perception and gives the ability to immediately perceive the problem and to solve it quickly without moving from one stage to another. It also requires the use of a small amount of information in order to reach productive convergence solutions, and in this sense it is the cognitive process corresponding to inference. (Razuki and Mohamed, 2018: 175-181),

#### Intuitive thinking characteristics:

Intuitive thinking does not follow precise and specific steps as it tends to make apparent attempts that depend on silent internal awareness of the problem. (Ali, 2006: 9-26) Intuitive thinking is related to creativity, which represents thinking in an open system characterized by production with a unique characteristic: the diversity of the answers produced and that are not determined by information, nor is it related to guessing (it is an analysis of the mind for certain combined reasons and certain circumstances that make it rule On the position of future judgment, and training in it requires frequent thinking). (Judges and Tarturi, 2006: 98), which is closer to optimistic tendency than pessimistic tendency, as they are responsible and emotional control. (Woolfolk, 2007: 55)

#### Second: mental alertness:

Mindfulness is one of the best means of controlling instability and stress, as it keeps a person out of a sense of his loss of control, as well as an increase in his concentration, that is, it indicates a careful examination of the expectations and ongoing thinking of

the individual's reliance on his experiences and the valuation of important things in the context and the identification of new aspects From the context that improves foresight (Masten & Reed, 2002: 26

Mindfulness properties:

It is a free psychological state that occurs when attention is stable and present, without any exceptional attachment to opinions, and mindfulness practices consist in the use of Imaging to observe thoughts, feelings, sensations, and to observe mental awareness and alertness during daily activities. (Carson & Carson, 2004: 471-472), as it is a AwarenessPure that reveals what is happening before or after the event (Rock, 2005: 352), and is characterized by the ability to change the state of mind by changing situations and not stagnating the ordinary, and this means ability Ideas about responses that do not belong to one category or appearance (Brown & Ryan, 2007: 214). Mindfulness, according to Langer's concept, consists of four dimensions: alertness to distinction, openness to newness. Orientation In The Present, Awareness Of Multiple Perspectives. (Langer, 1989: 70).

### Chapter III

In line with the aims of the current research, I have used the descriptive approach, specifically the relational method, because it is appropriate for the methodology of studying relational relationships and describing the phenomenon studied, and the following describes the procedures of the research.

Study community:

The study population consists of students of the third stage / College of Education / Ibn Al-Haytham / University of Baghdad for the academic year (2019-2018), as it reached (500) students.

The research sample:

The current research sample consisted of (400) male and female students from the College of Education / Ibn Al-Haytham / Baghdad University morning study, as that sample was drawn according to the stochastic random method.

Search tools:

First: the measure of intuitive thinking: -

#### Formulation of Intuitive Scale Paragraphs:

The number reached (40) paragraphs, and a quadrant runway was approved to answer the paragraphs starting from (always, often, sometimes, never) and the correction is from (1-4)

#### Validity of paragraphs:

The scale was presented in its preliminary form with instructions to a group of specialized arbitrators to verify apparent honesty, and accordingly the paragraphs were retained.

#### Exploratory experience:

The intuitive measure of scale was applied to a random sample of (40) male and female students, at the rate of (20) students and (20) students, and it was revealed through the application that the instructions are understandable and the paragraphs are clear and the time to answer the paragraphs of the scale ranges between (30 - 40) minutes, i.e. 35 minutes.

#### Statistical analysis of paragraphs:

##### First: Discriminatory Power:

The intuitive scale of measure was applied initially to (400) students who were randomly selected.

For the purpose of conducting the analysis in this way, (27%) of the forms that obtained the highest and lowest scores of (108) forms were identified for each of them, and thus the number of the forms that were subject to the analysis (216) forms and T-Test was applied). All of the paragraphs are distinguished at the level of significance (0, 05) and with a degree of freedom (214).

Second: The relationship of the paragraph with the overall degree of the scale and the domain to which it belongs.

Using the T value of the correlation coefficient indication, it appears that all correlation coefficients are statistically significant at a level (0.05) and with a degree of freedom (398).

#### Psychometric properties of the intuitive scale of thinking:

#### Virtual Honesty: Face Validity

The paragraphs of this scale were presented to a group of experts in the field of education and psychology to express their views on the validity of the paragraphs, according to what they see with the addition, addition and modification of what they deem appropriate and they were placed before each paragraph of the alternatives: (valid, invalid, the proposed amendment).

#### Reliability: Reliability

The stability of the scale was found using the method of internal consistency, as it was applied to a sample of (60) male and female students, and by applying the Alpha Alpha Cronbach equation to the internal consistency, as the stability factor in this method reached (86.0).

#### Second: The Mindfulness Scale: -

Formulation of paragraphs of mental alertness:

Formulated the paragraphs of mental alertness, which numbered (76) items

Validity of paragraphs:

The preliminary image of the tool, which numbered (76) paragraphs, was presented to (12) arbitrators to express their views on the validity of each paragraph of the scale. (61) items out of a total of (76) items.

Preparation of scale instructions:

It was applied to (40) male and female students randomly selected, and it was found that all the paragraphs are understood in terms of meaning and formulation, and it turns out that the average time to answer the scale is (45) minutes.

Scale Correction:

The respondent places a sign () in front of the alternative that suits him and represents his answer to the paragraph and the correction is from (4-1) for the positive response and vice versa for the negative response.

Statistical analysis of paragraphs:

1- Discriminatory Force (style of the two groups of parties):



Paragraph distinction strength was calculated using Pearson to measure the ability to distinguish vertebrae. It was found that all paragraphs are statistically significant except for two paragraphs.

1- Finding the Coherence Coefficient:

It appeared that the paragraphs are statistically significant at the level (05.0)

Psychometric properties of the scale:

Virtual Validity:

Paragraphs of the scale were presented to a committee of arbitrators to judge their authority to measure the attribute or variable to be measured, and to take a percentage of agreement (80%).

Reliability: Reliability

Stability in the consistency coefficient method (Fakronbach) method: The scale was applied to a sample of (40) male and female students, and by applying the Alpha Cronbach equation for internal consistency, as the coefficient of measure of mental alertness measure reached (84.0).

the fourth chapter

The current chapter includes a presentation of the results, their interpretation and discussion in light of the research objectives, as follows:

Intuitive thinking and its relationship to mental alertness for third stage students / College of Education

Presenting and discussing the results:

The first goal: to identify intuitive thinking among students of the third stage / College of Education.

The mean (159.99) was calculated with a standard deviation of (14.70). The theoretical average of the test reached (120), and by applying the t-test for one sample to calculate the significance of the difference between the two averages, it appeared that the calculated T value (39.30) is higher than the tabular T value (1.96) and statistically significant at the level (0.05) and below the degree of freedom ( 199), as shown in Table (1)

Table (1)

Arithmetic mean, standard deviation, and T value of intuitive scale of measure

The results showed that students of the third stage - College of Education enjoy intuitive thinking.

The second goal: to identify the mental alertness of students of the third stage - College of Education.

The mean (219.1) was calculated with a standard deviation of (17.10). The theoretical average of the test reached (177) and by applying the t-test for one sample to calculate the significance of the difference between the two averages, it appeared that the calculated T value (35.10) is higher than the tabular T value (1.96) and statistically significant at the level of (0.05) and below the degree of freedom (199), as shown in Table (2)

Table (2)

| Significance level   | Value table | Value calculate | t Degree free | Hypothetical mean | standard deviation | SMA   | Sample |
|----------------------|-------------|-----------------|---------------|-------------------|--------------------|-------|--------|
| 0.05<br>Significance | 1.96        | 35.10           | 199           | 177               | 17.10              | 219.1 | 200    |

Arithmetic mean, standard deviation, and T value for mental alertness scale

The results showed that students of the third stage / College of Education enjoy mental alertness.

| Significance level   | Value table | Value t calculate | Degree free | Hypothetical mean | standard deviation | SMA    | Sample |
|----------------------|-------------|-------------------|-------------|-------------------|--------------------|--------|--------|
| 0.05<br>Significance | 1.96        | 39.30             | 199         | 120               | 14,70              | 159.99 | 200    |

The third goal: the relationship between intuitive thinking and mental alertness for third-year students / College of Education

The researcher extracted Pearson correlation coefficients between intuitive thinking and mental alertness, reaching 0.54) as shown in Table (3).

Table (3)

The relationship between intuitive thinking and mental alertness for third stage students / College of Education

| Significance level                                | Test t |           | Correlation coefficient value | Sample | Variables          |
|---|--------|-----------|-------------------------------|--------|--------------------|
|   | table  | calculate |                               |        |                    |
| 0.05  | 1.960  | 8,250     | 0,54                          | 400    | Intuitive thinking |
| There is a statistically significant relationship |        |           |                               |        | Mindfulness        |

The results showed that there is a significant relationship between the degrees of intuitive thinking and mental alertness among students

Interpretation of the results:

1- Intuition training consists in forming visions, which are seen as transcending the boundaries of time and space, looking to the future, and realizing what is behind existing things, and these characteristics are the same basic characteristics of mental awakening.

2- The student, when he possesses intuitive thinking, is mindful, and this causes him to pass through an increasing state of epistemic contemplation, or he is present in his body and mind at the present moment, so the world interprets the innovation of new categories and their continuous use without interruption to understand the phenomenon, and the individuals engaged in their behavior accept mindlessness mentally. Actively, instead they respond to the built environment to non-vigilant activity lacking mental alertness in the absence of flexible cognitive processing.

Conclusions:

1- Students of the third stage / College of Education enjoy cognitive skills or mental activity that aims to reach a solution or a conception of simple, straightforward initial solutions without resorting to the analytical steps by which we discover whether these solutions or perceptions are true or false.

2- Students of the third stage / faculty of education enjoy mental awakening, which represents a state of sensory awareness that is distinguished in a different and effective way, which leaves the individual open to the new and sensitive to both context and perspective, and intuitive thinking is also related to mental alertness of students.

Recommendations:

1- Benefiting from the measure of intuitive thinking and mental alertness prepared by the researcher in the current research in order to diagnose these capabilities among students and other segments of society.

2- Training students on both intuitive thinking and mental alertness and developing them with the aim of increasing the use of these capabilities to achieve better results.

Suggestions:

As a complement to the current study, the following is suggested:

1- Conducting a study to measure the correlation between both intuitive and probabilistic thinking.

2- Carrying out a study to measure the correlation between mental alertness and artistic imagination.

Arab and foreign sources:

1- Razuki, Raad Mahdi and Muhammad, Nabil (2018): Thinking and its patterns, Part Seven, University Book House for Publishing and Distribution, Beirut, Lebanon.

2- Ali, Muhammad Jamal. (2006). Thinking. Riyadh: Dar Al-Shibl, Distribution & Printing.

3- Katame, Youssef. (1990). Children's thinking, development and teaching methods, Oman: Eligibility for publication and distribution.

- 2- Brown, K and Ryan, R (2007): Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological inquiry*. Vol:18.
- 3- Carson, W and Carson, E (2004): Mindfulness based relationship enhancement, *Journal of behavior therapy*. Vol: 35.
- 4- Jain S, Shapiro SL, Swanick S, Roesch SC, Mills PM, Bell I, Schwartz GER. A (2007): randomized controlled trial of mindfulness meditation versus relaxation training: Effects on distress, positive states of mind, rumination, and distraction. *Annals of Behavioral Medicine*.
- 5- Kettler, K. M. (2013). Mindfulness and cardiovascular risk in college student, New York. *The Eagle Feather*, 10 (5).
- 6- Langer, E (1989): *Mindfulness*. New York, Addison Wesley Publishing.
- 7- Masten, A.S., & Reed, M.J. (2002): Resilience in development. In Snyder, C.R., & Lopez, S.J.(Eds), *Hanbook of Positive Psychology*, New York: Wiley.
- 8- Perkins, DN & Richhart, R. (2000) Mindfulness has also been found to enhance flexible and critical thinking skills. *Journal of Social Issues*, 56 ,1.
- 9- Rock, E (2005): *Mindfulness meditation*. *Consciousness and Cognition*.
- 10- Weinstein, N., Brown, K.W., & Ryan, R.M. (2009): A multimethod examination of the effects of mindfulness on stress attribution, coping, and emotional well-being.
- 11- Woolfolk, A. (2007). *Educational psychology* (10th edition). Boston: Pearson.