COGNITIVE COMPETENCE AMONG INTERMEDIATE SCHOOL TEACHERS

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Abstract

The cognitive competence of individuals appears in the form of an increase in awareness in mental and emotional states compared to others, as the individual possesses cognitive competence and is more capable of solving problems by using methods to enhance their ability to communicate with individuals who do not possess cognitive competence, as well as the ability to carry out educational activity. It is based on a set of facts, concepts, generalizations and principles and becomes clear through educational behavior that reaches the level of skill, as the pressures faced by male and female teachers that affect their cognitive competence, as male and female teachers with little experience in teaching suffer from the pressures resulting from their practice of the profession as they strive.

They put a lot of effort into reading, understanding and analyzing the material and how to prepare it, then thinking about how to deliver it to the students. In addition, they may face some problems during the course of the lesson. Professional pressures are one of the most important obstacles that a teacher may face in his field of work, due to the interference and multiplicity of tasks and modern learning methods.

Hence, the teacher's efficiency is affected by several things that affect the performance of his work tasks and lead to a decline in the level of his professional performance as a result of several pressures that the teacher is exposed to, whether in his personal or professional life, which affect the performance of his tasks.

Therefore, it is necessary to provide teachers with a set of competencies to be effective in their positions by providing them with Information and skills especially needed to help cope with stress. Research objectives: The current research aims to know:

How cognitive competence is used among teachers in intermediate schools? The research sample consisted of (400) male and female teachers who were selected by a stratified random method and in an equal manner, with (200) males and (200) females. To achieve the objective of the research, the researcher prepared a measure of cognitive competence according to the theory of (Lezak, 2012), which consisted of (24) items, divided into five areas.

The researcher verified the psychometric properties of the two scales and applied them to the research sample, and used statistical methods, the t-test for one sample, the t-test for two independent samples, and the Pearson correlation coefficient.

The results of the research reached the following:

1. Male and female teachers have cognitive competence.
2. There are no statistically significant differences in the relationship according to the gender variable (males, females).

Research problem

The school is an essential element in the structure of society, as it is considered one of the basic centers of science and knowledge, where ideas are presented, opinions are exchanged between teacher and student, and principles and values are transcended (Al-Zaidi, 2000: 207).

Despite the vital role played by educational institutions, they still suffer from many problems that in turn affect the effectiveness of education, a decrease in the quality of the institution, and an increase in the teaching load on the teacher, which leads to a decrease in student achievement in general and its impact is reflected on education in the educational institution as a whole (Kayrooz &prtestou, 2002: 357).In order for educational institutions to be able to play a leadership role in society, it is necessary to rely on the teaching bodies and their workers because they are the main element in the educational process, knowing that the success and progress of any institution depends primarily on what that institution provides of highly qualified members of the teaching staff (Tanash, 1994: 108).

The current problem is not represented by teachers' possession of mental abilities and potentials, as each of us possesses abilities and potentials, but the problem appears in the inability to invest in these capabilities, benefit from them, and efficiently employ them in their fields of work. Cognitive competence is represented by teachers' possession of a set of skills and knowledge to employ in their field of work He should keep pace with the developments taking place, and as a result of the circumstances that teachers in Iraq live in and the conflicts that he experiences, this has led to a difference in his personal makeup, as he feels a sense of frustration, alienation, and loss, and all of these create a feeling of distress and anxiety, so what if the same conditions that he is exposed to continue until now The result leads to a decrease in his cognitive efficiency (Al-Kinani, 2015: 3).

Among the studies that indicate the weakness and decline of efficiency in our educational system, such as the study of Al-Zayat (2010), Bashio (2014), and the study of Al-Fajal (2016), which confirm the phenomenon of not dealing with cognitive mental activity at its highest cognitive levels, not stimulating it mentally and cognitively, and even dropping its level of arousal to the lowest cognitive levels.

Under modeling Routine questions, problems, and mathematical problems benefit the mental and cognitive activity of the teacher. This reflects the weakness of knowledge acquisition, its poor representation and processing, and the failure to derive new cognitive units and structures that can be employed and used productively and effectively as desired.

There are also many problems that a teacher may face, which cause him psychological pressure, which leads to job dissatisfaction, weak job commitment, hatred of the school work environment, and inability to make the appropriate decision, which negatively affects work efficiency (Abu Mughli et al., 2002: 54).

Research Importance

The concept of efficiency appears in the field of education through the problem of productivity that it contains, that is, about the type of results expected to be achieved by performing a specific performance. It also talks about the value of the effort that must be made to achieve those results,

as well as the relationship between the development of knowledge and the amount of effort expected to achieve this development.

Efficiency is measured by the extent to which the dynamics of the teacher's strategies, his scientific techniques, and the extent to which he chooses and uses the skills that allow him to achieve the lowest levels of difference between the expected return and the achieved return (Bou Allaq, 2004: 20-29).

Teachers realize their cognitive competence in relation to their academic performance in multiple ways. Teachers who have a high awareness of their academic competence face challenging tasks, exert great effort, show low levels of anxiety, show flexibility in learning strategies, and show high accuracy in their self-evaluation of their academic performance and motivation High internal attitude towards the work they do (Bandura, et al, 1992:87).

Schunk (2003) confirms that individuals with high cognitive competence believe that they have the ability to complete the tasks presented to them successfully and effectively, while individuals with low cognitive competence tend, when faced with certain tasks, to give up easily and become lazy, and thus perform these educational tasks with poor and poor performance. Sometimes this leads to it being left idle (Schunk, 2003:43).Therefore, competence helps the teacher face the educational problems that he may encounter during his work, adapt to them, and employ this knowledge in his daily life. It also helps him solve educational problems by accomplishing the tasks he intends to achieve (Gharib, 2003: 60).

Cognitive competence helps control the teacher's thoughts by organizing the process of cognitive mental representations sequentially or simultaneously through cognitive mental processes so that the teacher obtains a high degree of differentiation and integration through processing and processing processes, whether quantitative, verbal, spatial, or a combination of all of them (Al-Zayat,1995: 65).Cognitive competence also contributes significantly to cognitive growth that leads to success in performing work, and this is what Bandura (2000) confirmed.

Individuals with high cognitive competence make a high effort and demonstrate high perseverance and cognitive flexibility in the face of different educational situations. He believes that the individual's beliefs about his capabilities And his ability To perform certain tasks are strong determinants of his level of achievement (Bandura, 2000: 67).Several studies confirm that cognitive competence is not only linked to high levels of task completion, but also to many adaptive academic outcomes, such as high levels of perseverance and increased persistence in performing difficult and complex tasks (Schluter, 2001: 67).

Research objectives:

The current research aims to know:

Cognitive competence among teachers in intermediate schools

Define terms

Known as cognitive competence;

 -lezak, 2012

It is the cognitive functions that include the processes through which the individual can pay attention, perceive, memorize, store, and use information. It also includes the process of awareness and language skill (Lezak, 2012:5).

Cognitive competence Cognitive competence is one of the widely accepted terms in modern knowledge societies that witness economic and social prosperity for individuals and societies, as well as countries that attempt to develop and keep pace with modern developments. Cognitive competence represents the enjoyment of an innate ability to do a specific job and at a specific level, and it includes competence Cognitive perception, practical skills, attitudes, emotions, values and motivations (Rychen & Salganig, 2001).

Competence is considered to be: a multi-faceted construct that includes cognitive ability, which includes understanding the fact that individuals differ and their perceptions about the same information, whether this information has social, cognitive, scientific, or mathematical aspects. It also includes the individual's ability to coordinate the viewpoints of others and events from the viewpoint of others, accept them.

Selman, (2003) states that The cognitive competence of individuals appears in the form of an increase in awareness in mental and emotional states compared to others, as the individual who possesses cognitive competence is more capable of solving problems by using methods that enhance their ability to communicate with individuals who do not possess cognitive competence, as well as the ability to carry out the activity. Educationalist is based on a set of facts, concepts, generalizations and principles and becomes clear through educational behavior that reaches the level of skill (Nashwan and Al-Shawan, 1990: 101).

The term cognitive competence is considered a pivotal term for the process of remembering in practice in the field of education. Contemporary educational literature is also full of many definitions that single out the concept of cognitive competence. Despite their multiplicity and diversity, they almost all agree that competence is not an isolated concept, but rather that it is associated with the concept of achievement that It cannot be described as a mere application of acquired abilities, skills, and competencies. Rather, it is the use of knowledge and the transfer of creativity.

Therefore, its nature is comprehensive, and it is based on a readiness acquired by the individual, which ends with him the ability to perform educational activities or perform tasks in an effective manner (Phillipcarre, 1994). If we focus on the concept of competence in the field of learning We can It is said that competence in this field is united in the ability to produce, as it is the individual's ability to use an organized set of theoretical knowledge and skill knowledge to take a position and decisions that allow him to carry out a set of tasks (Boulaq, 2006: 93).

Cognitive competence takes two forms
1.Cognitive competence in its latent form is the concept of Conceot, which is the ability to do work.
 2. Cognitive competence in its apparent form is a process, which is the actual performance of the work.

Cognitive competence is linked to:

1. The learner's targeted performance and tasks that he is entrusted with achieving.

2. Ability to perform tasks.

3. The performance that should be performed.

4. The information, knowledge, concepts and skills necessary for this performance.

5. Standards by which actual performance is measured (Al-Naqa, 1997: 10).

-LASIK theory (LEAZK, 2012), which explained cognitive competence

Cognitive Functions;

The presence and absence of cognitive abilities are functional characteristics of the individual that are not directly observed but are inferred from behavior and other indicators. All behaviors are determined, including the performance of neuropsychological testing an individual's failure in the abstract thinking test may not be due to a specific weakness in the concept of thinking, but rather to attention disorder, verbal inability, or the inability to distinguish between test stimuli. (Abigail B. Sivan and Arthur L. Benton, 1999).

The four main categories of cognitive functions, whose procedures are similar to computer programming, storage and processing (such as sorting, collecting, and linking data in various ways), and output, include:

Receptive functions:

1. The ability to select, obtain, classify and integrate information.

2. Memory and learning refers to storing and retrieving information.

3. Thinking concerns the mind, organizing and reorganizing information.

4. Expressive functions are the means through which information is communicated or acted upon. Each function includes many separate activities - such as color recognition or immediate memory for spoken words, although each function constitutes a distinct class of behaviors and usually more than one procedure operates simultaneously and in close interconnection. Despite the apparent ease with which categories of cognitive functions can be conceptually distinguished in more than just interconnections, they are inseparably linked to each other - that is, to different aspects of brain activity. For example, A.R. Damasio and Tranel (1990) describe memory: it Information storage and retrieval for recognition components Visual Just as we note the seemingly simple role that thinking (concept formation) plays in naming a visual stimulus, practical and theoretical applications take advantage of our ability to distinguish between these different components of behavior.

Classes of Cognitive Function The entry of information through receptive functions into the central processing system begins from sensory stimulation, i.e. sensation, through perception, which involves integrating sensory impressions into psychologically meaningful data and then into memory. Thus, for example, light on the retina creates a visual sensation. Perception involves encoding signals, which is transmitted from the path of the stimulated retina to a shape. The perception of sensations also depends greatly on attentional factors.

(Meado, 2001, Ray et al, 2001and Allison, et al 2002) Neuropsychological research focuses primarily on the five traditional senses: sight, hearing, touch, taste, and smell, and is consistent with their importance in perceiving the world, just as sight and hearing have gained a great deal Of interest, perception involves the active processing of a continuous flow of sensations as well as their inhibition or filtering from consciousness. This treatment includes many successive and interactive stages.

The simplest physical or sensory characteristics Such as color or shape come first in processing, sequencing and acting as the basis for the more complex "higher" levels of processing that integrate sensory stimuli with each other and with previous experience. Normal perception in the living organism is a complex process that involves many different aspects of brain function (2002). Lowel and singer; 2000, goodale; Coslett and Saffron (1992) state that cognitive functions include activities such as awareness, recognition, discrimination, modeling, and orientation.

Poor cognitive integration appears as disturbances in recognition known as "agnosias" (non-knowledge).

Memory

If we wanted to describe one component as being better and more wonderful than others, then memory is the one that deserves that description. The disparity in memory between speed, strength, and ability to connect things has a stronger effect than the ability of intelligence, as our ability to remember and forget is what determines the impact of past experiences on us. (Jane Austen Mansfield Park, (1814, 1961), where memory, being the ability to remember, learn, and deliberately access stores of knowledge, is the center of all cognitive functions, and perhaps what distinguishes a person in terms of personality, behavior, and the ability to remember in the future, including using memory to "travel through time" to.

The future to imagine what will happen to us in time in the future to plan future activities (memory frees the individual from reliance on physiological impulses or circumstantial coincidence to seek pleasure; Terror and despair do not occur in the vacuum of isolated memory. A severely impaired memory prevents individuals from communicating with the world, and even a less to moderately impaired memory can have it a very confusing effect on communicating with people.

Different memory systems

Memory is classified as operating in terms of two systems of long-term storage and retrieval: the explicit memory system, which deals with facts and events and is available to consciousness, and the implicit memory system, which is the subconscious.

(Milner, Squire, and Kandelsquire, 1998) Depending on the individual's perspective, the number of memory systems or types of memory varies from a clinical perspective, as Mayes (2000) divided into semantic memory (memory of facts), episodic memory (autobiographical memory), implicit memory of the individual, and procedural memory. (Baddeley, 2002) as it was done He proposed many divisions and sub classifications of memory systems (B. Milner, 1998) Salmonandsquier, 2009) and (Endel Tulving, 2002) found no less than (134) different types of memory.

Declarative explicit memory Most memory research and theories have focused on the ability to recognize information and remember objects and events for all purposes. This is the type of memory that students may refer to when complaining of memory problems and which teachers deal with in most educational activities. It is "memory" in common language and has been described as "mental ability."

To retain and revive impressions or recognize previous experiences and the fact of retaining mental impressions (Gstein, 1966)) and as such always requires awareness. Dimitrak and colleagues (1992) referred to this as "explicit memory," where memory involves the process of "conscious and dependent recollection." Thus, explicit memory refers to information that can be brought to mind and examined logically (Dimitrack and colleagues, 1992, p. 60).

Stages of Memory Processing

Despite the many theories about stages or levels of processing for clinical purposes, the two-stage model of explicit memory provides an appropriate framework for describing and understanding memory:

Sensory memory:

It stores large amounts of incoming information for a short period (within seconds) in the sensory store. It is a selection and recording process through which perceptions enter the memory system. The stimulus can be a fleeting visual image or an auditory stimulus that works to process the early stage of memory (perceptual readiness and response). Components are grounded Perception depends on attention and plays an essential role in the recording process, and the information that is recorded is processed as short-term memory or quickly fades into temporary memory (Markowitsch, 2000).

a. Temporary or short-term memory: Information remains temporarily preserved from the recording process, while it can be theoretically distinguished from attention in the practice of short-term memory and can be equivalent to the simple immediate attention span (2002, Howieson and Lezak; 2000, Baddeley). "Immediate memory" works as a store of Limited capacity of information It is transferred to permanent **storage**

Expressive functions

Expressive functions, such as speaking, drawing, writing, manipulating, physical gestures, and facial expressions or movements, constitute the sum of observable behavior. Through it, mental activity is inferred, such as apraxia, and disorders of purposeful expressive functions are known as (Apraxic) (no action). Apraxic usually involves a weakness in acquired voluntary actions despite the efficiency of the motor nerves of the muscles for appropriate sensory coordination for complex actions performed without conscious intention. For example, expressing words, spontaneous expressions are clearly isolated when they are voluntary. Speech is blocked when intentional hand movements and adequate understanding of the elements and goals of the activity cannot be achieved.

Given the complexity of the targeted activity.

It is not surprising that apraxia occurs with disruption of pathways at different stages (initiation, localization, coordination, and sequencing of motor components) in the development of an act or sequential action (Heilman and Rothy, 2011).

Thinking

Reasoning can be defined as any mental process that links two or more pieces of information explicitly (as in performing a calculation) or implicitly (as in judging that this is bad for that) (Foster, 2003).

A group of complex cognitive functions fall under the headings of thinking, such as calculation, reasoning, judgment, concept formation, abstraction, and generalization. Organization, planning, and problem solving overlap with executive functions. The nature of the information that is processed mentally (such as numbers, design concepts, and words) and the process that is performed (compare, synthesize, summarize, arrange) defines the category of thinking. Thus, "verbal thinking" includes many processes that are carried out with words. It generally includes arranging, comparing, and extending ideas.

Spatial starch the concept of "higher" "lower" mental processes with the ancient Greek philosophers4. Consciousness: Defining the concept of consciousness has eluded a universally accepted definition (R.Carter, Dennett, 1991), and it is therefore not surprising that efforts to determine its neural substrate are still at the hypothesis-making stage. Consciousness generally relates to the level at which an organism is receptive to stimulation or awake.

The word "consciousness" is often used. To refer to self-awareness the surrounding environment in this sense can be confused with "attention" to maintain a clear distinction between "conscious5. Orientation It is self-awareness in relation to one's surroundings and requires consistency and reliability to integrate attention, perception and memory. Weak perceptual or memory functions can lead to deficiencies in directions. Reliance on the integration of many different mental activities makes directions highly vulnerable to brain disorders. The disadvantages of directions are the most common symptoms of brain diseases include poor awareness of time and place, which is the most common. (Leazk, 2012).

The researcher adopted the theory of Leazk (2012) because she relied on it in constructing a measure of cognitive competence and interpreting the results.

Studies Dealing With Cognitive Competence

The researcher was not able to obtain previous Iraqi or Arab studies that dealt with cognitive competence, to the best of the researcher's knowledge.

The foreign studies were on samples of children and school students, which is why the researcher decided not to mention them the descriptive approach was used because it is the most appropriate method for studying the correlational relationships between variables. The descriptive correlational approach is one of the methods of scientific research that depends on studying reality or the phenomenon as it is, describing it accurately, and expressing it quantitatively and qualitatively. The quantitative expression gives us a numerical description that shows the amount or size of this phenomenon And the degrees of its connection with other phenomena, while the

qualitative expression describes the phenomenon to us and explains its characteristics (Obaidat et al., 1998: 271).

Research population

It means all the individuals, things, or people who are the subject of the research problem, and they are all the elements related to the study problem to which the researcher seeks to generalize the results of the study (Abbas et al., 2009: 217).

The current research population consists of teachers present in (301) middle and secondary schools affiliated with the Baghdad Education Directorate (Rusafa II), numbering (8071) teachers and annex (1) school, with (3747) teachers and (4324) schools for the academic year (2020-2021). Table (1) shows this.

Table (1) Research community

Number of schools, males and females, total

8071 4324 3747 301

Research sample:

The sample means a part of society that has characteristics and specifications, and that is part of society and represents society fully in all its parts (Al-Jabri, 2011: 245). (18) schools were chosen, at a rate of approximately (6%), in a random manner. From them, (400) teachers and schools were chosen, at a rate of (Approximately 5%) of the research population using the stratified random method The ratio is equal to (200) males, including (200) females, which is the same as the statistical analysis, and Table (2) shows this;

Table (2) Research sample

Total	Female	Male	Schools	T
23	23		Amna Bint Wahab Preparatory School for Girls	1
25		25	Al-Morouj Preparatory School for Boys	2
25	25		Umm Al-Qura Preparatory School for Girls	3
25		25	Shafaq Al Nour Preparatory School for Boys	4
20		20	Abi Ubaida Preparatory School for Boys	5
30		30	Batal Khaybar Preparatory School for Boys	6
15	15		Amna Al-Sadr Preparatory School for Girls	7
30	30		Al-Ibtihal High School for Girls	8
20		20	Khatam al-Nabiyyin Secondary School for Boys	9
25	25		Al-Fidaa High School for Girls	10

20		20	Al-Najah Secondary School for Boys	11
15	15		Al-Samoud Girls High School	12
20		20	Al-Khwarizmi Secondary School for Boys	13
20		20	Al-Makareem Secondary School for Boys	14
20		20	Al-Rowad Secondary School for Boys	15
20	20		Jawharat Baghdad High School for Girls	16
22	22		Al-E'timad Secondary School for Girls	17
25	25		Seville Evening High School for Girls	18
400	200	200	Total	

Cognitive efficiency

The researcher followed the following procedures in preparing the cognitive competence scale

1.Planning for scale

The concept of cognitive competence was defined by the definition of Lezak, 2012, which states (it is the cognitive functions that include the processes through which the individual can pay attention, perceive, memorize, store, and use information. It also includes the process of awareness and language skill.

-The researcher relied on the theory of (Lezak, 2012) as a theoretical framework to prepare the scale.

-Review the scales of previous studies, such as the Pearson scale (2011).

-Identifying the areas of the cognitive competency scale through **Definition and Theoretical Framework:**

1. Awareness: a cognitive process for an individual's understanding of his own performance and the performance of others when interacting with physical objects and people. Its number of paragraphs is (7).

2. Attention: The individual's willingness to focus on a specific sensory modality while not paying attention to other stimuli and the number of its paragraphs (4).

3. Visual perception: the individual's ability to recognize and discover things through the senses, process them mentally, link them to previous experiences, and give them their various cognitive meanings and connotations, and the number of its paragraphs (4).

4. Memory: It is the process of preserving, encoding, and organizing information for retrieval and use at different times. Its number is (6).

5. Language skill: the ability to understand language and access memory connotations to identify things with a specific name and respond to verbal instructions and behavioral actions. The number of its paragraphs is (5).

 -Determining the answer alternatives by relying on the five-point Likert scale method in the answer alternatives on the scale, which are:

(Always applies to me, often applies to me, sometimes applies to me, rarely applies to me, never applies to me) and with weights of (1-5) degrees.

Preparing the scale items in their initial forms

•The researcher drafted paragraphs covering the areas of cognitive competence that were identified according to the adopted theory. The researcher was able to prepare (26) paragraphs in their initial form distributed among the five domains: the first domain is awareness and the number of its paragraphs (7), the second domain is attention and the number of its paragraphs (4), and the third domain is perception. Al-Basri, the number of its paragraphs (4), and the scope The fourth is memory, the number of its paragraphs is (6), and the fifth is language skill, and the number of its paragraphs is (5), Appendix (2).

The following was taken into account when drafting the paragraphs :Simplicity and lack of ambiguity

•Each paragraph should measure only one idea, and not use negative wording so as not to confuse the respondent•

•It should be clear and short

•Preparing standard instructions

•Objectivity and the possibility of tabulating answers

•Avoid intrusive questions that cause embarrassment to the respondent

•Stay away from questions that require a strong memory and intellectual effort to answer (Cronbach, 1970: 70).

•Validity of items (face validity)

This method relies on polling the opinions of the arbitrators to judge the extent of the relationship of each item of the scale to the ability or trait to be measured (Abdul Rahman, 2008: 201). The researcher verified the validity of the items of the scale by presenting them in their initial form in Appendix (2), which numbered (26) items on A group of arbitrators and specialists in educational sciences The number of arbitrators reached (10) in Appendix (3). To issue a judgment on the validity of the items and their suitability for the field to which they belong, the researcher adopted an agreement rate of (80%) or more in order for the paragraph to be valid and to be maintained in the scale. In light of this percentage, the arbitrators' answers were analyzed and the It was agreed to keep all paragraphs, as agreed by the arbitrators. Although the five-point scale remains valid for correction, Table 3 shows this;

Table (3) Percentage of arbitrators' agreement on the items of the cognitive competence scale

Agreed ratio	Dissenting arbitrators No.	Approving arbitrators No	Para.No.	fields
100٪	-	10	7 ،6 ،5 ،4 ،3 ،2 ،1	Awareness
100٪	-	10	4 ،3 ،2 ،1	Attention
100٪	-	10	4 ،3 ،2 ،1	Visual Perception
100٪	-	10	6 ،5 ،4 ،3 ،2 ،1	Memory
100٪	-	10	5 ،4 ،3 ،2 ،1	Language Skill

Exploratory experience: For the purpose of identifying the clarity of the scale's items and instructions and identifying the difficulties that the respondent may face, the researcher applied the scale to a sample of (50) teachers and schools selected randomly from (8) schools distributed according to type. Table (4) shows this, after completing the application and reviewing it. The answers turned out to be that the scale items and instructions were clear for teachers, the time taken to answer the scale items ranges between (15-25) minutes. **Table (4) shows this.**

Table (4): Sample clarity of scale instructions

Total	Type		Name of school	Seq.
	Female	Male		
6	6		Al-Amal Secondary School for Girls	1
6		6	Iraq High School for Boys	2
6	6		Al Khansaa Girls Secondary School	3
6		6	Abdullah bin Abbas Secondary School for Boys	4
6	6		Al-Rataj Girls High School	5
7		7	Marouf Al-Rusafi Secondary School for Boys	6
7	7		Al-Sajood Secondary School for Girls	7
6		6	Al-Farouk Secondary School for Boys	8
50	25	25	Total	

Statistical analysis of the scale items (cognitive competence):

The characteristics of the scale depend to a large extent on the standard characteristics of the scale items. The higher the standard characteristics of the items in their scores or strength, the more

they give an indication of the accuracy of the scale and its ability to measure what it was set out to measure (Eliss, 1976: 189).

Ebell points out that the goal of statistical analysis of items is to keep good items in the scale that reveal accuracy in measuring what they were designed to measure (Ebell, 1972: 392).

Based on what was mentioned, the researcher followed the following **Steps to Analyze The Items Statistically**

Statistical Analysis; Anastasi (1976) believes that the best number to be chosen to conduct statistical analysis is no less than (400) individuals, because this number gives the best variation between individuals, which leads to the emergence of the best possible differentiation (Anastasi, 1976: 209). For the sake of statistical analysis For the scale, the scale was applied to the statistical analysis sample consisting of (400) a middle and high school teachers from the original research community.

The discriminatory power of the items of the (cognitive competence) scale: The goal of conducting the analysis of the items statistically is to extract the discriminatory power of the items and keep the good distinctive items in the scale (Ebell, 1972: 555). One of the important conditions for the items is that these items are characterized by discriminatory power between individuals with high scores and individuals with low scores in the trait. Or the desired feature Measure it (Gronlund, 1981: 253)To calculate the discriminatory power of the cognitive competence scale items, the researcher used the two extreme groups method, as shown in Table (5), by applying the scale items to the statistical analysis sample of (400) teachers and schools, Table (2).

To correct the answers, the researcher followed the following steps:

1. Determine the total score for each cognitive competence scale questionnaire.

2. The grades were arranged in descending order from the highest grade to the lowest grade.

3.The two extreme groups in the total score were identified by (27%) for the high group, and the scores of the high group members ranged between (124-114). The percentage of (27%) of the lower group is between (96-51), and the number of individuals reached (108) in the upper group and (108) in the lower group, meaning a total of (216) individuals.

4. Using the T-test for two equal independent groups, the significance of the differences between the average scores of the lower and higher groups was determined by comparing the T-value calculated for each item of the cognitive efficiency scale with the tabular value. It was found that the differences are statistically significant at the significance level (0.05) and the calculated value is higher thanThe tabular value is (96.1) and the degree of freedom is (214), except for paragraphs

(1.5) of the first domain. Table (5) shows this. Thus, the scale finally consists of (24) items distributed among the domains, Appendix (4). Table (5)

Internal homogeneity;

The relationship of the item score to the total score of the scale. Accordingly, this type of validity is one of the methods used in calculating the consistency of the scale, as Anastasia confirms that the internal consistency of the scale resulting from the relationship of the item to the field or the overall score is that it basically measures homogeneity and determines the characteristics of the behavioral field or trait to be measured, and that the degree of consistency of the test is related to the degree of validity of the construct (Faraj , 2007: 285). In light of this, the Pearson correlation coefficient was calculated to extract the correlation between each item and the total score of (400) questionnaires. The results showed that all correlation coefficients are statistically significant when compared to the tabular value (0.098) at the (05.0) level and the degree of freedom (398). Table (6) shows this.

Table (6) Correlation coefficients of the item score with the total score of the cognitive competence scal

indication	Correlation coefficient value	Paragraph	Function	Correlation coefficient value	Paragraph
Function	60,0	13	Function	42,0	1
Function	58,0	14	Function	47,0	2
Function	66,0	15	Function	62,0	3
Function	39,0	16	Function	58,0	4
Function	27,0	17	Function	24,0	5
Function	40,0	18	Function	38,0	6
Function	26,0	19	Function	29,0	7
Function	46,0	20	Function	39,0	8
Function	42,0	21	Function	21,0	9
Function	47,0	22	Function	40,0	10
Function	43,0	23	Function	67,0	11
Function	50,0	24	Functio	35,0	12

B. The relationship of the paragraph to the field to which it belongs: The researcher used the Pearson correlation coefficient to find the correlation between each item and the total score of the field to which it belongs. The correlation coefficients all showed statistically significant when compared to the tabular value of (0.098) at the level of (05.0) and the degree of freedom (398) and Table (7) explains that.

Table (7): The correlation coefficient for each item and the field to which it belongs

indication	Correlation value	the field	Paragraph	Significance level	Correlation value	the field	Paragraph
Function	53,0		14	Function	76,0		1
Function	59,0		15	Function	69,0	Awareness	2
Function	59,0	memory	16	Function	81,0		3
Function	58,0		17	Function	78,0		4
Function	66,0		18	Function	16,0		5
Function	52,0		19	Function	66,0		6
Function	75,0		20	Function	59,0	Attention	7
Function	29,0	The skill the language	21	Function	33,0		8
Function	75,0		22	Function	28,0		9
Function	61,0		23	Function	55,0	Visual perception	10
Function	78,0		24	Function	74,0		11
				Function	38,0		12
				Functio	69,0		13

C. The relationship of the field to other fields: To achieve this, the Pearson Correlation Coefficient was used to find the internal correlations between each domain and the other domains of the Occupational Stress Scale. It became clear that all of the correlation coefficients are statistically significant because they are greater than the critical value of (0.098) at the significance level of (05.0) and the degree Freedom (214), and Table (8) explains that.

Table (8)

Correlation coefficients of the domain score with other domains of the cognitive competence scale

Cognitive competence	Language skill	memory	Visual perception	Attention	Awareness	the field
70,0	27,0	36,0	40,0	34,0	1	Awareness
60,0	31,0	32,0	41,0	1	-	Attention
79,0	59,0	52,0	1	-	-	Visual perception
78,0	55,0	1	-	-	-	memory
74,0	1	-	-	-	-	Language skill

Alfa Cronbach equation:

The Vacronbach equation is the most common equation in calculating the reliability coefficient because it shows the strength of the association between the scale items, as well as it gives

evidence of the accuracy of the scale and is also called (the internal consistency coefficient) (Odeh and Al-Khalili, 1988: 355).

The Vacronbach equation was applied to the statistical analysis sample of (400), so the value of the Vacronbach reliability coefficient reached (80.0), and this value is a good indicator of the scale.

Descriptive statistical indicators for the cognitive efficiency scale:

The researcher extracted the descriptive characteristics of the scale using the Social Sciences Survey (SPSS), as shown in Table (9).

Table (9): Statistical indicators for the cognitive efficiency scale

its value	Descriptive statistical characteristics:	T
79,59	Mean	1
62	Median	2
68	Mode	3
03,13	Std.Dev	4
46,-0	Skewness	5
56,-0	Kurtosis	6
27	Minimum	7
87	Maximum	8
60	Term	9

Normal distribution of the sample on the cognitive efficiency scale:

After extracting the psychometric properties of the cognitive efficiency scale, it became clear that the sample is normally distributed on the cognitive efficiency scale, and Figure (3) shows this.
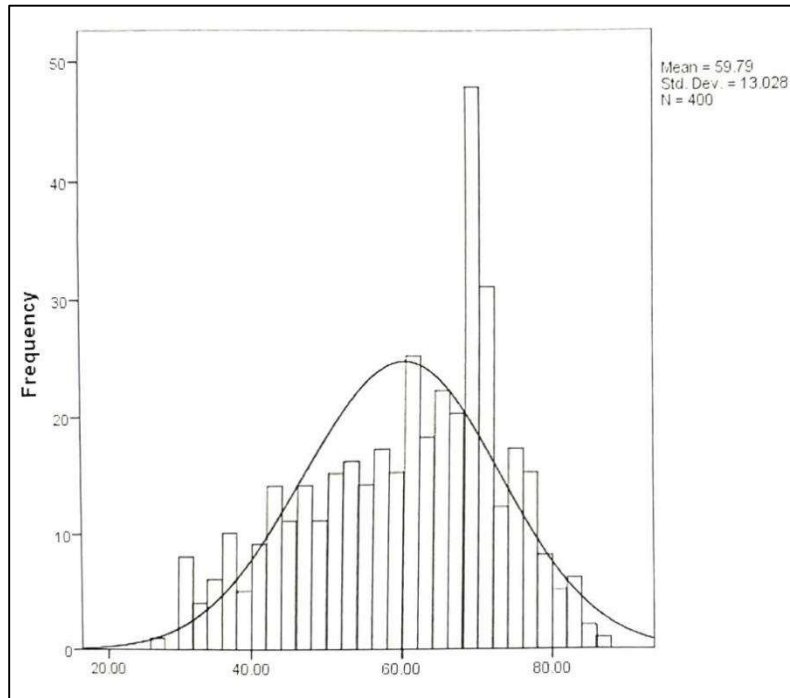

Figure (2) Distribution of scores of individuals in the research sample on the cognitive competence scale

The final version of the cognitive efficiency scale:

The scale now consists of (24) items in its final form distributed over (5) domains. The awareness domain consists of (5) items, the attention domain consists of (4) items, the visual perception domain consists of (4) items, the memory domain consists of (6) items, and the language skill domain It consists of (5) paragraphs, with answer alternatives (always applies to me, often applies to me, sometimes applies to me, Applies to me rarely, never applies to me) Appendix (4) and to degrees (1-5) respectively, Appendix (2)The highest score for the respondent is (120), the lowest score is (24), and the hypothetical average is (72).

The first objective: Identify the cognitive competence of teachers in middle schools

To achieve this goal, the researcher applied the cognitive competence measure to members of the research sample, which numbered (400) teachers. The results showed that the current average for the research sample reached (79،59) degrees, with a standard deviation of (03،13) degrees, and when this average is balanced with the hypothesized average. For the scale, the score was (72) and after testing the significance of the difference Between the two means and using the t-test for one sample, it was found that the difference was statistically significant, as the calculated t-value

was (74.18), which is greater than the tabulated t-value of (96ٕ1) with a degree of freedom (399) and a significance level of (05ٕ0). Table (16) shows this

Table (16)
One-sample t-test on the cognitive efficiency scale

Sample average	Sample average	Sample average	Sample average	Sample average	Sample average	Sample average	Sample average
دال	399	1ٕ96	18ٕ74	72	13ٕ03	59ٕ79	400

Table (16) indicates that teachers have cognitive competence, and the researcher attributes this to their having a good cognitive structure as a result of the knowledge and experiences they gain through their studies, their pursuit of knowledge, the development of their cognitive and academic abilities and skills, and their participation in training workshops, which makes them enjoy a good cognitive structure, which in turn is considered specific for cognitive competence, thus, the cognitive outcomes of teachers, which are considered a function of his cognitive competence, may be observed by the results of his students, the extent of their understanding, and his ability to achieve goals and solve the problems they face, according to LASIK theory, that cognitive competence is functional characteristics of the individual that are not directly observed, but are inferred from behavior and other indicators. All behaviors including the performance of neuropsychological testing are identified as executive functions as those abilities that enable a person to successfully engage in independent, purposeful, self-directed, and self-serving behavior.

Recommendations

Holding training courses and scientific and cultural seminars that include guidance and educational guidance, provided that the course staff are qualified and experienced personnel who are able to provide psychological and guidance services to educational staff in order to increase their cognitive competence.

Suggestions

Conducting other studies address the relationship of cognitive competence to other variables such as personal traits and psychological needs.

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