



مجلة علوم



# ذوى الاحتياجات الخاصة

## **Psychometric Efficiency of The Arabic Narrative scale for children from 6 - 10 years**

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sciences and human behavior. It is a systematic study based on scientific foundations that is important in making decisions related to the individual and society. It aims at understanding human behavior and explaining factors leading to those behaviors in order to predict future behaviors of the individual and the group. It has the purpose of trying to control those behaviors and the factors, as well as the variables that led to the emergence of those behaviors.

The community is used to supervise researchers and measure their adjustment to the surrounding social environment, which they belong to. Hence, this made it necessary to pay attention to the testing methods related to the individual's linguistic behavior, as it may affect mental and cognitive processes. Bishop et al. (2017) confirmed that language acquisition difficulties are among the first signs and indicators that have been observed on the individuals who lack the development of cognitive mental abilities.

Language has a major importance and great effect on the lives of humans, as it is used in speaking, thinking, teaching, entertaining, asking for help, expressing feelings and emotions, and exchanging information and knowledge. Language is the human activity that represents internal processes of the individual and reflects his experiences and ideas. Thinking requires symbols that carry meaning,

**Abstract:**

*The current research aimed to provide a descriptive diagnostic tool that contributes to determining the child's ability to tell a story, and the ability to explain using clear language the child's life situations. This research focused on primary school children from 6-10 years old, both for children with average abilities and those with special needs, putting in consideration the environment and Arab culture. The sample covered students from Al-Zahraa Primary School in Beni Suef Governorate, and Abu Al-Rish Children's Hospital affiliated with Ain Shams University, with a total sample of (150) children. The research used The Arabic Narrative scale for children from 6 - 10 years as an instrument, The research found that there was acceptable stability coefficient, indicating reliability of the tool, as well as making it a good tool to use in measuring story telling among both children with average abilities, as well as those with mental sub-normality within the Arab culture.*

**Keywords**— *Psychometric Efficiency, Narrative scale, Language and Speech disorder, Telling Story.*

**Introduction**

The field of psychological and educational assessments and evaluation is one of the important fields, as it is concerned with the study of behavioral

request or order; the interactive function: language is used to interact with others in the social world, and the importance of this function is highlighted, given that the human being is a social being; the Personal function: through language, the individual - a child and an adult - can express his feelings and attitudes; the exploratory function: After the child begins to distinguish himself from the environment around him, he uses language to explore and understand this environment. It is what we can call the (interrogative function) and the news (information) function: through language, the individual can convey new and diverse information to his peers. (Heilmann et al., 2010).

According to this, we find that language and the use of sentences and words are of great importance in the life of the individual. Children need to learn and use language to meet their needs and express their emotions and feelings. Other reasons that make language an important foundation is that it helps reflect the development and growth of the child, and we find that fathers and mothers urgently need to teach their children: Language. We often find mothers looking for a mutual conversation between them and the child that deals with the events of his/her day and what he/she does and what he did in different places, especially at the school. This made it important for researchers to determine

and words are the best that symbolizes the meaning, and it is a means of communicating and clarifying the meaning to others. Language, then, is the foundation of the thinking process, and whenever this foundation becomes narrow and its conditions are disturbed, thought becomes narrow and its production is disrupted (Colozzo & Whitely, 2014).

Chen and Pan (2009) believed that language "is a specific system of phonetic symbols that has significance and meaning in relation to things and events in the environment, in addition to being the necessary human tool for thinking, social communication, and the exchange of ideas between individuals" (p. 20).

Altman et al. (2016) indicated that language is "a mental ability that consists of a set of linguistic knowledge, including meanings, vocabulary, sounds, and rules that organize them all.

The importance of language is due to the fact that it performs a number of very important tasks or functions in an individual's daily life, including: the utilitarian function (the means): the language allows its users from their early childhood to satisfy their needs and express their desires; the organizational function: the individual can, through language, control the behavior of others, as in the form of a

**Research importance:**

The importance of the current research stems from the following:

- 1- Enriching the educational field with psychological and educational measurement tools, which are among the important diagnostic tools that are used to determine the strengths and weaknesses of all children and people with special needs in particular.
- 2- Availability of a suitable diagnostic tool for children based on the use of attractive visual stimuli and images that are appropriate for the age group from 6-10 years.
- 3- Measuring the ability to tell the story due to the scarcity of measures that are concerned with knowing the ability of children to tell the story.
- 4- Providing descriptive, taxonomic, and diagnostic information for the members of the research sample of children from 6-10 years old.
- 5- Benefiting from the current test in preparing educational and treatment plans for children who suffer from shortcomings in the ability to tell the story.
- 6- Identification of children who are below the level of their peers in the aspects of linguistic expression and story secret; and

**Research terms:**

*Psychometric efficacy.*

the level and ability of the child in linguistic expression, through telling stories and life situations, especially in the primary school stage as it is the fundamental stage for development. It is the first which represents a long-term separation from the mother, as well as being the most important stage of the growth and development of language in children.

**Research problem**

The problem of the current research is clear in the need for a scale or a tool to assess a child's ability to tell a story. The research problem becomes clear by answering the research questions.

**Research questions:**

- 1- What were the validity coefficients of the Illustrated Story Telling Scale for children 6-10 years old?
- 2 - What were the reliability coefficients for the picture story telling scale for children from 6-10 years old?

**Research goal:**

The current research aimed to provide a descriptive diagnostic tool that contributes to determining the child's ability to tell the story, and the ability to tell the child's life situations, Auto story. This is for primary school children from 6-10 years old, commensurate with the abilities of normal child and those with special needs, as well as the environment and Arab culture.

Speak grows at an early age and begins to form a sentence of two words. The child's ability to narrate events increases dramatically from the second year to the sixth year and learns a lot of vocabulary and words that help him/her to name things and express actions, thoughts, desires, and feelings. There is no doubt that oral narration is one of the most important language performance skills, if not the most important one at all, because language is in its nature a process of verbal transmission and audible reception, and it is a content and disclosure of this content. Also, the oral narration of the events of the illustrated story should precede the reading skill because the activities that the child exercises during oral expression work to correct the verbal defects that need to be corrected before reading. Al-Nashef (2016) stated that the most important objectives of the oral narrative process of comics are as follows:

- Develop the vocabulary that the child needs to express the things, ideas, and feelings he wants and feels.
- Correct pronunciation of words and vocabulary, and correct pronunciation of letter exits.
- Speak in untrue, sound sentences and according to the rules of the language, and.
- Gain the skill of organizing ideas and communicating with others.

Madi (2017) defined it as the ability of the measurement tool to achieve its goal through numbers characterized by accuracy and objectivity that enable the researcher to diagnose and distinguish between individuals according to their scores on the test.

Abu-Hashem (2006) also emphasized that tests that are characterized by psychometric efficiency must meet three basic conditions: the general conditions of the test, such as comprehensiveness, legalization, and objectivity, and the experimental conditions of the test such as reliability, validity and standards, and practical and usable conditions.

#### *Narratives.*

Narrating events for the illustrated story is one of the most important linguistic performance skills, as it is the translation of the tongue to what was understood during listening. Oral narration is one of the distinguishing signs of the human being in general, and it is everything that comes from the tongue, so that the individual expresses something that has a meaning in the mind of the speaker and the listener.

Beck and Chistin (2012) indicated that oral narration skills represent the positive side of linguistic communication, and the child begins to acquire them gradually after pronouncing the first word when he reaches the first year, as his ability to

understandable words in a clear style, which is called verbal or verbal expression in the educational process.

### **Importance of Oral Expression**

Atta (2005) believed that the oral narration of the events of the comic books is of great importance, which is evident in the following:

- Familiarize the child with pronunciation, fluency of the tongue, and representation of meanings.
- Accustom him/her to logical thinking, arranging ideas and linking them together.
- Develop the child's self-confidence by talking with his classmates and schoolmates.
- Enable children to express in sound terms what is going on around them in relation to their life and work inside and outside the kindergarten.
- Overcoming some psychological problems that may affect the child in childhood, Kajaal or shyness in speech or introversion.
- Develop the skills and abilities that began to appear in the child in the arts of functional expression, from discussion and presentation of ideas and opinions, and uttering words; and push the child to imagination and creativity.

According to Stetter and Hughes (2010), oral narration is an important means of venting and a tool for releasing emotions, because the individual's expression of what is in himself in front of others alleviates the severity of the problem he suffers or the situation he is exposed to, and it is a major means in the educational process at its various stages. The kindergarten teacher must be keen to train the children on some of the skills and habits associated with speaking and oral expression, the most important of which are:

- The courage to address others and confront them and talk to them without hesitation or fear.
- Clarity of words in pronunciation by focusing during oral narration.
- The use of movements and signs accompanying the utterance and appropriate to the meanings of words and sentences.
- Avoiding speech defects such as stammering, wheezing, and others.

There are also partial skills that must be considered, including changing the tone and tone of the voice according to the meaning, and perhaps the representative situations have a great impact in training children to master these skills; as well as to express what is going on with his/her feelings. It is important that they express their feelings, using spoken and

activates the brain and links thinking together.

- Accompanying pictures with sounds that match them, as this method showed great success in developing children's language performance.

### Storytelling skills for children

There are storytelling skills that any language program presented to children in general and children with mental special needs in particular should focus on. The most prominent of these skills are what were mentioned on the following points:

- The child's pronunciation of the letters from their exits and their clarity for the listener.
- Arranging speech in a specific order that achieves what the speaker and listener alike aim at.
- Complete control over everything the child says, especially with regard to completing the meaning.
- The ability to use appropriate postures and body movements expressing images and aids.

The current test measures the following abilities for oral storytelling for children aged 6 – 10 years of age:

Al-Hawari (2004) mentions that language as a developmental phenomenon passes through several

### Storytelling techniques for children:

Ming et al. (2009) mentioned that oral narration methods vary according to the multiple situations that the child goes through in his daily life, the most prominent of which are:

- Using the storyboard map strategy, which is a chart that visually shows the structure of the story with detailed images that include the main story elements, in addition to teaching children how to benefit from previous knowledge and link it to the events of the comic to understand and give it more depth. Visual learning has proven successful with children; this makes it an effective way to improve reading comprehension.
- Expressing through stories, by repeating them after viewing the pictures, answering some questions related to them, representing them, or completing the missing story.
  - Oral expression after reading, by answering questions received, narrating the meaning of what was read, discussing it, commenting on it, or summarizing it.
  - Using the storytelling method with children, as it

about the extent of their prevalence. Some studies indicated to the prevalence of receptive language disorders represented in listening among children with mental special needs by 81%, Tony (2014) indicated in his research that the prevalence of language problems among children with mental special needs reached 80%, as Al-Wabli (2012) indicated in his research, the increasing of many verbal and expressive problems among children with mental special needs, and these problems are represented in particular in pronunciation, expression, and sound output.

Many studies also indicate that there is a lack of oral language performance among learnable children with mental special needs, as Graham and Graham (2006) indicated in their research that they have weakness and shortcomings in proper verbal expression and understanding the oral message and keeping it in memory for a long time, as well as weakness in visual and auditory perception and discrimination and its impact on listening skill and receptive language, as Grove and Dockrell (2010) indicated in their research to children's lack of oral narration skills such as linguistic performance of verbal expression, gesture expression, and movement.

Carolyn and Smith (2015) stated that the oral narration of children with mental special needs is clearly delayed and is characterized by weakness and shortcomings compared to their normal

successive and interrelated stages until the child can master it and master it, as it depends on the child's chronological age and the degree of his mental and social maturity.

Yessed and Algozzino (2018) indicated that the pronunciation of vocabulary and words that have meaning is delayed in the child with special needs than the age at which they appear in the normal child, and this delay appears in the weakness and lack of linguistic output, short sentences and their structures, the spread of pronunciation defects and verbal problems and the use of sentences and verbal expressions.

Abbeduto et al. (2013) shows that the verbal and expressive problems are related to cases of mental special needs - and the lack of linguistic performance at the level of receptive language and expressive language is linked to poor mental performance of children with mental special needs children with mental special needs. Al-Wabli (2012) showed that there is a negative relationship between mental special needs and the ability to construct sentences and narrate events and details, and weak linguistic understanding of children with mental special needs children with mental special needs.

Some studies indicate the prevalence of language problems among children with mental special needs who are able to learn, as the results of studies varied

This level is concerned with the construction of the word, as it may be a noun, and it may be a verb, a subject noun, or an object noun

#### 4- Grammar level

It represents the rules from which the sentence is built, as the sentence consists of three main elements: the verb - the noun - the letter.

#### 5- Level of meanings

That is, the meanings of the vocabulary and the relationship between them within the same relationship, which constitutes a key for the word or other words, and relationships that link the sentences.

#### 6- Usage level

That is, the use of appropriate language in appropriate situations (Jia et al., 2016).

#### **Stages of language acquisition: -**

Language passes through several stages until it reaches its form that allows the individual to use it as a tool for communication, and it depends in its growth on the maturity and training of vocal devices and on the level of motor, mental and sensory compatibility on which this language skill is based, especially in the beginning of its formation (Colozzo, & Whitely, 2014).

peers. The succession of these skills proceeds in one way and in one way in normal children and mentally sub-normal, but the rate of growth in children with mental special needs is delayed and is characterized by weakness and apparent shortcoming.

The current test dealt with three sub-skills of the concept of storytelling, which are pre-narration skills, re-narration skills, and story-telling skills.

#### **A- Pre-narration skills:**

The word has content in our minds. Objects have an image in the mind called a sign. This sign has in our minds an imaginary and symbolic concept. Words form the linguistic context of the individual.

#### Language levels

##### 1- Vocal level

This level focuses on where the sound is formed, how it is formed, and the state of the vocal folds during sound formation.

##### 2- Phonological level

It studies the patterns of sounds and how they are consistent, so it must be specific sequences of sounds; this level focuses on collecting sounds in what is called the syllable, and the union of those syllables to reach the stage of the word.

##### 3- The morphological level

previous one and building on it so that there can be two or more stages in the same period:

**A- The first stage: screaming**

It is the screaming stage, which are the first and simplest sounds that the newborn makes to communicate with others. Wolff studied the screams of children in the first weeks of birth and found that they emit three types of screams indicating hunger, screaming indicating anger, and pain. The mother is also able to distinguish between these patterns of screaming and the emotional response that takes place automatically. Approximately three weeks after birth, new sounds begin, which may initially be emitted by sucking and swallowing movements in the mouth (Balthazar and Scott, 2017). As the child reaches the third month, he/she learns to scream in a sure way to get the attention of others, and in the fourth month the child cries when the mother or father stops playing with him, and in the fifth month, his screaming increases in search of attention and social contact (Silva et al., 2014).

**B- The second stage: Babbling**

The stage of babbling which begins with the beginning of the sixth month as a kind of random play aimed at communication or expression. The babbling begins with one syllable that is repeated and then with two syllables and more, and some of these syllables

Mills et al. (2017) see that all children of the world go through the same successive stages of language development, and that the mother's interest in the development of language development in her child during the first three years positively affects the process of language acquisition and development in the pre-school child.

Reuterskiold et al. (2011) also sees the need to distinguish between two different processes behind the child's acquisition of the first language, which is the process of understanding the language of other adults, and the second is the use of this language.

Kim (2016) believes that a child's language acquisition begins with sounds, then these sounds begin to differentiate into words that have meaning, then these words are synthesized to become meaningful grammatical sentences. It is worth noting that these stages of development are not completely and clearly separated from each other (Al-Nahhas, 2001)

In its inception and development, language follows a gradual timeline, which is summarized as follows:

**1-First year of life**

The first year can be considered as a stage of transition to language, in which the child trains the speech apparatus to produce different sounds, and it can be divided into different stages, each stage overlapping with the

between children (Bierski, 2016). The most common parts of speech at this stage are nouns, and these nouns often perform the function of a complete sentence (Meuris et al., 2014).

#### **B- The two-word stage:**

Huang et al. (2021) saw that the child generally begins the second with single words. At the age of 18 months, his vocabulary reaches about 20 words, which increases to about 200 words by the last quarter of the second year (Al-Nahhas, 2001). The verbal output of children develops according to the age of the child, as the children's vocabulary begins to increase in the last months of the second year and extends to the following years (Meuris et al., 2014).

#### **Third year of life: -**

According to Marshall & Reese (2022), the child during the third year increases the number of his vocabulary from 300-400 words at the beginning to about 2000 words at the end, as he has gained the ability to form simple sentences consisting of about four words, and compound sentences begin to appear automatically in the child's speech. It consists of two or more simple sentences, and the linguistic development increases with the production, understanding and answering of interrogative sentences if adults use them with him. At first, children answer the questions of when,

remain to be the basis of actual speech (Silva et al., 2014).

#### **C- The third stage: Tradition:**

The child begins his readiness to learn words and relate them to their meanings, imitating the sounds and words of those around him. Piaget believes that the ability to imitate and retain is essential in acquiring the meanings of vocabulary. The use of the symbol and understanding its significance expresses the child's awareness of the existence of things and people, the continuity of this existence, and his awareness of causation (Balthazar and Scott, 2017).

#### **D- Fourth stage: Gestures:**

The young child uses gestures as an alternative to speech, while the older child uses them as an addition to and affirmation of speech. Among the gestures that satiate at this stage are extending the arms and smiling, which conveys the idea that the child wants the mother to carry him (Silva et al., 2014).

#### **Second year of life:**

**A- The one-word stage:** The first word begins to appear in the 12<sup>th</sup> month, and usually the word begins with a single syllable and can be repeated. Studies indicate that the first word in a child appears at the end of the first year, but this identification is subject to individual differences

process takes place in three basic stages (reception, processing, transmission) These are the processes that the researchers relied on to organize the content of the current scale vocabulary in sequence (pre-narration, re-narration, storytelling).

Early childhood stage (2-6 years)  
Language is clear and relates to overall concepts and perceptions. The child's ability to understand a lot of simple information and how some of the things he cares about are going. The early childhood stage can be explained through *Piaget Cognitive Theory*:

In Piaget's opinion, language acquisition is not a participatory process, as much as it is a creative function (efficiency in performance to achieve a function). Competence is acquired only on the basis of internal organizations that begin initially and then are reorganized based on the child's interaction with the external environment, and by primary organizations, Piaget means the child's willingness to deal with linguistic symbols that express concepts that arise through the interaction of the child with the environment since the first stage, which is the stage kinesthetic sensory.

**Research procedures:**

**Research Methodology:**

how, and why as if they were questions of what and where. The child can also integrate into a short dialogue in which he speaks once or twice (Marshall & Reese, 2022).

**Fourth year of life:**

In the fourth year of a child's life, he has a wealth of verbal output which he understands, which of course is less than what he actually uses. He is also able to understand the instructions that are given to him, and he is able to understand the meanings of the stories and tales that are told to him (Silva et al., 2014).

**Fifth year of life:**

In the fifth year of the child's life, his vocabulary increases, and he controls the pronunciation of all the sounds of his language, as well as fictional stories. This stage is ongoing as the child continues to acquire new linguistic abilities as semantics and pragmatic skills throughout his life; however, the average maturation is around 8 years (Al-Nahhas, 2001).

**Interpretation of language acquisition:**

The speech process included issuing the sounds necessary for speech, forming them in a way that makes them take certain symbolic forms, and then organizing these symbols according to certain rules, so that they come out interconnected with each other to give understandable meanings. The speech

Governorate, Abu Al-Rish Children's Hospital affiliated with Ain Shams University.

#### **Research tools:**

The Arabic story telling test for children from 6-10 years has been prepared by the two researchers.

The preparation of the test included the following steps:

#### **Defining the idea of the scale and justifications for its design:**

The step of defining the idea of the scale and the justifications for its design is one of the most important and first steps, since it allows the designer of the scale to access the main entrances and ideas on which he will be based in his design (Loutfi, 2006), and through the researchers' work with children with language problems, the researchers found an urgent need to determine the extent The child's ability to narrate life situations and the ability to tell a full-fledged story.

#### **Determine the goal of the scale:**

This step plays the role of a guide who appoints the scale designer during the following steps to prepare a scale that meets the desired purpose. This step is intended to determine the purpose required of the scale to be presented, or the goal to be achieved. Those goals are divided into two types:

The two researchers used the descriptive approach because of its relevance to the nature of the research in describing the psychometric properties of the story-telling scale for children from (6-10) years.

#### **The research sample:**

The research sample consisted of primary school children and children with special needs whose ages range between (6-10) years from Al-Zahraa Primary School in Beni Suef Governorate, Abu Al-Rish Children's Hospital affiliated with Ain Shams University, and the research sample consists of:

The exploratory sample: the exploratory sample included (10) children.

Legalization sample: The sample included (150) children distributed as follows (100) children from the first to the third level children at Al-Zahraa Primary School in Beni Suef Governorate, (50) children from children with special needs (30) children with simple mental needs, (20) One of the children with language delay.

#### **Research limits:**

Time limit: The current test was applied in the period from 2020-2022.

Spatial limit: The test was applied at Al-Zahraa Primary School in Beni Suef

In preparing the current scale, the researchers relied on Piaget's theory of cognitive development, so the scale areas were divided into the pre-narration stage, the repetition or re-narration stage, and the spontaneous narration stage of the story, which corresponds to the stages of cognitive growth and the stages of language growth and development.

The language perspective of narration was acquired through test that has previously attempted to evaluate the narrative skills of Arabic speaking children and was used as a reference in the construction of this test as:

- 1- The modified Arabic Preschool Language screening test (Abo Hassiba et al., 2011)
- 2- The Egyptian Arabic Pragmatic test (Khodier et al., 2018)

A more general reference to narrative skills was obtained through:

- 1- The Renfrow Bus Story Narrative scale (Schneider & Haywayd, 2008).
- 2- The Narrative Competence test (Zanchi and Zampini, 2021).

#### **Determining the nature and characteristics of individuals:**

The researchers determined the nature and characteristics of the rationing sample by specifying the age group (6-10) years. A group of normal children and people with special needs were rationed.

A- General objectives such as:

- 1) The need to design a tool to measure children's ability to tell a story.
- 2) To identify the degree to which normal child and people with special needs possess the skill of telling the story.

By looking at the psychological scales that were used to assess language and speech problems and the ability to tell stories, the researchers saw the scarcity of scales that focus mainly on measuring the child's ability to tell the story and determining the level or stage in which the child falls on the story-telling test.

b- Special objectives such as:

- 1) Preparing a scale to tell the story in order to guide and prepare training programs.
- 2) Preparing a scale to tell the diagnostic story.
- 3) Preparing a scale to tell the story for the purpose of testing scientific hypotheses for study and research.

Therefore, the researchers aimed to prepare and design the current scale to be a model for diagnosing the lack of ability to tell the story in children and to use the test results in order to prepare training and development programs for children with limited ability to tell stories.

#### **Theoretical frameworks:**



academic and social interactions of school-aged children (Hessling & Brimo, 2019). Story retelling skills are considered by the authors as the ability; to attend to, store, recall and retell a given oral narrative supplying the required information without necessity of repeating the exact utterances.

*Automatic storytelling or narrative skills:* Oral narratives have often been described as a primary and universal way that people organize and make sense of their experience. Indeed, narratives or 'stories' of past, future, or imagined events are ubiquitous in our daily lives; they are present in conversations, ceremonies, books, television, and play, ranging from early pretend to video games. Thus, the ability to understand and tell stories has an important role in social and communicative functioning. Moreover, given that stories are often read aloud by educators in early childhood settings and expected to be read independently by students later on, story knowledge can contribute to children's classroom participation and their academic performance (Segal and Pesco, 2015). From the authors perspective narrative skills, also known as storytelling skills, are an important part of communication, academic success, and healthy relationships. These skills help us retell events, tell stories, give instructions, comprehend what we read, and more in organized, efficient, and engaging ways

### **Defining the sub-dimensions of the measured property:**

The property to be measured is divided into a group of sub-dimensions that constitute in its general total the total score of the measured characteristic, which helps in placing and arranging the items. The dimensions of the scale are as follows:

*Pre-narrative skills:* A combination of socio-cognitive and linguistic skills that are required for both the development and competency of narrative abilities (Veneziano and Nicolopolou, 2019). Another view adopted by the authors is that pre-narrative skills are a mixture of cognitive and linguistic skills that are essential for the child to allow him to acquire personal narrative skill which is considered as a precursor to storytelling or narrative skills acquisition.

*Story retelling skills:* Story retelling is a process of re-narrating the story by students to bring out personalized perceptions. Retelling story is the re-conveying of events in words, images, and sounds, often by improvisation or embellishment. Stories or narratives have been shared in every culture as a means of entertainment, education, cultural preservation and to instill moral values. Oral narratives (e.g., storytelling, story retelling, and story generation) are an essential part of the

- Part One: Presenting personal information
- Part Two: Describing items from memory
- Part Three: Story telling with pictures
- Part Four: Story telling without pictures
- Part Five: Verbal absurdities
- Part Six: Social conversation skills

**Presentation of the scale to industry professionals:**

The current scale was presented to (10) arbitrators and specialists in the field of special education, psychology, language, and speech pathologists, in order to ensure the integrity of the items, and the statements that the percentage of agreement between the arbitrators was less than (80%) of the opinions were deleted and excluded.

**Monitoring and recording responses form:**

The application and response registration form has a part that includes monitoring and recording grades. It is necessary to record all the responses made by the child in order to be studied to obtain the total score, due to the important points required for correction such as accuracy, completeness of information, and clarity. The application brochure has been designed and prepared. It includes the child's name, date of application, school name, date of birth, IQ degree, chronological age, previous tests that

**Determining the optimal form of the scale and methods of application:**

The current step included several procedures, including defining the shape of the items of the scale, defining, and formulating instructions, defining the shape of the response and the correction key.

**Test structure:**

First field (Pre narrative skills)

- Part One: Object description
- Part Two: Recognizing emotions
- Part Three: Comprehending verbal analogies
- Part Four: Comprehending negation in sentences
- Part Five: Answering simple factual questions on simple stories

Second field (Story retelling skills)

- Part One: Retelling the content of a story
- Part Two: Retelling simple sentences with pictures
- Part Three: Retelling compound sentences with pictures
- Part Four: Retelling simple sentences without pictures
- Part Five: Retelling compound sentences without pictures
- Part Six: Retelling previous stories or experiences based on target words

Third field (Story telling skills or narrative skills)

The exploratory experiment yielded the following results:

A - Deleting some blurry pictures of the child.

B - Putting a colored frame to facilitate the visual perception of the images.

### Third: Validation of the test:

After completing the steps that were followed in preparing and planning the test content and conducting the exploratory experiment, the researchers calculated the validity and reliability of the test to ensure its validity to measure the child's ability to tell the story from 6-10 years.

### Reliability test

#### Cronbach's Alpha

The reliability coefficient of the storytelling test was calculated using the Cronbach's Alpha coefficient, and all values were acceptable, and it has an acceptable degree of reliability, and this is shown in Table (1):

**Table (1)**

*The reliability coefficients of the story telling test using the Cronbach's Alpha coefficient*

N	Testes	Cronbach's Alpha coefficient
1	First sub	0.745
2	Second sub	0.739
3	Third sub	0.752
Total score		0.742

were applied to the examinee, the examiner, as well as writing down the child's responses, the raw score for each sub-test, the standard score, the cognitive page of abilities, and the performance profile, which indicates the level of performance The child is on the test, and it also includes a summary of the scores indicating the differences between the child's performance on the three sub-test areas, which are pre-narration skills, story retelling skills, and story-telling skills.

### Test correction standards.

The researchers used the raw scores that were obtained from the standardization sample, and it indicated the highest score that the subject can obtain (162), and the lowest score that can be obtained, a score of zero, while a score less than (70) indicates the child's lack of ability to tell the story.

#### \* Survey experience:

The researcher conducted an exploratory experiment on a sample of (10) children, with the aim of:

- 1 - Ensure that the test instructions are clear.
- 2 - Ensure the clarity of the images used in the test.
- 3- Ensuring that the pictures are appropriate for both the mental and chronological age of the children.

# Psychometric Efficiency of The Arabic Narrative scale for children from 6 - 10 years

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The researchers applied the storytelling test on a sample to verify the psychometric stability which included (150) children of normal children and people with special needs. The test was corrected, and then it was divided into two parts. Separately, it was followed by calculating the correlation coefficient by Spearman's method between the scores of the subjects in the individual and even vocabulary. The value of the Spearman-Brown's coefficient and the General Gutman's coefficient of split-half was high, which indicates that the current scale enjoys a high degree of stability, and this is shown in the table (2)

Table (2)

The stability coefficients of the story telling test by the hash-half method

م	Tests	Spearman - Brown	Guttman
١	First sub	.٩٥٠	.٨٧٦
٢	Second sub	.٩٣٦	.٦٧٢
٣	Third sub	.٩٣٩	.٦٠٨
	Total score	.٩٤٤	.٧٣٠

It is clear from Table (2) that the test stability coefficients for each of its dimensions in the Spearman-Brown half-segmentation method are close to that of the Guttman method, which indicates that the test has a high degree of stability in its measurement of storytelling among normal children and people with special needs.

correlati		first Sub	-Second Sub	Third sub	
N	on	N	N	N	
	coeffic	correlation	correlation	correlati	
	ient	coefficient	coefficient	on	
				coeffic	
				ient	
١	**.١٧٠	٣٢	**٠.٦٧٨	١	**٠.٢٧٤
٢	**٠.٤٧٥	٣٣	**٠.٧٢٣	٢	**٠.٦١٧
٣	**٠.٣٣٩	٣٤	**٠.٦٩٥	٣	**٠.٥٩٦
٤	**.١٧٤	٣٥	**٠.٦٩٨	٤	**٠.٤١٤
٥	**٠.٢٩٠	٣٦	**٠.٦٥٦	٥	**٠.٤٣٩
٦	**٠.٣٠٧	٣٧	**٠.٢١٨	٦	**٠.٤٠٩
٧	**٠.٤٧٢	٣٨	**٠.٣٥٣	٧	**٠.٥٩٧
٨	**٠.٦٢٣	٣٩	**٠.٦٢٥	٨	**٠.٥٧٩
٩	**٠.٣٨٣	٤٠	**٠.٣٧٥	٩	**٠.٤٩٠
١٠	**٠.٤٠٤	٤١	**٠.٤٨٧	١٠	**٠.٤٤٠
١١	**٠.٧١٩	٤٢	**٠.٣٥٢	١١	**٠.٧٦٦
١٢	**٠.٥٥٦	٤٣	**٠.٤٢٩	١٢	**٠.٦٦٨
١٣	**٠.٦٩٨	٤٤	**٠.٥٢١	١٣	**٠.٤٣١
١٤	**٠.٥٨٦	٤٥	**٠.٥٧٤	١٤	**٠.٤٤٩
١٥	**٠.٧٥١	٤٦	**٠.١٨٨	١٥	**٠.٥٥٨
١٦	**٠.٧٩٦	٤٧	**٠.٢٣٠	١٦	**٠.٦٦٢
١٧	**٠.٦٤٦	٤٨	**٠.٣٥٣	١٧	**٠.٧٤٨
١٨	**٠.٧٠٣	٤٩	**٠.٣٤٨	١٨	**٠.٧٢١
١٩	**٠.٧١٦	٥٠	**٠.٥١٤	١٩	**٠.٦٨٥
٢٠	**٠.٧١٠	٥١	**٠.٢٦٩	٢٠	**٠.٦٩٢
٢١	**٠.٦٣٨	٥٢	**٠.٦٢٥	٢١	**٠.٧٢١
٢٢	**٠.٦٤١	٥٣	**٠.٥٢٤	٢٢	**٠.٦٥٤
٢٣	**٠.٧١٩	٥٤	**٠.٥٢١	٢٣	**٠.٦٣٧
٢٤	**٠.٦٩٣	٥٥	**٠.٤٦٥	٢٤	**٠.٤٨٤
٢٥	**٠.٦٩٨	٥٦	**٠.٢٨١	٢٥	**٠.٣٨٩
٢٦	**٠.٧٧٥	٥٧	**٠.٢٤٣	٢٦	**٠.٥٥١
٢٧	**٠.٧٥٥	٥٨	**٠.٢١٨	٢٧	**٠.٤٢٧
٢٨	**٠.٧٢١	٥٩	**٠.٤٢٥	٢٨	**٠.٢٧١
٢٩	**٠.٦٦٠	٦٠	**٠.٣٦٧	٢٩	**٠.٢٩٨
٣٠	**٠.٦٥٨	٦١	**٠.٤٦٤	٣٠	**٠.٥٣٥
٣١	**٠.٦٧٧	٦٢	**٠.٤٩٣	٣١	**٠.٦٦٤
				٣٢	**٠.٦٦٦
				٣٣	**٠.٧٠٨
				٣٤	**٠.٧٢١
				٣٥	**٠.٧٢٠
				٣٦	**٠.١٩٢
				٣٧	**٠.١٩١

It is clear from Table (1) that the test has an acceptable stability coefficient (0.742), which gives a good indicator of the test's reliability, and accordingly the scale can be applied to children to measure the child's ability to tell the story at the age of 6-10 years.

Split half

Tests	first	Second	Third	Total
First sub	-			
Second sub	**٠.٢٤٥	-		
Third sub	**٠.٦٩١	**٠.٢٣٣	-	
Total score	**٠.٦٢٨	**٠.٤٠٨	**٠.٦٣٠	

\*\* Function at 0.01. significance level

It is clear from Table (4) that the correlation coefficients were all significant at a significance level of (0.01), which indicates the test's internal consistency.

### Re-apply the scale:

A test was applied to (150) children of normal children and those with special needs, and then the application was repeated at an interval of two weeks. The correlation coefficient between the degrees of the two applications was shown in Table (5):

Table (5)

Re-application stability to test the storytelling

Tests	correlation coefficient	Indication level
First sub	٠.٨٠٤	٠.٠١
Second sub	٠.٧٦٥	٠.٠١
Third sub	٠.٨٦٤	٠.٠١
Total score	٠.٨٥٩	٠.٠١

It is clear from Table (5) that the correlation coefficients between the first and second applications were statistically significant at the level of significance (0.01), and this indicates the stability of the test.

### Validity of the Test

The internal consistency of the item with the total degree of the dimension:

This is done through the scores of the psychometric stability sample by finding the Pearson's correlation coefficient between the scores of each individual and the total score. Table (1) shows this:

Table (3)

Correlation coefficients between the scores for each item and the total score for its dimension on the storytelling scale

\*\* A function at the 0.01 significance level \* a function at the 0.05 significance level

It is clear from Table (3) that most of the vocabulary of the storytelling scale has a positive and statistically significant correlation at two levels (0.01, 0.05), meaning that it has internal consistency.

Internal consistency method for dimensions:

The correlation coefficients were calculated between the tests each other and on the one hand and their correlation with the total score of the test, and Table (2) shows this:

Table (4)

Matrix of correlations for the storytelling test and its overall score

**Factor analysis (confirmatory):**

Confirmatory Factor Analysis was used using the statistical program (AMOS, 26), in order to verify the validity of the latent (or underlying) construction of the scale, by testing the general latent factor model, where it was assumed that all the observed factors of the kinetic story-telling scale are organized around One latent factor as shown in Figure (2):

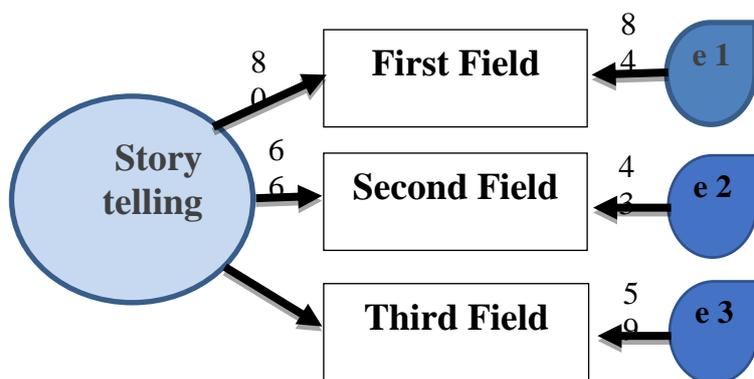


Figure (2)

The one-factor latent factor model of Micelles storytelling

The single latent factor model of the storytelling scale had good matching indicators, where the value of (chi-square = 0.000), degree of freedom = (0), and the RMSEA index = (0.533), and this indicates that the model has good matching indicators and table (7) shows the coefficients of The normative path and the value of (T) for

It means the ability of the test to measure the feature in question. Honesty determines the value of the test and its validity in measuring what it was designed to measure (Khattab, 2008).

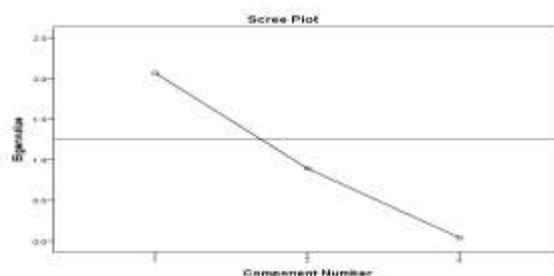
**Factor analysis**

The test was applied to (150) children of normal children and people with special needs, through the factor analysis of the test, the loadings of the common factors on the storytelling tests were known. It means that these dimensions that make up this factor express a good expression of one factor, which is the story narration that actually developed the scale to measure, which confirms that the scale has a high degree of validity. Table (6) shows this:

Table (6)

The results of the factor analysis of the storytelling test

N	tests	Saturation factor values	commonness ratios
1	First sub	0.921	0.848
2	Second sub	0.892	0.796
3	Third sub	0.897	0.800
latent root			2.449
Contrast ratio			81.742



The peripheral comparison was used to find out the scale's ability to distinguish between the strong and the weak in the trait it measures (story telling), by arranging the scores of the psychometric efficiency check sample in descending order as an internal test for the validity of the peripheral comparison of dimensions, and the significance of the differences between the mean scores was calculated. The highest quadrant is the strong side, and the lowest quadrant, and Table (8) shows this.

Table (8)

Comparative validity of the storytelling test

test	top quartile ٣٨ = n		minimum quartile ٣٨ = n		T value	Level of significance
	u	standard deviation	U	standard deviation		
First	٦١,٦٠	١,٧١	٤١,٦٣	٩,٥٥	١٢,٦٨٩	٠,٠١
Second	٢٦,٢٩	٣,٢٥	٢٢,٧٦	٦,٧٤	٣,٤٢٤	٠,٠١
Third	٣٦,٧١	١,٣٣	١٩,٢١	٩,٣٣	١١,٤٣٦	٠,٠١
Total	١٢٥,٢٣	٢,٧٠	٨٣,٦٠	١٥,٤٨	١٦,٣٢٨	٠,٠١

It is clear from Table (8) that the difference between the strong and weak groups is statistically significant at the level (0.01) and in the direction of the strong level, which means that the scale has strong discriminatory validity.

### Steadfastness of arbitrators

The stability of the arbitrators means the extent to which the arbitrators' assessments agree on an individual's behavior or it is intended to the extent

the variables The following table (3) shows: The results of the confirmatory factor analysis of the dimensions of the scale:

Table (7)

Summary of the results of the confirmatory factor analysis for the dimensions of the storytelling scale

latent factor	Watching factors	Saturation with one latent factor	Standard error of saturation estimation	T-values and their statistical significance
STORYTELLING	First	٠,٨٠	٠,٦٤	**٤,١٧٨
	Second	٠,٦٦	٠,٤٣	**٦,٨٥١
	Third	٠,٧٧	٠,٥٩	**٤,٨٩٣

(\*\*) D at (0.01)

It is clear from Table (7) that the one latent factor model has good values for the goodness of fit indicators, and that the three validity coefficients (the ramifications of the one latent factor) are statistically significant at the 0.01 level; which indicates the validity of all observed dimensions of the storytelling scale, and from here it can be said that the results of the confirmatory factorial analysis of the first degree provided strong evidence for the sincerity of the infrastructure of this scale, and that storytelling skills are one general latent factor around which the three observed sub-factors are organized. .

### Peripheral comparison validity:

the consistency of the content of the sub-tests among them.

The results of the current research also found that all the correlation coefficients of the sub-tests with the total score of the test are statistically significant at the level of significance (0.01), which indicates the consistency of the content of the sub-tests with the total score of the test.

The results of the current research also indicated a high coefficient of stability for the test, through the stability of the arbitrators: where the test results indicated that there are high coefficients of the reliability of the arbitrators on the scale of storytelling for normal children and people with special needs from 6-10 years, where an agreement percentage (80%) of the respondents was accepted and the opinions of arbitrators and professors in the field of psychological measurement, special education, mental health and specialists working in the field.

The reliability coefficients using the hashing half way of the test indicated that the test enjoys a high degree of stability and therefore its results can be trusted, as the reliability coefficient of the test as a whole was (0.944), while the reliability coefficients on the sub-tests of the test by the hashing half way and using the Spearman-Brown corrective equation ranged between (0.936), (0.950) and all the coefficients are functional.

to which the arbitrators' assessments are consistent with a conduct. (Khattab, 2008)

The two researchers presented the scale to a number of \*specialized professors in order to ensure that:

The suitability of the images used in the test to the research sample.

The suitability of the test instructions for the research sample

The appropriateness of the test response methods for the subject category

- Adding or deleting what they deem appropriate of vocabulary that contributes to achieving the objectives of the current research.

#### **Research results:**

Internal consistency: The results indicated a high coefficient of internal homogeneity of the test, as all test items have a statistically significant correlation with the degree of the sub-test to which they belong, where all correlation coefficients are significant at the level of significance (0.01), (0.05), and therefore the items of each scale belong to the sub-scale it contains, which indicates the internal homogeneity of the scale.

The results also indicated that all the correlation coefficients of the sub-tests have a high degree of statistically significant correlation at the level of significance (0.01), and this confirms

scale's ability to distinguish between The two groups, high in the ability to tell the story and low in the ability to tell the story in the trait measured by (story telling), by arranging the degrees of the psychometric efficiency verification sample in the total score of the scale in descending order as an internal test for the validity of the peripheral comparison of dimensions, and the significance of the differences between the mean scores of the quartiles was calculated. Top, quadrant

The lowest to the scale's ability to distinguish between the two groups is statistically significant at the level of significance (0.01), which indicates the validity of the end comparison of the test.

### Research Suggestions:

Based on the findings of the current research of high validity and reliability coefficients for the current scale, the two researchers suggest

1. Using the current scale in making a diagnosis and determining the level of storytelling for children in the primary stage from 6-10 years old.
2. Using the current scale for follow-up and continuous evaluation during interventional and therapeutic programs for children.

Also, the scale has a high degree of stability, and therefore its results can be trusted, as the test reliability coefficient as a whole was (0.730), while the reliability coefficients on the scale axes ranged by the Gutman's method between (0.608), (0.876), and all the transactions are significant. This indicates the high degree of stability of the scale, and this means that the scale is stable. The current scale is fixed across vocabulary. Therefore, the researchers used the current scale to measure storytelling for children from 6-10 years.

The correlation coefficient of re-application of the test also indicated that the correlation coefficients between the first and second applications are statistically significant at the level of significance (0.01), which indicates the stability of the test.

The results of the confirmatory factor analysis of the degree of sincerity of the infrastructure of this scale indicated, and that storytelling skills are one general latent factor around which the three observed sub-factors are organized. The one latent factor model had high values, and that the three validity coefficients were saturated with one latent factor) were statistically significant at the level (0.01), which indicates the validity of all observed dimensions of the storytelling scale, and the results of the end comparison validity indicated the

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3. Using the current scale to find the differences between the sexes in telling the story.
  4. Using the current scale as guidance and counseling tool for teachers and researchers to build training and enrichment programs.
  5. finding the correlation between the current scale and the intelligence test Stanford Binet, the fifth Arabized picture of Mahmoud Abu Al-Nil 2013.

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