

The influence of Multiple Intelligences theory in determining the mental abilities of the individual from product design viewed

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Introduction of the study:

The mind is purely human and its growth is at different stages and it is responsible for the distinction of human beings from other organisms, but the human itself is different with the human brother in his mental abilities Among these abilities is the intelligence that is mental energy or mental return or is the accompanying nature of the mind that works Actively, understanding, depth and speed.

The work of the mind and the field of development of intelligence in all ages and fields is the preoccupation of all sciences and is an integral part of the programs of behavioral and educational development and social activities, and how everyone seeks to develop these skills both for their children or in their studies or in the field of education.

Statement of Study:

Numerous scientific and philosophical theories have emerged to explain the intelligence, characteristics, types and measurement of mental intelligence. The most recent is the theory of multiple intelligences of the world Howard Gardne - intelligence is defined as multiple abilities that appear in multiple areas, both in problem solving or in the ability to modify or change multiple products in a particular cultural pattern or cultural patterns

Problem of Study:

Due to the high level of awareness of the need for attention to talent and education and the development of intelligence and skills and openness of areas led to people's demand for intelligence tests and skills development. It was found that the tests of IQ measurement at the present time lacks precision and keep up with the theories of measurement of modern intelligence and high economic cost and consumption to time Greater effort.

Objective of the study:

An alternative solution instead of traditional intelligence tests that cost individuals time, effort and high economic cost, and sometimes they may be wrong in their assessment, is a new application in which the individual can save time, effort, cost, ease of handling and accuracy in results.

Significance of the study:

To provide accurate, practical, accurate and enjoyable application of the latest interpretation theories of individual intelligence, and can be used easily for all ages, which in turn reveals the importance of the effective role of the industrial designer in this area.

Methodology and Plan of the study:

- 1 - Measures of intelligence tests and mental skills
- 2 - The philosophy of multiple intelligences - and their classification
- 3 - The field of product design and how it can crystallize the theory and benefit from it

1 - Measures of intelligence tests and mental skills

There are many theories that interpreted mental intelligence to become a nucleus and a beginning to build standards of individual intelligence, including

-The Theory of Spurman - Theory of Therston - Theory of Sordende S4 - Gilford Theory
 And followed by accurate scientific classifications through which to build the tests of intelligence from a scientific perspective accurate intelligence tests were classified to the following

-1- Types of IQ tests

Individual language tests - Individual performance tests. - Semi-performance tests - Collective intelligence tests. - Personality tests. - So many scientists strive to come up with many different methods of intelligence measures that can measure individual intelligence

1 - (The Stanford Binet Intelligence Scale - 1905)

(Wechsler Intelligence Scale - 1939) 2 -

3 - (GMMS – 1927)

Kaufman Assessment Battery For Children - 1985) (4 –

(Otis - Lennon Mental Ability Test - 1969) 5 -

Raven`s Progressive Matrices 1986)(6 -

California Tests of Mental Maturity 7 -

2 - The philosophy of multiple intelligences - and their classification

Gardner's theory of intelligence known as the theory of multiple intelligence suggests that there are eight kinds of intelligence in individuals that can develop

Intelligence	direction of thinking	Attitudes	Examples
Linguistic intelligences	- Ability to deal with and use the language, whether orally or in writing effectively in different tasks and understand their complex meanings -- High growth in the use of language vocabulary and expression words	Reading - Conversations - Writing stories and novels - Games -Keywords - Textual Interviews - Dialogues - Discussions	Author, poet, journalist and announcer

<p>Logical/ Mathematical intelligences</p>	<p>-Ability to understand mathematics and science and grasp abstract concepts -The ability to think logically and deal with numbers, in addition to the ability to solve problems at high speed without the need for analysis and installation skills and planning -Induction and development</p>	<p>Experiments - questions - solving calculations - logical operations - problem solving - solving puzzles - logical interpretation - exploration</p>	<p>Scientists - Industrialists - Technological field</p>
<p>Bodily Kinesthetic intelligences</p>	<p>- Control and control the muscles of the body -The ability to control their feelings and body movements - their awareness of the surrounding environment through their bodies -- Use their bodies to express or to indicate what they want to express</p>	<p>Dance - Jump - Movement - Sports - Mobility - Performance Arts - Representation</p>	<p>Actors - Athletes</p>
<p>Spatial intelligences</p>	<p>the ability to visualize things in space, planning and 3D visualization This type of intelligence depends on visual sense and imagination, and they have the ability to create mental images of abstract concepts. They try to visualize everything mentally so that they can see the natural world accurately and translate it into new forms</p>	<p>Painting and Photography - Art and Fine Arts - Design Fields Imagination - visualization - formation of new structures</p>	<p>Artists - Designers - Architects-</p>
<p>Inter Personal intelligences</p>	<p>It shows through the ability to distinguish the feelings and mood of others, to understand the behavior of others and also to be able to negotiate and deal with others and then make the right decision based on this knowledge, and are characterized by establishing relationships with others and listening to them, and have good communication skills and how to deal with individuals</p>	<p>Social cohesion - dealing with others - leadership - organization</p>	<p>Politicians</p>

Intra Personal intelligences	They have the ability to know and understand their own feelings and feelings, their ability to discover themselves, to identify their needs, weaknesses and strengths, and thus to be able to control them, and to communicate with themselves	Introspection - meditation - planning - calm - individual learning - self - alone - individual projects	Scientists, philosophers and thinkers
Musical intelligences	It is related to musical skills including playing, composition, musical sense and listening to different musical tones -Ability to recognize the degree and intensity of the tone and rhythmic patterns, as they enjoy learning through the whistle -They love to sing, compose and compose - and turn words into a continuous rhythm of music	Melodies - rhythms - music - singing - chanting - listening to music - playing	The musician - the musician - the singer

Table (1) - Types of multiple intelligences

Many intelligence tests were conducted through the theory of multiple intelligences and were adopted by many institutions and were within the framework of theoretical and expressed questions that confirm the theoretical perspective and philosophy of application.

There is also a trend of skill development through interactive and smart games, the trend of children's educational toys, which has become widely known and has become aware of all classes and classes to seek to develop their children's skills.

3 - The field of product design and how it can crystallize the theory and its benefits

The theory of multiple intelligences opens a wide scope to the design of products in the crystallization of this theory and its transformation through science and product design studies into actual products through which we can measure the intelligence of the individual and how he can work and develop it.

The design of the product carries many systems that can develop the tests of measurement of intelligence and transform it from the theoretical side, which is inaccurate and boring and carries a lot of inaccuracy and unreliability of the results to interactive products that enable the user to interact directly with them, which in turn provides more accurate results and ensures pleasure in use And ensures continuous intellectual presence between the user and the product, which in turn brings us to more accurate and effective results in the measurement of IQ and the citizen in the individual and what he must do to develop this skill and work on it.

It has become necessary for the industrial designer to develop the field of measurement and development of intelligences through all that has been developed from applied science and technologies and through the latest theories of intelligence.

This is done by working on the benefit of the design factors of the product in transforming the theory into applying and transforming the theoretical scale of intelligence into an actual product.

If these elements are crystallized and linked to a standard product in the theory of multiple intelligences, they will reflect a solution to the problem of measuring the intelligence and obstacles that are now encountered, and it will make them more enjoyable and interesting rather than boring and monotonous. It will be more effective and accurate, stimulating continuous measurement and enjoyment. With it.

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