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DIFFERENT VIEWS ON MULTIPLE INTELLIGENCES THEORY: FOR AND AGAINST

Abstract: The present scientific article highlights various opposing views on Multiple Intelligences theory which is known in the world since the publication of an American psychologist Howard Gardner's book "Frames of mind". It was believed that the theory would bring a new perspective in foreign language education. Many educators all around the world have been incorporating this theory into their practice and teaching pedagogy, but it has also brought some critics' attention. This article briefly investigates the different views on MI theory. To sum up, authors conclude that with all the criticism and positive remarks the MI theory has been receiving since 1983, the original intention of Howard Gardner was not to develop an educational model to apply in the classroom, but to challenge academic psychologists to look at the human intelligence in a broader way.

Key words: multiple intelligences theory, intelligence, teaching pedagogy, general factor

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Аңдатпа: Бұл мақалада Ховард Гарднердің жарияланғаннан кітабі негізінде бүкіл дүние жүзіне тараған көпше түрдегі ақыл-ой теориясы туралы әртүрлі қарама-қайшы көзқарастар қамтылған. Көпше түрдегі ақыл-ой теориясы шет тілін меңгеруде жаңа көріністер ашады деп саналады. Осы теория дамығалы бері дүние жүзі бойынша оқытушылар берілген теорияны өз педагогикалық тәжірибесіне еңгізуде, алайда көпше түрдегі ақыл-ой теориясы көптеген сынға ұшырауда. Атаулы мақалада көпше түрдегі ақыл-ой теориясына әртүрлі көз-қарастар қысқаша көрсетілген. Теорияны енгізудің оң тәжірибесін, сондай-ақ ғалымдардың сыни түсіндірмелерін ескере отырып, мақаланың авторлары Гарднердің бастапқы мақсаты білім беру моделін жасау емес, адамның ақыл-ойы туралы жаңа және кең көзқарастар қалыптастыру деген тұжырымға келді.

Кіліт сөздер: көпше түрдегі ақыл-ой теориясы, ақыл-ой, педагогика, көптік ақыл-ой факторы.

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Аннотация: Данная статья освещает различные противоречивые мнения относительно теории множественного интеллекта, которая получила всемирное распространение после публикации работы Х.

Гарднера «Рамки разума». Считается, что теория множественного интеллекта открывает новые горизонты для изучения сферы обучения иностранному языку. Многие преподаватели по всему миру внедряют данную теорию в свою педагогическую практику, но в то же время она привлекла к себе внимание многих критиков. Данная статья вкратце рассматривает различные точки зрения на теорию множественного интеллекта. Принимая во внимание положительную практику внедрения теории, а также критические замечания ученых, авторы статьи приходят к заключению, что изначально цель Гарднера состояла не в разработке образовательной модели, а в выработке новых взглядов на человеческий интеллект в более широком смысле.

Ключевые слова: теория множественного интеллекта, интеллект, педагогика, фактор общего интеллекта

Introduction.

Multiple Intelligences Theory is known in the world since the publication of an American psychologist Howard Gardner's book "Frames of mind" in 1983. He suggested that each individual is born with different abilities and aptitudes in various subjects and has several types of intelligences that are combined differently. Gardner says: "In its strong form, MI theory posits a small set of human intellectual potentials, perhaps as few as seven in number, of which all individuals are capable by virtue of their membership in the human species"[1]. He states that besides verbal-linguistic and logical-mathematical intelligences, which have been considered as essential ones, there are six more intelligences: musical, bodily-kinesthetic, interpersonal, intrapersonal, spatial-visual, naturalist. In his first book "Frames of mind" Gardner listed only eight types of intelligences, later on he added another one – naturalist. He also considers the possibility of differenciating existential, spiritual and moral intelligences and gives a detailed description to each type of intelligence. Gardner claims that the intelligences can be combined in different manners, so each individual has a different intelligence profile, which is a combination of all the intelligences. Each person has some strong intelligences (strengths) and some are not well developed (weaknesses). Gardner believes that the intelligence profile can be changed and improved through education. He also states that each person's potentials can be activated and this activation depends on several aspects such as "the values of a particular culture, the opportunities available in that culture, and the personal decisions made by individuals and/or their families, schoolteachers, and others" [2, p. 34]. Since then this theory has been widely accepted by applied linguists, many teachers have been exposed to it and developed different methodologies to implement it in education. However, it has also attracted controversy and criticism. Many cognitive psychologists and psychometrics specialists argue over several points that we will review further:

Main part.

1. The use of term “intelligence”

There are various definitions of the word “intelligence” and they are very controversial. From “Intelligence: Knowns and Unknowns”, a report published by the Board of Scientific Affairs of the American Psychological Association:

“Individuals differ from one another in their ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought. Although these individual differences can be substantial, they are never entirely consistent: a given person's intellectual performance will vary on different occasions, in different domains, as judged by different criteria. Concepts of "intelligence" are attempts to clarify and organize this complex set of phenomena. Although considerable clarity has been achieved in some areas, no such conceptualization has yet answered all the important questions, and none commands universal assent. Indeed, when two dozen prominent theorists were recently asked to define intelligence, they gave two dozen, somewhat different, definitions”[3].

The critics of Howard Gardner’s theory claim that his definition of intelligence is too broad and it is not even about intelligence, but more about learning styles, abilities, skills or aptitudes. Jamon F.Peariso from Liberty University argues that Ormrod’s definition of intelligence as “the ability to modify and adjust one’s behaviors in order to accomplish new tasks successfully. It involves many different mental processes and may vary in nature depending on one’s culture”[4] is more acceptable than Howard Gardner’s “a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture” [5]. Gardner argues that a narrow definition of intelligence as equal to scholastic performance and psychometric test scores is too constrictive. Gardner believes that multiple intelligence theory is about understanding the intellect, the cognitive aspects of the human mind. He believes that it is more useful and sustainable to view the intellect from the standpoint of a number of independent intelligences than from the standpoint of test scores or scholastic performance.

2. The “*g”* factor and the questions of its incompatibility with the MI theory

One of the main controversial issues that MI theory has put into question is the “g” factor. The concept of g is an integral part of a widely accepted theory developed by Charles Spearman, cited in Gottfredson [6] that intelligence is composed of a general ability (or g factor) which underlies all intellectual functions. According to Spearman, this g factor was responsible for overall performance on mental ability tests. He noted that while people

certainly could and often did excel in certain areas, people who did well in one area tended also to do well in other areas. For example, a person who does well on a logical test would probably also do well on other tests. Gottfredson writes:

" The g factor was discovered by the first mental testers, who found that people who scored well on one type of mental test tended to score well on all of them. Regardless of their contents (words, numbers, pictures, shapes), how they are administered (individually or in groups; orally, in writing, or pantomimed), or what they're intended to measure (vocabulary, mathematical reasoning, spatial ability), all mental tests measure mostly the same thing. This common factor, g, can be distilled from scores on any broad set of cognitive tests, and it takes the same form among individuals of every age, race, sex, and nation yet studied. In other words, the g factor exists independently of schooling, paper-and-pencil tests, and culture" [6].

The critics of the MI theory claim that it is not compatible with the general intelligence and it puts the g factor in question. But if we research more closely we can see that the MI theory agrees that the g factor exists, but questions whether it is superior to the other forms of human cognition or not. And again here we can see the issue of semantics: the psychometrics specialists "reserve" the word "intelligence" to the g factor, and claim that what Howard Gardner proposed should be called "abilities/skills/aptitudes/talents/capacities". The answer of Gardner to that was that he wanted to challenge people to question the whole nature of intelligence as a phenomenon: "I decided to call these faculties 'multiple intelligence' rather than abilities or gifts. This seemingly minor lexical substitution proved very important; I am quite confident that if I had written a book called 'Seven Talents' it would not have received the attention that "Frames of Mind" received"[7].

Also there were some publications on the topic of the general intelligence and the measurements of Multiple Intelligences with empirical evidence, written by B.A.Visser, M.C.Ashton, P.A.Vernon, where they proved that each of the domains proposed by Gardner involves a blend of the general *g* factor, cognitive abilities other than *g*, and, in some cases, non-cognitive abilities or personality characteristics. They conducted 16 tests covering the eight intelligences (two tests for each intelligence) and reported the presence of g running through most of the tests. These researchers argued that what Gardner calls intelligences are actually capacities that are secondary or even tertiary to the g factor [8].

3. The origin of the MI theory

The critics claim that Gardner's work resembles earlier work by factor theorists of intelligence like L.L. Thurstone that a single factor (g) cannot explain the complexity of human intellectual activity. In 1938, Thurstone identified seven primary mental abilities (verbal comprehension, numerical

ability, spatial relations, perceptual speed, work fluency, memory and reasoning) that underlie all intellectual activities. But according to Morgan, identifying these various abilities and developing a theory that supports the many factors of intelligence has been a significant contribution to the field. Morgan believes that Gardner's seven intelligences might be better referred to as "cognitive styles" rather than standalone constructs of intelligence [10].

4. Lack of empirical evidence

Another criticism the MI theory has brought on itself is the lack of empirical support. The reality is that in his book "Frames of Mind" Gardner listed eight criteria that need to be met in order for a specific intelligence to appear in the theory and each of those eight criteria provided huge empirical data, like studies of brain-damaged people and "savant" populations, studies on human brain and research in human cultures. The eight criteria considered were based on: biological sciences, developmental psychology, logical analysis and traditional psychological research. The criteria for determining an intelligence are as follows [5]:

a) Isolation by brain damage. While brain injury causes impairment of certain faculties, other faculties are spared which points to the probability that one intelligence could be dissociated from others;

b) An evolutionary history. Looking at the evolution of our species, it is possible to identify the roots of each intelligence;

c) Identifiable core operations. Each intelligence has a distinct mental operation or operations which are central to the intelligence;

d) Encoding in a symbol system. Symbols are intrinsic to all human cultures and there is a universal human tendency to use symbols. "Symbol systems may have been developed precisely because of their preexisting, ready fit with the relevant intelligence or intelligences" [1];

e) A distinct developmental history. Intelligences have their own developmental process and each intelligence develops in a similar way in all people. Therefore, the pattern of development for linguistic and musical intelligence will vary but their respective development will be very similar in all people;

f) The existence of idiot savants, prodigies and outstanding people. While there are people who are exceptionally gifted in one field and at least average in others there are also people who are exceptional in one field but stunted in all other areas. This indicates independence of each competence;

g) Experimental verification. The ability to perform two activities simultaneously with no interference, like walking and singing, indicates discrete intelligences. However, when two activities cannot be performed simultaneously without difficulty, like reading and speaking, it can be inferred that they are manifestations of the same intelligence;

h) Support from psychometric findings. Although this criterion may seem contradictory, nevertheless these tests do evaluate spatial, logical-mathematical and linguistic intelligences and have indicated little correlation between these faculties.

5. MI and educational practice

Another issue at question is the application of the multiple intelligences theory in teaching practice.

Considerable number of studies have been conducted since the emergence of the present theory and various findings in favor of Multiple Intelligences Theory found their application in the field of education. However, the critics of the MI theory claim that there is no solid research that supports the effectiveness of using the MI theory in the classroom. Willingham [10] writes:

"Hard data are scarce. The most comprehensive study was a three-year examination of 41 schools that claim to use multiple intelligences. It was conducted by Mindy Kornhaber, a longtime Gardner collaborator. The results, unfortunately, are difficult to interpret. They reported that standardized test scores increased in 78 percent of the schools, but they failed to indicate whether the increase in each school was statistically significant. If not, then we would expect scores to increase in half the schools by chance. Moreover, there was no control group, and thus no basis for comparison with other schools in their districts. Furthermore, there is no way of knowing to what extent changes in the school are due to the implementation of ideas of multiple intelligences rather than, for example, the energizing thrill of adopting a new schoolwide program, new statewide standards, or some other unknown factor.

The response to this criticism was provided by Thomas Armstrong in his book called "Multiple Intelligences in the classroom". He said that the main problem with the application of the MI theory in teaching practice is that it represents a wide range of various techniques, tools, strategies, methods, etc., and each teacher can develop his own way to implement it. He notes that many important key education figures like Noam Chomsky, Linda Darling-Hammond, Deborah Meier viewed the theory of multiple intelligences as an important contibution to the field of education. [11].

Conclusion

In conclusion, it is worth to note with all the criticism and positive remarks the MI theory has been receiving since 1983, the original intention of Howard Gardner was not to develop an educational model to apply in the classroom, but to challenge academic psychologists to look at the human intelligence in a more broader way. The reason why the MI theory was accepted so enthusiastically by the teachers all around the world is that it revealed the positive qualities of all people and provided practical ways to succeed in and out of the classroom.

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