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Entry points, interests and attitudes. An integrative approach of learning

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Abstract

The relationship between personality and intelligence is of a major importance in the learning process. Interests and attitudes are related to the entry points on emotional ground. In some educational systems the focus on cognitive abilities and cognitive functions increased, amplified by the neuroscience and the computational approach.

The cognitive approach should be enriched with major aspects from the global human psychological system like interests/motivation, emotional profile, attitudes and so on. The focus on cognition only, or the computational view should be completed with personality approaches and behavior regulation, all of these influencing without doubt the intelligence.

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1. Introduction

Starting from Howard Gardner's theory, which defines intelligence as the bio-psycho-physiological potential to solve problems or to create products that are valued in at least one culture, the educational environment was dramatically changed by comparison to the traditional general theory that consider the intelligence as a unitary/general capacity that can be adequately measured by specific instruments (IQ tests).

In "Frames of Mind" (Gardner, 1983) the author has suggested that the individuals possess several relatively independent mental abilities or forms of intelligence. Since then those whose approach was cognitive have designed various educational models based only on cognitive functions, without paying attention to emotional factors, although Gardner's theory also includes references to emotions. Today we assist to an increased focus on cognitive abilities and cognitive functions, amplified by the neuroscience approach. Although the educational view seems to be enriched with a new approach since 80's through Gardner's theory, the philosophical and psychological views stated long time ago that an individual could have more specific abilities within a life aspect than in another one (e.g., one could have better literature abilities than mathematical). In this regard we can give as an example the discipleship process which was one of the main ways to educate one's abilities and to make a severe selection of those with the best abilities in a specific area.

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Our approach tries to indicate that the purely cognitive view should be completed with major ideas related to interests/motivation, emotional profile, attitudes and so on. The focus on cognition only, or the computational view should be broadened with referrals to personality, as system and to behavior regulation, as process, all of these influencing without doubt the intelligence in one or more areas. Our approach is supported by Gardner's assertion in 2003, after 20 years of multiple intelligences theory:

“This analysis has led to a perhaps surprising conclusion. “Multiple intelligences” should not in and of itself be an educational goal. Educational goals need to reflect one's own values, and these can never come simply or directly from a scientific theory. Once one reflects on one's educational values and states one's educational goals, however, then the putative existence of our multiple intelligences can prove very helpful. And, in particular, if one's educational goals encompass disciplinary understanding, then it is possible to mobilize our several intelligences to help achieve that lofty goal.” (Gardner, 2003)

Moreover, as Gardner considers interpersonal and intrapersonal abilities as two major intelligences, this is a supporting point itself for reconsider the focus on cognition only.

2. Multiple intelligences and entry points

Multiple intelligences (MI) theory has won wide acceptance, particularly among teachers, as a way to adapt teaching strategies to individual strengths. In this approach emphasis is placed on provided multiple “entry points” to a subject - narration, pictorial, discussion, hands-on, etc. (Gardner, 1999a, pp. 169- 172). There are also two other important ways that can enhance student's understanding together with the entry points: by offering analogies that help connect the new concepts to those known and already understood and by providing multiple representations of the core ideas of a topic (Robson, 2006).

If we try to make a connection of MI theory with other cognitive functions, Gardner's theory closely resembles the multiple modes of perception and access to knowledge organization approaches. According to Gardner, all humans possess and exhibit several types of intelligence. Individuals possess varying amounts of these intelligences and combine them using them in personal and specific ways. These differences have profound effects upon the student, determining, for example, which “entry point” (a story, an image, hands-on activity) is most likely to be effective for a given student in encounters with new material and which concepts are likely to be confused with one another. Students vary as to which entry point is the most appropriate for them and which routes are most comfortable to follow once they have gained initial access to specific information. Using the entry points can help the teacher introduce new materials in ways which they can be easily grasped by a range of students; then as students explore other entry points, they have the chance to develop multiple perspectives and to use this process as a solution against stereotypical thinking (Gardner, 1991).

In other words entry points represent the virtual doors which help the best fit between student's mental strength and a specific type of information. An entry point allows learners to encounter the knowledge/concepts of the disciplines and by analogies and multiple representations the knowledge can be understood. We can discuss about at least five entry points: narrative, logical-quantitative, aesthetic, experiential and existential.

In this approach our focus is on the entry points, because we consider they are closely related to aptitudes and they have an innate part. Consequently the analogies and the multiple representations are only methods which help the understanding process once an entry point is found. In an interview Gardner describes the importance of the three ways to enhance understanding as follows:

“Multiple intelligences do not just provide various entry points to a topic; they offer the opportunity to draw comparisons or analogies from many different domains and to capture the key ideas of a topic in a number of different symbol systems (for example, ordinary language, poetry, static graphs, dynamic flow charts, and so on).” (Robson, 2006)

The “entry points” method (together with the other two ways of enhancing understanding) is used by teachers as a practical tool for a better educational process, but the students usually aren't aware of this method; they don't know about this theory, they don't know the teacher search for the best entry point in a specific teaching scenario. As a consequence they cannot self-regulate their learning process. It is more likely the young children (characterized by preoperational stage and inability to think abstractly, according to Piaget) will not understand the entry points approach and, thus, they cannot self-regulate their learning process. But the adolescent students should be made aware about the entry points approach in order to become better self-regulated learners, so they can plan, organize,

self-instruct, self-monitor and self-evaluate at various stages of the learning process. In our opinion self-regulated learners perceive themselves as competent, self-efficacious, and autonomous and they select, structure and create environments that optimize learning. Confused-learners just do things without having a clear strategy in their minds and their interest toward the learning process is low (Vasile, 2010).

3. Personality and intelligence

There are several approaches on personality concept (psychoanalytical, biological, cognitive etc.) but we will focus here on the systemic one. From this point of view, we can consider personality as a system in which the affective and cognitive functions interact through interfaces designed to regulate the behavior. From this perspective, the motivation (characterized by needs and interests) and the will are the most important factors on behavioral regulation. If we are interested in something we will work towards meeting the interest in this area. The interest (and thus the motivation) in a certain area will give raise to an internal tension. Here the willpower adjusts the behavior so the individual lowers the level of internal tension. The emotions play an important role too in this process. One could have pleasant or unpleasant feelings when he/she have to carry out an activity.

We discussed above about the relation between entry points and aptitudes/skills. In the systemic approach of the personality, aptitudes are of a major importance and there are many theories which consider intelligence related to aptitudes/skills. In an integrative view, the interrelation between MI and personality should be underlined. Thus, we can discuss about entry points in terms of aptitudes/skills.

Although the relationship between personality (including emotions and the regulatory functions) and intelligence is of an extreme importance, not too many scientists have expressed their interest in both personality and intelligence. Usually they study either one or the other area. Zeidner (1995) has argued that it seems to be seven major ways of thinking about this relationship:

1. *“Intelligence is the independent variable, whereas personality is the dependent variable.*
2. *Intelligence is the dependent variable, whereas personality is the independent variable.*
3. *Intelligence and personality show a bidirectional relationship, with reciprocal determinism existing between the two constructs.*
4. *The observed personality–intelligence relationship is artefactual, with a third extraneous variable responsible for the observed relationship between the constructs.*
5. *Personality is an intervening or ‘nuisance’ variable intervening between the intelligence construct (as input) and manifest level of intelligence (as output, evidenced in intelligence test scores).*
6. *Personality is a moderator variable, moderating the relationship between intelligence and a criterion variable of interest.*
7. *Intelligence is a moderator variable, moderating the relationship between personality and a criterion outcome variable”* (p. 316).

In some approaches intelligence is assessed as the core of the personality, but we can find other models of intelligence focused on cognitive functions even when we talk about emotions. A concept called “intellectual competence” or the “intelligence personality” was proposed, which is the individual’s capacity to acquire and consolidate knowledge throughout the life-span, which is dependent on ability, personality and self-insight with related emotions. These factors could explain the development of abilities, how confidence affects this development and how people perform on daily tasks. (Furnham, 2008).

4. Intelligence and emotions

There are many theories on emotions: Cannon-Bard (physiological changes and the emotion experience are two independent events), James-Lange (the emotion follows the behavior), cognitive appraisal, opponent process, social contagion etc. Even the origin and the mechanism of emotions are still disputed. We all agree the fact that emotions play a major role in our lives and specifically in the learning process. In this case the relation between cognition and emotions can be observed in the learning behavior.

Cognition, as a causal function, continues into the response state, or into the behavior, but emotions accompanies both the cognition and behavior. Cognition and emotions are interrelated when a person makes an evaluation of the significance of external signals and related behavior having as a purpose the personal well-being. On the contrary,

cognition only it is impersonal. Appraisal takes place in humans on the ground of interrelation between the two functions: cognition and emotions.

Gardner describes in MI theory at least three types of intelligence which, in our opinion, are closely interlinked with emotions: interpersonal intelligence, intrapersonal intelligence and existential intelligence. Unfortunately in many of the educational systems in which the MI approach plays an important role, these three forms of intelligence are not used too much or they are not used at all. The focus solely on cognition does not take into account the emotional factor and, consequently, student's interest for a particular activity (learning).

5. Attitudes and interest

In the systemic view of personality, attitudes are part of the character and they are learned as behavioral patterns. An attitude is a construct that represents an individual's degree of like or dislike for an item. Attitudes are generally positive or negative views of something. There could be also both positive and negative attitudes toward an item. Attitudes are changing as a result of experience.

Emotions play an important role in attitude change. Emotions works interrelated with the cognitive process. Attitudes and are functions of cognitive, affective and volitional components. Attitudes are part of the brain's associative networks, the spider-like structures residing in long term memory that consist of affective and cognitive nodes (Breckler et al., 1992). We will continue this approach, considering that a positive attitude toward an item implies an increased interest for that item. In terms of definition the interest is the feeling of a person whose attention, concern, or curiosity is particularly engaged by something (Dictionary.com). Interest implies both cognition (attention) and emotion.

Interest has been variously defined as a kind of consciousness accompanying and stimulating attention, a feeling pleasant or painful directing attention and as identical with attention itself. It is obvious the major implication of this process in the dynamics of attention and, consequently, in the educational process. The relation between attitudes and interest is also clear, but we underline the implications of emotions too.

What about the attitudes and interest implications in the learning process? Is it enough for a teacher to use only the cognitive approach from the MI theory, disregarding the student's interests for the information he has to learn, nor the student's attitude (and emotional feedback)? Is it efficient? No.

6. Intelligence and efficiency in education

The reason we presented the above considerations is that both studies and experience have shown repeatedly that education is ineffective when the methods are based only on cognitive elements, without taking account of emotions, interests and attitudes. There are negative influences of the cognitive structures on the problem solving process, for instance, which are connected to interest and attitudes, such us: the "blinding" thinking (because of the lack of interest and the negative attitude the subject cannot connect data in order to solve a problem); stereotypical thinking (perseveration in the same manner of solving a problem or connect things, even the learning conditions are changed – due to lack of interest and/or negative attitude) etc. All these problems reduce efficiency in educational process, though it may seem if the educators use the MI theory, the results should be better.

The solution we propose for the "low efficiency" problem is to integrate the above presented aspects of human psychology into the educational system in a practical way. On the one hand the teacher should not be concentrated only on cognitive functions, but on the personality system too, with a focus on emotions, attitudes and interests. In our opinion Gardner's theory could be more effective in practice if used complementary to the above considerations and related theories. As shown above MI theory didn't exclude the emotional factors or the personality (although did not developed these issues so much as the cognitive approach). For an increased efficiency MI theory should be used as a framework in which major aspects of personality should have an important place. On the other hand the social aspect of the learning is of major importance too. This aspect was developed within Cooperative Learning Theory (Kagan, 1994). Cooperative learning is a type of structured peer interaction emphasizing positive human relationships, collaboration between peers, active learning, academic achievement, equal participation, and equal status of students in the classroom. By encouraging the social interaction and feedback, the entire personality system is integrated into the learning process.

7. Conclusion

As stated in the title of the paper and in the above considerations, an integrative approach on learning process, interest, attitudes, emotions and personality, as a global system should be realized. The purpose of this theoretical paper was to underline that a potential threat for the educational system appeared: the use of MI theory in a limitative way, without taking into account aspects related to interests, attitudes and, in generally speaking, aspects related to emotional ground and to behavior regulation. We proposed above a practical solution for increasing the efficiency of learning. Students should be made aware of the entry points approach, but of the entire MI theory too in order to become self-regulated learners. Teachers should take into account the entire personality system (including emotions, interests and attitudes) in order to increase the efficiency of learning. Last but not least the social aspect of the learning process should be considered as the environmental learning.

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