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Title

A COMPARATIVE STUDY OF THE RELATIONSHIPS BETWEEN MULTIPLE INTELLIGENCES AND GENERAL SELF EFFICACY AMONG PUBLIC AND PRIVATE ORGANIZATIONS IN MARAGHEH

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Abstract:

Multiple Intelligences is closely related to the organizational affairs. By developing Multiple Intelligences and studying its effects on General Self-Efficacy we will have employees more compatible in every sophisticated and complicated issue. By investigating these kinds of relationships, managers will consider the importance of multiple intelligences and general Self Efficacy. This paper will review the literature of both in general because of its importance.

Keywords: Multiple Intelligences, General Self-Efficacy, Public and Private Organization, Maragheh.

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Definition of Intelligence:

For many years, intelligence has been one of the most controversial concepts (Eysenck & Kamin, 1981). This concept, like many other concepts in psychology, is not well defined.

Psychologists have not reached an agreement on what intelligence is (Valsiner & leung, 1994).

Although intelligence is a possession prized by most people, the term has no objective, agreed-upon referent either among the general public or contemporary psychologists.

Characteristics such as age, weight, or height in individuals have proper referents, but we cannot point to a single observable characteristic of a person to indicate his or her intelligence (Kail & Pelligrino, 1985). The problem resides in the fact that intelligence is an abstract concept. It doesn't have any tangible, exact and physical basis. Intelligence is a general concept for a group of processes which are inferred from people's explicit behaviors and responses. For example, we can observe the problem solving strategies and measure the result of using such strategies precisely, but intelligence which is supposed to create such techniques is not observable (Moafian, 2008).

However, there have been lots of attempts to define intelligence. According to Kline (1991)" intelligence is popularly defined as the ability to learn, understand and deal with novel situations. The intelligent person is seen as quick-witted, acute, keen, sharp, canny, astute, bright and brilliant. At the other end of the scale the unintelligent person is described as dim, dull, thick, half-witted or stupid" (p. 1).

Multiple Intelligence Theory:

Gardner's theory has a very solid biological basis. In this theory, the brain has been taken into account as a major physical determinant of intelligence. By studying individuals who had speech impairment, paralysis, or other disabilities, Gardner could find the parts of the brain that were specialized to perform the specific physical functions. He compared the rains of people with disabilities with those who did not have a disability and found that in the disable people there was damage in specific areas. In his studies, Gardner found seven different parts of the brain; as a result, in his theory, he suggested seven different intelligences including musical, mathematical, linguistics, spatial, kinesthetic, interpersonal and intrapersonal, each associated with a specific area of the human brain. Later, Gardner added an eighth one, naturalist, to his list of multiple intelligences (Gardner, 1995; cited in Hosseini, 2003: Noruzi & Rahimi, 2010, pp 2-3).

Gardner's MI theory posits that human beings possess at least eight intelligences, to a greater or lesser extent. They are as follow (Armstrong, 2009, pp.6-7):

Once this broader and more pragmatic perspective was taken, the concept of intelligence began to lose its mystique and became a functional concept that could be seen working in people's lives in a variety of ways. Gardner provided a means of mapping the broad range of abilities that humans possess by grouping their capabilities into the following eight comprehensive categories or "intelligences":

Linguistic: The capacity to use words effectively, whether orally (e.g., as a storyteller, orator, or politician) or in writing (e.g., as a poet, playwright, editor, or journalist). This intelligence includes the ability to manipulate the syntax or structure of language, the phonology or sounds of language, the semantics or meanings of language, and the pragmatic dimensions or practical uses

of language. Some of these uses include rhetoric (using language to convince others to take a specific course of action), mnemonics (using language to remember information), explanation (using language to inform), and met language (using language to talk about itself).

Logical-mathematical: The capacity to use numbers effectively (e.g., as a mathematician, tax accountant, or statistician) and to reason well (e.g., as a scientist, computer programmer, or logician). This intelligence includes sensitivity to logical patterns and relationships, statements and propositions (if-then, cause-effect), functions, and other related abstractions.

The kinds of processes used in the service of logical-mathematical intelligence include categorization, classification, inference, generalization, calculation, and hypothesis testing.

Spatial: The ability to perceive the visual-spatial world accurately (e.g., as a hunter, scout, or guide) and to perform transformations upon those perceptions (e.g., as an interior decorator, architect, artist, or inventor). This intelligence involves sensitivity to color, line, shape, form, space, and the relationships that exist between these elements. It includes the capacity to visualize, to graphically represent visual or spatial ideas, and to orient oneself appropriately in a spatial matrix.

Bodily-kinesthetic: Expertise in using one's whole body to express ideas and feelings (e.g.,as an actor, a mime, an athlete, or a dancer) and facility in using one's hands to produce or transform things (e.g., as a craftsperson, sculptor, mechanic, or surgeon). This intelligence includes specific physical skills such as coordination, balance, dexterity, strength, flexibility, and speed).

Musical: The capacity to perceive (e.g., as a music aficionado), discriminate (e.g., as a music, critic), transform (e.g., as a composer), and express (e.g., as a performer) musical forms. This intelligence includes sensitivity to the rhythm, pitch or melody, and timbre or tone color of a musical piece. One can have a figural or "top-down" understanding of music (global, intuitive), a formal or "bottom-up" understanding (analytic, technical), or both.

Interpersonal: The ability to perceive and make distinctions in the moods, intentions, motivations, and feelings of other people. This can include sensitivity to facial expressions, voice, and gestures; the capacity for discriminating among many different kinds of interpersonal cues; and the ability to respond effectively to those cues in some pragmatic way (e.g., to influence a group of people to follow a certain line of action).

Intrapersonal: Self-knowledge and the ability to act adaptively on the basis of that knowledge. This intelligence includes having an accurate picture of oneself (one's strengths and limitations); awareness of inner moods, intentions, motivations, temperaments, and desires; and the capacity for self-discipline, self-understanding, and self-esteem.

Naturalist: Expertise in the recognition and classification of the numerous species—the flora and fauna—of an individual's environment. This also includes sensitivity to other natural phenomena (e.g., cloud formations, mountains, etc.) and, in the case of those growing up in an urban environment, the capacity to discriminate among inanimate objects such as cars, sneakers, and CD covers (Noruzi & Rahimi, 2010, pp 3-5).

Self-efficacy:

Self-efficacy was defined by Albert Bandura as a person's belief in their capability to successfully perform a particular task. Self-efficacy theory is an important component of Bandura's (1986) more general social cognitive theory, which suggests that an individual's behavior, environment, and cognitive factors (i.e., outcome expectations and self-efficacy) are all highly inter-related. Bandura, 1978, p. 240 defined self-efficacy as "a judgment of one's ability to execute a particular behavior pattern." Wood and Bandura (1989) expanded upon this definition by suggesting that self-efficacy beliefs form a central role in the regulatory process through which an individual's motivation and performance attainments are governed. Self-efficacy judgments also determine how much effort people will spend on a task and how long they will persist with it. People with strong self-efficacy beliefs exert greater efforts to master a challenge while those with weak self-efficacy beliefs are likely to reduce their efforts or even quit (Bandura & Schunk, 1981; Brown & Inouyne, 1978; Schunk, 1981; Weinberg, Gould & Jackson, 1979; Staples et al, 2005: Sariolghalam & Noruzi, 2010, pp 132-133).

It is a person's belief in their capability to successfully perform a particular task. Together with the goals that people set, self-efficacy is one on the most powerful motivational predictors of how well a person will perform at almost any endeavour. A person's self-efficacy is a strong determinant of their effort, persistence, strategizing, as well as their subsequent training and job performance. Besides being highly predictive, much is also known about how self-efficacy can

be developed in order to harness its performance enhancing benefits (Heslin & Klehe, 2006; Noruzi, Rahimi, 2010, pp 3-4).

Methodology and Instruments:

This project has been done by two questionnaires with high reliability and validity among 350 (202 Male and 148 Female) employees in public and private organizations in Maragheh.

General Self-Efficacy, The General Self-Efficacy Scale is a 10-item psychometric scale that is designed to assess optimistic self-beliefs to cope with a variety of difficult demands in life. The scale has been originally developed in German by *Matthias Jerusalem* and *Ralf Schwarzer* in 1981 and has been used in many studies with hundred thousands of participants. In contrast to other scales that were designed to assess optimism, this one explicitly refers to personal agency, i.e., the belief that one's actions are responsible for successful (Schwarzer, 2006 Sariolghalam & Noruzi, 2010).

MIDAS Questionnaire: To measure teachers' MI, Multiple Intelligence Developmental Assessment Scale (MIDAS) questionnaire was used, which consists of one hundred and nineteen questions about eight intelligences which are mentioned in Gardner's MI theory. In this questionnaire, a number of questions for each intelligence come as follows:

	Musical	Kinesthetic	Mathematic	Spatial	Linguistic	Interpersonal	intrapersonal	Naturalist
The number of questions	14	13	17	15	20	18	9	13

The results of factor analysis revealed that the questionnaire measures eight hypothetical constructs (Shearer, 1996; cited in Hosseini, 2003).

Research Questions:

1. Is there significant relation between employees' Multiple Intelligences and Self efficacy among public and private organizations of Maragheh?

1-1. Is there significant relation between employees' Musical Intelligences and Self efficacy among public and private organizations of Maragheh?

1-2. Is there significant relation between employees' Kinesthetic Intelligences and Self efficacy among public and private organizations of Maragheh?

1-3. Is there significant relation between employees' Mathematic Intelligences and Self efficacy among public and private organizations of Maragheh?

1-4. Is there significant relation between employees' Spatial Intelligences and Self efficacy among public and private organizations of Maragheh?

1-5. Is there significant relation between employees' Linguistic Intelligences and Self efficacy among public and private organizations of Maragheh?

1-6. Is there significant relation between employees' Interpersonal Intelligences and Self efficacy among public and private organizations of Maragheh?

1-7. Is there significant relation between employees' intrapersonal Intelligences and Self efficacy among public and private organizations of Maragheh?

1-8. Is there significant relation between employees' Naturalist Intelligences and Self efficacy among public and private organizations of Maragheh?

Data Analysis:

To assess normal distribution, Descriptive statistics was applied. To determine the relationship between employees' Multiple Intelligences and General Self-efficacy, Kendall's tau-b test was used. Gender roles and the tendency to check the Critical Thinking and student Self-efficacy, independent t test were used.

Results:

Table 1, shows the results of descriptive statistics for the two instruments – MIs and Self-efficacy questionnaires - used in the study (see table 1).

Table 1: Summary of chi-square tests and research hypotheses

Independent Variable- and Dependent Variable	Test	Amount	DF	Level on Significance	*Result*
General Self Efficacy and Multiple Intelligences	Chi Square	149	4	0.000	*Significant*
	Kendall's tau-b	0.56	-	0.000	*Significant*
General Self Efficacy and Musical Intelligences	Chi Square	80.5	4	0.000	*Significant*
	Kendall's tau-b	0.38	-	0.000	*Significant*
General Self Efficacy and Kinesthetic Intelligences	Chi Square	100.9	4	0.000	*Significant*
	Kendall's tau-b	0.42	-	0.000	*Significant*
General Self Efficacy and Logical Intelligences	Chi Square	107.5	4	0.000	*Significant*
	Kendall's tau-b	0.48	-	0.000	*Significant*
General Self Efficacy and Spatial Intelligences	Chi Square	68.2	4	0.000	*Significant*
	Kendall's tau-b	0.38	-	0.000	*Significant*
General Self Efficacy and Linguistics Intelligences	Chi Square	132.6	4	0.000	*Significant*
	Kendall's tau-b	0.51	-	0.000	*Significant*
General Self Efficacy and Intrapersonal Intelligences	Chi Square	64.2	4	0.000	*Significant*
	Kendall's tau-b	0.30	-	0.000	*Significant*
General Self Efficacy and Interpersonal Intelligences	Chi Square	17.2	4	0.002	*Significant*
	Kendall's tau-b	0.13	-	0.007	*Significant*
General Self Efficacy and Naturalistic Intelligences	Chi Square	65.9	4	0.000	*Significant*
	Kendall's tau-b	*0.36*	-	*0.000*	*Significant*

As table 1, shows there are significant relationship between Multiple Intelligences and general self efficacy. It also reveals that every dimension of multiple intelligences has meaningful relationship with general self efficacy also. And the degree of relationship can be understood from the Kendall's tau-b in this table shows the intensity of the relationship between two factors i.e. dependent and independent variables and also the Chi Square and the degree of freedom related to the significance of variables i.e. are the two variables significant or not.

Discussion and Implications:

As a manager who has a good Multiple Intelligences, MIs and general self efficacy, GSE can cope with the market and organizational facts well than others who do not have more so a manager who has a good MI can manage the situation and run the business more successfully than the others too (Noruzi & Rahimi, 2010).

The table 1 revealed that there is significant relationship between MI and GSE and also among dimensions of MI and GSF. It is logical in the real world because if someone has a high intelligence then he/she can manage the situation better and will have better ability to develop the organization to higher ranks and this will lead to self efficacy in employees. In the following we bring some practical steps to help the developing of both MI and GSF in the organization.

Some practical guides for developing MIs and GSE come in the following:

1. Holding purposeful seminars and workshops for development of both MIs and GSE.
2. Managers should train employees but it should be responsive to and guided by intellectual standards (relevance, accuracy, precision, clarity, depth, and breadth).
3. GSE should be developing via intellectual factors of the employee with self-discipline.
4. Because the thinker can identify the elements of thought present in workshop or meetings and they want to make logical connection between the elements and the problem at hand so the feedback is highly needed.
5. Managers should help the employees in both public or private in self-assessing and self-improving.
6. The employees should know why they learn MIs strategies or GSE affairs. They should

know that learning these strategies will help them to be improved.

7. The multimedia training and learning in the sleep strategy will increase employees GSE and managers can use from that strategy also (Noruzi & Hernandez, 2010).

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