

Investigation of Training Relationship among Commercial and Sales Managers through Measuring Strategic Thinking and Multiple Intelligences (Based on Howard Gardner's theory of multiple intelligences)

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Abstract

Business environment is associated with devastating changes, fleeting opportunities, uncertainty and irregularity in twenty century and several factors effect on this issue including technological developments and globalization process. In such condition that the rules governing the business world is constantly changing, there is no sustainable advantage for organizations except continuous compliance with the environment. Understand and predict the major trends of environment are the only way for organizations which can apply to be in a better position than competitors and it is not possible unless in the shadow of managers with the power of strategic thinking. Current study is applicable from viewpoint of purpose and a survey work from viewpoint of methodology. This research aims to investigate relationship of strategic thinking power and each intelligences of Howard Gardner's theory (Verbal / linguistic, logical / mathematical, bodily / kinesthetic, visual / spatial, musical / rhythmic, interpersonal and intrapersonal) and try to help organization in selecting commercial and sales managers with intelligences related to strategic thinking power through estimating the training relationship. Statistic population is including all commercial and sales managers of KhorasanRazavi which their performance will be investigated through Cochran sampling. Results show that there is a positive and meaningful relationship between three intelligences (logical / mathematical, visual / spatial, intrapersonal) among seven Gardner intelligences and training of commercial and sales managers.

Keywords: Training, Strategic thinking, Multiple intelligences.

1. Introduction

Successful treatment of strategic management is full of attention to the environment, timely detection of its opportunities and orientation toward taking its advantage. Nowadays, it is essential to have managers with power of creating effective strategies to remain in competition cycle, managers who can put organizations in a position better than their competitors by creative power of their mind. Since the importance of existing strategic thinking in organization and necessity of managers with such power, it is try to investigate the relationship between strategic thinking and multiple intelligences

with training of commercial and sales managers who have crucial role in achieving the ultimate goal of organization which is to earn maximum profit.

Gardner's theory of multiple intelligences divides human intelligences into seven parts with individual abilities having superior ability in one or more parts of this multiple intelligences which are probably less powerful in other parts, considering the fact that Gardner's theory human intelligence is not fixed during lifetime unlike the traditional theories and is improvable and augmentable by practice and training, will help organizations to improve this relative intelligences by holding courses and workshop and using mentioned techniques referred by psychologists to utilize its positive results including improvement of competitive situation and understand the needs of customers and markets, as well as recognize patterns and paradigms of the market (1). Therefore, the main issue in this study is lack of potential talents among commercial and sales managers to establish strategic thinking and multiple intelligences through a criterion for measuring training relationship.

2. Theoretical Basics

1-2- Concept of strategy

Bruce Henderson, a prominent scholar and president of the Boston Consulting Group defines strategy as a unique advantage to differentiate the organization from competitors and considers Managing this Differentiation as work basis. There is a strong and unchangeable principle in strategy approach that is called "focus". If we want to be strong in all jobs, nothing will happen. This principle is due to competitive environment and resources limitation. Basically, the strategy is born of these two factors. Without competition, strategy is meaningless and where is competitive environment, this approach is effective (2).

According Porter, strategy is creation of unique and valuable conditions for organization. One of the essentials of strategic positioning is selection and performing activities different from competitors. Nevertheless a different position is not considered as competitive advantage because every moment could be imitated by competitor that can be dangerous (3).

2-2- Strategic thinking

The purpose of strategic thinking is creation of new and innovative strategies that could rewrite the rules of the competitive game and draw a potential future perspective that is significantly different from the present (4). Strategic thinking is not only the problem solving, problem solving is in connection with ordinary and current rules, while strategic thinking focuses more on creating problems and challenges which lead organization to move in a new direction. In fact, strategic thinking can be a good foundation for innovative and effective strategies (5).

2-3- Definition of intelligence

Intelligence is one of the important branches of psychology regarding individual differences and in fact it is a potential for finding or creating solutions for problems, which also includes gathering new knowledge (6). Several studies have shown that the higher the IQs, the greater the likelihood of success in school, work and life. Hence, the intelligence tests would always be valid tools to select the most qualified individuals for admission into universities and organizations (7).

2-4- Multiple intelligences

Among the various theorists, two theorists consider the intelligence as a complex and multiple systems, Howard Gardner and Stern Berg. Following we will look at their opinions:

2-4-1- Sternberg's triarchic theory of intelligence

Sternberg investigates intelligence in line with three capabilities including analytical, creative and applied capabilities. In analytical thinking, it is tried to solve problems by tangible strategies or relationship between the constituent elements through comparison and analysis. It is tried to come up with new kinds of issues raised by new or innovative methods in moral thinking or creator. But in

practical thinking or action, it is tried to apply what is learned and experienced in working conditions and time of day (8).

2-4-2- Gardner's theory of multiple intelligence

Gardner isn't the first psychologist who has assumed human potential as independent of each other, but he is the first psychologist who has amplified the meaning of intelligence term and categorized human intelligence by this method. Gardner has identified intelligences into seven distinct and independent units including verbal/linguistic, logical/mathematical, bodily/kinesthetic, visual/spatial, musical/rhythmic, interpersonal and intrapersonal (9), we will describe them as below:

1- Verbal/Linguistic intelligence

Verbal-linguistic intelligence is in connection with using language. Gardner emphasizes on four aspects of linguistic knowledge from different candidate on that their importance has been dramatically proven in Islamic society. These four aspects are including:

- 1- Rhetoric technique: The ability to use language to persuade others in justifying an act.
- 2- Verbal memory ability: the ability helps people to remember information.
- 3- Description: Most of the learning process is done by language.
- 4- Ability to describe activities.

2- Logical / mathematical intelligence

This intelligence is in connection with world of object and enables the person to understand the reality and potential of actions who performs and connections between sentences who makes. In fact, such people enjoy from gathering information, doing experiment and solving problems (10).

3- Bodily/kinesthetic intelligence (utilizing motion intelligence)

According to Gardner, targeted physical activity per se is seen as intelligence and in this way, the gap between the body and the brain is removed. The ability to control body movements and the use of crafted objects masterfully is considered as the main task of physical-kinesthetic intelligence.

4- Visual/spacial intelligence

Visual-spatial intelligence can be the same as pictorial intelligence which would recall ability of people to watch through the eyes and think through the mind. Gardner states the main components of this intelligence as the ability to perceive the visual-spatial world accurately and ability to change in initial perception of human.

5- Musical/ rhythmic intelligence

This intelligence is able to recognize tonal patterns and sensitivity to environmental sounds especially human voices and musical instruments and usually musicians and music educators have this kind of intelligence. These hearing sensitivities will influence on the motion and consciousness of individuals (11).

6- Personal intelligences (interpersonal/intrapersonal)

Gardner put interpersonal and intrapersonal together in his statements and expresses that interpersonal intelligence is a talent to understand the own feelings, emotions and ability to isolate and identify feelings and use them as a means of understanding and guiding behavior. Interpersonal intelligence is considered in communication of people with others. Center of this talent is attention and distinguish between people from viewpoint of motivation, intentions, character, temperament, etc. (12).

3. Methodology

Current study is a survey research from viewpoint of gathering necessary data and applicable one from viewpoint of purpose. The statistic population includes commercial and sales managers of

companies that are active in the geographical area of Khorasan Razavi which list of these companies is provided by the Industries Office of KhorasanRazavi. Since this study was a multivariate one in which estimated parameters are correlation and regression coefficients, so Cochran method was used to estimate sample volume. According to calculations, the sample size of 60 subjects was determined. Two questionnaires were used to gather data in this study. Armstrong's questionnaire was used to assess power of strategic thinking and Bruce and Longden's questionnaire was used to assess multiple intelligences which both were among valid scientific questionnaires. In addition, these two questionnaires have been sighted by several professors of psychology and then amended version was used. Validity of questionnaires has been obtained by content validity, accordingly. Alpha Cronbach coefficient test was used to test reliability of applied questionnaires. Meanwhile, regression analysis was used to determine relationship between variables, significant test of relationships and mathematical model for these relationships.

4. Research hypothesis

According affective determinants identified in the literature and applied questionnaire, seven hypotheses are presented below:

H1: Power of strategic thinking and verbal/linguistic intelligence influences on training of commercial and sales managers.

H2: Power of strategic thinking and mathematical/logical intelligence influences on training of commercial and sales managers.

H3: Power of strategic thinking and bodily/kinesthetic intelligence influences on training of commercial and sales managers.

H4: Power of strategic thinking and visual/spatial intelligence influences on training of commercial and sales managers.

H5: Power of strategic thinking and musical/rhythmic intelligence influences on training of commercial and sales managers.

H6: Power of strategic thinking and interpersonal intelligence influences on training of commercial and sales managers.

H7: Power of strategic thinking and intrapersonal intelligence influences on training of commercial and sales managers.

Testing hypothesis

For testing each hypothesis, suppose x represents given intelligence and y as power of strategic thinking as well as β the slope (angular coefficient) of regression line y with respect to x . Therefore, relationship between x and y means $\beta \neq 0$ and lack of correlation between them means $\beta = 0$. So test of each hypothesis is as below:

$H_0 : \beta = 0$

$H_1 : \beta \neq 0$

Therefore, regression analysis and significant tests of regression were used to test above mentioned hypothesis. In each hypothesis there is no relationship between these two variables if H_0 is accepted. But relationship between these two variables as math equation (regression line equation) will be provided, if H_0 is rejected.

H1: Power of strategic thinking and verbal/linguistic intelligence influence on training of commercial and sales managers.

Two below modes have been ideated for this hypothesis:

H_0 : Power of strategic thinking and verbal/linguistic intelligence don't influence on training of commercial and sales managers. $\beta = 0$

H1: Power of strategic thinking and verbal/linguistic intelligence influence on training of commercial and sales managers. $\beta \neq 0$

Stages of The regression analysis are as follows:

Table 1: Model summary

	Model
	1
R	0.216 a
R Square	0.047
Adjusted R Square	0.030
Std. Error of the Estimate	11.850

a. Predictors: (constant), linguistic.int

Table 2: ANOVAb

	Model		
	1		
	Regression	Residual	Total
Sum of Squares	397.212	8144.971	8542.183
df	1	58	59
Mean Squares	397.212	140.431	
F	2.829		
Sig.	0.098 a		

a. Predictors: (constant), linguistic.int

b. Dependent variable: strategic.thinking

Table 3: Coefficients^a

		Model	
		1	
		(Constant)	Linguistic. Int
Unstandardized Coefficients	B	64.040	0.995
	Std. Error	2.917	0.591
Standardized Coefficients	Beta		0.216
t		21.954	1.682
Sig.		0.000	0.098
95% Confidence Interval for B	Lower Bound	58.201	-0.189
	Upper Bound	69.879	2.178

a. Dependent Variable: Strategic. Thinking

We compare value of this probability with significant level $\alpha=0.05$ to test $\beta = 0$ against $\beta \neq 0$, and because this probability is not smaller than or equal to $\alpha=0.05$, assumption $\beta \neq 0$ is rejected. It means that because sig=0.098 is larger than $\alpha=0.05$, assumption $\beta \neq 0$ is rejected and we conclude that power of strategic thinking and verbal/linguistic intelligence don't influence on training of commercial and sales managers.

H2: Power of strategic thinking and mathematical/logical intelligence influence on training of commercial and sales managers.

Two below modes have been ideated for this hypothesis:

H0: Power of strategic thinking and mathematical/logical intelligence don't influence on training of commercial and sales managers. $\beta = 0$

H1: Power of strategic thinking and mathematical/logical intelligence influence on training of commercial and sales managers. $\beta \neq 0$

We compare value of this probability with significant level $\alpha=0.05$ to test $\beta = 0$ against $\beta \neq 0$, and because this probability is smaller than $\alpha=0.05$, assumption $\beta=0$ is rejected. It means that because $\text{sig}=0.011$ is smaller than $\alpha=0.05$, assumption $\beta=0$ is rejected and we conclude that power of strategic thinking and mathematical/logical intelligence influence on training of commercial and sales managers.

According conducted analysis, if we suppose that y represents strategic thinking and x as mathematical/logical intelligence, therefore there is below relationship between these two variables:
 $Y = 62.048 + 1.542x$

So, according observed significant level, above mentioned regression is meaningful and its determination coefficient is 0.106 and correlation coefficient between two variables is 0.325.

H3: Power of strategic thinking and bodily/kinesthetic intelligence influence on training of commercial and sales managers.

Two below modes have been ideated for this hypothesis:

H0: Power of strategic thinking and bodily/kinesthetic intelligence don't influence on training of commercial and sales managers. $\beta = 0$

H1: Power of strategic thinking and bodily/kinesthetic intelligence influence on training of commercial and sales managers. $\beta \neq 0$

We compare value of this probability with significant level $\alpha=0.05$ to test $\beta = 0$ against $\beta \neq 0$, and because this probability isn't smaller than or equal to $\alpha=0.05$, assumption $\beta=0$ is rejected. It means that because $\text{sig}=0.152$ is larger than $\alpha=0.05$, assumption $\beta=0$ is rejected and we conclude that power of strategic thinking and bodily/kinesthetic intelligence don't influence on training of commercial and sales managers.

H4: Power of strategic thinking and visual/spatial intelligence influence on training of commercial and sales managers.

Two below modes have been ideated for this hypothesis:

H0: Power of strategic thinking and visual/spatial intelligence don't influence on training of commercial and sales managers. $\beta = 0$

H1: Power of strategic thinking and visual/spatial intelligence influence on training of commercial and sales managers. $\beta \neq 0$

We compare value of this probability with significant level $\alpha=0.05$ to test $\beta = 0$ against $\beta \neq 0$, and because this probability is smaller than $\alpha=0.05$, assumption $\beta=0$ is rejected. It means because $\text{sig}=0.001$ is smaller than $\alpha=0.05$, assumption $\beta=0$ is rejected and we conclude that power of strategic thinking and visual/spatial intelligence effect on training of commercial and sales managers.

According conducted analysis, if we suppose y represents strategic thinking and x as visual/spatial intelligence, therefore there is relationship between two variables as below:
 $y = 59.847 + 1.924x$

So according observed significant level, above mentioned regression is meaningful and its determination coefficient is 0.165 and correlation coefficient between two variables is 0.406.

H5: Power of strategic thinking and musical/rhythmic intelligence influence on training of commercial and sales managers

Two below modes have been ideated for this hypothesis:

H0: Power of strategic thinking and linguistic intelligence don't influence on training of commercial and sales managers. $\beta = 0$

H1: Power of strategic thinking and linguistic intelligence influence on training of commercial and sales managers. $\beta \neq 0$

We compare value of this probability with significant level $\alpha=0.05$ to test $\beta = 0$ against $\beta \neq 0$, and because this probability is not smaller than or equal to $\alpha=0.05$, assumption $\beta \neq 0$ is rejected. It means because sig=0.112 is larger than $\alpha=0.05$, assumption $\beta \neq 0$ is rejected and we conclude that power of strategic thinking and musical/rhythmic intelligence don't influence on training of commercial and sales managers.

H6: Power of strategic thinking and interpersonal intelligence influence on training of commercial and sales managers.

Two below modes have been ideated for this hypothesis:

H0: Power of strategic thinking and interpersonal intelligence don't influence on training of commercial and sales managers. $\beta = 0$

H1: Power of strategic thinking and interpersonal intelligence influence on training of commercial and sales managers. $\beta \neq 0$

We compare value of this probability with significant level $\alpha=0.05$ to test $\beta = 0$ against $\beta \neq 0$, and because this probability isn't smaller than or equal to $\alpha=0.05$, assumption $\beta \neq 0$ is rejected. It means that because sig=0.085 is larger than $\alpha=0.05$, assumption $\beta \neq 0$ is rejected and we conclude that power of strategic thinking and interpersonal intelligence don't influence on training of commercial and sales managers.

H7: Power of strategic thinking and intrapersonal intelligence influence on training of commercial and sales managers.

Two below modes have been ideated for this hypothesis:

H0: Power of strategic thinking and intrapersonal intelligence don't influence on training of commercial and sales managers. $\beta = 0$

H1: Power of strategic thinking and intrapersonal intelligence influence on training of commercial and sales managers. $\beta \neq 0$

We compare value of this probability with significant level $\alpha=0.05$ to test $\beta = 0$ against $\beta \neq 0$, and because this probability is smaller than $\alpha=0.05$, assumption $\beta=0$ is rejected. It means that because sig=0.003 is smaller than $\alpha=0.05$, assumption $\beta=0$ is rejected and we conclude that power of strategic thinking and intrapersonal intelligence don't effect on training of commercial and sales managers.

According conducted analysis, if we suppose y represents strategic thinking and x as intrapersonal intelligence, so there is below relationship between these two variables:

$$y = 61.353 + 1.760x$$

So according observed significant level, above mentioned regression is meaningful and its determination coefficient is 0.140 and correlation coefficient between two variables is 0.374.

5. Discussion and Conclusion

At the first stage, it was necessary to select Howard Gardner's theory of multiple intelligences among existing theories in intelligence area that is the newest and the most efficient approach of intelligence in the fields of education and organization. Then, in next step we help organizations to employ managers with high capabilities in intelligences related to strategic thinking by specifying affective relationships for working in commercial and sales department and equip themselves with such key advantage of twenty century, in addition to determination of relationship between individual intelligences that are separated from each other and power of strategic thinking with training, by exploring around strategic thinking and people's intelligence variables (based on theory of Gardner).

After gathering and analyzing data by using SPSS software it was observed that there is significant relationship between three intelligences (logical/mathematical, visual/spatial and intrapersonal) from seven intelligence of Gardner and power of strategic thinking with training paradigm. Since each intelligences of Gardner's theory can solve problems related to their specific area, therefore it can be stated that according to relationship between each intelligence and power of strategic thinking with training variable, managers with high capability in each of spatial, logical/mathematical and intrapersonal intelligence, have high power of strategic thinking. Considering the fact that strategic thinking is necessary not only in high level of organization but also in all levels, so organizations can use sufficiently of this issue to select employees in different departments. Meanwhile, organizations can help staffs to reinforce each of these intelligences by holding workshop and educational courses and relevant educational methods and in compliance with theory of multiple intelligences and finally use them toward organization interests. Organizations should seek to learn from environment towards having strategic thinking more than aware of the environment. Awareness about business environment and understanding its rules is considered as the secret to survive and development of organizations. The customer must be understood well and it must be specified how to create value for him/her. Market signals must be correctly interpreted and showed correct reaction. It is hoped that this research will enable organizations to recruit and train managers with the high ability in intelligences related to strategic thinking and ultimately, use of this key advantage. InshaAllah.

6. Resource

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