

Multiple Intelligence Theory And Its Impact on Student Academic Achievement in Communication Skills

Azizah Saad AlRowais

Abstract: *The concept of multiple intelligences (MI) theory is a challenge for educators to create environments that develop students' eight intelligences. The chief goal of the present research study is to investigate the role of MI theory on the student's achievement in communication skills. The researcher builds a new concept to assess the MI theory in developing the PYP students' academic success in Communication Skills at Salman bin Abdul-Aziz University. The present study employed the descriptive method to determine the principles of MI (Multiple Intelligence) theory to prepare the communication skills course, and the quasi-experimental method to measure the effectiveness of the independent variable (MI theory) on the dependent variable (achievement). Sixty students who represent Salman bin Abdul-Aziz University in Saudi Arabia were selected randomly. For this purpose, Achievement test was used to gather the data. The study showed that there were positive effects of MI theory on the student's achievement. The major contribution of the researcher is to develop a relationship between MI theories in the PYP students' academic attainment.*

Index Terms: *Communication Skills, Multiple Intelligence (MI) Theory & PYP Students, Saudi student*

I. INTRODUCTION

In educational sector, the practitioners have significantly used robust tactics for defining a proper shape in building communication skills of students. In Saudi Arabia, numerous loop holes have been found in confidence level of students, where these students hesitate in confronting with other people. The lack in students' communication skill has reduced their confidence level which adversely depicts their overall image. Saudi educational reform has seen the rapid expansion of the higher education. Preparatory Year Programs (PYP), as a key component of these reforms is committed to preparing students for success at higher educational institutions. PYP sets clear objectives of striving to provide students with both academic skills, and the English language proficiency that is needed to function and succeed in academic contexts. To equip university students with distinguished personal skills by developing their self- and life-long learning in- and outside university, the PYP includes Communication skills courses to develop students' personalities. It is used to understand the concept of communication and its elements,

Manuscript Received on February 2015.

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types and outcomes, deal effectively with the different types of personalities and employ verbal and non-verbal communication effectively. Several studies have been carried out to investigate the effect of using different approaches and activities on the student's achievement and motivation [1].

II. STATEMENT OF THE PROBLEM

The Education Ministry of Saudi Arabia has introduced the Preparatory Year Program (PYP) to prepare students to excel academically and to equip them with the assistances that required for supporting them in their professional and academic career [2]. The statement of problem of this research study defines great influence on students of Salman bin Abdul-Aziz University which are as follows:

- The problem of the present study lies on the fact that PYP students in Saudi Arabia face difficulties in communication skills, as a result of using traditional teaching methods at some of the general government schools unsuitable to their age stage.
- There is continuously a need for improvement and innovation of teaching methods and learning types.

A. Research Objective

The research aimed to examine the role of multiple intelligences theory in developing the PYP students' academic achievement in Communication Skills at Salman bin Abdul-Aziz University.

B. Research Question

What is the role of Multiple Intelligences Theory in developing the PYP students' academic achievement in Communication Skills at Salman bin Abdul-Aziz University?

C. Research Hypothesis

To answer the study question, the following hypothesis was tested:

H_0 : There are statistically significant differences between the mean scores of the experimental group and the control group in the post application of the achievement tests of Communication skills.

H_A : There are no statistically significant differences between the mean scores of the experimental group and the control group in the post application of the achievement tests of Communication skills.

D. Significance of the Study

The importance of the research lies in the following considerations:

- It is a response to the calls of education scholars for the employment of various educational methods and theories, concerning the characteristics of age stage and students' requirements.
- This study is according to the researcher's best knowledge, and it is highly probably one of the pioneering studies in the KSA aiming at application of MI theory.
- It may draw the attention of the course designers to include more and more MI theory activities in high education programs in order to provide different fields of practice, concerning the students' requirements.

III. LITERATURE REVIEW

Dr. Howard Gardner, an analyst and educator of neuroscience from Harvard University, created the hypothesis of Multiple Intelligences (MI) in 1983. The hypothesis tested customary convictions in the fields of instruction and cognitive. A MI educational program is intended to show content by considering each of the 8 intelligences.

A. Education in Saudi Arabia

In Saudi Arabia, the educational framework includes 24 legislature colleges, more than 24,000 schools and few educational and preparing establishments. The framework is interested in every national and furnishes understudies with free education, books and wellbeing administrations [3]. The legislature allots in excess of 25% of the aggregate plan to education including professional preparing, and uses around 13.17 billion U.S. dollars on essential education and examination.

B. Higher Education in Saudi Arabia

The development in the Kingdom of Saudi Arabia in all fields, and advanced education is no exemption; it is a mainstay of the effective improvement in any nation. A regal declaration numbered 1/236 in 8/5/1395 AH (1975 AD) stipulated securing Ministry of Higher Education to predict executing the national advanced education arrangement. The 24 administration colleges of Saudi Arabia, 6 private colleges and 18 private universities, every one of them have a plenty of teaches that are not simply scholarly.

C. Salman Bin Abdul-Aziz University

Salman Bin Abdul-Aziz University was made an illustrious announcement in 2007 to exchange a limb of King Saud University in Al-Kharj. This autonomous college called the University of Al-Kharj and the increase of all schools in different areas such as Saih, Dalam, Wadidawaser, Hawtatbanitamim and Aflaj and Harq.

D. Preparatory Year Programs (PYP)

PYP sets clear objectives of striving to provide students with both academic skills and the English language proficiency needed to function and succeed in academic contexts. These objectives defined the clear pathway programs in other parts of the world [4].

Researchers assumed that the students at the PYP experienced more anxiety than the experienced students in the pharmacy and engineering colleges[5]. In 2011, Das has

defined the skills of communication scale in achieving the good academic for students. The overall approach of CLT was highly dynamic and reliable for providing excessive quality in communication skills [6].

E. Multiple Intelligence Theory

Knowledge has generally been characterized as far as insights remainder (IQ), which measures a restricted scope of verbal/semantic and consistent/ scientific capacities [7]. Sternberg and Grigorenko's fruitful insights hypothesis is one of these. Gardner takes a pluralistic perspective of adapting by perceiving that everybody has diverse cognitive qualities (1993). Gardner's hypothesis of numerous intelligences incorporates the accompanying four premises:

- There are more than two sorts of discernment. Gardner has named eight.
- Intelligence could be taught and zones of shortcoming and qualities might be moved forward.
- Intelligences are everlastingly changing all through life [8].

There are a few key focuses in the Multiple Intelligences hypothesis that are worth saying. There are numerous approaches to be savvy inside every class.

Intelligence	Core Components
Logical-mathematical	Sensitivity to, and capacity to discern, logical or numerical patterns; ability to handle long chains of reasoning
Linguistic	Sensitivity to the sounds, rhythms and meanings of words; sensitivity to the different functions of language
Musical	Abilities to produce and appreciate rhythm, pitch and timbre; appreciation of the forms of musical expressiveness.
Spatial	Capacities to perceive the visual-spatial world accurately and to perform transformations on one's initial perceptions
Bodily-Kinesthetic	Abilities to control one's body movements and to handle objects skillfully.
Interpersonal	Capacities to discern and respond appropriately to the moods, temperaments, motivations, and desires of other people
Intrapersonal	Access to one's own feelings and the ability to discriminate among them and draw upon them to guide behavior; knowledge of one's own strengths, weaknesses, desires and intelligences.
Naturalist (from an interview with Gardner by Checkly, 1997).	Ability to discriminate among living things (plants, animals) as well as sensitivity to other features of the natural world (clouds, rock configurations).

Figure 1: Intelligence Components

Gardner has thought of seven different intelligences in 1999 included an eighth sagacity. Figure 1 quickly depicts each of Gardner's Multiple Intelligences. The numerous brainpower hypotheses are most helpful for two instructive finishes:

- It permits us to arrange instructive projects that will empower kids to figure it out craved end states.

- It helps us to arrive at more kids who are attempting to comprehend imperative speculations and ideas in the controls.

F. The Importance of MI Theory in Education

MI hypothesis has been turning into a famous hypothesis these days. Armstrong accepts that various intelligences hypothesis can extraordinarily influence understudies' conduct in the classroom by making an environment where people's necessities are perceived, and went to all through the school day [9]. There has been an attention on showing understudies in overwhelmingly two structures, two intelligences, semantic symbolization and consistent numerical symbolization [10].

It has been analyzed that the results demonstrated understudies who were taught by numerous intelligences hypothesis based guideline were accomplished higher than the ones which were educated by the customary science direction about compound holding idea [11]. Also some studeies described the multiple intelligences (MIs) and self-efficacy profiles that characterize Saudi female (gifted) third intermediate students and their relationship to the achievement of EFL language skills and aspects. The sample consisted of (85) Saudi female third intermediate grade students, (43) were identified as gifted, and (42) were regular students [12].

G. IM & Communication Skills

Communication skills is considering as an important action of assigning information through the conversation of opinions, mails, illustrations, indications, transcribed, or conduct [13]. Through communication skills, the students can improve their learning capabilities at various scales which are as follows:

- Verifying concepts, literatures, importance and factors of communication
- Improving communication with inner-self and self-confidence
- Working to counter communication problems with full power and competence
- Using effective methods which suits different human patterns during communication
- Improving the speaking and listening skills
- Addressing, discussing, persuading and negotiating with others
- Working with groups as a team and participating in a variety of volunteer work
- Writing C. V. and reports
- Performing interview with confidence
- Using modern technological methods

Many teachers, schools, textbook writers, and assessment specialists have embraced these strategies [14], [15], [16]. Some stated that MI activities were effective in developing students' writing competencies [17].

IV. METHODOLOGY

A. Research Method

In order to test the research hypothesis, the present study employed the descriptive method to determine the principles of MI theory to prepare the communication skills course, and

the quasi-experimental method to measure the effectiveness of the independent variable (MI theory) on the dependent variable achievement [18].

B. Research Approach/Procedures

It included the pre-administration of the instruments, the treatment and the post administration of the instruments. The research approach has been categorized into pre-administration and post-administration test, where student's academic achievement is identified on the basis of their multiple intelligence theory implementation and communication skills activities.

C. Pre- Administration of the Instruments

The researcher pre-administered the achievement test to measure the student's achievement of the experimental and control groups, and identify their level in communication skills course before the introduction of the treatment. The pre-administration of the instrument was conducted at the beginning of January 2014. It was administered to sixty students of Preparatory Year Program (PYP) at Salman bin Abdul-Aziz University, before they were exposed to the treatment.

D. The Treatment

The treatment lasted 12 weeks to investigate the effectiveness of MI theory on the students' achievement at Salman bin Abdul-Aziz University. The researcher used the materials in the treatment were textbooks, video lectures online, PowerPoint presentations, and course management systems. The researcher was involved in teaching the two groups: the experimental group (taught through the MI theory applications) and the control group (taught through the traditional method).

E. Post-Administration of the Instruments

After implementing the treatment, its effectiveness was evaluated by the post-administration of the instrument. The content of the pre-administration and the post-administration was the same. The achievement test of the course was post-administered to measure the students' achievement of the experimental and control groups. The statistical procedures were applied on the data obtained using the means and t-tests.

V. RESEARCH INSTRUMENTS AND SAMPLE

A. Instruments

The study instruments included the achievement test of communication skills course that was pre-post-administered to measure the students' achievement of the experimental and control groups. The Academic Achievement Test designed by the researcher included 50 multiple-choice items to measure the students' academic achievement. Each question had one correct answer and three 'distracters'.

B. Data Collection Techniques

The Preparatory Year Program (PYP) is based on the predefine sample of size 60 students which are taken from the Salman bin Abdul-Aziz University for the second term of the year 2013-2014. From these 60 students, 30 students were analyzed as a control group and the remaining 30 were

analyzed as treatment group. The researcher used the random sampling technique in order to collect the data because the result generated from the random sample has very small chance of biasness. Also, the quantitative approach used by the researcher to analyze the test score of the selected student [19].

C. Research Sample

The study sample was composed of sixty students who represent the Preparatory Year Program (PYP) at Salman bin Abdul-Aziz University for the second term of the year 2013-2014. Two classes were randomly selected, and randomly assigned to the experimental and control groups of the study. The variables assumed relevant to the present study were controlled as follows: All the students were females of the same age (18-19 years old); both groups were taught by the researcher, students in the two groups were at the same level of proficiency as measured by the pre-tests.

D. Data Analysis

The Cronbach's reliability test has done for analyzing the reliability of collected data. This test has identified the experiment and control group reliability level. The researcher tried out the instrument by administering the test on a sample of 10 PYP students (other than the sample subjects) who had finished studying the intended course. Alpha-Cronbach's coefficient was computed by using the SPSS program. The reliability coefficient of the test was (0.85) which proved to be statistically reliable. However, from the obtained reliability of Cronbach's alpha value, it declared that the possibility of surety of data set with research objective is 0.85.

E. Pre-Administration of Achievement Test

The instrument of the study was administered before the commencement of the treatment in order to ensure the equivalence between the experimental and the control groups. The use of t-test is also obvious that supports the nature of study and results that required attaining on individual basis. The reason for implementing the t-test technique is to identifying the significance level in between experiment and control group.

Table (1): Independent Samples T-test for the differences between two groups on the pre-administration of achievement test

Group	No.	Mean	T- value	p-value
Control	30	10.15	-1.62	0.11
Experimental	30	11		

The above table shows the results of the independent samples t- test for the differences between two groups on the pre-administration of achievement test of the course "Communication skills" which showed that there were no significant differences between the means of responses of the two groups. The mean value of experimental group is high as compare to control group. The t-value defines the significance level which, whereas p-value defines the possibility of accepting or rejecting the hypothesis claim. The null hypothesis is false which defines there are no statistically significant differences between the mean scores of the experimental group and the control group in the

pre-application of the achievement tests of communication skills.

F. Post-Administration of Achievement Test

In post-administration of achievement test the use of independent sample t-test has evaluated the significance level of both experimental and control group. The role of multiple intelligences theory in developing the student's academic achievement in communication skills has identified on the basis of independent sample t-test.

Table (2): Independent Samples T-test for the differences between two groups on the post-administration of achievement test

Group	No.	Mean	T- value	p-value
Control	30	23.37	5	0.01
Experimental	30	35.63		

The above table shows the results of the independent samples t-test for the differences between two groups on the post-administration of achievement test of the course "Communication Skills" that revealed that there were significant differences at 0.05 level between the students mean scores on the post-application of the test and these differences were in favor of the Experimental Group. The mean value of experimental is highly greater as compared to control group. So, the research hypothesis was rejected because there was a marked improvement in the Experimental Group performance on the post-administration of the test. The post administration in student achievement test has totally defined the significance and existence level of the test values.

VI. CONCLUSION AND RECOMMENDATIONS

In this research, the researcher builds a new concept to evaluate the role of MI theory in developing the PYP students' academic achievement in Communication Skills at Salman bin Abdul-Aziz University. From the above study, the role of multiple intelligence theory has highly effective in enhancing the effectiveness level of students' achievement and also work in improving their communication skills. Also, the main decisions about the contribution for the pedagogy define that there are statistically significant differences at (0.05 level) between the mean scores of "taught in light of MI theory" and "the taught through the usual method" in the post application of the achievement tests in favor of the experimental group. Additionally, students will contribute more regularly, and enhance their communication skills by adopting the courses of multiple intelligence theory.

The major contribution of the researcher is to develop the relationship between MI theories in developing the PYP students' academic achievement in Communication Skills. PYP Saudi students face difficulties in communication skills, as a result of using traditional teaching methods at some of the general government schools unsuitable to their age stage such as manuscript lessons must be highly effectual in providing high quality assistance to students. Therefore, there is continuously a need for improvement and innovation of

teaching methods and learning types. According to the different results of the previous studies about the effectiveness of the IM theory, the researcher felt the need to conduct the present study.

These significant changes augment the reliability of student skills factors which are as follows:

- The faculty members are advised to adopt applications of MI theory, and it's usage in teaching because of its effectiveness in the development of the knowledge and skills of students and their attitudes.
- More attention should be paid to the preparation of workshops and training courses for the training of faculty members at universities on the use of MI theory and employing e-learning tools and make use of them in the design of courses.
- Course designers are advised to include the MI activates into their practices in order to provide different types of learning styles to shift the focus from teacher to learner in instruction.

On the basis of above recommendations, students can enhance their academic achievement rapidly. With the implementation of all these significant changes, the communication level and skills of students have been dynamically enhanced.

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