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Propose Measures for Enhancement: Multiple Intelligence Based Instructional Strategies

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ABSTRACT

This study explores the effectiveness of multiple intelligence-based instructional strategies in enhancing the learning experiences and development of secondary high school students. Rooted in Howard Gardner's theory of multiple intelligences, the research aims to identify how various teaching approaches can cater to diverse learner profiles, including mastery, interpersonal, understanding, and self-expressive styles. The study also investigates the impact of these strategies on developing students' logical-mathematical, verbal-linguistic, and spatial intelligences. Utilizing a descriptive research design, data were collected from teachers at the International Bureau of Management through questionnaires and analyzed using mean scores and weighted averages. Findings reveal that instructional strategies aligned with multiple intelligences significantly contribute to students' cognitive, affective, and psychomotor development. Mastery and interpersonal teaching styles were particularly effective in fostering engagement and comprehension, while self-expressive approaches promoted creativity and personal insight. Despite the overall positive outcomes, challenges such as managing classroom behavior and facilitating critical thinking were identified as obstacles to optimal intelligence development. The study recommends that educators integrate diverse instructional methods tailored to multiple intelligences and continuously refine their teaching practices to address these challenges. Ultimately, adopting multiple intelligence-based strategies promotes holistic learning, enabling students to realize their full potential across varied intellectual domains.

INTRODUCTION

We perceive the world either through our five senses, through intuition—which can be thought of as an idealized "sixth sense"—or by a combination of both. Some people rely more heavily on their senses than on intuition. These individuals tend to live and work in a practical, hands-on way, motivated by usefulness and a realistic outlook on life, often operating according to established procedures and focused on clear goals. Conversely, intuitive individuals trust their insights, follow inspiration and vision, and often feel restricted by rigid procedures. They prefer flexibility and the freedom to explore ideas and possibilities.

Our perception of the world is ultimately subjective, shaped by how our minds judge information. The mind judges primarily through two modes: thinking and feeling. When we judge through thinking, we depend on reason, logic, and evidence, making our judgments more objective. In contrast, feeling-based judgments emphasize human connections that bring depth and meaning to life, beyond purely logical links.

As educators aiming to initiate and improve the learning process for every student, it is crucial to understand their needs, abilities, and skills—in other words, to know the nature of the

learner. This understanding allows us to design and tailor our teaching methods and techniques to make learning easier and more effective.

Traditionally, instruction and learning have been the sole responsibility of the teacher, who acts as the primary source of information for students. However, in a learner-centered classroom, the teacher takes on the role of facilitator and resource provider. The teacher guides students by recommending useful resources, posing thought-provoking questions, and creating opportunities for learners to construct their own ideas and take responsibility for their learning.

Moreover, teachers should be prepared with appropriate instructional materials to support the learning process. They develop teaching styles and methods based on their own strengths and abilities to promote effective learning—this study focuses on exploring those aspects.

The researcher conducted the study in International Bureau of Management that focused and limits on the four learning styles namely: Mastery style, Interpersonal style, Understanding style and Self-expressive style. The scope also included how effective are these teaching strategies in the development of multiple intelligence along the domains, namely: Cognitive, affective and Psychomotor.

This study assumed the development of each individual learner through using the different teaching styles in the development of Multiple Intelligence. The progress of each student will change to become a well rounded individual using their faculty of thought and facultative senses, just like an ideal person.

LITERATURE REVIEW

This chapter is a presentation of the related literature and related studies, as well as the significant to the present study. The synthesis of the art, gaps bridged by the study, theoretical and conceptual framework, and definition of terms are likewise discussed in this chapter.

Teaching approaches and strategies represent a modest attempt to present some models of teaching approaches and strategies that easily lead to a wide range of content across discipline, ability level and age groups. One of its goals is to offer a repertoire of teaching methodologies that have been tried and improved effective in different yet conducive teaching-learning movements. It intends to achieve an understanding dynamics of teaching, both inside and outside the classroom suited for all instructional levels.

Finally, it aims to develop the skills in observing and analyzing teacher's roles and behavior that provide direction and guidance towards learning efficiency. [1]

John Dewey (1916) and Herbert Thelen (1960), according to them the classroom should be a laboratory for the purpose of study and inquiry into important social and interpersonal problem, thus the emergence of the use of group dynamics and group investigations.

They evolve strategies and procedures for helping small groups solve their own problems at the same time learn democratic principles from their day to day interaction. [2]

It puts premium on self-directed learning activities pattered after the scientific procedures and process. As such, they learn by acquiring about something, weighted and sorting out information and building their own meaning. In so doing, they employ such processes as analyzing, evacuating and synthesizing with an end in view at discovering concepts by themselves. Ultimately, they become independent, autonomous learners capable of learning on their own. Applied in the classroom for academic learning socialization became model cooperative learning.[3]

According to Teresa Pica, (1985), problem solving activities enable students to do cooperative thinking in trying to solve problem.[4]

Peer tutors benefit from the relationship; their own understanding is reinforced by explaining the idea or problem, and their social skills are enhanced.[5]

Benjamin Bloom, argues that tutoring (with preferably a 1:1 student ratio, more than 3:1) is the most effective method of grouping for instruction compared to conventional methods (30:1) student-teacher ratio) and even mastery learning methods (which develop when mastery methods are used in a class of 30 students.[6]

To Marcel, teacher-directed activities deepen understanding for students, and increased their ability to use knowledge. Student should independently identify similarities and differences.[7]

According to Paktang Benjamin Bloom's Educational Taxonomy of Educational Objectives, it is divided into three domains nemly:

1. Cognitive domain, are those that use in academic knowledge to develop the intellectual abilities of the students, such as knowledge, comprehension, application, analysis, synthesis and evaluation.
2. Affective domain, which deals with students who are affected by their learning, and also it is divided namely: receiving, responding, valuing, organization and characterization by value.
3. Psychomotor, are eye coordination for viewing visual art, intricate use of complex equipment in laboratory task and communicating instruction facial and hand gestures. And these include reflex movements, and non-discursive communications.

In demonstration method, the teacher explains the details of the experiment when he performs before the students. The students also find it easy to grasp as they not see the things before their eyes, but also know their detailed explanations from the teachers.[8]

There is active participation of the students in it. They see the apparatus and their operations and help the teacher in demonstrations, experiment etc. thus they hold on the interest in learning. The maxim of from concrete to abstract is folded in this technique, students can draw conclusion after seeing the demonstrations.[9]

David P. Ausbel, a psychologist, asserted that a meaningful reception of learned, the learner receives verbal information, linked it to previously acquired knowledge, and gives new information, as well as the old information, especial meaning. The speed and thoroughness with which a person learns depends on two things: 1. how closely the learners prior knowledge is related to the new material and 2. The nature of the relationship established between the new and old information.

This theory also contends that learning and remembering can be greatly improved by setting up and using highly organized frames of references that come from storing information systematically and logically. He believes that the presence of relevant structure in the learner's thought system will improve learning and give new information potentially greater meaning.[10]

The theories of learning rest on the concept of man and his behavior as a dynamic organism. Philosophically, there have been with the two aspect of man. The first concept postulates that human are inherently endowed with natural capacities e.g. the faculties of reasoning, remembering and imagining which grows with exercise. The concept presupposes that man in an energy system or system of dynamic force attempting to maintain balance equilibrium in response to the other energy in the physical world with which he continuously interacts through his sense organs. This energy system is in the body of a functioning unit which encompasses man's entire being and includes responses to various stimuli; his motivation, his orientation, his feeling and rational processes.[11]

In logical approach of philosophy, it seeks to promote human beings with a sound and intellect method of living, put sides into orderly, structured sequences that lead to accurate thinking.[12]

In a discovery lesson, instead of expressing in detail all the principles and information she/he wants for students to learn, the teacher carefully structures the learning environment so that the students themselves derive the generalizations or obtain the information from available

sources. She/he can structure the environment physically or verbally. By having materials and equipment for students to use in the classroom or by inviting guests speakers, he/she can structure the learning environment physically. Verbal instructing of the learning environment, on the other hand is accomplished by giving students a set of condition designed to stimulate them to ask questions and to find the answer to their questions. You will find that you can lead students to the discovery you wish them to make through skillful questioning.[13]

Accordingly, the theory of Multiple Intelligence was developed in 1983 by Dr. Howard Gardner, professor of education at Harvard University. It suggests that the traditional notion of intelligence, based on I.Q. testing, is far too limited. Instead, Dr. Gardner proposes eight different intelligences to account for broader range of human potential in children and adults. These intelligences are: Linguistic intelligence ("word smart"); Logical-mathematical intelligence ("number/reasoning smart"); Spatial intelligence ("picture smart"); Bodily-kinesthetic intelligence ("body smart"); Musical intelligence ("music smart"); interpersonal intelligence ("people smart"); Intrapersonal intelligence ("self smart"); Naturalist intelligence ("nature smart").

Dr. Gardner says that our schools and culture focus most of their attention on linguistic and logical-mathematic intelligence. We esteem the highly articulate or logical people of our culture. However, Dr. Gardner says that we should place equal attention on individuals who show gifts on other intelligences: the artist, architects, musicians, naturalist, designers, dancers, therapist, entrepreneurs and others who enrich the world in which we live. Unfortunately, many children who have these gifts don't receive reinforcement for them in school. Many of these kids, in fact, end up being labeled "learning disabled" , "ADD" or "attention deficit disorder" ;or simply underachievers, when their unique ways thinking and learning aren't addressed by a heavily linguistic or logical-mathematical classroom. The theory of Multiple Intelligence proposes a major transformation in the way our schools are run. It suggest that teacher be trained to present their lessons in a wide variety of ways using music, cooperative learning, art activities, role play, multimedia, field trips, inner reflection, and much more (see multiple intelligence in the classroom). The good news is that the theory of multiple intelligence has grabbed the attention of many educators around the country, and hundreds of school are currently using its philosophy to redesign the way it educates children. The bad news is that there are thousands of schools still out there have teacher that teach in the same old dull way, through dry lectures, and boring worksheets and textbooks. The challenge is to get this information out to many teachers, school administrators, and others who work with children, so that each child has the opportunity to learn in ways harmonious with their unique minds (see in their own way).

The theory of Multiple Intelligence also has strong implications for adult learning and development. Many adults find themselves in jobs that do not make optimal use of their most highly developed intelligences (for example, the highly bodily-kinesthetic individual who is stuck in a linguistic or logical desk-job when he or she would be much happier in a job where they could move around, such as recreational leader, a forest ranger, or physical therapist). The theory of multiple intelligences gives adults a whole new way to look at their lives, examining potentials that they left behind in their childhood (such as a love for art or drama) but now have the opportunity to develop through courses, hobbies or other programs of self-development.

One of the most remarkable features of the theory of multiple intelligences is how it provides eight different potential pathways to learning. If the teacher is having difficulty reaching a student in a more traditional linguistic or logical ways of instruction, the theory of multiple intelligences suggest several other ways in which the material might be presented to facilitate effective learning. Whether you are kindergarten teacher, a graduate school instructor, or an adult learner seeking better ways of pursuing self-study on any subject of interest, the same basic guidelines apply. Whatever you are teaching or learning, see how you might connect it

with: words (linguistic intelligence), numbers or logic (logical-mathematical intelligence), pictures (spatial intelligence), music (musical intelligence), self-reflection (intrapersonal intelligence), a physical experience (bodily-kinesthetic intelligence), a social experience (interpersonal intelligence), and/or, an experience in the natural world (naturalist intelligence).

For example, if you're teaching or learning the law of supply and demand in economics, you might read about it (linguistic), study mathematical formulas that express it (logical-mathematical), examine a graphic chart that illustrates the principle (spatial), observe the law in the natural world (naturalist) or in a human world of commerce (interpersonal); examine the law in terms of your own body (e.g. when you supply your body with lots of foods, the hunger demands goes down; when there's very little supply, your stomach's demand for food goes way up and get hungry) (bodily-kinesthetic and interpersonal); and/or write a song (or find an existing song) that demonstrates the law (perhaps Dylan's "much of nothing?").

You don't have to teach or learn something in all eight ways, just see what the possibilities are, and then decide what particular pathways interest you most, or seem to be the most effective teaching or learning tools. The theory of Multiple Intelligence is so intriguing because it expands our horizon of available teaching/learning tools beyond the conventional linguistic and logical methods used in most schools (e.g. lecture, textbooks, writing assignments, formulas and etc.). To get started, put the topic of whatever you're interested in teaching or learning about in a center of blank sheet of paper, and draw eight straight lines or "spokes" radiating out from this topic. Label each line with a different intelligence. Then start brainstorming ideas for teaching and learning the topic and write down ideas next to each intelligence (this is spatial-linguistic approach of brainstorming; you might want to do this in other ways as well, using a tape recorder, having a group brainstorming session, etc.). have fun!

According to Howard Gardner initially formulated a list of seven intelligences. His listing was provisional. The first two have been typically valued in schools; the next three are usually associated with the arts; and final two are what Howard Gardner called 'personal intelligence'(Gardner 1999:41-43).

Linguistic intelligence involves sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals. This intelligence includes the ability to effectively use language to express oneself rhetorically or poetically; and language as a means to remember information. Writers, poets, lawyers and speakers are among those that Howard Gardner sees as having high linguistic intelligence.

Logical-mathematical intelligence consists of the capacity to analyze problems logically, carry out mathematical operations, and investigate issues scientifically. In Howard Gardner's words, it entails the ability to detect patterns, reason deductively and think logically. This intelligence is most often associated with scientific and mathematical thinking.

Musical intelligence involves skill in the performance, composition and appreciation of rhythms. According to Howard Gardner musical patterns. It encompasses the capacity to recognize and compose musical pitches, tones and rhythms. According to Howard Gardner musical intelligence runs in an almost structural parallel to linguistic intelligence.

Bodily-kinesthetic intelligence entails the potential of using one's whole body or parts of the body to solve problems. It is the ability to use mental abilities to coordinate bodily movements. Howard Gardner sees mental and physical activity is related.

Spatial intelligence involves the potential to recognize and use the patterns of wide space and more confined areas.

Interpersonal intelligence is concerned with the capacity to understand the intentions, motivations and desires of other people. It allows people to work effectively with others. Educators, salespeople, religious and political leaders and counselors all need a well-developed interpersonal intelligence.

Intrapersonal intelligence entails the capacity to understand oneself, to appreciate ones feelings, fears and motivations. In Howard Gardner's view it involves having an effective working model of ourselves, and to be able to uses such information to regulate our lives.

In Frames of Mind, Howard Gardner treated the personal intelligences 'as a piece'. Because of their close association in most cultures, they often linked together. However, he still argues that it makes sense to think of two forms of personal intelligence. Gardner claimed that the seven intelligences rarely operate independently. They are used at the same time and tend to compliment each other as people develop skills or solve problems.

In essence Howard Gardner argued that he was making two essential claims about multiple intelligences. That the theory is an account of human cognition in its fullness. The intelligences provided 'a new definition of human nature, cognitively speaking' (Gardner 1999:44).

Human beings are organisms who posses a basic set of intelligences. People have unique blend of intelligences. Howard Gardner argues that the big challenge facing the deployment of human resources 'is how to best take advantage of the uniqueness conferred onus as a species exhibiting several intelligences' (ibid.:45).

This intelligence, according to Howard Gardner, is amoral and they can be put to constructive or destructive use.[14]

Synthesis of the State of the Art

The reviewed literature and related studies provided useful insights, and contributed for the main discussion or in helping the researcher is the main focus of this study. The related readings put emphasis of how to develop learners multiple intelligence through the use of different learning styles that includes cognitive, affective and psychomotor domains.

The study is related to the teaching learning strategies/style on how to enhance to improve students' abilities and its domain that touches the multiple intelligence of every learner to his present work.

Gaps bridged by the study

In summary the literature and studies made by the researcher enhance and aided the researcher in framing the creative component of the study. In this study though it gives support to the researchers desired result, it does not duplicate the study because the literature and studies cited only give the answer about the attribute of the learning styles and abilities of every domain in the learners, and the problems encountered by the teacher in teaching and learner in learning. It differed on the present study because the researcher's study dealt with the developed proposed Multiple Intelligence centering on the learning styles based instructional strategies.

Conceptual Framework

This study conceptualized the present learning style of the teacher in developing the Multiple Intelligence in every student through using the four learning styles namely: mastery, self-expressive, interpersonal and understanding style. And that includes the three domains namely: cognitive, affective and psychomotor domain.

The teacher should put his/her full effort in using the four learning styles so that they can see their adversity and privation of their teaching to the apprentice.

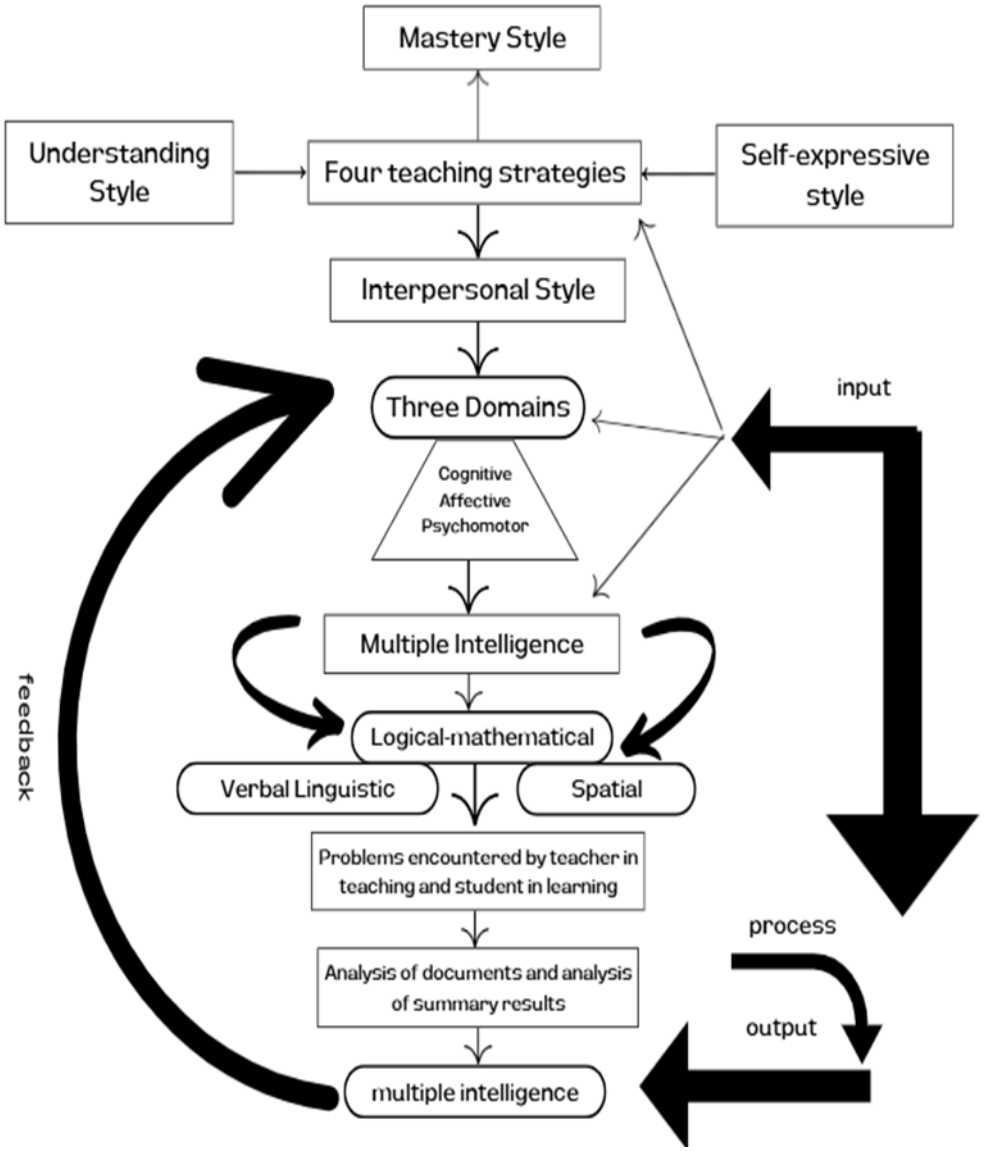
The input of this study, theoretically states the problem of this study that through the learning tyles the teacher used, it can develop the multiple intelligence of every learner; that also develops the three domains namely: cognitive, affective and psychomotor. And it states the

problem of the teacher in developing the multiple intelligence of student in teaching and learning.

The process of this study is through the use of analysis of documents and analysis of summary results.

The output of this study is the researcher's desired results, which is the Multiple Intelligence: based instructional strategies that will be used by the teachers in the future in developing the multiple intelligence of every learner namely: linguistic, logical-mathematical, spatial and interpersonal.

The feedback of this study can be serving in the output of this conceptual framework on how it serves as the desired results of the researcher.



METHOD

This chapter is a presentation of the methods of research used in this study; it includes the research design, procedures of investigation, respondents, and tools of collecting data and the statistical data interpretation as well as other relevant information.

Research Design

The researcher used the descriptive analysis design using the descriptive method of research to attain the purpose of study. It involved the description and interpretation of actual

condition prevailing practice; view or feedback from the performance of descriptive method" is the purposive process of gathering, analyzing, classifying, and tabulating data focused on prevailing conditions, practices, beliefs, processes, trends, as well as cause and effect relationships. It included making adequate and accurate interpretation about such data, with or without the aid of statistical methods."(Calderon and Gonzales, 1993)

Procedure of Investigation

In this study, the researcher chooses first the topic which catch his interest, then formulated the variables of the problem. The researcher employed each method in gathering data through retrieving the questionnaires from the respondents. After gathering the questionnaire, the researcher treated the data by using statistical measures this includes the tabulation of data, tallying, frequency and getting the percentage to come up with the ranks of the items.

Respondents

The respondent of the study comprised the teachers of International Bureau of Management.

Twenty teacher respondents were chosen in the different classroom of International Bureau of Management.

Tools in Data Gathering

The research instrument used in data gathering were survey questionnaires which was the main tool in determining the data needed in this study, on the effectiveness of teaching.

Questionnaires

The questionnaire was the main tool in getting the perception of the respondents about the teaching strategies they practiced in the past and how the present affect their ways of teaching. This well planned questionnaire was based on the specific problems as is commonly used in survey studies and measurement of attitudes and opinions. This questionnaire had been distributed to the respondents properly planned by the researcher in order to get the desired information.

Preparation of the Questionnaires

The researcher constructed a questions based on the statement of the problem in gathering the desired data. Before the formulation of the questions, the researcher made library research to look for similar studies related to the present study, which served as the guide of information of the questionnaires for the study.

Sampling Technique

Due to the rapid schedules and wide dispersion of the respondents, the researcher used convenience techniques. It is a process of picking out people in the most convenient and fastest way to immediately get their reactions. This technique was employed because of the difficulty in reaching out the teacher of International Bureau of Management in Antipolo city.

Dry Run

In order to determine the effectiveness, validity and reliability of the questionnaires, the researcher distributed a number of questionnaires to selected respondents for dry run. The researcher chooses ten teachers of International Bureau of Management, as the respondents of the pre-testing of the questionnaires. They were also asked about their comments in answering

the questionnaires. After all questionnaires were gathered, the researcher revised the questionnaires based on the comments and suggestions of the respondents.

Administration of the questionnaires

The researcher distributed a total twenty questionnaires to the respondents personally. The researcher went to the different classrooms of International Bureau of Management. The researcher personally assisted the respondents during the time they were answering the questionnaires and assisted them whenever they needed clarifications. The questionnaires were collated after the respondents finished answering all the questions. The researcher was able to retrieve nineteen questionnaires for the dry run.

Statistical Treatment of Data

The study made use of the following statistical tools to interpret data namely: Frequency, average weighted mean and 5-point likert scale.

Average Weighted Mean

This measure was employed in the interpretation and analysis of the perception of the respondents on the performance.

The formula is:

$$AWM = \sum fxs/N$$

Where:
AWM is average weighted mean
Σ is summation of the means score
f is the frequency of the respondents
s is the scale of the respondents
N is the size or number of respondents

Likert 5-point Scale

This was used for determining average weighted mean and frequency technique, the perceive response on effect and effectiveness. These were categorized as follows:

Scale	Limits	Equivalent
5	4.50-5.00	Fully effective/fully accepted/Outstanding
4	3.50-4.49	Very effective/very much accepted/very satisfactory
3	2.50-3.49	Effective/much accepted
2	1.50-2.49	Less effective/moderately accepted
1	1.00-1.49	Ineffective/not accepted

RESULT

Multiple Intelligence Based Instructional Strategies

This chapter is presentation and analysis of the findings on Multiple Intelligence Based Instructional Strategies. This includes the teaching strategies developing multiple intelligence and problem encountered in the development of Multiple Intelligence.

Teaching Strategies in developing Multiple Intelligence among high School students.

The researcher looked into the strategies of teaching among high school students in terms of mastery style, interpersonal style, understanding style and self-expressive style.

Mastery style

Mastery style directs the development aspect on the sense of thinking. Table.1 shows the data derive from the respondents.

Teaching strategies in Multiple Intelligence on mastery style

according to the data of teaching strategy, focused on the mastery style; table.1 shows that on the indicator "Remembering", the responses obtained a mean score of 83 and weighted mean of 4.37, indicative of very satisfactory"; "Describing" obtained a mean score of 78 and a weighted mean of 4.12 or very satisfactory" and "Manipulating" obtained a mean score of 74 with a weighted mean of 3.89 indicative of very satisfactory.

Table 1. Teaching Strategies On Mastery Style
N=19

INDICATOR	M.S	A.W.M	ADJECTIVE EQUIVALENT
Remembering	83	4.37	Very Satisfactory
Describing	78	4.12	Very Satisfactory
Manipulating	74	3.89	Very Satisfactory
Total Mean Score	235		
Total Average Weighted Mean		4.13	Very Satisfactory

The researcher thus infers that mastery style is a style which develops very well or very satisfactorily multiple intelligence among high school learners.

Interpersonal style

Table.2 shows the data on interpersonal style as a strategy in developing the Multiple Intelligence among high school students. In this another teaching strategy in which interpersonal style. The data revealed a total mean score of 239, indicative of a very satisfactory.

It also shows that on indicator "supporting feelings" a mean score of 74 obtained a weighted mean of 3.89 manifesting an equivalent of "very satisfactory"; on "expressing emotions" a mean score of 79 was obtained with a weighted of 4.16 manifesting "very satisfactory", a teaching strategy in developing multiple intelligence; on "learning from experience" in developing the sense of thinking, a mean score of 86 and weighted mean of 4.53 were obtained reflecting a "very satisfactory" mode of developing multiple intelligence.

From data, the researcher deduces that "interpersonal style "as strategy for teaching secondary students is very favorable to the youth in developing their character and molding their feeling towards each others. With a total mean score of 239 and Total average weighted mean of 4.19 manifesting a very satisfactory style of strategy.

Table 2. Teaching Strategies On Interpersonal Style
N=19

INDICATOR	M.S	A.W.M	ADJECTIVE EQUIVALENT
Supporting feelings	74	3.89	Very Satisfactory
Expressing emotions	79	4.16	Very Satisfactory
Learning from experience	86	4.53	Very Satisfactory
Total Mean score	239		
Total Average Weighted Mean		4.19	Very Satisfactory

Understanding Style

Table.3 shows the data on developing the Multiple Intelligence of high school students in their intuitive thinking. The table shows a total mean score of 230; obtaining an average weighted mean of 4.04 manifesting a "very satisfactory".

In further shows that in "Analyzing gaps/flaws", a mean score of 72 with a weighted mean of 3.79 was obtained indicative of very satisfactory for developing multiple intelligence among high school students. On "testing proving questions" a mean score of 79 was obtained with a weighted mean of 4.17, indicative of very satisfactory; on connecting ideas a mean score of 79 with a weighted mean of 4.17 was obtained manifesting a very satisfactory rating in the strategy in developing multiple intelligence among high school students. From the foregoing statistical data it can deduced with confidence that in terms of developing Multiple intelligence of the learners, "Understanding style" was formed to be "very satisfactory" manifesting a total mean score of 230 and an average weighted mean of 4.04 as perceived mean by the respondents.

Table 3. Perception In Understanding Style On Multiple Intelligence
N=19

INDICATOR	M.S	A.M.W	ADJECTIVE EQUIVALENT
Analyzing Gaps/Flaws	72	3.79	Very Satisfactory
Testing proving questions	79	4.17	Very Satisfactory
Connecting Ideas	79	4.17	Very Satisfactory
Total Mean score	230		
Total Average Weighted Mean		4.04	Very Satisfactory

Self-expressive Style

Table 4 shows the data for developing an intuitive feeling among high school students. It shows the data with a total mean score of 248, obtaining a total average weighted mean of 4.35, indicative of a very satisfactory style of teaching

It further shows that in "developing original solutions" a mean score of 79 with a weighted mean of 4.17 indicative of a "very satisfactory" rating; on "generating ideas" a mean score of 89 was obtained with a weighted mean of 4.68, manifesting an "outstanding" strategy in developing multiple intelligence among high school learners; on "developing insights a mean score of 80 was obtained and a weighted mean of 4.21, indicative an equivalent of "very satisfactory" rating.

The researcher further infers that self-expressive style among high school students in developing their Multiple Intelligence was favorable in developing their inner insights and to generate their ideas manifested by a very satisfactory perception.

Table 4. Perception On Self-Expressive Style In Developing Multiple Intelligence
N=19

INDICATOR	M.S	A.W.M.	ADJECTIVE EQUIVALENT
Develop original Solutions	79	4.17	Very Satisfactory
Generating Ideas	89	4.68	Outstanding
Developing Insights	80	4.21	Very Satisfactory
Total Mean score	248		
Total Average Weighted Mean		4.35	Very Satisfactory

Multiple Intelligence in Developing the Learning Among Secondary Students:

Perception on Multiple Intelligence in developing the learning process among the secondary students was based on the three styles of teaching strategy, re: logical-mathematical, verbal linguistic and spatial styles.

Logical Mathematical

Table.5 shows that indicator "making calculations" has a mean score of 75 with weighted mean of 3.95 indicative of "very satisfactory rating; on "forming and testing hypothesis", a mean score of 76 with a weighted mean of 4.00 was obtained indicative "very satisfactory" results as a style in developing multiple intelligence among high school students. On using scientific method a mean score of 73 was obtained with a weighted mean of 3.84, manifesting a "very satisfactory style of teaching to the learners; and using deductive and inductive reasoning a mean score of 71 with a weighted mean of 3.84 was obtained manifesting a "very satisfactory equivalent. It further shows that a total mean score of 295 was obtained with a weighted mean of 3.95 manifesting a "very satisfactory" adjective rating indicative that this study was very effective in developing teaching strategies for high school learners. It can be deduce that logical mathematical in high school teaching is very influential as a teaching strategy for developing multiple intelligence. The researcher further shows that the data on logical mathematical among high school learners was encouraging and sympathetic as strategies in teaching, bringing influence motivating students to learn faster.

Table 5. Perception On Logical Mathematical Style As Teaching Strategy
N=19

INDICATOR	M.S	W.M	ADJECTIVE EQUIVALENT
Making calculations	75	3.95	Very satisfactory
Forming and testing hypothesis	76	4.00	Very satisfactory
Using scientific method	73	3.84	Very satisfactory
Using deductive/inductive reasoning	71	3.75	Very satisfactory
Total Mean score	295		
Total Average Weighted Mean		3.95	Very satisfactory

Verbal Linguistic Style

Table.6 shows the perception of secondary students on verbal linguistic along the three variables. It shows that from the total respondents a perceived total mean score of 231 which have total average weighted mean of 4.05 manifesting "satisfactory" in motivating the high school students of International Bureau of Management to develop their Multiple intelligence in verbal linguistic. total mean score of 231, and the total average weighted mean of 4.05 was very satisfactory style in motivating high school learners to develop multiple intelligence. The indicator "can speak effectively with its mean score of 77, and a weighted mean of 4.05, according to its adjective equivalent was very satisfactory; the indicator "can write effectively" with its mean score of 76, and a weighted mean of 4.00 was obtained, according to its adjective equivalent was very satisfactory. The indicator "can read effectively, with its mean score of 78, and a weighted mean of 4.11 manifesting a very satisfactory adjective equivalent.

It further shows that verbal linguistic is favorable in developing Multiple Intelligence among high school students.

Table 6. Perception on Verbal Linguistic style for Multiple Intelligence
N=19

INDICATOR	M.S	A.M.W	ADJECTIVE EQUIVALENT
Can speak effectively	77	4.05	Very Satisfactory
Can write effectively	76	4.00	Very Satisfactory
Read effectively	78	4.11	Very Satisfactory
Total Mean score	231		
Total Average Weighted Mean		4.05	Very Satisfactory

Spatial Style

Table.7 shows the data on spatial style as multiple intelligence base instructional strategy for secondary students. It shows that on "representing ideas visually" a mean score of 77 was

obtained with weighted mean of 4.05, indicative of an adjective equivalent of "very satisfactory". It shows further "create mental images" obtained a mean score of 77, with the average weighted mean of 3.73, and adjective equivalent of "very satisfactory". On the "ability on drawing and sketching" an obtained mean score of 78, with an average weighted mean of 4.57 was indicative of an adjective equivalent of "Outstanding" total mean score of 241, and a total average weighted mean of 4.12 was obtained manifesting an adjective equivalent to be very satisfactory; indicative of a very effective rating on remembering symbols.

The researcher deduces that spatial style as one of the Multiple Intelligence based strategy was found favorable learning strategy for the teachers to the learners in developing learning of high school students. Manifested with a total mean score of 241, perception of Multiple intelligence on Spatial style and a total average weighted mean of 4.12..

Table 7. Perception on Spatial Style
N=19

INDICATOR	M.S.	A.M.W	ADJECTIVE EQUIVALENT
Representing ideas visually	77	4.05	Very Satisfactory
Create mental images	77	3.73	Very Satisfactory
Ability in drawing/sketching	87	4.57	Outstanding
Total Mean score	241		
Total Average Weighted Mean		4.12	Very Satisfactory

Effectiveness of the Teaching Strategies in Developing Multiple Intelligence

Effectiveness of the teaching strategies in developing Multiple intelligence was drawn from the three domain of learning, namely: cognitive, affective and psychomotor.

Cognitive. Table.8 shows that on cognitive domain: "knowledge" obtained a mean score of 80, with a weighted mean of 4.21 indicative of an adjective equivalent of very satisfactory. Indicator "comprehension" had a mean score of 79, with a average weighted mean of 4.17 was obtained, manifesting a "very satisfactory adjective equivalent. Indicator "application" had a mean score of 78, with the average weighted mean of 4.11 was obtained, and adjective equivalent was very satisfactory. The indicator "analysis" has a mean score of 72, with an average weighted mean of 3.79 was obtained, and adjective rating was "very satisfactory". The indicator "synthesis" had a mean score of 71, with an average weighted mean of 3.75 was obtained, and an adjective equivalent of a "very satisfactory". The indicator evaluation had a mean score of 74, with an average weighted mean of 3.89 was obtained with an adjective equivalent of very satisfactory. Furthermore a total mean score of 454 and a total average weighted mean of 3.99 were obtained, with total adjective equivalent of "very satisfactory. It indicates that it is very effective when it comes to learning of the mind.

The researcher deduces that Multiple intelligence in terms of cognitive domain was on the whole very effective when applying the four learning style in teaching high school learners.

Table 8. Perception on the Cognitive Domain
N=19

INDICATOR	M.S	A.W.M	ADJECTIVE EQUIVALENT
Knowledge	80	4.21	Very Satisfactory
Comprehension	79	4.17	Very Satisfactory
Application	78	4.11	Very Satisfactory
Analysis	72	3.79	Very Satisfactory
Synthesis	71	3.75	Very Satisfactory
Evaluation	74	3.89	Very Satisfactory
Total Mean score	454		
Total Average Weighted Mean		3.99	Very Satisfactory

Affective Domain

Table.9 shows the data on affective domain which focused in the development of learners attitude and character. The indicator "receiving" had a mean score of 79 and a weighted mean of 4.17 was obtained manifesting a very satisfactory mode of developing Multiple Intelligence among high school learners. On "responding" a mean score of 78 and weighted mean of 4.11 was obtained manifesting very satisfactory results in developing Multiple intelligence among high school students. On "valuing" a mean score 75 with a weighted mean of 3.95 was obtained indicative of very satisfactory rating. On "organization" a mean score of 70 with a weighted mean of 3.68 was obtained manifesting a very satisfactory rating; while "characterization" had a mean score of 71 a weighted mean of 3.75 indicative of very satisfactory equivalent. Furthermore a total mean score of 373 with an average weighted mean of 3.93, manifesting a very satisfactory equivalent rating mode of developing the characters of learners through multiple intelligence centering on the four learning styles.

Table 9. Perception on Multiple Intelligence: Affective Domain of learner, attitude and character
N=9

INDICATOR	M.S	A.W.M	ADJECTIVE EQUIVALENT
Receiving	79	4.17	Very Satisfactory
Responding	78	4.11	Very Satisfactory
Valuing	75	3.95	Very Satisfactory
Organization	70	3.68	Very Satisfactory
Characterization	71	3.75	Very Satisfactory
Total Mean score	373		
Total Average Weighted Mean		3.93	Very Satisfactory

Psychomotor Domain

Table.10 shows that on the psychomotor dimension, indicator "reflexes movement" had a mean score of 74, with weighed mean of 3.89, and an adjective rating of "very satisfactory". Indicator "fundamental movement" had a mean score of 74, and a weighted mean of 3.89, manifested an adjective rating of "very satisfactory". Indicator "perceptual movement" had a mean score of 70,and an average weighted mean of 3.68, with an adjective equivalent of "very satisfactory" indicator "physical movement" had a mean score of 75,with a weighted mean of 3.95, and adjective raring of "very satisfactory". Indicator: skilled movement" had a mean score of 75, with a weighted mean of 3.95 and an adjective equivalent rating of very satisfactory". Indicator non-discursive communication" had a mean score of 70, with a weighted mean of 3.68, and an adjective equivalent rating of "very satisfactory". It further shows that a total mean score of 438, and a total average weighted mean of 3.84, with an adjective equivalent rating of "very satisfactory". It can be inferred that a very effective learning was derived when it comes to strategy in learning of the bodily motion.

Table 10. Perception on Psychomotor Domain
N=19

INDICATOR	M.S	M.W	ADJECTIVE EQUIVALENT
Reflex movement	74	3.89	Very satisfactory
Fundamant movement	74	3.89	Very satisfactory
Perceptual movement	70	3.68	Very satisfactory
Physical movement	75	3.95	Very satisfactory
Skilled movement	75	3.95	Very satisfactory
Non-discursive communication	70	3.68	Very satisfactory
Total Mean score	438		
Total Average Weighted Mean		3.84	Very satisfactory

Problem in the Development of Multiple Intelligence by the Teacher in Teaching and Learner in Learning

The study revealed the problem encountered in the development of multiple intelligence by the teacher in teaching and learner in learning.

Teacher in Teaching

Table .11 shows the data on the problem in developing the Multiple Intelligence among the learner in the learning process and by the teacher in their teaching.

It shows that in "stopping inappropriate behavior", a mean score of 69 was obtained manifesting the most encountered problem in the development of multiple intelligence among the learners in the teaching profession by the teacher; in "readying the classroom", a mean score of 68 was obtained and a average weighted mean of 3.59 indicative as moderately problematic in the development of multiple intelligence in the teaching process of the teacher. On indicator "finding difficulties in monitoring student's development" and "difficulties in organizing behavior" a mean score of 66 also obtained and a average weighted mean of 3.47 manifesting "less problematic" equivalent rating in teaching of teacher in developing multiple intelligence of the learner. a total mean score of 269 were obtained and 3.54 Total average weighted mean as Moderately problematic.

It can be inferred that both teaching and learning the teacher in the high school and the learners/students in learning encountered some problems along the way their endeavor to developed multiple intelligence. It can further be inferred that "stopping inappropriate behavior" of the high school learner ranked first.

Table 11. Problems encountered in teaching
N=19

INDICATOR	M.S	A.W.M	ADJECTIVE EQUIVALENT
Stopping inappropriate behavior	69	3.63	Most problematic
Readying the classroom	68	3.57	Moderately problematic
Find difficulties in monitoring students' development.	66	3.47	Less problematic
Difficulties in organizing behavior.	66	3.47	Less problematic
Total Mean score	269		
Total Average Weighted Mean		3.54	Moderately problematic

Problem in the Development of Multiple Intelligence by the Student in Learning. Students in Learning

Table.12 shows the data on the problem in developing the Multiple Intelligence in the learners learning process.

It shows that in "problems on critical thinking in the subject areas", with a mean score of 67 and 1st in the rank was obtained manifesting the "most problematic problem" in the development of multiple intelligence on the learners in the learning process; on "difficulty in asking question to teachers in the discussion" and "difficulty in finding to solve the problem to the answers", has a mean score of both 66 and obtained an average weighted mean of 3.47, manifesting the "less problematic" equivalent of learning of learners in developing their multiple intelligence. A total mean score of 199 were obtained and 3.49 total average weighted mean as less problematic.

The data further shows that the learner encountered difficulty of learning in terms of critical thinking/analysis and comprehension, which means the teacher has the responsibility to improve learners in the field of their expertise, until the learners master their skills and proceed to other learning process in developing their multiple intelligence through the process of four learning styles.

Table 12. Problems encountered in learning
N=19

INDICATOR	M.S	A.W.M	ADJECTIVE EQUIVALENT
Problems in critical thinking in subject.	67	3.53	Most problematic
Difficulty in asking question to teachers in discussion.	66	3.47	Less problematic
Difficulty in finding to solve problem to the answer.	66	3.47	Less problematic
Total Mean score	199		
Total Average Weighted Mean		3.49	Less problematic

CONCLUSIONS

Based on the findings, the following conclusions were drawn:

1. On the four learning styles: Mastery, Understanding, Self-expressive and Interpersonal Style that develops the Multiple intelligence was revealed as very effective in teaching high school students, because through this learning styles the students can become a holistic individual in which a balance of internal and external aspect, with the sound mind and a sound body. And truly contribute for the Betterment of our society.
2. This Multiple intelligence as conducted was efficient and guaranteed to the high school students wherein logical-mathematical, verbal linguistic and spatial intelligence was truly develop to the high school students, according to the survey that comes from the teachers of International Bureau of Management, through the use of this Multiple intelligence therefore, the students could really show as individual, a well rounded personality in the field of different expertise.
3. In the development of Multiple intelligence domains, it was very effective and successful because through the data that was gathered it manifests a very satisfactory conclusion. wherein the students has the ability to improve, through the different learning style that had been introduced.

The most problem encountered by the teachers in teaching was the stopping of inappropriate behavior of the teachers in teaching by the students in learning was the problem in critical thinking in subject area. Therefore the teacher should encourage students to learn more and discover themselves with own abilities through the use of four learning styles: Mastery, Understanding, Self-expressive and Interpersonal style, so that their students could really enhance their abilities.

Recommendations

The following are the recommendations based on the findings and conclusion.

1. The teachers should used this four learning styles: Mastery, Understanding, Self-expressive and Interpersonal style because through the use of this learning styles they can evaluate and determined how far the students ability differs from the previous learning, and we can see the improvements.
2. The teacher should develop the different Multiple Intelligence of the students, so that the teacher could not be biased in the development of students learning.
3. The teacher should always remind themselves that in developing Multiple intelligence, they need to consider the development of the three domains: Cognitive, Affective and Psychomotor. so that the balance of the learning should take place in students development.
4. The teacher should avoid inappropriate behavior of students in learning, in their way of teaching.
5. The teacher should develop students, most especially in critical thinking and analysis.
6. Teachers should encouraged students to ask questions in the discussions.
7. The teachers should consider different way of teaching strategies in developing multiple intelligence of secondary high school students.
8. Teacher should be firm in managing classroom instruction and monitor student's development.
9. The teachers should attend different workshops and seminar about developing student's character and abilities and also Multiple Intelligence.
10. Teachers should consider themselves as the models for their student to emulate.

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