

Multiple Intelligence Theory with a View to Designing a Classroom for the Future

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Abstract—The classroom of the 21st century is an ever changing forum for new and innovative thoughts and ideas. With increasing technology and opportunity, students have rapid access to information that only decades ago would have taken weeks to obtain. Unfortunately, new techniques and technology is not a cure for the fundamental problems that have plagued the classroom ever since education was established. Class size has been an issue long debated in academia. While it is difficult to pin point an exact number, it is clear that in this case more does not mean better. By looking into the success and pitfalls of classroom size the true advantages of smaller classes will become clear. Previously, one class was comprised of 50 students. Being seventeen and eighteen-year-old students, sometimes it was quite difficult for them to stay focused. To help them understand and gain much knowledge, a researcher introduced “The Theory of Multiple Intelligence” and this, in fact, enabled students to learn according to their own learning preferences no matter how they were being taught. In this lesson, the researcher designed a cycle of learning activities involving all intelligences so that everyone had equal opportunities to learn.

Keywords—Multiple Intelligences, role play, performance assessment, formative assessment.

I. INTRODUCTION

THERE are numerous, as well as obvious reasons for championing few students per room. It has been shown that classroom overcrowding will lead to two disadvantages. The first is that there will be less student /teacher interaction. The more students there are, the less the teacher will be able to meet on an individual basis. Additionally group work becomes problematic. Activities tend to break down when there are more than thirty students in the room. The classroom simply becomes unmanageable. A second major issue is distraction. The more stimuli inside the room that do not pertain to the lesson, the more the student will become disinterested in the teacher.

Class size will have direct correlations with student grades on average. The achievers, regardless of size, will always find a way to perform to their maximum capabilities. The middle of the road students are harder to assess. Most will strain to learn while some others will simply give up out of frustration. So what does this mean for the students at the bottom? In large classroom settings, this means that the teacher simply has no choice but to let them academically drowned. Teachers have a responsibility to the school to finish the material within a given time. Slower learners will drag down the entire class,

causing a loss in time. Therefore teachers will either fail these students or let them barely pass. A small room would eliminate this problem. Less students means extra time. With the extra time teachers can take the slower students aside, and give them the one on one attention that they deserve; hence, applying Multiple Intelligence Theory with a view to designing a classroom is necessary for the future.

II. LITERATURE REVIEW

Small classroom size means more group interaction. With a smaller room there are numerous activities that can take place. Round table discussions on an issue or topic would be essential to the learning process. In this venue, students can exchange thoughts and ideas fairly and calmly. Each student would have a turn to speak and the rest could respond. This concept allows students to think freely and figure out issues for themselves. Often rote memorization is all that students are taught to learn in a big classroom. For example a lesson on The Four Noble Truths in a big classroom would involve the basic story, facts, and dates and this at some point will be regurgitated on a test.[1] In a small room student would be able to figure out in depth how The Lord Buddha enlightened. Therefore, final examination question might be more analytical such as “How can we apply Buddhist Teachings in our lives?”

Sadly, a researcher’s experiences have been with large classrooms. Each day it could be a struggle to simply get the students to quiet down so that the researcher could begin a lesson. This means that a job as a teacher nowadays becomes compromised as the researcher is forced to police them as much as teach them. The time the researcher could use to teach is to wait for them to settle down. Additionally, the researcher has very little time to ask the students questions about the material, the researcher only can interact with them if they are having major problems with the lesson. The researcher also feels a lack of community within a large room. It is important for the teacher and students to know one another. Sometimes students might struggle not due to laziness or lack of intelligence, but personal issues outside of school. Large class sizes do not give the opportunity to truly interact with students. As this new century progresses there has been a myriad of advances, yet without correcting age old issues these new tools lose the value. To deal with a number of students in a large class and urge them to become interested in the lesson, the researcher attempts to provide a solution to teaching with differences. In fact, many teachers struggle with finding ways to reach individual learning styles and needs.

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One teaching method that can accommodate for this variety of learning styles is Howard Gardner's Multiple Intelligences [2]. Each of the intelligences encompasses certain characteristics and the teacher must incorporate the intelligences into their daily lesson planning for practical use in the classroom. This, in turn, allows each child to learn in a way that is associated to his or her strengths, solving the age-old dilemma of how to meet the individual differences of individual students; thus, the researcher realized and felt interested in this Multiple Intelligence theory, then eagerly started to introduce students to it which could have accommodated for this variety of learning styles. To clarify this theory, here comes Howard Gardner's Multiple Intelligences [3] as following:

- 1) Naturalist Intelligence involves the ability to understand nature's symbols, to respect the delicate balance that lets us continue to live.
- 2) Interpersonal Intelligence consists of the ability to understand, perceive and discriminate between people's moods, feelings, motives, and intelligences.
- 3) Logical-Mathematical Intelligence consists of detect patterns, reason deductively, and think logically.
- 4) Spatial Intelligence can lend itself to the ability of visual perception.
- 5) Intrapersonal Intelligence develops from internal resources. It focuses on imagination, patience, discipline, motivation, and a great deal of self-respect.
- 6) Bodily-kinesthetic intelligence entails the ability to understand the world through the body. This includes ability to manipulate objects, and to carry out dedicate movements using precise control.

- 7) Musical Intelligence makes use of sound to the greatest extent possible. This involves the ability to understand of pitch, rhythm, and timbre.
- 8) Linguistic Intelligence involves the mastery of language. Having students write, read and role play develops their linguistic intelligence.

III. PROCESS OF RESEARCH

In order to assess students for their understanding, the qualities of good assessment are important to be considered. The researcher always introduces two assessments to students namely Performance Assessment and Formative Assessment.

A. Performance Assessment

The role play project allows students to explore their creativity. They can choose to make their plays funny, serious, or both while still providing adequate information to the reminder of the class. The reason that the researcher always chooses role play as a method in teaching this topic is students are able to engage personally with the material, and the researcher enjoys the fact that students are able to. To assess students fairly and appropriately, they will be rated in group. At first, students form a group of seven and pay close attention because they are fascinated with the material, rather than simply feeling obligated to stay awake and prepare for their role play project. Every group has about 10 minutes to do the role play. From this point, students with various intelligences can fully show their capacities. The following rubric is specifically provided for the role play:

TABLE I
ROLE PLAY RUBRIC

Scoring criteria	4 Excellent	3 Good	2 Need some improvement	1 poor
Participation	Always willingly focus during group work and presentation.	Usually willingly focus during group work and presentation	Sometimes willingly focus during group work and presentation	Rarely willingly focus during group work and presentation
Remaining on Task	Complete work with the expected timeframe Manage time effectively	Complete work with the expected timeframe	Require some assistance to complete the task	Need to be redirected to the task by teacher or other member of the team
Achievement of purpose	A purpose is clearly established and effectively supported	A purpose is clearly established and generally supported	A purpose is established but may not be supported	A purpose is vaguely established and may not be supported
Group Creativity	Co-operatively work and fully share abilities to one another	Well organized and show abilities clearly	Quite organized yet some mistakes found	Choices demonstrate little awareness and do little to enhance a role play

B. Formative Assessment

In addition to assessing from role play, the researcher is supposed to check their understanding and judge the students' success from the mid-term paper. The researcher prefers an essay writing to multiple choices questions since the essay gives students an opportunity to show how effectively they can develop their point of view, present their ideas logically and clearly, and use language precisely. The rubric below fosters communication between the teacher and students. This method of assessment allows the facets of the mid-term paper and their corresponding point values to be clear to both

parties. The students and the teacher also benefit from the assessment's ability to account for the whole as well as its components. Primarily the test is graded with two specific standards in mind. The question is worth to give points. Three from these five points are judged contents and ways in which the students perceive and interact with the question. The remaining points are incorporated grammar and sentence structure.

TABLE II
RUBRIC FOR MIDTERM EXAMINATION

Criteria	3	2	1	0
Content	Successful completion of all parts of the question as well as creative incorporation of outside knowledge.	Most part of the questions was answered, and above average knowledge of the material was shown.	The bare minimum of information was related, and at times inconclusive.	The answer clearly displayed that the student was unfamiliar with all parts of the question.
Grammar	N/A	Spelling errors are few and do not affect understanding. Word choice is thoughtful and shows mastery of the English language.	Spelling errors are numerous, but do not greatly affect understanding. Word choice is correct and shows knowledge of English	Spelling errors are numerous and effect understanding. Word choice is sometimes incorrect and shows little knowledge of English

IV. DISCUSSION

For a classroom in 21st century, the teacher must create more activities so as to provoke students to study enthusiastically. The activities in class must be attractive so that students will be satisfied with working in groups and the activities provided. If the students feel comfortable in the classroom, the effectiveness of learning will bring about.[4] One of the useful activities in the classroom is having role-play. This, students can use their body in very expressive skilled ways based on bodily kinesthetic intelligence. They are able to capture the intended emotion and express them through different medium. Kinesthesia is the capacity to act gracefully and to apprehend directly the actions or the dynamic abilities of other people or object. When students learn to work together to create their own role-play, this is generally called interpersonal intelligence. In order for teachers to help linguistic learner's progresses, they need to use language that the student can relate to and fully comprehend. Supposed that language is used correctly, it can provide a bridge between the material and the learner. Having them write read and give oral reports about element in their own lives such as sports, television, or popular bands develops their linguistic intelligence. Students needs English skills to describe what they have learnt from the class and also draw pictures to demonstrate. Students with spatial intelligences are best taught using pictures or photographs. It is often a good assessment to have them draw their ideas. Hence, it's very useful to apply spatial intelligence to studying as well. What's more, the 21st century learning directly focuses on life skills. This means students can gain their knowledge or education from outside the classroom. Students often benefit from learning outdoors. Teachers can accommodate for them by planning activities such as observing nature, field trips in nature, and so forth. These activities allow the students to have experiences with what they are most comfortable with doing. Some of the intelligences described above are a better way for teachers to understand and accommodate different learning styles. When teachers enter lessons on the students' needs, it optimizes learning for the whole class. Teachers who teach towards the multiple intelligences realize the benefits such as active learners and successful students [5].

Undoubtedly, the researcher has learned that lessons that involve tedious work and bland lectures make the students completely disengaged. Rather the researcher has chosen to design this lesson plans to help peak their interest in the

subject matter. The researcher attempts to interact with students on a level that they not only understand, but are non-threatening. The classroom in the 21st century is no longer a place for monotone lecture, but a forum intelligent interaction between the educator and those being educated.

V. SUGGESTION

By no means do students get bored of lesson so long as the researcher applies the role play to teach them. Not only they can show their abilities to others but also they are able to understand the lesson deeply and keep their retention to apply in their lives. It is not strange that applying Multiple Intelligence Theory can be applied to different field of subjects appropriately.

In terms of classroom management, it is very useful to find out different ways of teaching which arouse all students to participate in all activities. In accordance with a classroom in 21st century, the teacher must create more activities so as to provoke students to study enthusiastically. The activities in class must be attractive so that students will be satisfied with working in groups and the activities provided. As we know, a role play technique allows students to understand clearly and enables a teacher to manage time appropriately. From the research, the Role play, for students, was far more successful than the researcher expected. Students were able to engage personally with the material. The researcher enjoyed the fact that students were able to pay close attention because they were fascinated by the material, rather than simply feeling obligated to stay awake. In this specific role-play, students were able to work cooperatively with their friends from their different learning styles and had the ability to push to the limits both personal and academic knowledge and molded it into cohesive learning experience. Undoubtedly, this strategy will be applied in all fields including mathematics, science, biology, and so forth. Students from biology course may perform their role play concerning a lesson of living things or a lesson of environment of science course.

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