A Survey On How the Previous Classroom Activities of Med Students Catered For Different Multiple Intelligences

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8.1 Abstract

One hallmark of effective teaching is for teachers to identify the potential of their learners and nurture them to the fullest so as to make them all round citizens able to fit effectively in a competitive society. One scholar who has contributed immensely to this issue is Howard Gardner in his theory of Multiple Intelligence (MI). This study sought to find out how the previous classroom practice of the research participants catered for all the eight intelligences as identified by Gardner. The research used descriptive research design specifically the questionnaire based survey. Research participants were 24 masters of Education students in an international university in Dar es Salaam, Tanzania. The study's results revealed that the practice of these participants did not cater for all intelligences in their classes. The contributory factors for this included: lack of adequate knowledge on the multiple intelligence theory, large classes, examination-oriented teaching and lack of adequate resources. The study recommends that the teacher education institutions should continuously review their curriculum to capture the ever expanding knowledge in education. The governments should employ more teachers to reduce congestion in classes and more learning facilities should be provided by school managers.

Key Words: Learning styles, multiple intelligence, Classroom practice

8.2 Introduction

It is apparent that we learn in different ways from each other and we often choose to use what has become known as a preferred learning style. Literature on this subject is vast (Armstrong, 1994; Pritchard, 2005; Campbell, Campbell, & Dickson, 2004). Indeed literature suggests that learners are likely to adopt an approach to learning which they are most comfortable with and in doing so leave behind the approaches which they are less comfortable with.

One scholar who has contributed immensely on this issue of preferred learning style is Howard Gardner. In his theory of Multiple Intelligences (MI), which is based on a recent cognitive research, Gardner (1993) identifies eight intelligences namely: Linguistic, body kinaesthetic, logical mathematical, interpersonal, musical, intrapersonal, spatial and naturalist intelligences. These intelligences reflect the various minds that students possess and therefore learn, remember, perform and understand in different ways (Carla,n.d)

Amstrong (2002) and Carla (n.d) who have written extensively on how this theory can be applied in a classroom situation explain that: Linguistic intelligent learners have special abilities to use words effectively whether orally or in writing. Therefore, such leaners like reading, playing word games, composing and presenting poetry and making stories. These learners are likely to learn well when they are encouraged to discuss, do presentations, read and write. Such learners may end

up being journalists, orators, politicians, poets among others. Logical Mathematical intelligence learners have the capacity to use numbers effectively. They like to experiment and to solve puzzles. They are best taught through logic games, investigations and mysteries. They prefer learning form concepts before dealing with details. Such learners make good mathematicians, accountants and statisticians.

Spatial learners have the ability to perceive the world accurately thus are very aware of their environments. They can be taught best through drawings, verbal and physical imagery. Resources that resonate well with them include charts, graphs, photographs, drawings among others. This group makes good interior decorators, architects, artists and inventors.

Bodily kinaesthetic learners have expertise in using their whole body to express ideas and feelings. Actors, athletes, surgeons, sculptors belong to bodily kinaesthetic group. They like movement, making things, and touching. They communicate well using body language and are best taught through physical activities, hands-on learning, acting out and role play. It is worth noting that this group of learners is good participants in sports and games. In the recent past, sports and games has become an industry that is well paying in comparison to elite professions, especially if we consider professional sporting.

Musical intelligence learners have the capacity to perceive, discriminate and express musical forms. The intelligence also includes sensitivity to rhythm, pitch or melody. This group may study well with music in the background. They can be taught through lyrics and speaking rhythmically. Effective teaching aids for this group include musical instruments such as radio stereo among others. Students in this group eventually become good music composers and music critics. Intrapersonal intelligence learners are good at utilizing self-knowledge and the ability to act adaptively on the basis of that knowledge. These learners are likely to shy away from others. The intelligence includes having an accurate picture of oneself (one's strength and limitation) awareness of inner moods, intentions, motivations, temperament and desires and capacity for self-discipline, self-understanding and self-esteem. They can be taught through independent study and introspection. Interpersonal intelligence learners have the ability to perceive and make distinction in moods, intentions, motivations and feelings of other people. This can include sensitivity to facial expressions, voice and gesture. They can be taught through group activities, seminars, and dialogues. Learners with interpersonal intelligence make successful teachers, mental health professionals among others.

According to Gardner (1993), everyone has all these intelligences but to varying degrees. As a result, students learn and process information in different ways. This means that students will learn best when they can apply their strong intelligences to the task. Thus if teachers give students opportunities to use their bodies, imaginations and different senses, almost every student finds that he or she is good at something. Even students who are outstanding in any single area will find that they have relative strengths in a particular intelligence (Santrock, 2007). It is therefore evident that individual learners have preferred ways of working, thinking and learning. If an individual's preferred approach to learning tasks is ignored, there is a possibility that their learning will not progress as efficiently and effectively as it might be expected (Pritchard, 2005). Consequently, it may be helpful for teachers to consider the learning style of their learners and incorporate what they discover into their planning, teaching strategies and assessment approaches. The school environment should also offer the natural setting that could enhance these intelligences in students.

It is the contention of this paper that if this is done, the schools are likely to produce individuals with diverse ability to fit well in various careers and occupations. This will contribute positively to the realization of Millennium Development Goals and possibly Kenya's vision 2030 which envisages a globally competitive and prosperous society by 2030. (The Government of Kenya, 2010). This assertion is supported by Carla (nd) who explains that the society would be better served if disciplines could be presented in a number of ways and learning assessed through a variety of means.

Gardner (1993) further explains that these differences in intelligences challenge an education system that assumes that everyone can learn the same material in a uniform way and think that universal measures suffice to test student' learning. Most education systems as they are currently constituted, he adds, are biased towards a linguistic mode of instruction and to a lesser extent towards logical-mathematical as well. These views are supported by Campbell, Campbell and Dickinson (2004) who observe that most teachers are likely to rely on one or more intelligences in their classroom approaches. This leaves out other intelligences not catered for. This is particularly common in examination oriented system. Teachers who rely on one form of intelligence are likely not to exploit the learners' potential to the fullest. It is with this background that this paper sought to find out if the previous classroom practice of Master of Education (MEd) students in a private international university catered and nurtured all the eight intelligences. To do this, the study was guided by the following questions.

Main Question: How does the previous classroom practice of the participants cater for different multiple intelligences in their classes?

Sub questions: a) To what extent do the participants' teaching and learning activities cater for various Multiple Intelligences in their classes?

b) To what extent do the participants' assessment practices cater for various multiple intelligences in their classes?

c) What challenges do the participants face in catering for different multiple intelligences in their classes?

8.3 Purpose of the Study

The purpose of the study was to bring to light how classroom practices cater for the eight intelligences. It aimed at establishing if all intelligences were nurtured equally or not considering Gardner's assertion that "virtually everyone has the capacity to develop all the eight intelligences ... if given appropriate encouragement, enrichment, and instruction" (Armstrong, 2002).

The research findings are expected to add knowledge to the already scarce research knowledge in the use of MI concepts especially in the developing countries and East Africa in particular.

8.4 Research Design and Methodology

The study used descriptive research design method specifically the questionnaire based survey (Robson, 2002) The nature of the study which required to establish if MEd students' previous classroom practices catered for various intelligences required to gather data at a particular point in time with the intention of describing the nature of existing condition **(**Cohen, Manion & Morrison,2000; Fraenkel & Wallen, 2006). The questionnaire was appropriate because it enabled the researcher to gather data on one shot basis. The study used a self-administered questionnaire. The researcher gave out the questionnaires to respondents at different times. Before giving out the

questionnaire, he orally sought the participants' consent to participate in the study and gave them out only after they had agreed.

8.4.1 Research Site and Sample

The research site was an international private university in Tanzania that specializes in Teacher Education. It was chosen because it has student teachers from both Kenya and Tanzania with diverse classroom teaching experiences and qualifications but by then, they were undertaking a master's program to be teacher educators. By the time of the study, all the population had at least been exposed to the theory of Multiple Intelligence and its application in classroom situation. Thus this population was in good position to recount its previous practice before being exposed to the MI knowledge. The whole student population of 24 students in the third cohort at the university was used.

8.4.2 Research Instrument

The research instrument was a questionnaire**.** The questionnaire had five sections namely; personal details, previous experiences, classroom practices, evaluation practices and personal views. Questions on classroom practices and evaluations were based on various teaching and learning activities and teaching resources that appeal to various intelligences as drawn from literature discussed in the introduction of this paper. The participants were required to indicate how often they used these activities and teaching resources in their practice. The questionnaire had four closed and one open-ended question. Closed ended questions were used because they are easy to respond to and easy to analyse. The partial open-ended question was used to generate new ideas that had not been covered in other questions especially to capture various challenges that the participants had likely faced in an attempt to cater for various intelligences in their classes.

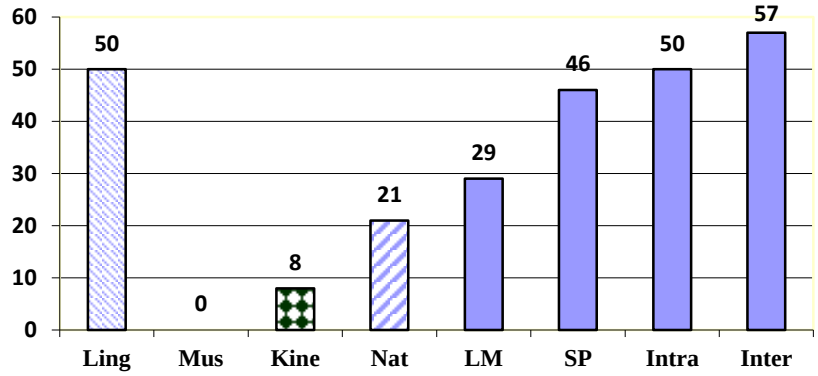
8.5 Data Collection, Presentation, Analysis and Discussion

Twenty four questionnaires were given out but only 21 were returned dully filled. This represented 87.5% turn out. All the twenty one questionnaires were fully completed.

Before analysis, the questionnaires were serialized to make the researcher analyse and track any trend in the data easily. The data in part three and four of the questionnaire were collapsed into two categories. Responses for 'never and occasionally' were combined to mean inadequate attention while 'regularly and always' were combined to mean adequate attention.

8.5.1 How Teaching and Learning Activities Catered for Various MI

Figure 1: A Graph showing the percentage of how various teaching and learning activities catered for by MI



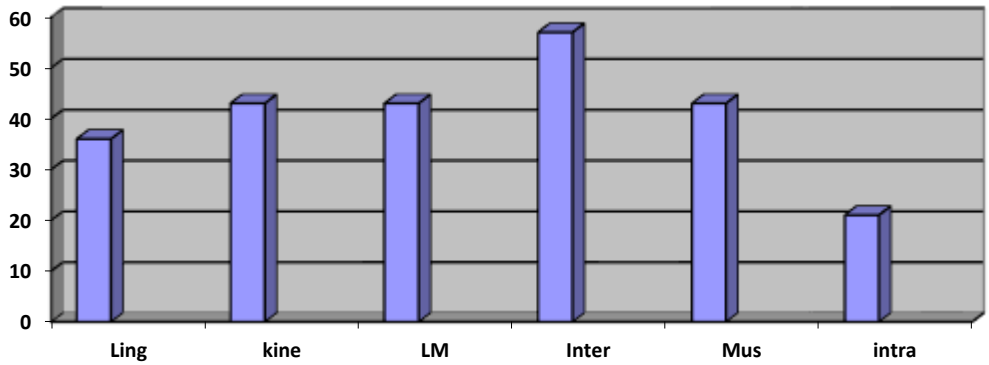
Key:

Ling-	linguistic	Mus-	musical,	Kine	-kinaesthetic,
Nat-	naturalists,	LM-	logical mathematics,	SP-	spatial,
Intra-	intrapersonal,	Inter-	interpersonal		

Figure 1 shows that activities that appeal to music and kinaesthetic intelligences were least used in the respondents' classes at 0% and 8% respectively. This is an unfortunate situation considering that in recent years, games, sports and music have produced well to do individuals in the society commonly referred to by the youths as 'celebrities'. This sector has become a well-paying industry than even traditional elite professions like teaching, engineering, medicine among others (Wafula, 2013). This minimal attention to these intelligences could mean that a good number of students who would have become sportsmen and musicians miss the opportunity because of lack of proper nurturing of their talents by their teachers.

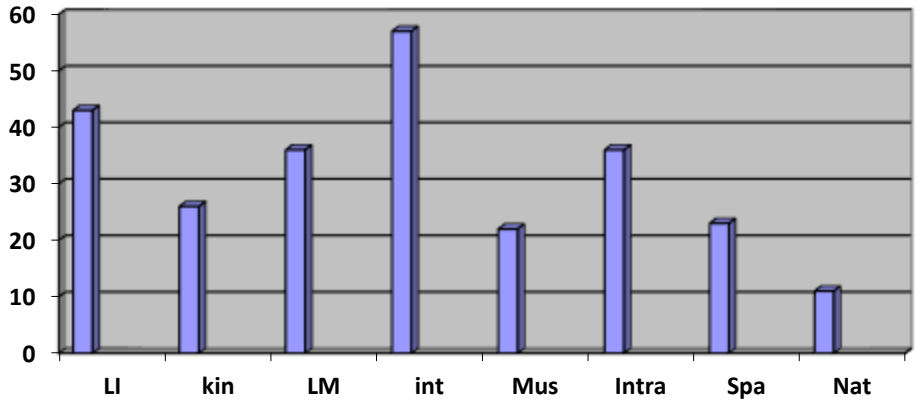
Teaching and learning activities that appeal to interpersonal, linguistic, and intrapersonal intelligences were averagely used: 57%, 50%, and 50% respectively. This proves the fact that certain intelligences seem to be taken to be more important than others (Armstrong, 2002). Similarly, it could mean that the education systems in the two countries (Kenya and Tanzania) emphasize on academically oriented intelligences.

Figure 2: A Bar Chart Showing the Percentage of How Various Assessment Activities Catered for Multiple Intelligence



The graph above shows that most of the assessment activities used by the respondents catered mostly for interpersonal intelligence (57%), linguistic intelligence 36%, while musical and logical mathematics intelligences took 43% each. It should be noted that most of these intelligences, a part from musical, are academically oriented activities thus confirm the fact that our education system is majorly examination oriented. Intrapersonal intelligence took the least with 21%.

Figure 3 classroom activities combined with assessment Activities



Over all, when the teaching activities are combined with the assessment activities, it was found that the only intelligence that received average attention was interpersonal 54%. This could be explained by the fact that a good number of teachers often use group and pair work in their classes. However, my experience as a classroom teacher shows that where groups are used in teaching, most of them are often not organized on the tenets of cooperative learning thus they may not end up developing interpersonal skills effectively. Consequently, I recommend further research in this area. Linguistic intelligence received the second most attention (44%) while logical mathematical was third 37%. To some extent this finding concurs with Gardner's (1993) assertion that most education systems as currently constituted are biased towards linguistic mode of instruction and to a lesser extent towards logical-mathematical.

8.5.2 Challenges Faced by Participants When Catering For Different Intelligences

i) Lack of Knowledge on MI Theory

Only six (28.6%) respondents indicated that they were conversant with MI theory before they enrolled for their masters course at the university, the rest, (71.4%) were not. It is important to note that these participants who did not have knowledge on the MI theory were trained and experienced teachers in their various countries. This finding has far reaching implication in teaching and learning activities in that the teachers who are supposed to nurture these intelligences do not know them therefore they may not cater for them appropriately in their teaching ,learning and assessment activities. This could be one reason why some scholars (Young, 2008; Okwara, Shiundu & Indoshi, 2009) have criticized initial teacher education for not focusing on individual knowledge and competence at the expense of pedagogical content knowledge.

ii) Large Class Populations

70% of the respondents felt that their class population were large thus did not have them freedom to use any teaching strategy that they could have thought appropriate. Similarly, all respondents (100%) were of the view that they did not have enough time to offer individualized attention to

their students. In such situation, it may not be possible to design teaching and learning activities that appeal to various intelligences that may be present in class. Consequently, this finding implies that learners with unique intelligences that may not be common in class are likely not to be catered for satisfactorily.

iii) Lack of adequate Teaching and Learning resources

85% of respondents were of the view that their various schools did not have enough teaching and learning resources. It is noteworthy that different multiple intelligence learners respond effectively to different teaching learning resources to enhance their learning. Therefore lack of enough resources could impact negatively on teachers' attempts to cater for various multiple intelligences in their classes

8.6 Summary of Findings and Recommendations

The study established that the previous practice of the participants did not cater for all intelligences in their classes. However, they sometimes unwittingly employed a few strategies without setting out to cater for specific intelligence. This could explain why, a part from interpersonal intelligence, all remaining intelligences scored below 50%. It is also confirmed by the admission of most respondents (71%) that they were not conversant with MI theory before they joined their MEd programme. This means there is no way they could have catered for all the intelligences without being conversant with MI theory. This finding confirms Campbell, Campbell and Dickson's (2004) view that most teachers are likely to rely on one or more intelligences in their classroom approaches at the expense of others. Such teachers are likely not to exploit the learners' potential to the fullest. The study also found out that some of the contributory factors to this approach could be lack of knowledge of MI by most teachers. Considering that all the participants had requisite minimum qualification of becoming a teacher in their respective countries, this could mean that initial teacher programs in the two countries do not review their teacher education curriculum frequently to capture new knowledge emerging from educational research and literature. The study therefore recommends that the teacher education programmes should continuously review their curriculum to capture the ever expanding knowledge in education. Large classroom populations and lack of time by teachers to offer individualized attention to students and wide syllabus are some of the challenges teachers face in an attempt to cater for learners' preferred learning styles. The governments need to employ more teachers to ease this problem.

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