**Inaugural Lecture**

**Embracing MultipleIntelligences (MI): A catalyst for enhancing inclusive teaching and learning.**

**BY**

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The Vice Chancellor, Professor Mtose

The Deputy Vice Chancellors (Professors De Wet and Songca)

The Executive Management & Extended Management

All Deans and Deputy Deans of Faculties,

Distinguished Members of Senate,

Heads of Academic Departments,

Academic and Administrative Staff,

School Principals & teachers,

Distinguished guests,

Last, but not least. My parents (uMama uMaNtumba no Baba uMaphalala representing the family here today)

I am greatly honoured by your presence this afternoon.

It is an honour and a privilege to deliver this inaugural professorial lecture, which marks another milestones in my journey which started in a mud school called Intumbane Primary School in a rural village eMangwaneni (Bergville)

I would like to thank the University for affording me this opportunity to share my academic experiences and insights with you. I never, in my wildest dreams, thought that I would be recognized in this way for my research and scholarship. Truly, I am humbled,

**Introduction**

One of our key responsibilities as teacher educators is to prepare teachers who will understand the significance of learner differences and minimise them to achieve optimum development.

This lecturer particularly focuses on our quest to improve teaching in schools because I believe that is where the “Rubber Hits the Road”, because at school level that is where we should ensure that all learners are able to develop their cognitive, social, emotional, cultural and physical skills to the best of their abilities, preparing them for lifelong learning and their future careers.

This lecture is a response to my worries over the years as a teacher and a teacher educator that in many schools it is common for a learner's day to largely consist of sitting in a desk, listening to a teacher, and taking notes in preparation for a test or an examination, without taking into consideration that not all learners learn effectively with this approach.

Many schools have defaulted to this traditional one-size-fits-all educational approach which is stifling learning in our classrooms. Research indicates that the most meaningful learning occurs when teachers design or adapt curricula to meet the needs, strengths, and interests of their learners.

Inclusive learning and teaching recognises all learner’s entitlement to a learning experience that respects their diversity, enables participation, removes barriers and anticipates and considers a variety of learning needs and preferences. The White Paper 6 emphasises that all learners can learn and are entitled to support. It suggests that education structures could meet the needs of all learners, acknowledging and respecting their differences by changing attitudes and environments (Hay & Beyers, 2011).

A widely held view in teaching is that every learner is unique and possesses the ability to learn, and that we should therefore explore their diverse potentials, for them to succeed. Ireson & Hallam (2001) suggest teachers need to recognise that in a mixed ability class learners have different strengths and weaknesses and develop at different rates. They have different preferences for learning and in displaying their work.

Teachers therefore working in such a heterogeneous (mixed‐ability) class should adapt the learning experiences to learners’ individual needs. There is a growing research output that has focused on Gardner's theory of Multiple Intelligences (MI) as a framework for designing a curriculum that meets different learning and teaching styles. MI provides a useful framework for teachers to consider eight intelligences in their teaching and assessment in order to cater for the diverse ways in which learners come to know in the classroom.

Gardner’s theory of Multiple Intelligences, which he first proposed in 1983 and refined it in 1993 challenges the notion that intelligence is a unitary general ability that cuts across all domains of competence, and he brought to life a theory that proposes that there are multiple intelligences (Chan, 2000). Specifically, Gardner redefined the construct of intelligence to encompass the ability to solve problems or to create products that are valued within one or more cultural settings- that is, intelligence cannot be considered apart from the uses to which it is put and the values of the cultural contexts.

Understanding that learners learn through a variety of methods means that teachers should plan to teach the same concepts through multiple methods and activities. In this regard. MI therefore becomes catalyst for enhancing teaching and learning that is inclusive.

**Types of Intelligences and their application in the learning context**

Gardner's theoryof MultipleIntelligences (MI), identifies eight different types of intelligences which teachers should consider in their teaching in order to cater for the diverse ways in which learners come to know in the classroom. The theory is based on two central propositions.

* The first proposition is that all human beings possess all the intelligences identified in the foregoing discussion.
* The second proposition is that, because of our genetics and our environment, individuals possess unique profile of intelligences, because their experiences are different.

**These eight intelligences are**:

1. Logical-Mathematical Intelligence is the ability to detect patterns, reason deductively and think logically. It enables individuals to solve mathematical operations, think logically and execute computing skills.

**Description:** Logical-mathematical learners enjoy working with numbers. They can easily interpret data and analyse abstract patterns. They have a well-developed ability to reason and are good at chess and computer programming. Logical/Mathematical Intelligence mainly features in Mathematics, Natural Sciences, Technology and Geography subjects in the Senior Phase curriculum. Mathematics learners makes use of symbols and notations to describe numerical, geometric and graphical relationships.

**Learning Activities that help develop this intelligence include:**

* observing, comparing, measuring, sorting, classifying things
* Playing maths games like dominoes, chess, checkers, and monopoly
* Searching for patterns in the classroom, school, outdoors, and home
* Conducting experiments to demonstrate science concepts
* Using science tool kits for science programs
* Designing alphabetic and numeric codes
1. Verbal-Linguistic Intelligence is the ability to use language proficiently to express oneself rhetorically or poetically. Also allows one to use language as a means to remember information. It enables individuals to effectively read, write and speak to relay a message.

**Description:** Verbal-linguistic learners love words and use them as a primary way of thinking and solving problems. They are good writers, speakers, or both. They use words to persuade, argue, entertain, and/or teach. Verbal/Linguistic intelligence is largely catered for in 11 official languages offered in the South African curriculum. Learning to use language effectively enables learners to acquire knowledge, to express their identity, feelings and ideas, to interact with others, and to manage their world. Teachers are however encouraged to promote language across the curriculum in which Verbal/Linguistic intelligence is promoted in all the school subjects.

**Learning Activities that help develop this intelligence includes:**

* prepared speech, unprepared speech, prepared and unprepared reading (reading aloud), debates, dialogues, interviews, report (formal and informal), oral presentation, role plays, poetry, drama, telling short stories, and folklore
* Completing crossword puzzles with vocabulary words
* Playing games like scrabble, or boggle
* Writing short stories for a classroom newsletter
* Listening to a storyteller
1. Visual-Spatial Intelligence is the ability to manipulate and create mental images in order to solve problems. It enables individuals to perceive their environment visually and manipulate visual images from the memory.

**Description:** Learners strong in spatial intelligence think and process information in pictures and images. They have excellent visual receptive skills and excellent fine motor skills. Learners with this intelligence use their eyes and hands to make artistic or creatively designed projects. The development of Visual/Spatial Intelligence is spread across other subjects such as Mathematics, Geography and Natural Sciences where symbols are used as well.

**Visual/Spatial Intelligence can be developed and assessed through the following activities:**

* Taking photographs for assignments and classroom newsletters
* drawings, illustrations, paintings, photographs, sculptures or sketches, power point, scrapbooks, videos, charts, graphs, map work, video tapes, laser disks, CD’s, DVD’s and posters
* Using clay or play dough to make objects or represent concepts from content-area lessons
* Using pictorial models such as flow charts, visual maps and timelines to connect new material to known information
* Taking notes using concept mapping, mind mapping, and clustering
* Using maps to study geographical locations discussed in class
1. Musical Intelligence is the ability to read, understand, and compose musical pitches, tones, and rhythms. It enables individuals to express themselves musically and through rhythm.

**Description:** Musical learners think, feel, and process information primarily through sound. They have a superior ability to perceive, compose, and/or perform music. Musically smart people constantly hear musical notes in their head.

**Musical Intelligence can be developed and assessed through the following activities:**

* Writing their own songs and music about content-area topics
* Putting original poems to music, and then performing them for the class
* Setting a poem to music, and then performing it for the class
* Incorporating a poem they have written with a melody they already know
* Listening to music from different historical periods
* Using rhythm and clapping to memorize math facts and other content-area information
* Listening to CDs that teach concepts like the alphabet, parts of speech, and states and capital cities
1. Bodily-Kinesthetic Intelligence is the ability to use one’s mind to control one’s bodily movements. It enables individuals to use gross motor skills to perform physical activities.

**Description:** Bodily-kinesthetic learners are highly aware of the world through touch and movement. There is a special harmony between their bodies and their minds. They can control their bodies with sophistication, expertise, and athleticism.

**Teachers can develop and assess bodily-kinesthetic intelligence through the following activities:**

* Dance, sports, simulations, exercises, physical movement, creating costumes for role-playing or simulations
* Building objects using blocks, cubes, or legos to represent concepts from content-area lessons
1. Interpersonal Intelligence is the ability to apprehend the feelings and intentions of others.

**Description:** Learners strong in interpersonal intelligence have a natural ability to interact with, relate to, and get along with others effectively. They are good leaders. They use their insights about others to negotiate, persuade, and obtain information. They like to interact with others and usually make friends easily.

**Interpersonal Intelligence can be developed through:**

* Working in cooperative groups to design and complete projects
* Working in pairs to learn math facts
* Interviewing people with knowledge about content-area topics
* Tutoring other learners
1. Intrapersonal Intelligence is the ability to understand one’s own feelings and motivations.

**Description:** People with a strong intrapersonal intelligence have a deep awareness of their feelings, ideas, and goals. Learners with this intelligence usually need time alone to process and create. Smith (2008) observes that people with intrapersonal intelligence will demonstrate understanding of oneself, appreciate one's feelings, fears and motivations.

**The Intrapersonal intelligence can be developed and assessed through:**

* Self-reflection activities, diary entries, meditation exercises, journals, personal stories, self-assessment, memoirs, role play, drama and case studies.
* Writing reflective papers on content-area topics
* Reflecting lessons learnt from different situations
* Writing their autobiography, reflecting on their lives
* Writing goals for the future and planning ways to achieve them
* Making a scrapbook for their poems, papers, and reflections
1. Naturalist intelligence enables individuals to understand their surrounding or the natural environment.

**Description:** This intelligence refers to a person's natural interest in the environment. These people enjoy being in nature and want to protect it from pollution. Learners with strong naturalistic intelligence easily recognize and categorize plants, animals, and rocks.

**Naturalist Intelligence can be developed and assessed by engaging learners in:**

* field trips, outdoor activities, solving environmental problems, planting trees, interaction with animals, draw or photograph natural objects, describe geographical sites and features, identify and classify birds/trees/insects and write about caring for plants and animals.
* Researching animal habitats
* Observing natural surroundings
* Organizing or participating in park/playground clean-ups, recycling drives, and beautification projects

**The significance of MI in education**

The theory of multiple intelligences proposes a paradigm shift in the way we conduct teaching and learning in our schools. It suggests that teachers be prepared 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 (Armstrong, 2018). Our education has mainly focused on linguistic and logical-mathematical intelligence at the expense of other seven intelligences.

The theory questions the idea that intelligence is a single entity that results from a single factor and that it can be measured simply through an IQ test. Gardner realised that the psychometric testing of intelligence which had been widely used over decades had only focused on specific learners’ abilities which mainly involves linguistic and logical-mathematical skills, and thus falling short in recognizing other learners’ abilities such as creativity, or tacit knowledge accumulated from idiosyncratic experiences.

Teachers should therefore regard intellectual ability more broadly rather than just a single attribute that can be measured in terms of IQ score and strive to provide an inclusive learning environment where every learner experiences success.

Research shows that individuals with high IQ are not necessarily talented in all tasks or aspects of life. Likewise, individuals with severe learning difficulties can on occasion exhibit certain specific skills. Hence, MIoutlines how teachers should recognize and teach to a broader range of talents and skills.

**The Animal School**

* I wish to use George Reavis' parable of [**The Animal School**](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CE4QFjAD&url=http%3A%2F%2Fmadalen.files.wordpress.com%2F2009%2F09%2F14037268-the-animal-school.pdf&ei=idDcTvHrBYHx0gH_hLHQDQ&usg=AFQjCNHHiLtkTRl23XZ1COA0NwWx9NU1_Q&sig2=z7nudfyXYr4b2AwDoeBAsg) to underscore the importance MI in education.
* The parable was written in 1940, when he was superintendent of the Cincinnati Public Schools in the U.S. state of Ohio
* In this parable, he tells of a story of animals who established a school to help their children deal with the problems of the new world (like we are currently grappling with the challenges and opportunities of the 4th Industrial Revolution).
* In a public meeting the animals decided that their curriculum will entail 4 subjects: **running**, **climbing**, **swimming** and **flying** and all these subjects were made compulsory.
* The duck was excellent in swimming but relatively poor in running, so he devoted himself to improving his running through extra practice.
* Eventually, his webbed feet got so badly worn that he dropped to only average in swimming. But average was acceptable in this school so nobody worried about that, except the duck.
* The rabbit had a nervous breakdown because the other animals said she looked like a rat when she jumped in the water for swimming class and all her hair got entangled and on numerous occasions she had to be saved from drowning.
* In the climbing class, the eagle beat all the others to the top of the tree, but kept insisting on using his own method of getting there. This was unacceptable, so the eagle was severely disciplined.
* The Fish hated the school. She thought swimming was great & flying was fun only if they let her do it from the water and not from dry land. She could not even try running and climbing because she did not have any legs; and she couldn’t breathe out of the water.”
* The fish’s parents made an appointment for her with the principal who took one look at her progress reports and pronounced, “You are so far ahead of the rest of the class in swimming that we’re going to let you skip swimming classes and give you private tutoring in running and climbing.”
* The fish had to drop out from school and so the other animals & so their vision to deal with the challenges of the new world was not realised

**The lesson learnt from this parable is that: Let the fish swim. Let the rabbits run. Let the eagles fly. We do not want a school of average ducks. Let us invest in our learner’s strengths.**

**Conclusion**

In conclusion, a widely held view is that a teacher working in a heterogeneous (mixed‐ability) class should adapt the tasks to individual learner needs. Such individualization turns a lesson into a mixed variety of the individual‐fit activities.

The Multiple Intelligences theory validates teachers’ everyday experience that learners think and learn in many different ways.

It also provides teachers with a conceptual framework for organizing and reflecting on curriculum assessment and pedagogical practices. In turn, this reflection will lead teachers to develop new approaches that might better meet the needs of the range of learners in their classrooms in an inclusive way.

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