

---

Title	Designing motivating lessons using learning styles
Author(s)	Ang Wai Hoong and Agnes Chang Shook Cheong
Source	<i>ERA Conference, Singapore, 23-25 November 1998</i>
Organised by	Educational Research Association of Singapore (ERAS)

---

This document may be used for private study or research purpose only. This document or any part of it may not be duplicated and/or distributed without permission of the copyright owner.

The Singapore Copyright Act applies to the use of this document.

## **Designing Motivating Lessons Using Learning Styles**

Ang Wai Hoong & Agnes Chang Shook Cheong  
National Institute of Education  
Nanyang Technological University, Singapore

### **INTRODUCTION**

Those of us who have been teaching for a period of time notice that pupils learn differently. Many enthusiastic beginning teachers feel frustrated when they discover some of their pupils are not learning as well as the others. Bernice McCarthy designed the 4Mat teaching model that can be simply and efficiently used by teachers to improve the odds for pupils. The Curriculum Development Institute of Singapore used this conceptual model to design most of the textbooks published by the Institute. This paper is designed to help teachers to understand the 4Mat system so that they can make use of any teaching materials with ease and flexibility to help their pupils to learn better.

### **TEACHERS AND TEACHING**

A successful teacher has a good grasp of pedagogy. S/he knows a lot about the nature of learning and the needs of her/his pupils. S/he is also a content expert. S/he knows the content well so that s/he knows what to teach and the sequence in which to teach it so that the pupils can learn the content well. Finally s/he needs to manage/orchestrate the teaching so that all the pupils are motivated to learn. Many experienced teachers have already developed their own systems to teach effectively. Bernice McCarthy is one of those very experienced and perceptive teachers. She developed the 4Mat system to share with other teachers so that they will continue to develop more effective lessons and will find teaching more satisfying.

### **4MAT SYSTEM**

#### Learning styles

Carl Jung (1927) noted major differences in the way people perceived, the way they made decisions and the extent of their attention. Subsequently Isabel Meyers and Katherine Briggs created the Meyer-Briggs Type Indicator. Their ideas spread into the education world and influence researchers to look into specific differences in human learning. Kolb (1983) found that people perceive and process information differently. It is the combination of how people perceive and how they process that influence the way they learn best, their unique learning style. Based on his findings Bernice McCarthy expressed her understanding into the 4Mat system for teaching.

Basically the 4Mat system is concerned with how people perceive information and subsequently how they process information. Some perceive information through sensing and feeling while others perceive information through thinking. While some process information in an active manner, others process information through reflection. Based on these differences McCarthy differentiate learners as having four major learning styles.

**Type One: Imaginative Learners**

These learners are more social learners. They learn best when they actually experience the information. They internalise it through discussing it with others.

**Type Two: The Analytic Learners**

These learners like to learn on their own. They appreciate facts and data. They need to know what the experts think.

**Type Three: The Common Sense Learners**

These learners are impatient to put into practice what they have learned. They like action. They are impatient with discussion.

**Type Four: The Dynamic Learners**

These learners like to discover things themselves. They want to try out how to make use of what they have learned in new situations.

**Left and right brain**

The 4Mat system is also concerned with right and left brain processing. Generally the left brain is concerned with verbal things and likes structures and details, whereas the right brain does visual-spatial things, like big pictures and see relationships. Teaching to both the right and left brain, the learners will learn things better.

**4MAT FOR TEACHING**

Adopting the 4Mat system to design lessons, teachers can cater to learners with differently learning styles as well as those who have different inclination in learning with the right or left brain. It is not possible for a teacher to please one particular type of learners all the time. The teacher can design a lesson such that there are different activities to allow different types of learners to have an opportunity to learn effectively.

A teacher may wish to adopt and adapt the following brief guidelines based on the 4Mat system to design lessons for a topic.

Type one activities include focusing and generating skills. Activities include observing, visualising, imagining, inferring, as well as group participation skills such as brainstorming, listening, speaking and interacting.

Type two activities stress on concept formation (declarative knowledge). They include skills such as concept attainment, patterning, organizing, seeing relationships, ordering, prioritising and classifying.

Type three activities stress on practice (procedural knowledge). Activities involving pupils in doing, trying out and putting concept into practice such as experimenting, seeing, tinkering and making things work.

Type four activities stress on applying what pupils have learned. Activities include creating new situations to apply concepts learned and new ways to do things such as synthesizing, re-presenting and re-focusing.

The different types of activities need not be in a specific order as long as the teacher includes all four types when teaching a lesson or a topic. Type Two learners who like listening and reflecting would not like interactive activities all the time. Similarly, Type One learners would find activities listening and reflecting rather boring. Both need to learn to extend themselves to do different types of activities. Type Three learners like action. All learning types need to learn to carryout type four activities so that they can become more creative and apply what they have learned in new situations. To cater to right/left mode of learning, teacher should include activities that allow pupils to express in words as well as expressing themselves in form of visuals.

## **A 4MAT LESSON OUTLINE ON SCIENCE**

### Germination of Seeds

#### Type I

Pupils in groups share their knowledge about the seeds they brought to one another. Each group takes turn to describe their collection to the class.

#### Type II

Teachers show a film on the germination of a seed.  
Teacher teaches the various stages of the germination of seeds.

#### Type III

Pupils germinate their own seeds.  
Pupils record (draw, sculpture, model, etc.) the different stages of germination of their own seeds.

#### Type IV

Pupils in groups plan a project to find out the effect of some environmental factors which may affect the germination of seeds.  
Pupils post their projects with data, diagrams, models, etc. to share with other pupils.

## **CONCLUSION**

The 4 Mat system is rather a simple system to follow in creating motivating lessons. It allows every pupil to carry out activities they enjoy during a certain part of a lesson. Teachers are designing lessons everyday for their pupils. They only need to keep in mind the 4Mat guidelines and they will continue to develop better and more motivating lessons.

## **Bibliography**

- Jung, C. (1927). *The Theory of Psychological Type*. Princeton, N.J.: Princeton University Press.  
Kolb, D. (1983). *Experiential Learning*. Englewood Cliffs, New Jersey: Prentice Hall.  
McCarthy B (1987). *The 4Mat System*. Barrington, IL: Excel, Inc.