CHAPTER 1

INTRODUCTION

According to research done by Prof. Roger Sperry and Prof. Robert Ornstein of the University of California, the brain is divided into two hemispheres i.e. the left and right hemispheres (Sperry, 1960). The functions of each hemisphere are as follows:

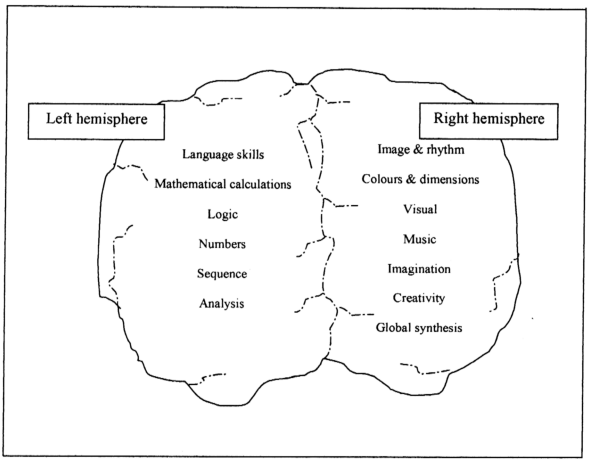

Diagram 1.1: Two Sides of the Brain (Sperry, 1960)

Academic processes are usually linked to the left hemisphere. Here critical thinking, mathematical operations and language skills take place and information is processed logically, analytically and in sequence.

The right hemisphere usually receives and restores information. Creative thinking happens in this domain; here the information is processed to form perception and meaningful visualization. Therefore, creative thinking can be understood as the ability to process information in order to produce something new and original.

Through training and experience in all types of activities and methods of creative thinking, an individual can actually enhance his creative and critical thinking. 'Creative thinking' and 'critical thinking' are two of the three elements which are required to help an individual make decisions or solve problems. The third element is 'clarification and understanding'. These three elements together make up the Map of the Thinking Domain as shown below. The lack of any one of these three elements will jeopardize effective decision-making and problem solving in daily life.

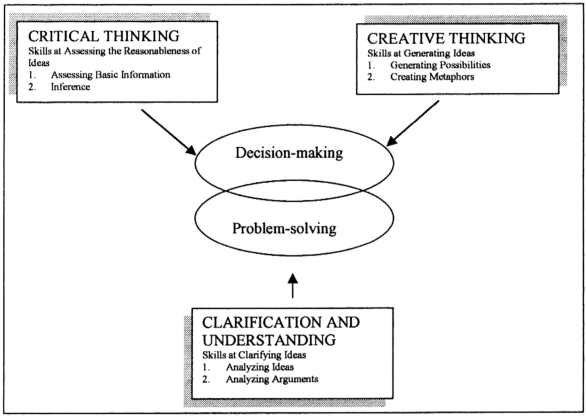

Diagram 1.2: Map of the Thinking Domain (R. J. Swartz and S. Parks, 1994)

Creative and critical thinking can be described as qualities of good thinking processes. When we are faced with a problem or difficult situation, we automatically question ourselves to find answers and solutions. In our quest for answers, we utilize knowledge, cognitive skills, values and attitudes (Mohd. Nashuha Jamidin et. al., 1995). By doing this we are actually going through the process of thinking. Creative and critical thinking processes are combinations of the utilization of knowledge, cognitive skills, values and attitudes. This is shown below in a detailed diagram of some key elements in creative and critical thinking.

Critical and Creative Thinking: Some Key Elements

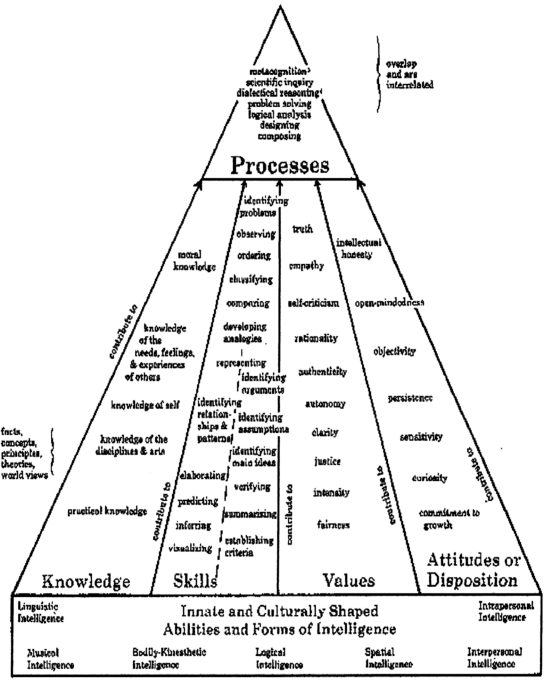

Diagram 1.3: Critical and Creative Thinking: Some Key Elements as taken from Common Essential Learning (1999).

According to Mohd. Nashuha Jamidin et. al. (1995), thinking is a process of utilizing the mind to find meaning and understanding of something, to evaluate and come to a decision or to solve problems. This definition expresses the fact that the thinking process is very important for man's daily living. Our everyday decisions and actions are linked inevitably to our skill in thinking.

Knowledgeable individuals who are adept in the thinking skill would obviously have a better opportunity to succeed in life. This is why it is important that everyone acquires the ability to think efficiently and effectively.

In a learning environment it is the teacher who is the key person responsible for disseminating relevant knowledge to the students and guiding them to realize their full potential. If, however, the teacher himself is not a person who is well versed in the thinking skill and on how to impart knowledge utilizing varied techniques and methodology then much will be lost. This type of teacher will not be able to guide students effectively nor help them improve their quality of thinking which is essential for coping with today's demanding world. This crucial matter was clearly pointed out by Tan Sri Awang Had Salleh in The Star (4 April 1993) where he said,

> The greatest learners among ourselves are those who think; who never take things for granted; who are fond of asking questions; and who watch and listen "learningly", meaning those who always try to make sense out of every bit of what they watch and listen to. Dear teachers and parents, can we not try to develop these learning habits in our children? In fact, in ourselves as well!

1.1 NEED FOR THE STUDY

With all of the above in view, it is important to examine the role of the teacher in helping to improve a student's creative and critical thinking. A discussion of the teacher's role in fostering creative and critical thinking must begin with recognition that the teacher is a person whose unique character, interests and desires cannot be separated from the idea of the teacher's role. As stated in the article 'Common Essential Learning' (1999), teachers should aspire to improve their practice through the use of creative and critical thought. Therefore, teachers should attempt to:

a) be open-minded, and encourage students to follow their own thinking

b) change their own positions when the evidence warrants

c) undertake the organization and preparation required to achieve learning goals

d) seek imaginative, appropriate and ethical solutions to problems

e) analyze their own thinking processes and classroom practices

f) exhibit genuine interest, curiosity and commitment to learning

Sandra Klenz (1987) says that the importance of having students develop good creative and critical thinking abilities has to do with the tools needed for independent and lifelong learning. She defined critical thought as that which is necessary for analyzing arguments and for rational decision-making, while creative thinking is necessary to develop alternatives to ways of life not considered upon reflection to be desirable. Students need to develop these thinking abilities in order to move their learning beyond memorization or passive acceptance to understanding and should have the commitment to persevere until clarity and insight are achieved.

Realising the key role of teachers in the process of disseminating knowledge to the future pillars of our society, the Ministry of Education conducted courses in 1994 to train teachers in creative and critical thinking. Changes were also made to the curricula to meet current and future needs. Thinking skills were incorporated into the existing curriculum. A new subject for Form Four students called 'Future Studies' was introduced. A pilot project for 'Future Studies' was carried out in 1997 and taught to Form Four students in 25 schools in five states in Malaysia (Fernandez, 1997). Future studies combines creative thinking with thinking skills and students are empowered to make their own decisions. However, the success or failure of this project has yet to be determined as it is still ongoing.

With the inception and implementation of the smart schools programme, training which involves the changing of mindsets to create a paradigm shift in teachers' thinking is being carried out at Maktab Perguruan Ilmu Khas, Kuala Lumpur. Raja Mazuin bte Raja Abdul Aziz, a master trainer at Maktab Perguruan Ilmu Khas, Kuala Lumpur, said that teachers will have to remake themselves into "facilitators of learning rather than purveyors of knowledge"(Lim, 1999).

According to Dato' Seri Najib Tun Haji Abdul Razak, "In Malaysia, smart schools are categorised by their ability to deliver education in a better way with the introduction of technology" (Lim, 1999). It is hoped that with a greater reliance on smart teaching and learning in these schools, a thinking workforce would be created. Undoubtedly the recent trend in the Malaysian education scene is the distinct inclination towards creating a thinking nation. Abdul Razak Baginda, executive director of Malaysian Strategic Research Centre, said that, "We need to produce thinkers, people with a strong base in knowledge -

the 'new Malaysians'. ...because in the new millennium we need a new breed of people" (Mansor, 1999).

With all these new developments in the field of education, it would be interesting to know whether a majority of teachers are aware of their own creative potentials. It is quite probable that they may also not know much about how to incorporate creative thinking techniques in the classroom situation. There is also an urgent need for teachers themselves to be creative, plan creative lessons and encourage students to actively use their creative imagination rather than stifle it. Creativity should permeate teaching.

Therefore, the need to obtain systematic and relevant information on the nature of the creative behaviour of teachers and the effectiveness of the teacher's delivery of the school curriculum should be a matter of utmost importance. Here the focus is specifically on the creative aspect only and not on both creative and critical thinking although both should ideally go hand in hand. This is because both these aspects of thinking offer multitudinous opportunities for research and thus cannot be handled in a single research, as the variables involved would be too many. Thus, this study will focus on:

1 the need to develop an understanding amongst English Language teachers of the importance of creativity and

2 the need for teachers to operate creatively in the classroom situation so as to foster creativity amongst students so that learning would be more interesting and thereby effective.

1.2 OBJECTIVES OF THE STUDY

This study will observe the creativity of English Language teachers in a selected urban grade B secondary school in the district of Sentul, Wilayah Persekutuan, Malaysia. All the English Language teachers of the school will be administered the Khatena-Torrance Creative Perception Inventory (Appendix A) to identify the more creative and the less creative teachers. Then these teachers will be observed in the classroom situation to determine if their classroom methodology reflects their creative potential. Finally, this study will also observe whether students' interest in learning the language correlates with the creative potential expressed by the teacher during classroom teaching. Hence the main objectives of this study are as follows:

1. To identify the nature of the creative behaviour of the English Language teachers of a school according to their performance in the Khatena-Torrance Creative Perception Inventory.
2. To establish whether the creative behaviour of English Language teachers manifests itself in classroom methodology (i.e. in the opportunity given to students to be divergent thinkers in the four dimensions of creativity namely fluency, flexibility, originality and elaboration utilizing creative thinking techniques).
3. To ascertain whether there is a link between the creative behaviour of English Language teachers which manifests itself in classroom methodology and students' interest in learning the language.
4. To find out if English Language teachers themselves feel the need for further training in creative thinking.

1.3 RESEARCH QUESTIONS

In accordance with the objectives of this study, the following research questions will be clarified.

1 What is the nature of the creative behavior of English Language teachers?

2 Does the creative behavior of a teacher manifest itself in classroom methodology, viz., is the opportunity given to students to be divergent thinkers in the four dimensions of creativity utilizing creative thinking techniques?

3 Does the manifestation of a teacher's creative behavior in classroom methodology arouse students' interest in learning English?

4 Do teachers of English feel a need for further training in creative thinking?

1.4 DEFINITIONS OF OPERATIONAL TERMS

The operational terms that will be used by the researcher are as follows:

1 Thinking

Involves the mental processing of knowledge and experiences in a person's mind. The statement 'I think; therefore I am' by the seventeenth-century French philosopher Rene Descartes (Hirsch, Kett & Trefil, 2002) supports this definition of thinking.

2 Creativity

> Creativity is a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficult, searching for the solutions, making guesses or

formulating hypotheses about the deficiencies and possible modifying and re-testing them; and finally communicating the results (Torrance, 1974).

This definition of creativity by Torrance is taken as the operational definition to creativity for this study as it most suits the researcher's idea that creativity is the effective use of knowledge together with imaginative manipulation so as to synthesize, evaluate and develop ideas.

3 Creative Thinking

A skill which widens an individual's power of imagination and innovation in order to produce many, varied, new and detailed ideas.

4 Creative Behavior

The behavior which demonstrates both uniqueness and relevance to a given task in its outcome (Parnes & Brunelle, 1967).

5 Classroom Methodology

Refers to teaching methodology which utilizes creative thinking techniques to encourage divergent thinking i.e. the intellectual ability to think of many original, diverse, and elaborate ideas.

6 Fluency

The ability to produce a quantity of possibilities, ideas, consequences, or products in response to a task in a short period of time.

7 Flexibility

The ability to view something in many different ways with a variety of ideas or products in response to a task.

8 Originality

The ability to produce unusual, unique, or highly personal responses, ideas, or solutions in response to a task.

9 Elaboration

The ability to expand and embellish ideas with intensive detail in response to a task.

10 High Creatives

The top 25% of the total number of respondents or the more creative teachers who ranked a high creative perception index or obtained high total raw scores in the Khatena-Torrance Creative Perception Inventory (KTCPI).

11 Low Creatives

The bottom 25% of the total number of respondents or the less creative teachers who ranked a low creative perception index or obtained low total raw scores in the KTCPI.

12 Creative Perception Index (CPI)

The total raw score obtained by each respondent in the KTCPI.

13 Factor Orientation Score (FOS)

The raw score obtained on the factor groupings of items by each respondent in the KTCPI.

1.5 SIGNIFICANCE OF THE STUDY

In Malaysia, the research on creativity is a fairly new endeavour. There is still a lot of room for further exploration as not many studies have been conducted on the extent of creativity amongst Malaysian students and teachers. Among those that have been carried out are a study of creativity and its correlates among Form Four pupils (Yong, 1986) and a

study of creativity and academic achievement among Form Four Malaysian students (Palaniappan, 1994).

Besides this, the Torrance figural test of creative thinking (Tan, 1992), the Torrance verbal test of creative thinking (Radiah Ghouse, 1996) and the Khatena-Torrance Creative Perception Inventory (Palaniappan, 1994) have been validated and found to be reliable to the Malaysian sample namely Malaysian secondary school students.

Research on the creativity of teachers is even more limited. Research has been done on the effectiveness of creative problem solving on the creativity of teacher trainees (Chia, 1998) and creative perception among female Bachelor of Education students at university level (Gan, 1998). An investigation into the creative behaviour of primary school English Language teachers and classroom methodology has also been carried out (Joseph, 1998). To this date, to the researcher's knowledge, there has been no research done in Malaysia on the awareness of secondary school teachers of their own creative thinking abilities and how these abilities manifest themselves in the teachers' usage of creative thinking techniques in the classroom. Therefore, it is sincerely hoped that this study can shed more light on this very interesting field of study.

Who would benefit from the results of a study such as this? Firstly all English Language teachers will. The results of this study will enlighten English Language teachers on the existence of their creative potential. This can allow them to seek assistance to increase their creative potential through the usage of creative thinking techniques.

Indirectly when more creative techniques are used in the classroom scene, lessons become more varied and hopefully more interesting. Hence students' interest will be aroused and ideally sustained in the long process of teaching and learning the English Language. And if students' interest is sparked then learning the English Language will become a joy, something to look forward to, in their lives. This will eventually lead to more effective teaching and learning in the classroom situation.

Besides this, teacher-training institutions would find the results useful when planning training courses so as to ascertain the extent of creative training programmes required. By doing this teachers can be better equipped to teach in a more creative manner so as to enhance students' creative thinking skills.

Teachers make up the core of a country's education system. Through them knowledge is imparted, minds are moulded, future societies are formed and nations are built. Therefore to realize Vision 2020, all parties concerned should first embark on a foolproof strategy to mould teachers' minds to enable them to be better equipped to play their roles in education in the future. It is hoped that this study will allow those concerned to realize the importance of the appropriate training for teachers to produce a nation of creative thinkers. As stated by Tan Ai Girl (1997),

> Advancement in science and technology is indebted to innovative and creative ideas. Economic modernisation and social advancement would not be possible without creative thinking. Seeing that, teaching creative thinking should be regarded as one of the essential social and pedagogical endeavours.

1.6 LIMITATIONS OF THE STUDY

The focus of this research is on teachers of the English Language in a selected secondary school. The main purpose of this study is to investigate the utility of creative thinking by looking at it mainly from the angle of teacher application. Is creativity reflected in the personality characteristics of the individual teacher and in the kind of thinking strategies he/she employs? Are the products that emerge as a result of a teacher's creative strivings a reflection of his/her creativity? Is creativity part and parcel of his/her classroom methodology? Can this help cultivate students' interest in English? Is the teacher aware of his/her creative thinking abilities? Answering these questions as clearly and comprehensively as possible is what the researcher intends to do to the best of her ability.

However, the researcher has no intention of testing out methods on how to improve the creative thinking of teachers. This would be another area for further investigation.

It should also be noted here that the researcher does not intend to investigate if there is any improvement in students' creative thinking skills as a result of the teacher utilising creative thinking methods and techniques in the teaching and learning process. This in itself would encompass another vast area of research. The researcher is however interested to find out if the manifestation of a teacher's creativeness in the classroom does actually kindle any kind of interest whatsoever in the student towards the subject which hence would improve the teaching and learning of the English Language in the classroom situation.

Besides this, the researcher also does not intend to dwell on the teachers' creativeness in the classroom situation with regards to body language i.e. mannerisms, gestures, facial

expressions and actions. This aspect does not constitute any of the key elements that contribute to the process of thinking. Body language encompasses the physical aspect of classroom teaching whereas creativity comes under the umbrella of mental capabilities.

The extent of creative use of a variety of teaching aids by a teacher when teaching will not be looked into in detail in this research. However, the researcher will take note of the type of teaching aid used (if any) by teachers who have been observed. This is because the teaching aid is part and parcel of classroom methodology and it functions as a tool which helps a teacher bridge the gap between his/her teaching of a specific lesson utilizing a specific creative thinking technique and his/her students grasp of the lesson.

Finally, even though creative and critical thinking are interrelated and complementary aspects of thinking the researcher has narrowed the scope of the study to the aspect of creativity only. Incorporating both aspects in one study is neither practical nor feasible when considering the amount of data that has to be collated for analysis.