



TEACHERS' EXPERIENCES OF CRITICAL THINKING
IN CLASSROOM TEACHING AT SELECTED SCHOOLS
IN IPOH: A QUALITATIVE STUDY

BY

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A dissertation submitted in fulfillment of the requirement for
the degree of Master in Education (Educational Psychology)

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AUGUST 2016

ABSTRACT

Malaysia aims to produce critical thinkers by the year 2020 according to the Ministry of Education's new curriculum plan. This study was conducted to explore the teachers' experiences in implementing critical thinking in classroom teaching. The second purpose of this study was to determine the methods of critical thinking that the teachers used to teach the students to think critically in the classrooms. This ethnography study is to know in-depth about the teachers' experience of implementing critical thinking in classroom teaching. The selection of the participants (teachers) was by using purposive sampling. The officer at the District-level Education Office had chosen six teachers from the list of excellent teachers in Kinta Utara. The teachers were three each from primary school and another three from secondary school who teaches Science, Mathematics and English. Interviews were conducted and the findings in this study were that eight methods were used in implementing critical thinking in the classroom teaching. The eight methods were stimulation, motivation, encouragement, discussion, facilitating, justification of own understanding, comparing and reasoning. Findings from this study could benefit other researchers to further develop a module for the methods in teaching critical thinking in schools.

خلاصة البحث

وفقا لخطة المناهج الجديدة لوزارة التعليم فإن ماليزيا تهدف إلى تخريج مفكرين نقادا , و ذلك بحلول عام 2020. أخرج هذا البحث لاكتشاف الخبرات المدرسية في تطبيق طرق التفكير الناقد أثناء التدري. الهدف الثاني هو تحديد طرق الناقد التي استخدمها المدرسون لتعليم الطلاب التفكير الناقد في حجرة الدراسة. تهدف هذه الدراسة الإتنوغرافية للتعرف على مدى خبرة المدرسين في تطبيق التفكير الناقد داخل حجرة المدرسة . عينة الدراسة عينة غرضية , حيث تم اختيار المشاركين المدرسين في ضوئها . تم اختيار ستة من المدرسين المختارين في كينتا اوتارا , و ذلك عن طريق موظف في مكتب قطاع التعليم . ثلاثة من المدرسين من المدارس الابتدائية , و الثلاثة الآخرين من المدارس الثانوية, و هم مدرسون العلوم, و الرياضيات و اللغة الإنجليزية . تمت المقابلات , و كانت نتائج الدراسة أن هناك ثمان طرق تم تطبيقها عند تطبيق التفكير الناقد داخل حجرات الدراسة و كانت هذه الطرق هي توقيير المثير , و خلق الدافعية , و التشجيع, و المناقشة, و التحليل, و الإقناع لشخص , و المقارنة, و الاستدلال. نتائج هذه الدراسة سوف تفيد الباحثين الآخرين لعمل بحوث مستقبلية لتطوير نموذج لطرق تدريب التفكير الناقد في المدارس.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion, it confirms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Education (Educational Psychology).

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Amalina Munirah Binti Mohamed Zabidi

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ACKNOWLEDGEMENTS

Firstly, I want to say my thankful to Allah for His Mercy and Blessing. Then, it is my utmost pleasure to dedicate this work to my dear parents and my relatives, who granted me the gift of their unwavering belief in my ability to accomplish this goal: thank you for your support and patience.

I wish to express my appreciation and thanks to those who provided their time, effort and support for this project. To the members of my dissertation committee, thank you for sticking with me.

Finally, a special thanks to Associate Professor Dr. Syed Alwi Shahab for his continuous support, encouragement and leadership, and for that, I will be forever grateful.

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Critical thinking must not be excluded from classroom teaching because critical thinking is a higher order of thinking that the students need to understand and master, according to former Minister of Education, Dato' Seri Muhyiddin Bin Yassin (New Straits Time, 2012). He added that critical thinking can help the students academically as well as in their daily life.

Human beings, especially children, think when they feel curious about something. Children at the age of 6 to 10 years old explore their environment through thinking and experience, and after they reach adolescence from 11 to 19 years old, they begin to think in concrete and formal terms, based on Jean Piaget's theory (1963). Critical thinking is a skill that can be learned by the students in the schools (New Straits Time, 2012). In addition, it is said that students also can be motivated to think critically by the teachers in the classrooms. Furthermore, the role of the teacher is very important in order to promote critical thinking in classroom teaching. An active learning approach is the way to encourage the students to think critically.

Therefore, teaching critical thinking is very crucial in the Malaysian education system. In this study, the researcher sought to understand the methods that excellent teachers use in their teaching. The teachers were selected by the District Education Office officer. Most of their students are exceptional, performing well above the national average; and they also excel in co-curriculum activities. The methods that

these excellent teachers used in teaching, especially using critical thinking, were highly significant in this study.

1.2 BACKGROUND OF THE STUDY

Historically, the Malaysian education system has been predominantly examination-oriented, before as well as after its independence in the year 1957. This was largely due to the legacy of the British colonial administration. The British education system used examinations to assess students' achievement. This went on for 53 years in the Malaysian schools. The new standard curriculum did not emerge until the year 2010 (Ministry of Education, 2009).

Issues emerged when employers were becoming more critical about the difficulty in hiring suitable job candidates. Graduates from the universities and academic institutions in Malaysia were found to be lacking in fulfilling the expectations in the work field due to the lack of critical thinking ability and poor communication skills (Borneo Post, 2012). In the report, Manpower Staffing Services (M) Sdn Bhd. country manager, Mr Sam Haggag, suggested that there is a need for a sound foundation in critical thinking to be incorporated into the education system to prepare future generations for the employment market. Haggag also also believed that there is a distinct gap between what the Malaysian education system is producing and what employers are looking for. According to Haggag, who runs a company providing workforce recruitment and training, this has resulted in six out of 10 graduates from the Malaysian universities taking as much as six months to find a job. The other 40 percent takes even longer.

Haggag believes that recruitment is a distinct challenge as the universities are churning out graduates who don't have the requisite skills to enter the workforce. From the manpower context, it was found that seven out of 10 graduates who attended recruitment interviews, to be failing the English language competency test set by employers. The lack of English proficiency limits their ability to communicate beyond the borders of Malaysia, lowering their confidence and curtailing their ability to add value in the workplace. In the same report, Hong Leong Bank chief human resources officer, Ramon Chelvarajasingam said that many of the new graduates emerging from the Malaysian education system lack the critical thinking skills required to keep up in a world that is constantly changing and becoming increasingly competitive.

It is said that, "New technologies and methodologies are forcing people to operate beyond their comfort zone. In our competitor nations, the young professionals are more advanced in critical thinking, innovation, thinking out of the box and have continuous development initiatives compared with Malaysia," (Chelvarajasingam, cited in Borneo Post, 2012). In addition, most employers are looking for graduates with a high level of confidence who are exposed to niche areas outside of their academic studies. Ms Nina Adlan, the director of Prospect Consulting Private Limited which provides advisory services to educational institutions, observed a disconnect between what graduates put down on their curriculum vitae and what they are demonstrating in capability. "What is the point in having good academic results when they can't communicate, can't conduct a proper conversation, and have no confidence," Adlan said.

Haggag said one reason for the lack of confidence found to be evident in young graduates is that educational institutions are not placing enough focus on equipping undergraduates with skills that will enable them to think out of the box and

adapt to the demands of the working world. It was suggested that graduates from the local education system who do not meet the employers' standards is due to the failings of the education system itself. The Malaysian education system is suggested not to be dissimilar from that of the United Kingdom's, which is teacher-centric, focusing on rote learning and swotting and places less emphasis on the practical application. The local education system also focuses on individual achievement and less on team performance, so there are not many opportunities for students to acquire interactive skills. The situation is suggested to be the same in Malaysia, where the system is biased towards those who do well in exams, which is not necessarily the best way to gauge their employability.

Reiterating his previous argument, Chelvarajasingam suggests that the educational institutions need to create a learning environment that combines an experiential approach and exposure to knowledge that extends beyond the scope of academic theory. Chelvarasingam argues that textbook stuff does not help them face the challenges of businesses that are constantly evolving. They need to be exposed to changing trends and behaviours, and to be taught skills like creativity, critical thinking, problem-solving and adaptability. They also need to be taught how to be globally aware, which is how to link what they learn to what is happening around the world. Meanwhile, Adlan believes that if Malaysia is to produce more employable graduates with creative and problem-solving skills, all parties involved in education should work together to create a culture that places a high value on critical thinking and creativity to replace the current one which focuses on information transfer and academic results.

Adlan pointed out that graduates who attend interviews more often than not are asked questions which require them to "think out of the box" that demands the critical

thinking ability. The lack of workers who can think critically is an important issue in Malaysia and it is the responsibility of the educators to ensure that their students can think critically before they join the work field. Malaysia's Ministry of Education is aiming to produce critical thinkers and critical leaders by the year 2020. All the above points therefore, underline the high level of significance of critical thinking in Malaysia's education system.

1.3 STATEMENT OF THE PROBLEM

There is a shortage of workers who are competent and can think critically in the workplace in Malaysia because the education system has been for a long time predominantly examination-oriented, resulting in students who tend to memorize the facts to answer the examination questions rather than to think critically.

Local graduates emerging from the Malaysian education system are finding it challenging to meet the expectations of prospective employers because of the lack in critical thinking skills and poor communication (Haggag, cited in Borneo Post, 2012). For example, the lack of critical thinking and poor communication skills had resulted in employers having to provide additional training to graduates in order to make them fit into their respective job scopes (Borneo Post, 2012). Graduates who are looking for work will need to be able to demonstrate their ability to solve problems, analyze situations and carry out research to develop potential outcomes. There is an also insufficient empirical study on the issue and the former Minister of Education believes that it is important for research to be undertaken to find out ways of implementing critical thinking in Malaysia's education system (New Straits Time, 2012).

1.4 PURPOSE OF THE STUDY

The main purpose of this study was to explore the teachers' experiences in implementing critical thinking in classroom teaching. The study was also to determine the methods used by the teachers to teach and motivate their students to learn to think critically in the classroom.

1.5 OBJECTIVES OF THE STUDY

The objectives of this study were:

1. To explore the teachers' awareness of the important aspects that they need to consider before implementing critical thinking in their lessons.
2. To examine teachers' perceptions of the methods employed in implementing critical thinking in classroom teaching.
3. To examine the teachers' experiences of teaching critical thinking to students with various needs.

1.6 RESEARCH QUESTIONS

The research questions for this study were:-

1. What is the teachers' awareness of the important aspects needed to be considered before implementing critical thinking in their lessons?
2. What are the teachers' perceptions of the methods employed in implementing critical thinking in classroom teaching?
3. What are the teachers' experiences in teaching critical thinking to the students with various needs?

1.7 SIGNIFICANCE OF THE STUDY

This study is useful for other teachers to understand about the importance of teaching critical thinking and implementing the methods in classroom teaching for the students with various needs. This study could be useful for other researchers in developing a module for the methods in implementing critical thinking in the Malaysian education system.

This study is also important to determine that the Malaysian education system is on the right track to achieve the Ministry of Education's vision by the year 2020, where Malaysian students can think critically. The new curriculum under NKRA and the new plan for education (2013-2025) are a few of the reforms made by the Ministry of Education in order to elevate the Malaysian education system to be at par with other high ranking education systems in the world. Therefore, the role of the teachers and educators are very crucial in order to achieve the target by the year 2020.

1.8 DELIMITATION AND LIMITATION

This study only focuses on the experiences of six excellent teachers who were selected by the District Education officer in the Kinta Utara District. This study was not conducted to investigate the number of people in Malaysia who are unable think critically. This study therefore is not suitable to be used to project the future of critical thinking skills' applicability in Malaysia's education system.

The main limitation for this study was the time constraints experienced in the data collection phase. The interviews took place at schools and were conducted during the teachers' free time whenever they did not have class. The teachers agreed to a one

hour interview with the researcher as they have many commitments at work and had to stay focused to carry out teaching duties.

1.10 DEFINITION OF TERM

Critical thinking - Watson and Glaser (2002) defines the concept of critical thinking as the unity of attitude, knowledge and ability comprising: (i) curiosity and ability to identify the existence of problems and accepting the evidence which support what is considered as true; (ii) knowledge of conditions to construct a valid conclusion; (iii) generating ideas and generalizations which are supported by logical evidence; and (iv) the ability to apply the attitude and knowledge above.

In this study, critical thinking means that the ability of the students to think critically by giving the answers themselves without depending on assistance from the teachers. Moreover, the students can voice out their opinions and justify their own understanding. Therefore, the students need to be motivated by teachers to think critically.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter aims to review the literature and recent research on Malaysian education system, the importance of critical thinking in Malaysian education system and the problems in implementing it. Critical thinking is a thinking method that needs to be taught in Malaysia's education system in order to produce critical thinkers and quality workers capable of meeting challenges in their work life.

2.2 OVERVIEW OF MALAYSIA EDUCATION SCENARIO

Malaysia achieved the status of a developing nation, 58 years after achieving independence. The development of the education system was placed under the NKRA (National Key Area Result) plan. A new education curriculum, called the Standard Curriculum, was introduced in the year 2009, and was implemented in national schools since 2011. This new curriculum was introduced in order to make the students think critically. However, this curriculum is still relatively new and yet to be reviewed or evaluated for.

The previous Integrated Curriculum in education was discontinued to be used to give way for a new curriculum that is compatible with the era of modernization and globalization. Besides, the new curriculum was used to replace the integrated curriculum, partly due to the transition from the examination-oriented system to an assessment-style system where the teachers need to assess the students normatively

and formatively from both the academic and non-academic aspects. In the new curriculum, the students are expected to find, explore, analyze, synthesize and evaluate information by using the tools of information technology (ICT).

However, despite the students already knowing how to find information from many sources, they still need to use critical thinking in order to sift through the massive information, locate and determine the most accurate information related to the task and questions at hand. Like many other skills, critical thinking can be learned; however, the main challenge is that the students are unable to learn how to develop their critical thinking skills by themselves. Hence, the need for teachers to guide and facilitate the students to acquire the critical thinking skills is important. The students' need for guidance and facilitation underlines the important responsibility of teachers to implement critical thinking techniques in the classroom. The students need to think critically to help them identify whether the information they come across in their learning is appropriate for each specific situation or not. Last but not least, in this scenario, the students need to be made ready to think critically and to prepare themselves to learn on how to think critically.

2.3 CRITICAL THINKING IN MALAYSIA EDUCATION CONTEXT

The Malaysian education system has emphasized the importance of critical thinking since the 1980s. Since 1994, teacher's training and education in Malaysia has included the methods and techniques of implementing critical thinking in the classrooms using the Teacher's Training College curriculum manual. Unfortunately, critical thinking remains a problematic issue in the education system as a majority of graduates from

local universities were suggested by the employers as not having the skills to think critically (Borneo Post, 2012).

This problem continues to persist because a majority of teachers are not fully - equipped to teach critical thinking, especially in terms of application outside the confines of the classroom. Most teachers do not understand how to incorporate critical thinking into their subject disciplines; they assumed critical thinking skills need to be taught as a separate subject. These statements based on the researcher experience as a teacher. Former Minister of Education, Dato Sri Muhyiddin Yassin, said that it is very important to change the curriculum in Malaysia. Apart from that, the sixth Prime Minister of Malaysia, Dato' Seri Najib Bin Tun Abdul Razak, had announced and introduced this new curriculum in 2009. The new curriculum was being introduced to replace the Integrated Curriculum for Primary Schools and Integrated Curriculum for Secondary Schools, (KBSR and KBSM).

KBSR and KBSM had been used in schools for 53 years. This new curriculum was introduced in the year 2010, under the National Key Area Result (NKRA) for education. This new curriculum is one of the ways to encourage the students to think critically. The aims of NKRA in education are to close the gap between students in the city and the students in the village, in order to give equal opportunity for all citizens to learn by focusing on students in preschool, to enable them all to read and write well by introducing LINUS (Literacy and Numeracy) in the schools, and also to reward schools for excellent grades achieved by their students. This new curriculum was introduced to reduce the focus on examinations. The Ministry of Education wanted the students to be able to think critically, to know, understand and change their behaviors based on the new curriculum.

Besides that, the Education Ministry is aiming to make the Malaysian education system to be more student-centered, to make students think critically and become competent knowledge-seekers by exploring and seeking information through the internet independently rather than dependent on teachers. This is in line with the new education policy. The former Minister of Education was said to want to see the Malaysian education system to be at par with international education standards. Therefore, the teacher's role is crucial in achieving this aim because teachers are responsible to teach, educate, train, and act as role models for the students. The integrated curriculum in education was opted out in order to use a new curriculum that is more in line with the new era of modernization and globalization (Najib Razak, 2009).

The examination-oriented system was replaced by the new assessment whereby the teachers need to assess the students normatively and formatively from both the academic and non-academic aspects. The new assessment is called a school based assessment. In the new assessment, it is considered important for the students to be able to find, explore, analyze, synthesize and evaluate information by using Information and Communication Technology (ICT). However, the students need to use critical thinking in order to meaningfully evaluate the information. Critical thinking can be learned. In the other hand, the students cannot learn critical thinking by themselves. They need the teachers to guide them. This is the important role of the teachers in implementing critical thinking in the classroom.

2.4 IMPLEMENTING CRITICAL THINKING IN MALAYSIAN EDUCATION

The education system in Malaysia today is largely a product of a system formulated by the British. The system still maintains many characteristics of the earlier British Education system, such as a centralized system of education. It has to be noted that reform efforts in the field of education started even before the country gained its independence in 1957. However, the most significant reform efforts in Malaysia (Malaya until 1965) were started in 1956 (Ahmad, 1993). The Razak Report was the beginning of the new curriculum in the Malaysian education system.

The reform efforts in 1980s in Malaysia's education highlighted the importance of critical thinking in education. Previously, critical thinking had been in the teacher's training curriculum since the year 1994. The Boston Model was used to teach the teachers to implement critical thinking in the classroom. In the teachers' training curriculum, the teachers were introduced to teaching and learning styles by using the left or right brain techniques. The Integrated Curriculum for Primary Schools (ICPS) and the Integrated Curriculum for Secondary Schools (ICSS) contained materials that have critical thinking implications.

Nowadays, Malaysia's education system is using the new curriculum which include the Curriculum Standard for Primary Schools (CSPS) and Curriculum Standard for Secondary Schools (CSSS). In the new curriculum based on the Ministry of Education directives, students are being assessed by the teachers using both normative and formative strategies for academic and non-academic dimensions. Subsequently, the new plan in education for 2013-2025 was introduced by the Ministry of Education in 2015. The curriculum was modified in order to make the students think better in a critical way. However, the success of the new plan depends on teachers to implement critical thinking skills in their teaching.

2.5 PROBLEMS IN IMPLEMENTING CRITICAL THINKING IN MALAYSIAN EDUCATION

Most critical thinking activities in textbooks are of the skills type where there are correct answers (Risby, 1987), or the questions posed ask students to give their opinion on an issue, but no criteria were provided to adjudicate between mere opinion and sound judgment. Beyer (1989, 1991), in his series of books on teaching thinking skills, does not include specifics on whether someone has predicted *well*, or summarized *reliably* (the critical part of thinking), and the problem-solving lessons involving logical puzzles, where there are right answers. Most teachers teach skills and that they would say they are teaching critical thinking.

In Malaysia, teachers teach the students by asking questions and most teachers are still using the chalk-and-talk approach, by which the teachers believe that they are already implementing critical thinking in the classrooms. However, this may not be the case at all. The teachers could be argued to be teaching skills but may not do so in a critical thinking manner. That is, the teacher may ask students to infer and generalize, but does not teach the students what would actually qualify as a plausible inference or a sound generalization. Despite the criticisms of viewing critical thinking as a skill or set of skills, (Degenhart, 1988; Hart, 1993; Bailin, Case, Coombs and Daniels, 1999a), it appears that most teachers treat critical thinking as a set of skills and procedures. This is understandable given that they are unlikely to have been exposed to critical thinking or to the criticisms of viewing critical thinking as a set of skills in their undergraduate or professional education (Su, 1990).

Talk of critical thinking criteria is disquieting, as it requires teachers to make judgments about truth, reliability, and acceptability. Even though there are some similarities between the approaches to teaching critical thinking advanced by Paul,