BARRIERS AND SOLUTIONS TO DEVELOP CRITICAL THINKERS : UNDERSTANDING PRIMARY SCHOOL TEACHERS' PERSPECTIVE

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JAYANTHI D/O SUBRAMANINAM

DISSERTATION SUBMITTED IN FULFILMENT OF THE REQUIREMENT FOR THE MASTER OF EDUCATION (PRIMARY SCHOOL EDUCATION) (RESEARCH MODE AND COURSE WORK)

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ABSTRACT

This study is aims to explore the barriers and potential solutions from primary school teachers to develop critical thinking among students. Paul and Elder's Critical Thinking model was adapted, aligned with cognitive learning aspects to develop students thinking skills. Qualitative approaches were used in this study to identify the barriers, potential solutions to overcome the barriers, and the importance of developing primary school critical thinkers. Six primary school teachers teaching in SJKT schools in Sentul District Kuala Lumpur were chosen using the purposive sampling method. Three research instruments were employed, which are interview, questionnaire and focus group discussion. NVivo software were used to analyse the data. The findings of this study underline five themes on the barriers to critical thinking at the primary school level which include, (a) critical thinking in primary school, (b) problem-solving in daily life, (c) primary school teachers teaching methods, (d) barriers to critical thinking, and (e) enhance the knowledge. The result also showed that primary school teachers had different thoughts and feelings about the barriers preventing them from developing critical thinking skills among primary school students. In conclusion, even though there are many obstacles, primary school teachers are continuously motivating themselves by enhancing the knowledge to better their students and have more potential solutions to overcome those barriers These findings have implications for improving the integration's effectiveness, removing barriers to critical thinking skills, and developing more primary school critical thinkers.

MENINJAU HALANGAN DAN PENYELESAIAN DALAM MENGEMBANGKAN PEMIKIRAN KRITIS DI KALANGAN PELAJAR DARI PERSPEKTIF GURU SEKOLAH RENDAH

ABSTRAK

Kajian ini bertujuan meninjau halangan dan penyelesaian dalam mengembangkan pemikiran kritis di kalangan pelajar dari perspektif guru sekolah rendah. Model 'Critical Thinking' Paul and Elder disesuaikan dalam kajian kerana ia terdiri daripada aspek pembelajaran kognitif yang mengembangkan kemahiran berfikir pelajar. Kajian berbentuk kualitatif ini mengenalpasti halangan yang dihadapi oleh guru sekolah rendah, sebab yang menyebabkan jurang pembelajaran dan kepentingan pemikir kritis yang sedang berkembang. Seramai enam orang guru sekolah rendah yang mengajar di sekolah SJKT di Daerah Sentul, Kuala Lumpur telah dipilih untuk menjadi responden kajian ini dengan menggunakan kaedah persampelan bertujuan. Tiga jenis instrumen kajian yang telah digunakan dalam kajian ini iaitu temu bual, soal selidik dan perbincangan kumpulan berfokus. Data dianalisis menggunakan perisian NVivo dan penemuan kajian menggariskan lima tema mengenai apa yang menyebabkan penghalang pemikiran kritis di peringkat sekolah rendah iaitu, (a) pemikiran kritis di sekolah rendah, (b) penyelesaian masalah dalam kehidupan seharian, (c) kaedah pengajaran guru sekolah rendah, (d) halangan pemikiran kritis, dan (e) meningkatkan pengetahuan. Hasil kajian juga menunjukkan bahawa guru sekolah rendah mempunyai pemikiran dan perasaan yang berbeza mengenai halangan yang menghalangnya daripada mengintegrasikan kemahiran berfikir secara kritis di kalangan pelajar mereka. Sebagai kesimpulan, walaupun terdapat banyak rintangan, guru sekolah rendah terus memotivasikan diri mereka dengan meningkatkan pengetahuan untuk memberi peningkatan kepada tahap pembelajaran pelajar mereka dan juga mempunyai lebih pelbagai cara penyelesaian yang berpotensi untuk mengatasi halangan tersebut. Kajian ini menunjukkan bahawa guru sekolah rendah cenderung mengatasi halangan dan mengembangkan lebih banyak pemikir kritis sekolah rendah. Implikasi kajian ini dapat membantu meningkatkan keberkesanan pengintegrasian kemahiran berfikir kritis dalam kalangan pelajar sekolah rendah.

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LIST OF ABBREVIATIONS

EPRD	Educational Planning and Policy Research Division
HOTS	Higher Order Thinking Skills
KBKK	Kemahiran Berfikir Kritis dan Kreatif
KBAT	Kemahiran Berfikir Aras Tinggi
KBAR	Kemahiran Berfikir Aras Rendah
MCO	Movement Control Order
MOE	Malaysian Ministry Education
PISA	Programme for International Student Assessment
SJKT	Sekolah Jenis Kebangsaan (Tamil)
SJKC	Sekolah Jenis Kebangsaan (Cina)
SK	Sekolah Kebangsaan
TIMMS	Trends in International Mathematics and Science Study
UPSR	Ujian Penilaian Sekolah Rendah

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Education has been an essential aspect that categorizes as an indicator of the country's development. Nevertheless, Malaysia's education system also plays an important role in the development of knowledgeable, highly skilled human capital that can fulfil the needs of developing countries.

According to the Research and Planning Division of Education (1994), the main aim of this effort is to produce Malaysian citizens who are knowledgeable, competent, have high moral standards, noble character, responsible, and capable of achieving high self-esteem together with the ability to contribute to the harmony and prosperity of society and country in general.

The main objective of Vision 2020 is to make Malaysia a 'Developed Country', not only economically but also target a developed nation together with other dimensions: education, economic, political, social, spiritual, psychological, and cultural (Mohamed ,1991).

In Malaysia, thinking skills are a significant agenda in national education and are eminent (Yen & Halili, 2015). Malaysia has put a significant effort in enhancing thinking skills. The main factor that identified thru a survey conducted by the Ministry of Human Resources (2005) and the Ministry of Higher Education Malaysia (2006), unemployment problem in this country increased because of lack of communication skills, especially in oral skills and critical thinking skills, particularly in problem-solving reasoning.

A foreign study in Australia stated that educators in that country also keep focusing on emphasizing generic skills among Australian university students (NCVER, 2003). from here we can understand that focusing on generating generic skills, especially in communication skills and critical thinking, and problem-solving, not only focuses on educational institutions in Malaysia but also on overseas educational institutions. Both of these skills are curriculum across skills and are transferable skills.

The OECD Centre for Educational Research and Innovation (CERI) held an international conference on Creativity and Critical Thinking Skills in School: Moving the agenda forward on 24-25 September 2019 in London, United Kingdom. The conference brought together policymakers, experts, and practitioners to discuss The

importance of creativity and critical thinking in OECD economies and societies – and how students can acquire these skills in school.

The participants have discussed many important things in the conference, such as the findings and lessons of a 4-year OECD project on fostering and assessing creativity and critical thinking in primary and secondary education. Other than that, the support of teachers is also required to innovate their pedagogy and monitor students' learning of creativity and critical thinking. Moreover, the advanced creativity and critical thinking in education, including PISA 2021 "creative thinking" assessment.

1.2 Background of The Study

In the current global educational system, ample importance is given to Higher Order Thinking Skills. This thinking skill helps develop students' educational achievement and equips future generations in the elements of lifelong learning, problem-solving, and critical and analytical thinking.

Essentially, the Malaysian Ministry of Education (MOE) has launched an extensive analysis of its education system by developing a new plan known as National Education Blueprint (2013-2025). This new plan outlines five system aspirations "access, quality, equity, unity, and efficiency". Apart from the system's aspirations, this plan also includes knowledge, bilingual proficiency, thinking skills, ethics and spirituality, leadership skills, and national identity.

Thus, it is presumed that HOTS strategies can produce new knowledge and skills. HOTS necessary for successful adjustment to a changing world are continuously acquired throughout life (M. Forster, 2004). In Malaysia, 'HOTS' has been introduced by the Ministry of Education as part of the government's efforts within the current Malaysia Education Blueprint 2013 to 2025.

The execution of teaching Higher order thinking skills (HOTS) based on Anderson and Krathwohl's Revised Bloom's taxonomy. This makes a huge transformation in the Malaysian Education Development Plan (PPPM) 2013 - 2025.

HOTS aims to develop students to think critically and creatively (Rebecca, 2018). After the implementation of HOTS in our country schools, students are encouraged and motivated to think critically. This approach also guides the students to work on project-based learning and independently whereas, teachers function as a facilitator.

According to the original statement and defining articles of the National Council on Excellence in Critical Thinking (1987), there are some important goals have been suggested in the International Critical Thinking Manifesto as follows:

1. To articulate, preserve, and foster the highest standards of research, scholarship, and instruction in critical thinking.
2. To articulate the standards upon which "quality" thinking is based and the criteria using thinking and instruction for thinking can be appropriately cultivated and assessed.

3. To provide the intellectual underpinnings needed to assess programs that claim to foster higher-order, critical thinking.

Generally, primary schools play an essential role in producing highly competitive pupils and have the ideal characteristics of a pupil. Hence, quality pupils who are also equipped with critical features such as innovation, critical thinking, and other high values will help Malaysia become a fully developed nation by 2020.

On the other hand, Critical thinking skill is one of the significant aspects focused on since the 90s by the Malaysian education system. Som (2003) stated that the Ministry of Education had set critical thinking skills to be part of acquiring knowledge and skills in subjects.

According to Margana & Widyantoro (2017), Teachers guide and teach their students to elaborate on their answers. Moreover, when students are reasoning on their answers, they require an in-depth knowledge of the concepts to elaborate and enable them to decipher and extract the meaning of these concepts.

Teaching student's critical thinking will strengthen their logical skills and ability to reason (Lipman, Sharp, & Oscanyan, 1980). Effective teaching comprises three strategies, i.e., dialogue strategies, stimulating critical thinking, and encouraging discussion in the classroom (Hashim, 2013).

Another way to improve the students critical thinking skills is by using the appropriate learning model. The use of learning models can affect learning and determine the final results of the increase in the students' critical thinking skills (Mabruroh & Suhandi, 2017).

This is further supported by Margana & Widyantoro (2017), teachers guide and teach their students to elaborate on their answers. Moreover, when students are reasoning on their answers, they require an in-depth knowledge of the concepts to elaborate, and enable them to decipher and extract the meaning of these concepts.

Teachers used Critical and Creative Thinking Skills (KBKK) in their teaching and learning activities to prepare the application of high-level thinking skills among the pupils. Implementation of HOTS (KBAT) in Malaysia has undergone several transformations with LOTS initiation (KBAR). In moving towards world-class education.

One of the important elements which are contained in 21st Century Skills is Critical thinking and problem-solving skills, Education Technology Division (2012) where the era of globalization of nations around the world looks heavy on the field of education that plays an important role in characterizing the human capital has a complete package of high quality and quality.

Furthermore, the 21st-century education challenge is to provide learning towards Higher Thinking Skills (HOTS) and manage a classroom or more dynamic learning space. However, the main challenge is how the teachers utilize multiple

sources of support and information technology to carry out effective teaching and learning activities and also how they upgrade their qualities related to current education syllabus developments.

Other than that, critical thinking challenges the pupils to create considerations and decisions as effective as analyzing, making explanations, arguments, demands and beliefs, and illustrations in their daily lives. Creative thinking skills also allow pupils to use various techniques such as creating ideas, building, implementing, and communicating with new ideas to others effectively.

Navarro (2008) stated that conventional teaching methods such as chalk and talk are less successful in attracting students but require more dynamic and creative with relevant teaching content appropriate to the current situation. Therefore, all parties directly involved in education should know that there is no room for non-renewal education.

Another way to improve the students critical thinking skills is by using the appropriate learning model. The use of learning models can affect learning and determine the final results of the increase in the students' critical thinking skills (Mabruroh & Suhandi, 2017).

Teachers can always use interactive approaches to integrate critical thinking skills among their students. This statement is aligned with Ennis (1990), who proposed that critical thinking should be taught separately from what was usually taught based on the curriculum. This is supported by Lidawan (2019), mind maps are associated with

creative and critical thinking as it emphasizes key concepts and its associations between the ideas.

Although it's broadly believed that improving students' critical thinking skills is the main objective in teaching activity, still there seem to be many obstacles in succeeding in this objective. But, it's still being a question mark whether primary school teachers have integrated critical thinking skills successfully among their students.

1.3 Problem Statement

This study is conducted because of several issues that arise in teachers' capabilities and competencies in integrating critical thinking skills among their students. The researcher has found that primary school teachers' capabilities essential ineffectiveness of thinking skills among primary school students becomes an anxiety for the stakeholders.

A recent UNESCO (2019) commissioned paper entitled: A Report about Education, Training Teachers, and Learning Artificial Intelligence: Overview of Key Issues identified five core questions to guide AI and education, shows that the role of teachers in the education system, especially in developing critical thinking skills among students has become increasingly relevant.

Within its larger ecosystems, AI can lead to complex new teaching situations, which necessitates developing a new understanding of its technical and conceptual aspects. As the learning environment has also changed and includes new teaching tools and intelligent tutoring systems, understanding them will be an asset.

One of the main concerns is about capabilities of the teacher in developing critical thinking skills (Zamri and Jamaludin (2000): Zulkarami, (2011), in their study on the implementation of thinking skills in teaching and learning, state that teachers stills require knowledge about thinking skills and are lack of skills in integrating thinking skills.

Researchers have revealed that many teachers still do not emphasize the importance of applying critical thinking among students. According to Freire (1970), teachers need to think for their students, and not teachers' minds are justified by the authenticity of the student's thinking.

Teachers and educators should also conducting follow up studies to investigate the best practice which improve prospective mathematics teachers' critical thinking skills and dispositions (As'ari, A.R., Mahmudi, A., & Nuerlaelah, E, 2017).

Moreover, to introduce the learning topics, some teachers still overlooked integrating critical thinking skills, which affects primary school students' necessary thinking skills. This situation can indirectly affect the credibility and effectiveness of developing primary school critical thinkers, and this indicates the constraint in developing critical thinking in primary schools.

According to Hashim S, Razali M & Jantan R (2003), HOTS questions provided in TIMMS may challenge students' thinking skills. But, according to Jayarajah, Saat & Rauf (2003), Malaysian students face problems in solving HOTS questions. Therefore, teachers have to focus more on creating a suitable learning environment in their classroom to make their students able to familiar with HOTS questions (Brissenden,1980).

Moreover, in 2018, Malaysia scored 440 in Mathematics, 415 in Reading and 438 in Science literacy- PISA (Programme for International Student Assessment) (Kannan, 2019). The results show us that our education system is still unable to prepare our children to compete internationally. Also, the PISA 2018's survey on Malaysian students revealed that students do not enjoy reading as a pastime and they only read when they are forced to or for a certain reason, not as an interest (Kannan, 2019).

Besides, current teachers have difficulties and challenges integrating critical thinking skills among their students. Nowadays, their teaching includes more important parts such as explaining, analyzing, and adjusting their lesson plans, objectives, success criteria, and thinking skills based on subject themes according to the latest revised additional curriculum standard.

Although changes in education need to keep track of time or move forward, in supporting this argument, Darling-Hammond and Brans ford (2007), stated that the teachers need to be prepared to accept change and also manage the change efficiently and effectively so that the teaching and learning become fresher and meet the needs of the students.

Furthermore, barriers to critical thinking skills is another reason which leads the researcher to conduct the study. Some teachers still do not dare to take risks by integrating critical thinking skills in their teaching and learning activities. Teachers who lack skills and confidence to overcome the barriers face difficulties to integrate critical thinking skills successfully among their students.

Besides this, primary school teachers are also loaded with other responsibilities that make them fully occupied in the school. In my observation, it could be one of the reasons why we cannot manage to succeed in the implementation of critical thinking in primary school.

Nevertheless, primary school teachers face many troubles with integrating critical thinking skills among their students. Rather than complaining about teachers' unsuccessful implementation of critical thinking, it will be more beneficial if we take innovative action to recognize the actual obstacles encountered by primary school teachers because they are the ones who experience the actual situation.

In addition, teachers' approaches in developing critical thinking skills through their teaching are also essential for success. The primary school teachers' approaches must be recognized and analyzed by the stakeholders to be used as a reference in the future.

However, as there is a lack of previous studies have been done to explore the barriers in developing critical thinking skills among primary school students and the teachers' perception as well the solutions, this study attempt to reveal the vital

knowledge about barriers to critical thinking skills and primary school teachers perception and potential solution.

Besides, the effect of unsuccessful critical thinking skills integration also reflects students' achievement in UPSR . On the other hand, Malaysian students achievement in the (TIMSS) and (PISA) 2018 shows that they are still below the international average compared to other Asian countries.

Past studies on critical thinking skills in our country emphasized more on secondary schools and universities but not much in primary schools. However, limited research has been carried out in primary schools on barriers in integrating critical thinking skills, but not in combination of barriers and solutions to the development of critical thinkers and the teachers understanding.

Therefore, this study will explore barriers and solutions to develop critical thinkers from understanding primary school teachers' perspectives in two selected National Tamil primary schools (SJKT) in Sentul District, Kuala Lumpur.

1.4 Research Objectives

This study aims to explore the primary school teachers' perception and potential solutions on the barriers to critical thinking. Specifically, this study aims to:

O1 Identify primary school teachers perception of barriers in their classroom teaching.

O2 Explore primary school teachers' suggestions to overcome the obstacles faced in developing critical thinkers.

1.5 Research Questions

Consistent with the above research objectives, this study addresses the following questions:

Q1 What issues do primary school teachers notice as barriers in their classroom teaching?

Q2 How to do primary school teachers can overcome the obstacles faced in developing critical thinkers?

1.6 Theoretical Framework

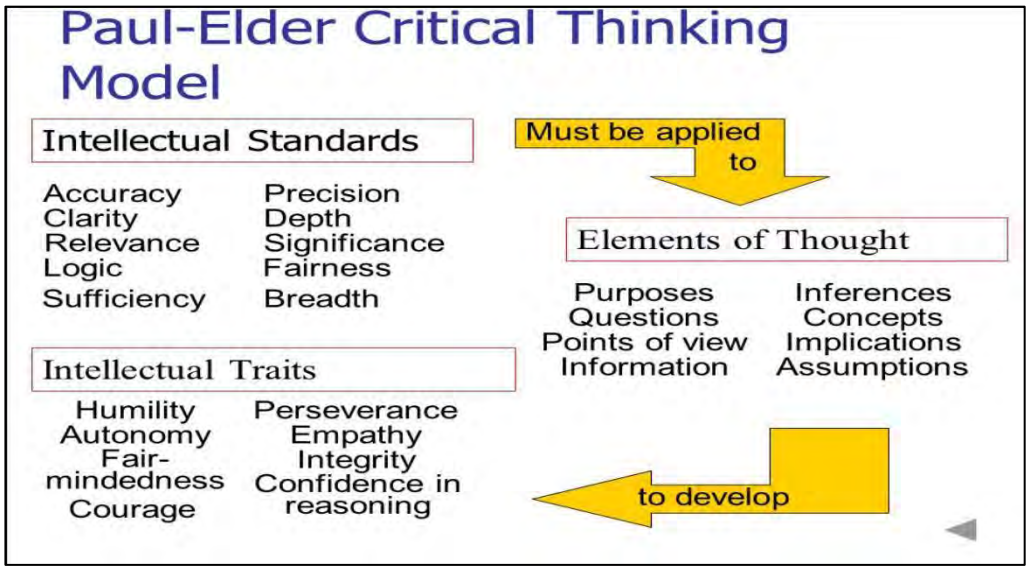

Figure 1.1. Paul-Elder Critical Thinking Model. Source : Paul and Elder,2001

The framework used in this study is the theory of Paul-Elders' for critical thinking. The Paul-Elder framework is a comprehensive model that defines specific cognitive skills, including meta-cognitive.

Educators regularly use Paul-Elders' critical thinking framework in their studies related to thinking skills. According to the literature review, the Paul- Elders model seems to be the appropriate option for the researcher to adapt in this study.

1.6.1 The Paul-Elder's Critical Thinking Framework

Paul and Elder introduced the critical thinking framework in 2001, which enabled the students to acquire their way of thinking in various methods. This framework also helps the students balance their thinking level to manage them to evaluate their thinking.

The purpose of the critical thinking framework is to keep enhancing the students reasoning through identifying its different elements through three main elements; elements of reasoning, intellectual standards, and intellectual traits.

Following are the related explanation of the main elements (Paul and Elder , 2011). In any situation related to our daily life, there will be a topic or argument to discuss.

In that situation, we always try to use different types of thinking to realize the topic in detail. We name these parts as the elements of thought or reasoning. Our minds may use the following features to think about the rational ideas.

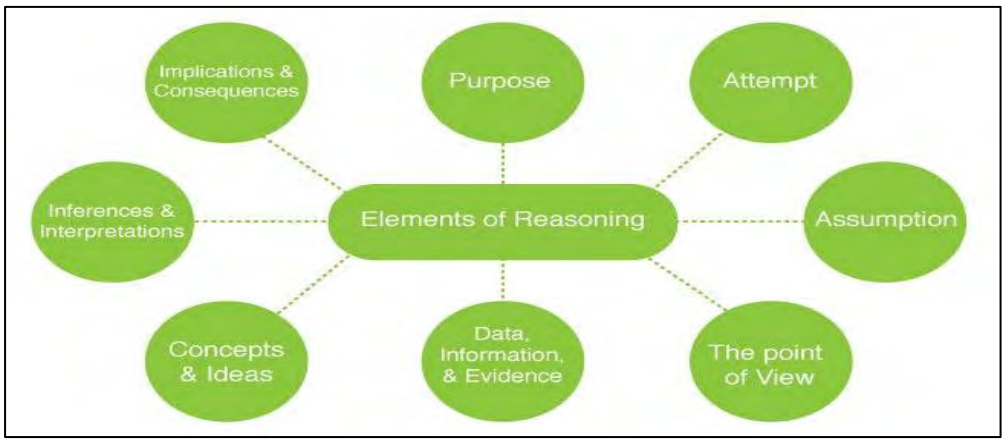

Figure 1.2. Elements of reasoning

Table 1.1

Elements of reasoning explanations

Purpose – In this part, we can include our thinking part, which will indicate a goal or objective of the topic. For example, the goal may involve solving a problem or achieving a target.
Attempt – This part will help us view the attempts addressed earlier on the topic or attempts to solve a problem.
Assumption – In this stage, without having enough details regarding the topic, it will be hard to solve any problem. We need to create an assumption to act as our research base about the subject.
The point of View – At this stage, we need to concentrate on our point of view, especially the point of view that allowed us to think about the topic.
Data, Information, and Evidence – In this part, we get supportive proof regarding the topic. At the same time, we need to include all the related data and information to the topic.
Concepts and Ideas – Over here, we will get all the related principles, models, and theories to the topic.
Inferences and Interpretations – In the end, using the above stages, we can give the conclusion in the form of solutions.
Implications and Consequences – All the reasons must track the consequences, which will be a solution for implementing the reasoning process results.

I) Intellectual Standards

The intellectual standards above required acceptable grade standards to attain its objective to assure the reliability of the results. Nine factors such as clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness are suggested in the evaluation process to measure the intellectual standards equation.

We can constantly evaluate the above parts by asking these standards questions. The below figure gives a clear picture of the examples to the questions that we can ask to assess the equality of our ideas.

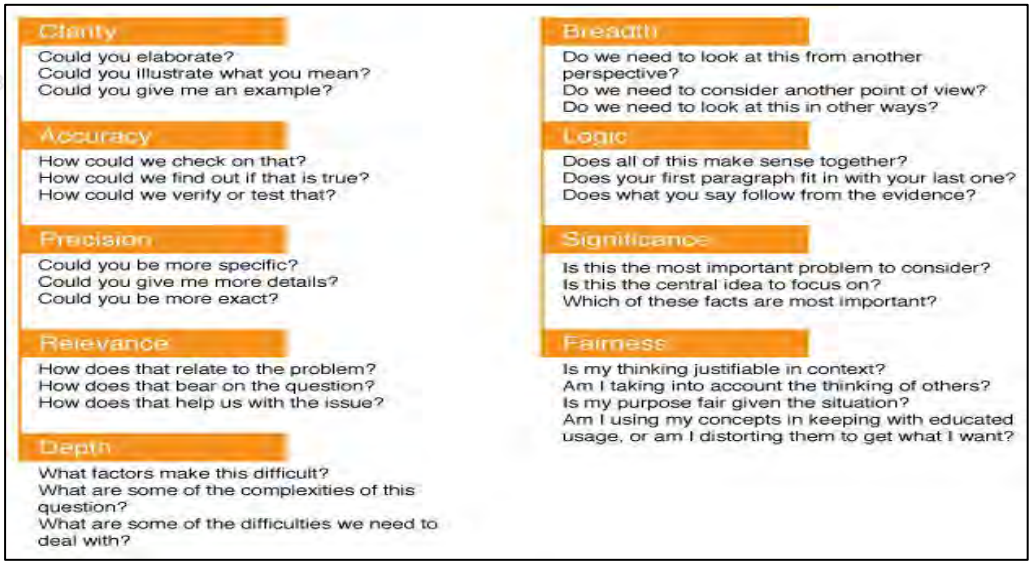

Figure 1.3. Example questions (Intellectual standards)

II) Intellectual Traits

As an outcome from the above application on the reasoning parts and validating them using intellectual standards, The following aspects are expected to be developed, known as the intellectual traits:

a) Intellectual Humility

This trait will help develop the ability to perceive the known limitation and the circumstances that may cause biases and self-deceptiveness. It depends on recognizing that one claims what one's knows.

b) Intellectual Courage

Intellectual Courage represents developing a consciousness to address ideas reasonably regardless of our point of view or our negative emotions about them. Also, it helps us develop our ability to evaluate ideas regardless of our presumptions and perceptions about them.

c) Intellectual Empathy

The part of empathy is related to developing the ability to put ourselves in others' shoes to understand them. Also, it creates how we can see the features of reasoning of the others, such as the viewpoints, assumptions, and ideas.

d) Intellectual Integrity

Intellectual integrity is the vital part of developing the ability to integrate with others' intellectual reasoning and avoid confusion from our own reasoning. Compared to empathy, this integrity focuses on others' reasons for the topic and merging with it.

e) Intellectual Perseverance

This intellectual perseverance develops the need to have the truth about the insight regardless of the barriers that face against it, such as difficulties, frustration, and obstacles. This helps us to build rational reasoning despite what is standing against it.

The best way to apply critical thinking using Paul-Elders' framework is based on three main stages, (i) observe the problem to build rational knowledge, (ii) ask questions to analyze and evaluate data and (iii) find answers to the questions that can be formulated into a solution for the problem. These stages are expressed into the following six steps.

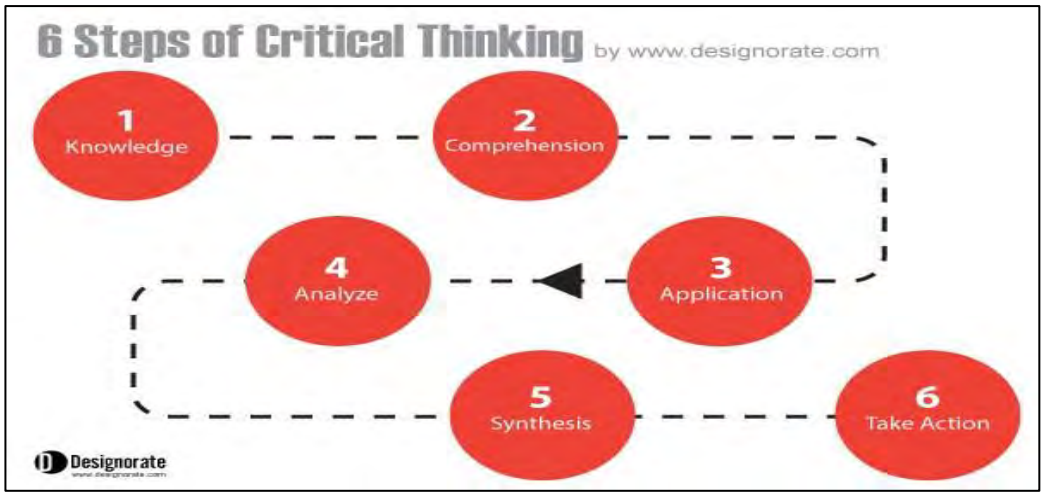

Figure 1.4. Steps of critical thinking

Table 1.2

Explanations of Critical Thinking Six Steps

i) Knowledge - Define the main topic that needs to be covered
ii) Comprehension - Understand the topic through researching the topic
iii) Application - Analyze the data and link between the collected data
iv) Analysis - Solve the problem for the problem or the topic investigated
v) Synthesis - Turn the solution into an implementable action plan
vi) Evaluate - test and evaluate the solution

Besides, “Epistemology” is the philosophy area that acts as a root of theory learning. The two famous philosophical traditions developed from the ancient philosophers Plato and Aristotle will be the cognitive and behavioral traditions, and cognitive psychology is more to the nativist tradition.

Richard Paul and Linda Elder (2013), the founding leaders of the excellent foundation for Critical Thinking, hail from philosophy and education psychology. Philosopher Richard Paul and educational psychologist Linda Elder have written briefly on critical thinking.

Paul and Elder (2013) emphasized that students can acquire their eight standards for critical thinking: clarity, accuracy, precision, relevance, depth, breadth, logic, and fairness by asking questions.

Furthermore, Paul and Elder's (2013) survey findings explained that most education institutions still lack what critical thinking is or how to teach it. Moreover, Critical thinking is a mode of thinking about any subject, content, or problem. The thinker improves the quality of their thinking by skillfully taking charge of the structures essential in thinking and imposing intellectual standards upon them.

Nevertheless, Paul and Elder (2011), also stressed that critical thinkers regularly will be able to explore eight elements of critical thinking as, The purpose of assertions, The questions at issue, The information required to assess the quality assertions, The interpretation of assertions, and their inferences, The concepts involved in understanding assertions, The assumptions contained in assertions or their interpretations, The potential consequences of assertions and The point of view of those making assertions and their alternatives.

Moreover, Paul, Richard W, Elder, Linda, Bartell, Ted (1997), in their study on California Teacher Preparation for Instruction in Critical Thinking: Research Findings and Policy Recommendations, explained about California teachers' preparation programs that prepare candidates for teaching critical thinking and problem-solving skills in elementary and also secondary schools.

According to Paul and Elder (1997), students need to acquire two essential dimensions of thinking to discover how to upgrade their thinking. Firstly, they have to identify the parts of their thinking, and then they need to assess their use of these parts of the review.

Other than elementary and secondary schools, many researchers have conducted interviews in private colleges, public colleges, and universities based on education and subject matter. In addition, several researchers cited and used Paul and Elders' Critical Thinking Model, which aligns with cognitive skills in their studies. In cognitive learning theory, the function of this nativist perception is to relate the mind to understand the mental process.

Apart from Paul and Elder's thinking model, there are many more well-developed critical thinking models in the research world, called philosophical models of critical thinking. Its starting range was from the tried and tested taxonomy of educational objectives and moving forward with its existing variations (Airasian et al., 2001; Bloom, 1956) to the Collegiate Learning Assessment, APA Delphi model (Facione, 1990). Other than that, more models relate cognitive decision-making in critical thinking (Ennis, 1991).

Although many thinking models have been developed by the researchers, in this study, I will adapt Paul and Elder's Critical Thinking Model because it involves cognitive learning aspects that help to develop pupils thinking skills, which is the central aspect in this study.

Paul and Elder's Critical Thinking model will be more appropriate to integrate into my study to explore barriers and solutions to develop critical thinkers, from understanding primary school teachers' perspectives in two selected National Tamil primary schools (SJKT) in Sentul District, Kuala Lumpur.

1.7 Conceptual Framework

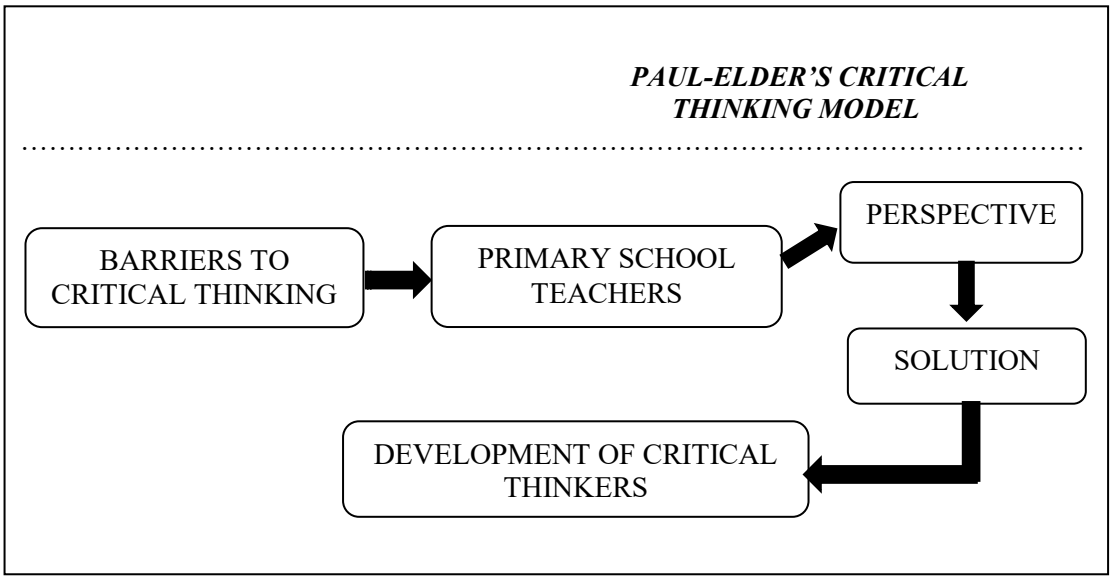

Figure 1.5. The propose conceptual framework

Mainly, this study is expected to explore barriers and solutions to develop critical thinkers from primary school teachers' perspectives. The researcher used some essentials of the study:

- Primary school teachers' perspective.
- Solution.
- Barriers to critical thinking skills.
- Paul-Elder's critical thinking model to come with this conceptual framework.

According to the above conceptual framework, this study will underline the selected primary school teachers' understanding and perspective about the barriers preventing them from developing critical thinkers and their solution to overcome those barriers in their teaching and learning session.

Moreover, in this study, I will adapt Paul & Elder's critical thinking model to see through the primary school teachers' perception of the barriers and potential solutions to overcome those barriers that obstruct them from developing critical thinking skills among their students.

1.8 Scope of The Study

The scope of this study is limited to one type of primary school (SJKT), which categorize under Sentul district schools located in Kuala Lumpur. Even though I've sent consent forms to a few schools in four Districts in Kuala Lumpur, I only get more

positive feedback from teachers from Sentul District, especially from selected two SJKT schools.

This research only focuses on primary school teachers rather than pupils. I choose them in this research because they are the essential persons responsible for developing primary-level critical thinkers.

1.8.1 Limitations of The Study

This study is conducted to identify the primary school teachers' perception of the barriers to critical thinking. This study focuses on only six teachers from two National Tamil primary schools in Sentul district, Kuala Lumpur. Elements in the Conceptual Framework being the focus of this study are identifying the teachers' perception and potential solutions to improve barriers to critical thinking in primary school.

This research only involved six teachers from two primary schools in Sentul District, Kuala Lumpur. The research output doesn't show another type of school's condition. In addition, this study will use qualitative approaches to gather data that aims to be transferable rather than replicable. Thus, the results from this study are intended to aspire rather than be statistically quantified.

1.8.2 Significance of The Study

Marshall & Rossman (1999) discusses the significance of the study in the context of researcher contributions to theory, policy, practice, and social and action issues. This research is significant to some organizations in our educational system, and among them are the State Education Department, Schools, Teachers, and the Public.

The State Education Department is an organization that ensures the state education system in developing schools and goes positive with the teachers. The benefits of this study to the education departments are that the results of this study will share more ideas that can be used in workshops or courses on critical thinking skills to improve teachers' skills.

Other than that, this study also aimed to provide more input to the education department to organize related training for the rural and urban primary schools teachers on the importance of integrating critical thinking skills among students.

Nevertheless, every school plays a significant role in educating their pupils differently. This research also provides benefits to school management, which can guide the teachers and the pupils. The outcomes of this research could be used as a guideline for school organizations to identify obstacles that influence teachers' teaching in developing the critical thinking of primary school students.

Besides that, this research can provide a clear vision to school management on how they can generate teachers with a high level of commitment in the classroom, demonstrating the importance of critical thinking skills among their students.

Nevertheless, educators have to be more creative when they deliver the knowledge because it will help the learning process be better and more effective. Among the benefits for educators through this research, it will give more new ideas to the teachers who could gain further information on how to overcome the obstacles to develop critical thinkers.

This study also aims to identify and explore barriers and solutions to develop critical thinkers from primary school teachers' perspectives. This study will contribute more ideas to primary school teachers to find alternative methods in classroom teaching to develop their students' critical thinking skills. Other than that, findings of this research can be used as guidance for other teachers to design thinking skills strategies to include in their daily lesson plan activities.

The outcomes of this research will contribute ideas to school teachers who were looking for an alternative method or strategy in teaching critical thinking skills. I hoped that the teachers could use the outcomes of this study to upgrade their teaching strategy. This research would also line up some potential solutions to overcome critical thinking barriers in primary school.

The findings of this research also may help support the existing teaching strategy that primary school teachers conduct and serve better learning by enhancing critical thinking skills.

Besides the education department, schools, and teachers, this research will benefit the public, such as researchers and readers. These research findings will contribute to researchers and readers to identify the responsibilities and roles of teachers in developing critical thinkers in enhancing the level of self-professionalism and the achievement of pupils.

Other than that, the academicians and researchers could also use the outcome of this study to conduct their further research on teachers' perceptions and potential solutions to improve barriers to student critical thinking in primary school.

1.8.3 Definition of Terms

The following terms are defined for use in this research.

I) Critical Thinking

The objective analysis and evaluation of an issue to form a judgment are also known as *critical thinking*. Other than that, critical thinking is also define as a reasonable and reflective thinking focused on deciding what to do or believe, (Ennis, 2011).

According to Ruggiero (2012), evaluation is the main idea involved in *critical thinking*. Moreover, Snyder & Snyder (2008) suggested that critical thinking is a learnable skill. In this study, *critical thinking* is the main aspect that is developed in the selected primary among school pupils to be more analytical.

II) Barrier

A barrier is a type of misunderstanding which can arise due to language or cultural differences, a lack of awareness of the 'processes' involved, or a misconception that critical thinking means making 'negative' comments. Reluctance to critique the 'norm' or experts in a field and consider alternative views. Lack of detailed knowledge.

The term *barrier* means "a natural formation that prevents or hinders movement or action". In this paper, the term *barrier* is used to mean "obstacles faced by teachers to integrate critical thinking skills among their students".

III) Solution

The term *solution* means "something that solves a problem". In this paper, the term *solution* is used to mean "list of suggestions to overcome the obstacles faced by teachers".

IV) Teachers

The term *teachers* means "a person that teaching something". In this paper, the term *teachers* is used to mean "six primary school teachers from two national Tamil schools".

V) Perspective

The term *perspective* means "the capacity to view things in their true relations or relative importance". In this paper, the term *perspective* is used to mean "primary school teachers view on unsuccessful of critical thinking skills among their students".

VI) Primary school

The term *primary school* means "a school including usually the first four to eight grades". In this paper, the term *primary school* is used to mean "two national Tamil schools in Sentul District, Kuala Lumpur".

1.9 Conclusion

Critical thinking skills are no longer a foreign skill in education in our country, and mastering thinking skills is an essential part of the primary school curriculum.

Additionally, critical thinking skills are one aspect of the soft skills demanded by human capital development, and it's also one of the 21st-century skills elements.

Generally, in this chapter, I have described several aspects of this study in detail, such as research introduction, the background of the study, problem statements, theoretical framework, conceptual framework, research objectives, research questions, the scope of the study, limitation of the study, the significance of the study, and also the definition of terms. The next chapter will give a brief explanation of the literature review used in this research.