

CONTRIBUTING FACTORS TO CHILDREN'S CRITICAL THINKING ABILITY: THE PERCEPTION OF PRE-SERVICE TEACHERS FROM A PRIVATE UNIVERSITY IN MALAYSIA.

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The purpose of the study is to explore the perceptions of pre-service teachers on the factors that contribute to critical thinking ability of children. In-depth interviews were done to two pre-service teachers who are currently studying at a private university. Findings show that knowledge and experiences of children dealing with peers and adults contribute the most to the critical thinking ability. Environment and exploration also help children to build the skill.

Keywords: Children, critical thinking ability, pre-service teachers, qualitative method.

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Introduction

From early childhood through adolescence, children's cognitive functioning changes greatly. Social and intellectual activities need a great deal of cognitive functioning. During social interactions, assumptions about others' thoughts guide children's actions and frame their interpretations of others' actions. Children also form concepts of the nature of knowledge that contributes to the abilities to reflect on one's thought processes and evaluate the reasoning of others (Pillow, 2008). A key component of critical thinking is the ability to evaluate the statements of other people (Heyman, 2010). Furthermore, one of the basic concepts of critical thinking being able to understand or figure out what the problem (or conflict, contradiction) is and to direct thinking to the specific purpose of solving the problem (Davis-Seaver, 1994). It is important that children learn to reason about information critically since it is not always accurate. Lack of this ability leads to many social problems, for example, suicide, which is an acute worldwide issue, and it has become an epidemic in Asia (Kok & Goh, 2011).

A lot of research was done on children's critical thinking ability (Davis-Seaver, 1994; Mabe, 2004; Pillow, 2008). Children are found to be able to think critically as early as three years old. Although critical thinking curriculum is seldom included for preschool children,

children are found to be able to think critically when they interact with their peers and adults (Pillow, 2008).

Teachers at preschools are expected to assist children with physical, cognitive and social development. They need to observe children's development in every aspect and encourage those developments. Since Malaysia is upgrading its preschool teachers' competency, a lot of diploma and degree in early childhood studies is offered in the public and private colleges and universities. These preservice preschool teachers are trained teachers and expected to deliver what is learned in the tertiary level into practice once they are put into service in preschools and kindergartens. However before the preschool teachers could encourage critical thinking ability of children, their definition of critical thinking is explored. Therefore, the purpose of this study is to explore the perceptions of preservice teachers on the factors that contribute to critical thinking ability. The research question that is intended to be answered is

What are the perceptions of pre-service teachers on the factors that contribute to critical thinking ability of children?

Literature Review

A study done by Davis-Seaver (1994) on 10 children of six and seven years old to identified their level of thinking showed that children at that age already had their critical thinking ability. The children were found to be able to recognize adults' manipulation of their thinking. Thinking as a political act was also evident in the responses of the children when they were found to use some strategies to conceal their true thinking from adults (Davis-Seaver, 1994).

Another study done by Salmon (2007) was to find out the critical thinking skills of children when they were drilled with thinking routine activities. The research was an action research project towards nurturing a culture of thinking in young children. The researchers trained a few teachers who implemented the thinking routines activities to children so that the children would engage their minds in the thinking ability. The study took place in two Reggio-inspired schools and the method of collecting the data was through documentation of children's work by participated teachers. The results showed that thinking routines built up positive attitudes about thinking and learning (Salmon, 2007).

Gee and Heyman (2010) did a study on children's evaluation of what people communicate about themselves. The study was done on a total of 296 participants from the age

of 4 to 12 years old. The study was to explore two things, 1) children understanding that people do not always reveal true information and 2) children's use of contextual cues to judge the credibility of what individuals say about themselves. The results showed that pre-school children are quite sophisticated at their reasoning and that they are able to judge the credibility on individuals based on whether or not the information is salient and familiar (Gee & Heyman, 2010). For example, preschool children are aware that girls are more likely to reveal to peers that they like to play with dolls than boys although boys are also found to play with dolls.

Research Method

3.1. Participants and sampling method

Two pre-service teachers who are still studying in their second year in the Early Childhood Studies program were employed as the informants for the study.

Purposive sampling method was employed in recruiting the informants. The power and logic of purposive sampling lies on selecting information-rich cases so that the study could be done in depth (Coyne, 1997)

3.2. Design

Interview guide approach was the form of interview approach used in the study. The approach suggested that the interviewer has an outline of topics or issue to be covered but is free to vary the wordings and order of the questions to some extent (Nik Suryani, 2008). Semi-structured interview for in depth information was done for 30 to 45 minutes. Probing was done again and again to make sure saturation level met.

3.3. Data collection

Data was collected from the answers to interview questions (IQ) which were derived from each research question (RQ) as follows:

- a) Is it important to be able to think critically? Why?
- b) When can we see children being critical thinkers?
- c) What contributes to the thinking of preschool children?
- d) How can socialization influence thinking?
- e) Is critical thinking ability of children decrease as they grow older? How?

Results And Discussion

A few themes emerged from the interview. Analysis of the interview revealed the findings below.

4.1 Knowledge and experiences

Knowledge and experiences contribute to the most part of developing critical thinking ability in children according to the informants. Children's past experiences and current ones contribute to knowledge development and thus critical thinking skill. The knowledge that children gained from daily activities, such as interaction with peers, parents and other adults added to the thinking ability. As Informant 1 said

"Their.....will to do it, and then with their previous knowledge and experiences...with what they are receiving and facing now "

A research suggested that recognition of children about knowledge generates critical thinking (Pillow, 2008) which seemed consistent with the finding.

4.2 Environment

Environment also plays a role in supporting critical thinking ability. Given suitable environment to grow, children could enhance this ability. Children need the space and freedom in the environment for them to explore, experiment and experience to be critical thinkers. This was mentioned by Informant 2 during the interview

"they need to have the space for them to express aaa, I think (DU 2-24)"

4.3 Exploration

Exploration in the spacious environment leads them to be able to compare and contrast, as the Informant 1 defined critical thinking previously. Through contact with the environment, children also learn to imitate others. They will experiment which behaviour is acceptable and which is not. This also relates to the ability to figure out what is right and what is wrong in their environment.

4.4 Positive attitudes

Positive attitudes of teachers also plays a role in building critical thinking ability in children, since children spend most of their time with teachers, and that teachers have become their companions, it is important for teachers to create s supporting environment to critical thinking.

"Encourage them have to be...the adults around them have to be..to be..have to encourage them"

For example, teachers may ask questions that stimulate their thinking such as open-ended questions, as mentioned by Informant 2

"Aaa...maybe ask them questions like...questions, various questions to stimulate their thinking

"like...aa...an open ended question la...why, why this, why, why questions "

This is evident from a research done by Bhaerman (n.d) that alleged the way for children to seek insights and truths is through constructive discussion with others. Children may gathered different ideas and view from others, they also may think of other's perspective when they are socialized.

1.5. Age factor

Moreover, children are found to have critical thinking skill at young age and this ability is improving with age as Informant 1 mentioned,

"I think they got since young, but it just the improvement of it, they are more a critical thinker when they were.... 4 and 5 maybe, starting 4 and 5 la, not I mean starting is like, since they were born, but when it's come more complex is at age 4 or 5 "

This finding is consistent with a research suggested that found that at the age of 3- and 4-year-old children already have some appreciation that individuals can differ in their credibility (Heyman, 2010).

However, Informant 1 believed that as children aged, their thought become more judgmental since they are more exposed to people and environment. A research found that children 6- and 8-year-olds judged that they would not understand an incidental message (Pillow, 2008).

On the other hand, Informant 2 stated otherwise. She believed that the ability of children to think critically is a stable trait. Once a child has it, he or she will maintain that ability.

"Hmm... if the basic is very stable, like of course they have this..aa..chance to develop this critical thinking so when they go out to primary school. They, they will be that because they're developed already, so they will bring this critical thinking top to primary school, or secondary school or even future into work"

Both informants are seemed to be contradicting each other. While Informant 1 assured that critical thinking ability of children is improving with age, Informant 2 supposed that the ability to think critically is stable over time. A study done by Pillow (2008) found that second grade children and kindergarten children rated statements from people around them differently where the first group appeared to have doubts while the latter appeared to believe that statements. This research be seen as supporting Informant 1 that critical thinking ability is improving with age.

4.6 Identify consequences of their behaviour

The importances of children to be critical thinkers are also explored within the scope of this research question. Findings showed that this ability is crucial in children since it enables them to identify consequences of their behaviour.

"they need to know what's right, what's wrong, they need to think aa.. what's the consequences of it, everything they do "

4.7 Own opinions

Also, children need to think critically because it enables them to have their own opinions.

"(when children do not have this ability) Only stick to what people say, they will, yeah, they will do what people like"

One implication of ability to think critically concerns with children's level of vulnerability to manipulation by others (Gee & Heyman, 2010). Children need to be able to have own opinions to avoid being manipulated. Furthermore, inability of children to identify consequences of behaviours may lead to social ills and perhaps suicidal thoughts and activities. According to Kok and Goh (2011), the numbers of suicidal case among adolescences are increasing. This is directly due to inability to cope with stress and relationship problems which are link with failure to value or judge whether something is good or bad. Hence, it is im-

portant for children to be able to think critically in order to make sound judgement and to have own opinions.

4.8 Restricted environment and direct teaching

However, there are some challenges to critical thinking found in the study. According to Informant 2, restricted environment and direct teaching hindered critical thinking skill.

"like for example, parents, then....school teachers because my kindergarten is not that kind of play-based, it's all direct teaching, sit on the desk..aa..sit on the chair in front of the desk and write and write, copy, write and then aaa..we will get scolded or canned from teachers and parents also "

"Quite restricted, everything cannot do this, this one cannot do, this one is wrong, this one is right, everything is told by parents"

As mentioned earlier, freedom and space in the environment are crucial to critical thinking development. Children in the classrooms also should be given freedom to express their thoughts in order to think critically.

Conclusion

The study explores the perception of pre-service teachers on the critical thinking ability of children. The issue that brought upon the exploration is because a lot of research found that children are critical thinkers. However, the rising number of social ills, specifically suicidal cases in Malaysia suggested that children are not critical thinkers. Also, there were some other studies that found children lack of critical thinking as they aged.

It was found that knowledge and experiences of children contributes to the most part of their critical thinking development. Children learn to be critical thinkers through experiences in socialization with others and also supporting environment prepared for them by the adults.

Critical thinking appeared to be developed in young age of children, basically 4 or 5. However both informants were contradicting each other when one suggested that critical thinking improved as children aged while the other assumed that it is a stable trait.

Finally, critical thinking also found to be important to children as it enables them to indentify consequences of their behaviours and manipulation from other could be avoided as they learn to have their own opinions on information at hand.

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