Session 5

Critical Thinking and Learning Skills for Children and Adolescents

A. Introduction

Learning to think analytically and objectively is likely one of the most valuable abilities youngsters of today will require in the years to come. Children in today's society need to be able to do much more than recite a list of facts; they need to be critical thinkers who can make sense of information, evaluate, compare, and contrast, draw conclusions, and create higher-order thinking abilities. Children need to accomplish this to succeed in today's world.

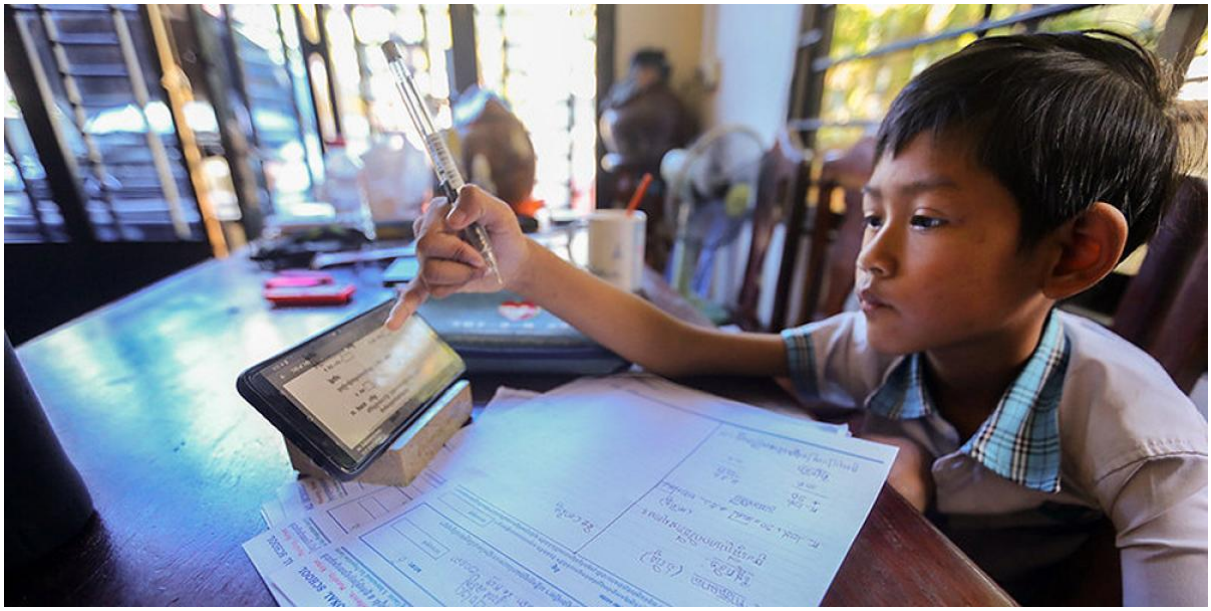

Image 1: The COVID-19 pandemic has shown the importance of education technology in curriculum delivery and student assessment. (Source: Asian Development Bank, 2021: Online)

Every day, we put our critical thinking abilities to use. They enable us to make sound choices, comprehend the repercussions of our actions, and find workable solutions to challenges. These instrumental talents are required for various activities, from putting together puzzles to determining the most efficient way to work. It applies concentration and self-control to solve issues and establish and achieve goals. It uses other essential life skills such as establishing connections, taking perspectives, and communicating. Thus, using our critical thinking skills enables us to make better, more informed choices.

Session 4 Conclusion

Domain 5 of the Philippine Professional Standards for Teachers (2017), Assessment and Reporting, along with its five strands, determines the ideals teachers consider in designing, using, and evaluating assessment strategies. Among the standards are the congruence to the curriculum guides and learning essentials to the assessment instrument being designed.

In this lecture, we will explore how to assess whether or not learners can think analytically and critically.

B. Session Objectives

At the end of this lecture, you are expected to perform the following:

1. To identify the observable thinking skills of learners that are indicative of analytical and critical thinking;
2. To determine how the analytical and critical thinking skills are assessed in school; and,
3. To discuss the application of analytical and critical thinking in social responsibility.

C. Session Content

1. Observable Indicators of Analytical and Critical Thinking

The foundation of learning is thinking (Navarro, Santos, & Corpuz, 2019). The teacher deliberately designs instruction to engage students in various thinking abilities. The two most encompassing forms of thinking are **analytical** and **critical**. Therefore, before we examine the specific indicators, let us differentiate the two.

Analytical Thinking. Using analytical abilities involves reducing large amounts of data and information to manageable chunks that may then be used to address specific issues. Those with an analytical way of thinking can reason with the data, recollect facts, and evaluate the data. They are interested in understanding how the pieces of the data come together and identify patterns, acquire insight into processes, and deduce trends. They endeavor to determine the components' distinctions, parallels, commonalities, and connections.

Indicators of Analytical Thinking:

a. *Breaking down ideas into smaller components* – viewing and exploring a concept by defining its characteristics, features, and significant parts

b. *Identifying a problem* – determining the central issue within a general experience.

c. *Comparing and contrasting concepts* – finding out what things have in common and what sets them apart is to compare and contrast them. Contrasting includes relating two or more things or events to highlight their differences, whereas comparing them reveals their commonalities or similarities.

d. *Elaborating* – further explaining a concept, idea, process, or experience through inferring, predicting, and hypothesizing

e. *Concluding* – stating a general thought about the concepts, issues, or facts that are put together.

Critical Thinking. A person capable of critical thinking considers all the facts and data provided and makes conclusions based on them and various other inputs. These can include opinions, points of view, and possible solutions that have been proposed.

People who think analytically do not just take things at face value as being valid. They investigate, prod, question, and research to ensure accurate data, and they develop conclusions based on the many types of data that are accessible. They put all they have learned to work to produce original answers. A person's capacity to make decisions with more purpose, rationality, and creativity is directly correlated to their level of critical thinking (Kubiszyn & Borich, 2007).

Indicators of Critical Thinking:

a. *Determining logical patterns* – basic critical thinking is manifested when a person judges the situations, conditions, and issues and concludes with a reason for their existence.

b. *Evaluating a problem* – judging how the problem affects the people, organization, or community based on the observed incidents.

c. *Synthesizing relationships* – creating new information or knowledge derived from the analysis of comparisons and contrasts.

d. *Problem-solving* – recommending solutions and innovations based on weighing the pros and cons of specific actions toward a problem

e. *Decision-making* – creating or performing a credible and feasible action in solving a problem.

2. Assessment of Analytical and Critical Thinking

Using authentic assignments that engage students to apply their knowledge and abilities to real-world circumstances is one of the popular methods to evaluate students' critical thinking skills. They find authentic projects interesting, relevant, and engaging; furthermore, they enable pupils to display both their level of comprehension and their creative potential. You may, for instance, assign your pupils a research project, the task of designing a product, the resolution of a case study, or the creation of a presentation. You might also utilize open-ended questions, scenarios, simulations, or games to encourage critical and creative thinking among the pupils.

However, this course primarily deals with the objective type of test and the traditional pen-and-paper tools; we will discuss more how to measure higher-order thinking (analytical and critical) through *"the power of questioning"*.

a. Questions of analytical thinking

Indicator	***Sample question format***
Breaking down ideas into smaller components	- Which part is responsible for…? - What feature is described as...?
Identifying a problem	- How does the problem exist? - What are the characteristics of…?
Comparing and contrasting concepts	- What is the difference of…? - How does one relate with…?
Elaborating	- What causes it to happen…? - What are the effects of…?
Concluding	- How does one become one…? - If this is… then what…?

b. Questions of critical thinking

Indicator	*Sample question format*
Determining logical patterns	- What makes one an essential part…? - What could be the aftermath of…?
Evaluating a problem	- Why is there a need to solve…? - What is the impact of the problem?
Synthesizing relationships	- What are the advantages of…? - How does one affect the other…?
Problem-solving	- How does a solution solve the problem? - Which innovation is practical? Why?
Decision-making	- What will you do? Why? - Given the conditions, what should be done? Why?

3. Analytical-Critical Thinking and Social Responsibility for Children and Adolescents

Schools are working hard to keep up with the fast changes in technology. Global revolutions have raised the bar, making it harder for teachers and students alike to adjust.

Up until today, educational technology in the Philippines is faced with significant challenges that have consequently triggered debates about the more appropriate learning modality than nothing at all. It's now a matter of being analytical and critical about the present situations and future opportunities. Therefore, the essential skills of thinking of educational technologists are crucial in guiding learners who are also threatened by the current impediments. It takes to discipline the mind now to endure the discomforts.

When children can discipline their minds by organizing thoughts and developing cognitive priorities, an appropriate "attitude" is set to be communicated. In this sense, the role of the teacher is imperative in guiding the student to think analytically and critically through frequent communication in class and providing a suitable learning environment – classroom setup, questioning technique, activities, materials, and technology.

Students usually respond to learning through communicative means – verbal and kinesthetic. This is called the student's "behavior," which reflects how they think and process understanding. The learner will likely deliver the expected affirmative behavior when the teacher's input can stimulate an

affirmative attitude. The teacher guides the positive link between student attitude and behavior.

Enhancement and enrichment tasks are eventually provided to practice logical attitudes to demonstrate the expected behaviors. When this becomes a student's way of life, it composes their "character." When such character becomes progressively constant, even after school, graduation, and adult career life, the "dignity" of being a fulfilled human being is established.

From the teacher's perspective, student development is considered a lifelong process. While in school, the teacher can directly influence the student's progress, but in the context of teacher education, learning, and development continue in the student even when they are no longer under the care of that teacher. It is now like a self-sustained dynamo who contributes to the development of the society.

From proper thinking and attitude to a desirable lifespan, this is the education framework on how the teacher should perceive teaching, learning, and human development. Critical thinking is the baseline of a logical attitude. Acceptable responses and actions are a reflection of one's social responsibility.

In this module, critical thinking is observed when someone appears to be in the proper mindset that can only be proven by behaviors, character, and consistent actuation. Therefore, the pre-service teacher must be keenly observant in detecting an act (and non-act) of critical thinking through social responsibility.

This content focuses on the five (5) basic social responsibility types commonly correlated with pandemic-proof characters dubbed as **SPEED Social Responsibility**: Spiritual, Personal, Ecological, Economic, and Digital.

Spiritual Social Responsibility. This may easily be connected to religious differences, but spiritual, social responsibility is actually on being compassionate and emphatic on the psychological, mental, and emotional soundness of another. An individual is ideally sensitive to the feelings and overall mindset of another by being careful in communicating with them.

Personal Social Responsibility. A person is also responsible for keeping themselves well. Being cognizant of one's own mental, physical, emotional, social, and spiritual health is classified in this type. This also pertains to personal grooming and character that affect one's social interaction.

Ecological Social Responsibility. Caring for the environment is caring for society. A person is believed to have sound critical thinking when there are deliberate actions to prevent ecological hazards, either by directly performing a beneficial act or avoiding doing something terrible for the environment.

Economic Social Responsibility. Financial sustainability is the ultimate goal of economic social responsibility. One is a critical thinker when they adhere to certain economic principles that involve saving resources and energy, recycling, generating funds, not engaging in financial anomalies, preventing corruption, etc. If the individual performs their part in sustaining the society's economy, this type of social responsibility is well attributed.

Digital Social Responsibility. The use of digital technology, including social media and online societies, has been subjected to specific issues and problems. A responsible netizen would always try to use technology to inform, inspire, and improve. Any activity that generates adverse reactions can be classified as digital abuse.

D. Conclusion

Analytical and critical thinking skills are foremost in training students to learn. As they are prepared for a more responsive and productive life ahead of them, they are exposed to reasoning, problem-solving, and creative work. Higher-order thinking questions and activities are the primary tools to assess their cognitive abilities.

E. References

Asian Development Bank (2021) *The COVID-19 pandemic has shown the importance of education technology in curriculum delivery and student assessment.* [Online Image] [Accessed on September 26, 2023] https://development.asia/insight/strategic-ways-boost-learning-outcomes-basic-education

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