



# Promoting Critical and Analytical Thinking Activities among the Learners: Accounts of Elementary Teachers

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**Abstract**—This phenomenological study explored the experiences of teachers in promoting learners' critical and analytical thinking of learners in Sto. Tomas West District, Division of Davao del Norte. This also investigated their coping mechanisms from the challenges they encountered, and their insights drawn from the findings of this study. Qualitative – phenomenological study was employed in exploring the views of the ten (10) elementary teachers of which primary instrument of data gathering was through in- depth interview. Major findings indicated that the experiences of teachers in promoting learners' critical and analytical thinking skills encompass a multifaceted exploration of pedagogical approaches, professional development, and assessment methodologies. Furthermore, the next exploration delves into three key coping mechanisms employed by educators to navigate these challenges effectively: technology integration and innovative tools, adaptive instructional strategies, and the cultivation of a growth mindset. Finally, the insights of teachers in promoting critical and analytical thinking skills among learners encompass a rich tapestry of methodologies, strategies, and valuable observations that shape the educational landscape. The three major themes were student engagement and active participation, inquiry-based learning and real-world applications, and assessment for learning and feedback strategies. The research implications stemming from the study on promoting critical and analytical thinking skills among learners are profound and hold significant implications for educational practices and policy considerations. The findings of this study provide valuable insights into effective pedagogical strategies, challenges faced by educators, and successful interventions in cultivating these cognitive abilities.

**Index Terms**—critical and analytical thinking abilities, learners, elementary teachers, phenomenology.

## 1. Introduction

In an era marked by rapid technological advancements and an influx of information, fostering critical thinking has become imperative for individuals to navigate complex issues and make informed decisions. Recognizing the significance of cultivating these skills early in the educational process, the research focuses on identifying pedagogical approaches that encourage learners to question assumptions, evaluate evidence, and engage in reflective analysis. By understanding the factors influencing the development of critical thinking, the study seeks to contribute valuable insights to educational practices,

ultimately enhancing learners' ability to think critically and analytically across diverse domains and disciplines.

While Indonesia was placed 40th out of 40 countries in The Learning Curve Pearson's 2014 worldwide index of cognitive skills on educational success, students' analytical thinking skills still need to be strengthened. The ordinary Indonesian student is still developing low-level cognitive skills; they are still learning and understanding things. The fourth (fourth) cognitive skill following knowledge acquisition, understanding, and application is analytical ability (Yakub, et al., 2021). According to a study conducted at one SMPN in Sidoarjo, students' analytical thinking abilities were still lacking because they were still more adept at memorization, understanding, and application than analysis (Widodo et al., 2018). In Cambodia, over the most recent period (2017 to 2022), the gap between the highest-scoring students (10% with the highest scores) and the weakest students (10% with the lowest scores) did not change significantly in mathematics and science, while it narrowed in reading. In mathematics, performance improved to a similar extent for both high- and low-achievers (OECD, 2022).

Yet, research in the context of Filipino students show that the majority of students excel merely in knowledge acquisition but are significantly underachieved in grasping concepts, which calls for the application of their higher order thinking abilities (HOTS). Local, regional, national, and even international comparisons, including those for the National Achievement Test (NAT), Third International Mathematics and Science Study (TIMSS), and even the most recent Programme for International Student Assessment (PISA) results, all show how poorly students perform in mathematics and sciences. These comparisons demonstrated how poorly Filipino pupils do in mathematics and sciences (Artuz and Roble, 2021)

Similarly, in Sto. Tomas West District, the most problematic aspect of critical thinking lies in its need for people to scrutinize their own convictions and prejudices, a process that may be painful and arduous. Moreover, critical thinking entails the meticulous examination and assessment of information derived from many sources, a process that may be both time-intensive and mentally taxing.

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The development of students' learning processes and analytical thinking abilities depends heavily on the experience and teaching methods of teachers. Teachers must choose pedagogies for teaching and learning that are appropriate to the specific learning topic in lessons that are designed to help students develop their critical thinking skills. Teachers should apply instructional methods that allow their students to think. To help learners develop their analytical thinking abilities, teachers must also prepare classes and employ the proper teaching resources. When students practice and enhance their analytical thinking abilities through the learning process in the classroom, analytical thinking skills will grow. With these statements of the developing analytical skills of students in science, this study aims to qualitatively explore the educational approaches made by the teachers that help students' analytical thinking abilities develop. The study also wants to investigate the challenges experienced by the teacher during the implementation of those approaches in developing analytical skills and how they overcome those challenges. Lastly, the researcher wants to determine the insights of the teachers on developing students' analytical skills.

## 2. Purpose of the Study

The purpose of this phenomenological study was to explore the experiences of teachers in promoting learners' critical and analytical thinking of learners in Sto. Tomas West District, Division of Davao del Norte. This also investigated their coping mechanisms from the challenges they encountered, and their insights drawn from the findings of this study.

At this stage of research, the experiences of teachers were generally defined as positive and challenging experiences in terms of promoting the learners' critical and analytical thinking skills in the classroom. Critical and analytical thinking skills were paramount in the classroom as they empowered students to engage with course materials on a deeper level. These skills enable students to question, evaluate, and synthesize information, fostering a more profound understanding of complex concepts. Moreover, critical and analytical thinking encourages students to think independently, promoting problem-solving abilities and creativity. In an ever-evolving world, these skills are indispensable for students to make informed decisions, evaluate the credibility of sources, and navigate the vast sea of information available to them.

### *Research Questions:*

This study aimed to explore the experiences of the teachers in promoting learners' critical and analytical thinking skills of learners in Sto. Tomas West District, Division of Davao del Norte. Specifically, this study sought to answer the following research questions:

1. What are the experiences of teachers in promoting critical and analytical thinking skills among the learners?
2. How do the teachers cope with the challenges they encounter in promoting critical and analytical thinking skills among the learners?
3. What are the insights of teachers in promoting critical and analytical thinking skills among the learners?

## 3. Methods

This study employed a qualitative research approach, focusing on the investigation of phenomena characterized by limited comprehension. Qualitative research was a valuable tool for collecting descriptive data, as it allowed for a deeper exploration of complex topics. As highlighted by Creswell (2015), active engagement in observing the emotions, thoughts, and behaviors within a specific group could provide individuals with a qualitative understanding of social and cultural phenomena. It was through this qualitative lens that the study sought to gain insights into the subject matter.

The selection criteria for participants were as follows: In order to participate in this study, individuals had to meet the following criteria: (a) possess a minimum of one year of experience as a Teacher I in public elementary schools within the Sto. Tomas West District, Division of Davao del Norte; (b) currently assigned as elementary teachers in the district; (c) have encountered difficulties in promoting critical and analytical thinking skills; and (d) be either male or female teachers. Moreover, a total of ten participants were included in extensive interviews, a sample size considered sufficient for the aim of explaining the ability to detect and develop theme components.

The qualitative data analysis process entailed a thorough examination of written materials to accurately represent and elucidate the experiences of the individuals under investigation. The current study employed data coding and theme analysis approaches.

In the qualitative data coding process, specific sections of text related to distinct issues were assigned labels or codes (Creswell, 2015). These textual segments were subsequently categorized based on the collected qualitative data (Mellinger & Hanson, 2016). Moreover, Vaismoradi *et al.* (2016) emphasized the significance of regarding a code as a recurring or consistent theme, a characteristic they particularly emphasized in their research. This specific aspect of the subject matter received focused attention in their scholarly investigation at a particular juncture.

In the context of researching and promoting critical thinking and analytical thinking skills among students in the classroom, coding was a crucial data analysis technique. Coding involved the systematic and organized process of categorizing and labeling pieces of qualitative data, such as text or interview responses, based on specific themes or patterns.

However, thematic analysis, as applied to the research topic of promoting critical thinking and analytical thinking skills of students in the classroom, involved a systematic process of identifying, analyzing, and reporting patterns or themes within qualitative data. In this context, it was crucial for researchers to thoroughly examine the data collected from teachers, students, or other relevant stakeholders to uncover recurring ideas, concepts, or issues related to critical and analytical thinking. These identified themes provided valuable insights into the factors, strategies, and challenges involved in fostering these skills in a classroom setting.

## 4. Results and Discussions

### A. Experiences of Teachers in Promoting Critical and Analytical Thinking Skills Among the Learners

The experiences of teachers in promoting learners' critical and analytical thinking skills encompass a multifaceted exploration of pedagogical approaches, professional development, and assessment methodologies. These themes collectively provide a comprehensive understanding of the challenges and successes encountered by educators in cultivating essential cognitive abilities among their students. The first theme delves into the diverse pedagogical strategies employed by teachers, shedding light on interactive methods designed to foster critical thinking in learners, while simultaneously addressing the obstacles encountered during implementation. The second theme focuses on the continuous professional development of teachers, examining how training programs and workshops impact their capacity to nurture critical thinking skills in the evolving landscape of education. Lastly, the third theme navigates the complexities of assessing and measuring critical thinking skills, exploring the development of effective evaluation tools and the utilization of assessment data to inform and enhance instructional practices. Together, these themes contribute to a nuanced understanding of the dynamic and intricate experiences faced by educators in their mission to cultivate critical and analytical thinking skills among learners.

#### 1) Pedagogical Approaches and Challenges

One major theme revolves around the various pedagogical strategies employed by teachers to promote critical and analytical thinking skills among learners. This includes the exploration of inquiry-based learning, case studies, collaborative projects, and other interactive methods. The theme also delves into the challenges faced by teachers in implementing these approaches, such as classroom dynamics, resource constraints, and adapting strategies to different learning styles.

Sarwanto, et al., (2017) added that the teacher factors included: (a) the learning model used by the teachers was dominant in the direct learning model with the lecture method; (b) the problem description provided was not familiar for students; (c) the problem and its resolution strategy offered did not make the students understand; and (d) the teachers did not understand the material, lacked expertise in delivering the material, and used the textbook as the only source of information and delegated all other forms of assessment.

#### 2) Teacher Professional Development

This theme centers on the experiences of teachers in enhancing their own skills and knowledge to effectively foster critical thinking in learners. It examines the impact of professional development programs, workshops, and training sessions on teachers' abilities to design and implement activities that stimulate critical and analytical thinking. Additionally, the theme explores the ongoing learning process for educators as they navigate evolving educational landscapes and incorporate new methodologies into their teaching practices.

Teachers are doubtful that the majority of their pupils will be

able to develop critical thinking skills on their own, according to Kerdsomboon and Boonsathirakul (2021), who also contributed this information. Many participants held the opinion that their learners were reluctant to communicate with others and lacked the language skills necessary to do so. Teachers were not always able to incorporate critical thinking into their lectures, as seen by their propensity to only provide the necessary materials and the fact that they had to finish their syllabi. Teachers seem to be torn between needing to finish their courses and wanting to promote critical thinking in their students. This is a challenge because it's possible that the institutions' governing and licensing authorities are ignorant of the demands and time constraints placed on teachers. The tendency of teachers to provide all necessary learning resources and the requirement to finish syllabi would indicate a very structured teaching approach.

#### 3) Assessment and Measurement of Critical Thinking Skills

Another crucial theme focuses on the experiences of teachers in assessing and measuring the critical and analytical thinking skills of their students. This includes discussions on the development of appropriate assessment tools, the integration of formative and summative evaluation methods, and the challenges associated with evaluating subjective cognitive processes. The theme also addresses how teachers use assessment data to inform their instructional practices and further refine strategies for promoting critical thinking among learners.

Students have to be able to think critically in order to function in both the workplace and in daily life in the twenty-first century. When a student must discover or construct an issue to address in an ambiguous scenario, analytical thinking is required. It entails an additional element of inquiry and situations with less clearly defined boundaries and results. It is a step in the problem-solving process, which is regarded as crucial for teaching kids the abilities they will need to survive in the more complex world and workplace of the twenty-first century. Analytical thinking requires the capacity to (1) break down a problem and comprehend its constituent parts, (2) explain how a system works, the causes of something happening, or the steps to solve a problem, (3) compare and contrast two or more things, or (4) evaluate and critique something's characteristics (Perdana, et. al., 2019).

The results of Tanti, et al.'s (2020) study on rural and urban students' science process skills and critical thinking abilities in science learning demonstrate that both urban and rural students have good science process skills. The independent sample t-test reveals that urban schools often have students with greater science process skills than rural ones ( $p < 0.01$ ). With a significance level of  $p < 0.001$ , students' critical thinking in science learning is much higher in urban settings than it is in rural areas. The regression analysis revealed that students' science process skills had a 51.5% influence on critical thinking. The other research finding was that the critical thinking process used when learning science is influenced by students' science process skills. Additionally, a comparison of students' critical thinking and science process skills based on the location of their schools revealed that urban students scored

higher than rural students.

### *B. Coping Mechanisms with the Challenges in Promoting Critical and Analytical Thinking Skills among the Learners*

In the dynamic landscape of education, the promotion of critical and analytical thinking skills among learners is often accompanied by multifaceted challenges. This exploration delves into three key coping mechanisms employed by educators to navigate these challenges effectively: technology integration and innovative tools, adaptive instructional strategies, and the cultivation of a growth mindset. As technology continues to reshape the educational landscape, teachers grapple with leveraging digital tools and innovative platforms to create immersive learning experiences that foster critical thinking.

#### *1) Technology Integration and Innovative Tools*

Coping with challenges in promoting critical and analytical thinking often involves leveraging technology and innovative tools. This theme explores how teachers integrate educational technologies, simulations, and interactive platforms to create engaging learning experiences. By incorporating digital resources, teachers can address diverse learning styles and provide interactive opportunities that enhance students' critical thinking skills.

The objective was to assess the cognitive abilities, versatile 21st century competencies, and academic performance alterations resulting from the use of technology in the curriculum of aspiring teachers specializing in scientific pedagogy. The study findings indicate that the progressive incorporation of technology into the educational process has favorable outcomes in terms of enhancing potential teachers' critical and creative thinking abilities, multi-faceted 21st century capabilities, and academic performance (Yilmaz, 2021).

Moreover, the results demonstrated that employing various technologies for English language learning activities promoted distinct facets of critical thinking abilities, including investigating supplementary information, exchanging thoughts and viewpoints, evaluating data, and providing justifications to reinforce opinions. In addition, the integration of various technologies facilitated the development of critical thinking skills in certain areas of English language proficiency. The research delved into more discoveries about challenges and remedies in utilizing technology to enhance critical thinking abilities in English classrooms (Rungsawang & Pookcharoen, 2023).

#### *2) Adaptive Instructional Strategies*

Coping mechanisms also encompass the use of adaptive instructional strategies to address individual learning differences and challenges. This theme examines how teachers modify their teaching methods based on ongoing assessments of student progress. Adjustments may include varying the complexity of tasks, incorporating differentiated instruction, and providing targeted support to students who face specific obstacles in developing critical and analytical thinking skills.

The manner in which a person handles information and circumstances can also serve as an illustration of analytical

thinking. An individual with analytical thinking abilities, for instance, should be able to examine arguments, claims, and facts by drawing conclusions through inductive or deductive reasoning, and then use those conclusions to make judgments in order to solve problems (Choowong & Worapun, 2021).

Critical thinking and science process abilities are crucial components that students must possess in order to learn science. Both of these abilities require scientific research and problem-solving with regard to real-world scientific ideas. Critical thinking and science process abilities have a similar thought process, making a relationship between the two viable. Critical thinking develops into a way of thinking that students must have. Using cognitive abilities to enhance learning outcomes, such as carefully analyzing ideas and arguments and problem-solving, is known as critical thinking (Saputra & Kuswanto, 2019).

#### *3) Cultivation of a Growth Mindset*

Encouraging a growth mindset serves as a coping mechanism in overcoming challenges related to critical thinking. This theme explores how teachers foster resilience, perseverance, and a positive attitude toward challenges. By emphasizing the process of learning, acknowledging mistakes as opportunities for growth, and promoting a culture of curiosity, educators aim to create an environment that nurtures the development of critical thinking skills.

Every person or individual constantly engages in thought, causing it to be both internal and external to the person in question. As educators, it is our goal to develop students' critical thinking and problem-solving skills. It is crucial for situational understanding, fact-checking, and fact-deconstruction skills (Qolfathiriyus, et al., 2019).

Hence, we must improve our ability to think, starting with the fundamentals and working our way up. Analytical thinking is one of the higher-order cognitive abilities. Analytical thinking involves putting decisions about a single topic or problematic issue through a thorough assessment of each logical step in turn (Sukmaningthias & Hadi, 2016).

### *C. Insights of Teachers in Promoting Critical and Analytical Thinking Skills Among the Learners*

The insights of teachers in promoting critical and analytical thinking skills among learners encompass a rich tapestry of methodologies, strategies, and valuable observations that shape the educational landscape. Three major themes emerge, shedding light on the educators' perspectives and practices in cultivating these essential cognitive abilities. The first theme revolves around the crucial role of student engagement and active participation, emphasizing the creation of a vibrant learning environment that stimulates curiosity and encourages students to actively contribute to discussions and problem-solving activities. The second theme delves into the significance of inquiry-based learning and the application of knowledge to real-world contexts, revealing teachers' recognition of the value in fostering independent exploration and linking theoretical concepts to practical scenarios. The third theme revolves around assessment strategies and feedback mechanisms, showcasing teachers' insights into designing



assessments that promote critical thinking and utilizing feedback as a tool for ongoing learning rather than mere evaluation. Together, these themes provide a comprehensive understanding of the multifaceted insights guiding educators in their mission to nurture critical and analytical thinking skills among learners.

### 1) *Student Engagement and Active Participation*

A significant theme revolves around the insights of teachers regarding the importance of student engagement and active participation in promoting critical and analytical thinking skills. Teachers highlight the need to create a classroom environment that encourages students to actively participate in discussions, ask questions, and contribute to problem-solving activities. Insights in this theme may focus on strategies for fostering a culture of curiosity, sparking interest in the subject matter, and leveraging interactive techniques to keep students engaged in the learning process.

Students are required to be able to consider the ideal. Students are generally capable of resolving issues and phenomena through their participation in social activities (Tiruneh & Cock, 2017). Five characteristics of critical thinking are: giving clear explanations, developing fundamental abilities, drawing conclusions, offering additional explanations, and formulating plans and tactics (Aminudin, et al., 2019).

In the study of Irwanto et al. (2017) on the investigation to ascertain the students' science process skill and analytical thinking ability on reaction rate demonstrated that the learning outcomes of students in the XI grade at Tiga Maret Yogyakarta Senior High School are comparatively low. The combined result of scientific process ability and analytical thinking capacity is just 30.67%, which is comparatively poor. The outcome shows that teachers are not maximizing their pupils' capacity for scientific inquiry and critical thought through laboratory exercises. Therefore, teachers must successfully enhance the cognitive and psychomotor domains of their pupils during the learning process.

### 2) *Inquiry-Based Learning and Real-World Applications*

Another major theme is centered on teachers' insights into the effectiveness of inquiry-based learning and the application of knowledge to real-world scenarios. Teachers often recognize the value of posing open-ended questions, encouraging students to explore topics independently, and connecting theoretical concepts to practical situations. Insights in this theme may explore the strategies teachers use to implement inquiry-based learning, design relevant projects, and integrate real-world applications to enhance critical thinking skills among learners.

Analytical thinking is one of the essential skills for learning in the twenty-first century. Skills in data analysis are crucial for processing information. The ability to discern between data sets that might be helpful to their learning processes and those that do not allow students to make better learning decisions (Elder & Paul, 2019).

Students in scientific courses must analyze the information throughout all learning stages, hence they must possess this skill. Stronger analytical skills allow students to develop applicable hypotheses, design well-organized experiments, and draw clear conclusions from scientific evidence (Santos, 2019).

It follows that it is not surprising that students who have strong analytical thinking skills typically perform better in science classes.

### 3) *Assessment for Learning and Feedback Strategies*

Teachers frequently provide insights into their approaches to assessment and feedback as key components in promoting critical and analytical thinking skills. This theme encompasses teachers' perspectives on formative assessments, constructive feedback, and the role of assessments as tools for learning rather than just evaluation. Insights may delve into how teachers design assessments that encourage critical thinking, the types of feedback provided, and the iterative process of using assessment data to inform and refine instructional practices.

One of the key abilities for learning in the twenty-first century is analytical thinking. Data analysis skills are essential for information processing. It enables students to distinguish between a set of material that is detrimental to their learning processes and information that might be helpful (Elder & Paul, 2019). The classroom environment greatly contributes to students' growth as analytical thinkers. Activities that promote systemic thinking should be included in a class.

Instructing students in science learning seeks to help them develop an epistemological understanding of scientific knowledge and the nature of science. Science is really more than just the ability to comprehend the concept of knowing nature. Science is more of a collection of methods used to create, broaden, and enhance knowledge. The science of learning process places an emphasis on offering hands-on learning opportunities so that students can actively create comprehension of scientific ideas, concepts, and principles through the growth of science process skills (Hammond, et al., 2019).

## 5. Implications and Future Directions

### A. *Implications*

The research implications stemming from the study on promoting critical and analytical thinking skills among learners are profound and hold significant implications for educational practices and policy considerations. The findings of this study provide valuable insights into effective pedagogical strategies, challenges faced by educators, and successful interventions in cultivating these cognitive abilities. By uncovering the lived experiences and perspectives of both teachers and learners, the research sheds light on the multifaceted nature of skill development in educational settings.

These insights have practical implications for curriculum design, teacher training programs, and the development of educational resources aimed at enhancing critical and analytical thinking skills. Furthermore, the study contributes to the broader discourse on the importance of fostering these skills in preparing learners for the challenges of the modern world, impacting not only academic success but also professional endeavors and civic engagement. The research implications, therefore, extend beyond the confines of the study itself, influencing educational policies and practices with the aim of creating learning environments that effectively promote critical

and analytical thinking among students.

Thus, policymakers and educators can leverage these implications to shape policies that prioritize formative assessments and feedback as integral components in the cultivation of critical and analytical thinking skills. Furthermore, the study may contribute to ongoing discussions on assessment practices, emphasizing their role as catalysts for continuous improvement in the cognitive abilities of learners.

### B. Future Directions of the Study

As we delve into the future directions of the study on promoting critical and analytical thinking skills among learners, several promising avenues emerge that warrant exploration and research. Firstly, an in-depth investigation into the long-term impact of various pedagogical approaches, adaptive instructional strategies, and innovative tools is essential to ascertain their sustained efficacy in fostering critical thinking skills. Longitudinal studies tracking learners over extended periods can provide valuable insights into the lasting effects of interventions. Additionally, there is a need to explore the intersectionality of factors influencing critical thinking development, considering variables such as socioeconomic background, cultural contexts, and diverse learning environments to create inclusive strategies. The ongoing evolution of educational technology demands continuous scrutiny, with a focus on harnessing emerging tools and platforms for optimal skill enhancement.

Furthermore, exploring the integration of interdisciplinary approaches and real-world applications within curricula could provide a holistic foundation for critical and analytical thinking. Overall, future research should aim to refine and expand our understanding, addressing the dynamic nature of education and equipping learners with skills that are not only pertinent today but resilient and adaptable for the challenges of tomorrow.

*Department of Education:* Future directions for the Department of Education involve translating research findings into concrete policies and curricular enhancements. The department should prioritize the integration of evidence-based pedagogical approaches, adaptive instructional strategies, and innovative tools across educational systems. Developing comprehensive professional development programs for teachers, with an emphasis on continuous training in fostering critical thinking skills, is crucial. Furthermore, the department should support initiatives that ensure equitable access to resources, especially in technology, for schools across diverse socioeconomic backgrounds.

*School Administrators:* School administrators can play a pivotal role in implementing research outcomes by fostering a culture of continuous improvement within schools. This involves creating environments that encourage experimentation with pedagogical approaches and the incorporation of technology. Administrators should prioritize teacher training initiatives, provide resources for the adoption of innovative tools, and facilitate collaborative platforms for educators to share best practices. Additionally, they can advocate for the allocation of resources to support interdisciplinary curricula and real-world applications within schools.

*Teachers:* For teachers, the future directions involve a commitment to ongoing professional development and the incorporation of research-driven strategies into daily practices. Teachers should actively seek training in adaptive instructional strategies, leverage innovative tools, and engage in collaborative communities to share successful approaches. Embracing interdisciplinary approaches and real-world applications within lessons can enhance the relevance of the curriculum. Moreover, teachers should advocate for supportive policies that enable them to implement research findings effectively.

*Future Researchers:* Future researchers should focus on addressing existing gaps in literature and expanding the scope of the study. This includes conducting longitudinal studies to assess the long-term impact of interventions, exploring the intersectionality of factors influencing critical thinking development, and delving into the efficacy of emerging technologies. Additionally, researchers should investigate the influence of cultural contexts on skill acquisition and assess the adaptability of interventions in various educational settings. Collaborative research efforts and meta-analyses could consolidate knowledge and contribute to the establishment of evidence-based best practices for promoting critical and analytical thinking skills among learners.

In conclusion, the future directions of the study on promoting critical and analytical thinking skills among learners hold tremendous potential to shape the landscape of education. As we look ahead, it is imperative to foster a collaborative approach among stakeholders, including education departments, school administrators, teachers, and future researchers. The synthesis of research findings should not merely remain in academic discourse but should inform tangible policy changes and instructional practices. Embracing innovation in pedagogy, adaptive strategies, and technology integration requires a concerted effort from educational institutions. The ongoing commitment to professional development for educators is crucial, ensuring that they remain equipped with the latest methodologies.

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