

**INVESTIGATING DEVELOPMENT OF CRITICAL THINKING OF PRESCHOOL CHILDREN BY THE MEANS OF CONVERSATION****<sup>1</sup>KOLA KIRAN KUMAR**<sup>1</sup>Research Scholar, Sri Satya Sai University of Technology and Medical Science, Sehore, Bhopal, Madhya Pradesh**<sup>2</sup>DR. SANTOSH JAGWANI**<sup>2</sup>Research Supervisor, Sri Satya Sai University of Technology and Medical Science, Sehore, Bhopal, Madhya Pradesh**ABSTRACT**

The value of learning to think critically from a young age is widely recognized. Early childhood educators play a crucial role in children's fundamental skills development. The current project is a single-subject case study which studies how critical thinking of a preschool kid may be encouraged through conversation with an adult. It acts as exploratory research. The study literature on early children's thinking educated us that inquiry and discussion are crucial to the process of developing young children's thinking. The youngster is a six-year-old boy attending K2 in a local kindergarten. The session was done as an in-depth one-to-one 'interview'. The findings demonstrates that the use of open-ended inquiry and reflective speech were beneficial in prompting and broadening the child's thinking. The boy engaged a wide variety of critical thinking abilities to expound on his views.

**Keywords:** Critical Thinking, Conversation, Preschool, Skills, Educators

**I. INTRODUCTION**

The capacity to think critically not only defines the capability of thinking in accordance with the laws of logic and probability, but also the capability of applying these abilities to real-world issues that are not content-independent. To have a deeper comprehension of oneself, critical thinking is essential. Through appreciating the perspectives of others, you may practice becoming objective, less emotional, and more open-minded. Planning ahead will provide you the assurance to offer novel viewpoints and insightful analysis of pressing issues.

The necessity to foster children's critical thinking skills within the curriculum has become increasingly apparent in light of the current educational climate. Even at a young age, kids already have the mental capacity to pick up and use a few of life's essential concepts and abilities. At the center of education is the development of critical thinking, a talent that has far-reaching implications for society and the individual learner alike. The major purpose of education should be the development and refinement of one's capacity for critical thought. In addition, children are required to learn critical and creative thinking skills and develop the ability to think independently and effectively while in school. Therefore, academic pursuits should cater to children's critical and creative thinking requirements. Unfortunately, the system has failed to ensure that all children acquire a foundational set of cognitive abilities.

In order to develop one's critical thinking skills, one must immerse oneself in a rigorous study of information and practice these skills on a regular basis. Inspiring and stretching a child's mind is what teaching thinking is all about. Teachers who get their students thinking and talking in class are more likely to have motivated, actively involved students. Thus, teachers may take use of students' critical thinking abilities in the classroom to boost students' intelligence through the development of their literacy skills.

**II. CRITICAL THINKING SKILLS IN KINDERGARTEN**

Methods used in teaching young children should incorporate opportunities for critical and creative thinking into the lessons they learn. A creative pedagogical framework, including creative teaching, teaching for creativity, and creative learning, provides the basis for understanding the link between

creativity and pedagogical practices and the categories of creativity promoted within education. Therefore, it is crucial that educators have opportunities to practice and gain expertise with critical thinking in order to ensure that students acquire these abilities in the classroom.

When a teacher is able to apply critical thinking skills to his or her own life, the classroom becomes a more stimulating and innovative place for students to learn. Furthermore, the teacher should serve as an example to the pupils in terms of how to think critically. As a teacher, you have a unique opportunity to serve as a role model for your pupils as they work to improve their own critical thinking abilities.

Teachers may have a significant impact on their students' academic growth beyond the rote memorizing and standardized testing of content knowledge by introducing them to the mindsets and practical skills of efficient problem solvers. The opposite is true with creative thinking, which is defined as the generation of novel ideas that are ultimately crucial in the process of issue resolution.

Educators, for their part, should be aware of the demographics of their classes in order to facilitate the effectiveness of teaching and learning activities by encouraging group work and collaboration among students who share similar interests and abilities. While the onus for student learning is ultimately on the instructor, classroom success depends in large part on the students' readiness to take an active role in the learning process through participation and independent inquiry.

### **III. METHODOLOGY**

A chat with a kid is being conducted and analyzed for this research. In order to investigate how a preschooler's critical thinking abilities may benefit from interaction with an adult, this project used a single-subject case study design.

The author, an early childhood educator, was caring for a six-year-old kid in K2 at a local kindergarten. Before beginning the project, we made sure to have the child's and parents' approval. The inclusion of the latter shows that researchers recognize children should have a voice in determining which studies they participate in.

The main data-collection tool was the in-depth individual interview. It incorporated the following:

- Presented in the style of a relaxed chat with the author. This interview was conducted without a list of questions in advance so that the interviewer may respond organically to the child's thoughts as they developed. An advantage of an informal interview is that the interviewer may go with the flow, which improves the questions' relevancy and usefulness.
- A child's natural curiosity led to the development of conversational subjects. It ensures that the discourse remains child-centered and focuses an emphasis on children's thoughts. The child's primary interest was in space travel, so that's the subject we covered. However, numerous tangential issues also came up as a result of the discussion's natural development.
- Semiotic expressions like drawings were welcomed.

The social-constructivist framework was chosen for this project because it places an emphasis on the adult's role as facilitator and the importance of the child and adult working together to construct meaning and agreement. In order to facilitate this, we used open-ended questions. To help the youngster feel more comfortable sharing his own ideas, opinions, and questions, reflective conversation was also encouraged.

The 30-minute interview was recorded and transcribed in its entirety. We used inductive content analysis to decipher and analyses the data.

**IV. RESULTS**

• **The Child’s Role in the Conversation**

The kid showed great interest and actively contributed to the conversation. He "controlled" the discussion by posing questions, suggesting themes, and expanding on his thoughts. As a result, it is clear that the boy was more open to discussing and expanding on his views when given the opportunity to 'guide' the discussion toward topics that piqued his interest. This lends credence to the idea of a "emergent curriculum." The child's emotional needs can be met by focusing on and supporting the child's areas of interest. Children's intrinsic drive is a key factor in their academic success.

• **The Adult’s Role in the Conversation**

The facilitator's participation in the child's thought processes required a variety of approaches that arose with the conversation's natural ebb and flow. Here are a few instances of that:

- Using open-ended questions such as
  - “Can you tell me more.....”
  - “So what happen if.....”
  - “What do you mean by.....”
  - “Why do you think...”
  - “How do they...”
  - “What do you mean by....”
- Using probing remarks/seeking clarifications
  - “It doesn’t?”
  - “You think so?”
  - “I wonder why?”
  - “The roof?”
- Using interjectory phrases such as  
“Oh...”; “I see...”; “Okay...”; “Well this sounds interesting...”
- Using gestures such as nodding, leaning forward to take a closer look at his drawings
- Showing keen/genuine interest in the child and respecting the child’s ideas.

The questions in Table 1 were samples of those that had prompted the kid to use higher-level reasoning.

**Table 1: Some examples of specific questions**

<b>Questions asked</b>	<b>Targeted thinking skills</b>
“Why do you think we see stars only at night?” “Why do you think the astronauts need to dig out the rocks?”	Constructing of theories
“So what happened if there is no water?”	Forming hypothesis
“Why can’t they take a car to the moon?”	Reasoning/logical thinking
“Which do you think is the better way?...Are they the same?”	Analyzing/evaluating/comparing
“Can you tell me more about this gravity?” “A moon buggy?...What is a moon buggy?”	Elaborating/illustrating
“What else do you think they can do... besides gluing...to join all the bones together?”	Problem-solving

• **The Range of Thinking Skills Displayed**

The ultimate product of the conversation was a blend of mostly correct facts and some supposition, speculation, and inference. Still, it was in the doing that one uncovered the secret to enhancing their critical thinking skills. The youngster frequently used critical thinking to make sense of problems and, in the process, developed his own concept of space and other phenomena he witnessed on Earth and in the cosmos.

The results showed that the youngster used many different types of critical thinking strategies, such as deductive reasoning, hypothesis testing, theory building, analysis, evaluation, inference, association, description, application, sequencing, problem solving, reflection, and metacognition.

**Table 2: Some examples of the child’s utilizations of his thinking skills**

<p><b>Constructing theories</b></p>	<p>His logical theory about satellite:</p> <ul style="list-style-type: none"> <li>○ “You know a space shuttle and a rocket they all go to the moon...they land on the moon. They put the satellite there so that other astronauts will not bang into the moon.”</li> </ul> <p>His logical theory about gravity:</p> <ul style="list-style-type: none"> <li>○ “...(the things) fly around. All things will be messed up. If ...if we try to grab on something...keeping sweeping around, cannot grab it ...cannot grab it...it will mess up the whole room....So gravity help to...help to keep them down so that we may not mess up so many things....so won’t be so hard to keep.”</li> </ul>
<p><b>Hypothesising, reasoning</b></p>	<p>On why it is important to know the moon:</p> <ul style="list-style-type: none"> <li>○ “Because if people don’t know much about the moon, if they have children...they ask huh, ‘Mummy can you tell me what...what is on the moon? Then mummy just said , ‘I don’t know’.”</li> </ul> <p>On why we see stars only at night:</p> <ul style="list-style-type: none"> <li>○ “I think because the stars give us light in the space. So only...only the moon comes out only at night...then also don’t have the sun. The moon maybe cannot shine...so that it’s either the stars ti help to light so people can see. Maybe there’s special lamps to brighten up the space.”</li> </ul>
<p><b>Comparing &amp; contrasting; analyzing and evaluating</b></p>	<p>Comparing the gas of the car to the special gas used for jet tanks, moonbuggy and space shuttle:</p> <ul style="list-style-type: none"> <li>○ “A car don’t have fire. That’s the difference.” “..when you fly to the moon, is...is go by the gas, special gas, they move them. Even though cars have gas, but those gas are not strong. Now there are gravity on earth. But the fire...strong...move...you can bring the rocket up to the...to the moon.”</li> </ul> <p>Comparing the moon buggy to the car</p> <ul style="list-style-type: none"> <li>○ “It’s like a car.” “But this car is a special car. Not the same car we use on earth. Usually we bring the moon buggy to space.”</li> </ul>

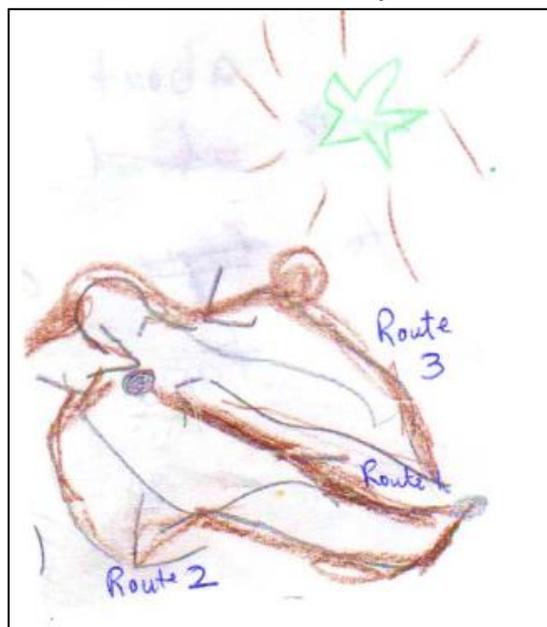
<p><b>Explaining, illustrating, elaborating</b></p>	<p>About gravity:</p> <ul style="list-style-type: none"> <li>○ “Gravity...this is like a strong power to hold you down on the floor. So when you...when you...like (looks around and picks up an eraser)if you throw this eraser, it will fall down (demonstrates it with eraser)...”</li> </ul> <p>About stars:</p> <ul style="list-style-type: none"> <li>○ “The stars like...is like...er...light...to give light because when you see close-up is like....er...a burning fire. So it’s...is very bright.” “...like some fireworks bloated up. Then the whole sky become coloured up.”</li> </ul> <p>About the rocket and the space shuttle:</p> <ul style="list-style-type: none"> <li>○ “Um...but...they don’t look the same but they...they...they are like partners, like that they help each other.”</li> </ul>
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• **Using Multi-modalities for Expression**

Numerous times, the child's use of non-verbal cues added depth to his vocal explanations. A prime instance of this is when he explained gravity in greater detail. To emphasize his point, he took up an eraser and hurled it into the air. Later, when he elaborated on the idea of 'messiness' if there was no gravity on Earth; he put both hands into the air and wildly waved them around. Another instance when he used his drawings to his advantage was when he attempted to justify why it may take longer to go to Pluto via alternate paths (Figure 1). This is a great illustration of the child's use of innovative approaches to an issue that arose on the spur of the moment.

**Interviewer:** “Why...why is this way the slowest (points to Route 3)?”

**Child:** “....but here’s the sun (Is quickly adds picture of the sun). You are going to need a lot...reach this level then push down (Is indicates with arrow). So then you have to wait. Then you have to change (spacesuits) over here near the sun (Is draw a round ball near the sun). Then you go ahead; so it’s very cold already, and then change again. Then you have to push again (Is adds another arrow which reached Pluto), then you have go ahead.”



**Figure 2: Drawing**

In the study of children at a young age, it is recommended that researchers employ a variety of media to better engage youngsters in conversation. Drawings by preschoolers revealed both inter- and intra-dialogic interaction, allowing for further exploration of the child's experience of being rejected by others. Children are "free to cognitively alter and arrange pictures, thoughts, and feelings and to employ a rich mixture of both fiction and reality to convey experiences" thanks to the usage of different areas of knowledge.

#### **V. CONCLUSION**

Preschoolers may use a variety of critical thinking abilities to interpret their experiences and build their own knowledge of the world. Of more significance than the end product is the process through which the youngster builds comprehension and uses his cognitive abilities. This highlights the practitioner's function as a facilitator of children's thought. Long, in-depth chats with kids may be a potent educational technique for encouraging them to think critically from a young age. Working from the kids' perspectives and inspiring a wide variety of creative outlets can help reinforce this.

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