Journal of Neonatal Surgery
ISSN(Online): 2226-0439
Vol. 14, Issue 2s (2025)
https://www.jneonatalsurg.com

OPEN ACCESS

Developing a Critical Thinking-Based Instructional Model for Basic Education in Nepal: Reforming Teacher-Centred Pedagogy

Dr. Rajendra Kumar Shah[1*]

[*1]Associate Professor, Tribhuvan University, Sanothimi Campus Faculty of Education Head of the Department (HOD) Department of Foundation of Education,

Email ID: drrajendrakumarshah@gmail.com, ORCID: 0000-0003-0533-1338,

[*]**Corresponding author:**

Dr. Rajendra Kumar Shah

Cite this paper as: Dr. Rajendra Kumar Shah, (2025) Developing a Critical Thinking-Based Instructional Model for Basic Education in Nepal: Reforming Teacher-Centred Pedagogy. *Journal of Neonatal Surgery*, 14 (2s), 348-360.

Received - 10/02/2025 **Acceptance -12/02/2025**

ABSTRACT

Throughout the history of educational thought, from classical philosophers like Plato and Aristotle to modern theorists such as Rousseau, Dewey, and Freire, scholars have continually examined ways to improve the learning process. Despite these intellectual efforts, pedagogical practices have predominantly remained teacher-centred. A major shift occurred with Rousseau's ideas, which redirected attention to the learner as the focal point in education, fostering widespread theoretical support for learner-centered teaching. Yet, translating this philosophy into classroom practice continues to spark debate. Although numerous learner-centered strategies have been developed, they vary considerably in design and execution. Simultaneously, critical pedagogy has emerged as a key framework, emphasizing education's responsibility in challenging social inequalities. Nevertheless, there remains a vital need for ongoing, systematic research to understand how learner-centered pedagogy can be effectively adapted to diverse educational settings. This study utilized analytical method, integrating inductive and deductive approaches. Inductive analysis generated themes from data, while deductive analysis aligned them with established theories. Drawing on prior research, the researcher identified key patterns, organized them thematically, and ensured coherence, credibility, and clarity through rigorous cross-checking. This study concludes that CT-based instruction can be effective at the basic education level. However, the development of effective critical pedagogy, the design of appropriate instructional strategies, and their successful implementation in the classroom require teachers to possess a high level of professional competence. The instructional model developed through this study is adaptable and can be effectively applied in classroom settings in alignment with the subject content. Five education professors reviewed the sample draft for academic and methodological rigor. A validation workshop held a month later addressed identified weaknesses, establishing the sample's content validity through expert feedback and revisions.

Keywords: *Critical thinking, strategies, anticipation, knowledge building, consolidation*

1. INTRODUCTION

Since ancient times, beginning with classical philosophers such as Plato, Socrates, and Aristotle, and extending to modern educational theorists including Piaget, Rousseau, Froebel, Pestalozzi, Montessori, Dewey, and Freire, numerous scholars have undertaken rigorous inquiries into how learning can be rendered more effective. Despite these extensive theoretical contributions, pedagogical practices have predominantly remained teacher-centered from ancient periods to the contemporary era. It was only with the advent of Rousseau's philosophy that critical discourse began to emerge concerning the appropriate focal point of the learning process. Since then, a broad consensus has developed among educational theorists advocating that learners - particularly learner -should occupy the central position in educational endeavors. While the principle of learner -centered learning has gained substantial theoretical support, debates persist regarding the practical realization of such an approach (Shah, 2019a). In response, a variety of learner-centered pedagogical methods and strategies have been developed; however, these remain heterogeneous in both form and implementation. Concurrently, critical pedagogy has evolved as a significant instructional paradigm, emphasizing the imperative to confront and address systemic social injustices through education. Nevertheless, there remains an urgent and ongoing need for systematic inquiry into how learner-centered pedagogy can be effectively actualized within diverse educational contexts (Shah, 2019b).

Despite its widespread application, Critical Thinking (CT) remains a challenging concept to clearly define (Paul & Elder, 2006). From the viewpoint of cognitive psychology, Sternberg (1986) describes CT as the mental operations, techniques, and internal representations individuals employ when solving problems, making choices, or acquiring new knowledge (Paul, 1992; Nickerson, 1988). This perspective offers useful insight into how individuals engage in CT within specific personal and contextual limitations (Pithers & Soden, 2000; Norris & Ennis, 1989; Sternberg, 1987). Nevertheless, it risks reducing the multifaceted nature of CT to a simple set of mental abilities or cognitive routines.

Ennis (1993) stands out as one of the most influential philosophical figures in the study of CT, playing a key role in shaping its theoretical framework. According to Ennis (1993), CT involves "reasonable reflective thinking aimed at determining what to believe or what action to take" (p. 180). To provide a more detailed understanding of CT, he outlined a broad set of thirteen dispositions alongside a range of cognitive abilities (Nelson, 1994). In a later work, Ennis (2011) emphasized that possessing CT skills - such as the capacity to analyze, evaluate, and draw logical conclusions - is not sufficient on its own; a truly effective critical thinker must also have a genuine inclination to use these skills when appropriate. This dual emphasis on both cognitive abilities and affective tendencies is also reflected in McPeck's (1981) definition of CT as "the propensity and skill to engage in an activity with reflective skepticism" (p. 8). Unlike theorists who focus primarily on reasoning or logical analysis, "reflective skepticism," which refers to the careful and principled application of doubt guided by established standards (Kennedy, Fisher, & Ennis, 1991).

Paul (1989) acknowledges that due to the complex nature of critical CT, any single definition may fall short, and various interpretations can be relevant depending on the context (Halpern, 1998). Rather than narrowing CT down to one fixed meaning, he opts to embrace multiple definitions. Paul has articulated CT in several forms, including his well-known statement that "CT is the art of analyzing and evaluating thinking with a view to improving it" (Paul & Elder, 2008, p. 2). However, this broad and inclusive approach has drawn criticism. Thayer-Bacon (2000), for instance, argues that by attempting to encompass too many elements within his definition, Paul sacrifices clarity and specificity (p. 61). Accordingly, Facione's (1990) landmark study, which is frequently cited, established a consensus definition of CT based on the input of 46 experts in the field. This definition characterizes CT as a "purposeful, self-regulatory judgment that leads to interpretation, analysis, evaluation, and inference, as well as the explanation of the evidential, conceptual, methodological, criteriological, or contextual factors that form the basis of that judgment" (Facione, 1990, p. 2).

Moreover, the consensus enriches this definition by outlining the personal characteristics of an ideal critical thinker - traits such as inquisitiveness, open-mindedness, fairness, flexibility, a trust in reason, prudence in judgment, honesty about personal biases, and clarity in understanding issues (Kim, 2003; McPeck, 1990b). By integrating both cognitive abilities and personal dispositions, this definition offers a comprehensive perspective on CT (Halonen, 1995). For educational purposes, such an inclusive view is particularly valuable, as it suggests that developing students' CT involves not only enhancing their cognitive skills but also fostering the dispositions necessary to apply these skills effectively. Consequently, successful CT instruction should address both these dimensions (Ennis, 1985; Messick, 1989).

Many educationists and researchers have observed that graduates from various universities across Nepal frequently exhibit a lack of CT competencies, particularly in areas such as analytical reasoning and logical judgment (McPeck, 1981; Shrestha, 2010). This shortcoming is widely attributed to the nation's traditional pedagogical model, which remains predominantly teacher-centered and lecture-based, prioritizing rote memorization over active student engagement and participatory learning experiences (Lai, 2011; McPeck, 1990a; Duron, Limbach & Waugh, 2006).

The political shift of the early 1990s, coupled with the privatization of education in Nepal, marked a significant turning point in the nation's educational landscape. This period saw academic institutions beginning to adopt innovative programs. International research has consistently demonstrated that such learner-centered teaching (Ennis, 1989; Shah, 2019a), which position students as active participants rather than passive recipients of information, significantly enhance the development of CT skills (Cooper, 1995; Koo, 1999; Mandernach, 2006; Duron, Limbach & Waugh, 2006). These developments offer a promising outlook for the emergence of a new academic culture - one in which students are equipped to think critically and contribute meaningfully to society. This potential transformation in the education system, driven by the integration of contemporary teaching strategies, inspired my interest in exploring how these shifts are influencing educational practices in Nepal.

2. OBJECTIVES OF THE STUDY

This study aims to achieve the following objectives:

- To design a pedagogically sound instructional model informed by the core tenets of CT; and
- To ensure the academic rigor and practical relevance of the model through validation by subject-matter experts and scholars in the field of education.

3. METHODS AND MATERIALS

This research adopts a qualitative methodology, drawing insights from an in-depth review of secondary literature concerning CT instructional strategies (Wolfinger, 2002). The study is grounded in foundational texts, including *"Teaching and Learning Strategies for the Thinking Classroom"* (Crawford, Saul, & Mathews, 2005), *"Classroom Instruction that Works: Research-Based Strategies for Increasing Student Achievement"* (Marzano, Pickering, & Pollock, 2001), and *"Pedagogy of the Oppressed"* (Freire, 1970). In addition to these core references, the study incorporates a range of academic sources, such as scholarly books and peer-reviewed journal articles authored by influential figures in the field of education. To maintain both contextual richness and alignment with the research aims, educational policy documents, theoretical literature, and analytical studies were deliberately chosen using purposive sampling techniques (Patton, 2015).

In reviewing scholarly works, articles, and other pertinent documents, this study employed analytical techniques developed by Fereday and Muir-Cochrane (2006), which combine inductive and deductive approaches. The inductive process involved generating thematic insights directly from the data, while the deductive process entailed assessing those findings in relation to established theoretical models (Nowell et al., 2017; Creswell, 2015).

The researcher first drew on established theories from previous studies to establish a solid analytical foundation. The Researcher then meticulously examined the documents to identify key concepts and recurring patterns (Glesne, 2011). The researcher systematically organized the emerging insights into thematic domains that aligned with relevant instructional strategies (Merriam & Tisdell, 2015), thereby strengthening the credibility, coherence, and interpretive clarity of the findings (Braun & Clarke, 2006). They rigorously cross-checked each theme and sub-theme to ensure consistency with the original sources (Patton, 2015; Nowell et al., 2017). The draft of the CT instructional model was reviewed by five professors of education to ensure its academic rigor and methodological soundness. Following their review, a validation workshop was conducted after one month to critically examine and refine the identified weaknesses. Based on the expert feedback and subsequent revisions, the content validity of the sample was established.

Developing a Sound Model of CT

To date, it has been widely observed that conventional teaching methods - rooted in long-standing traditions - continue to dominate classrooms across schools and universities worldwide. These methods typically follow a linear and systematic sequence: determining instructional objectives, selecting content, developing instructional materials, implementing teaching-learning activities, and concluding with classroom assessment and the assignment of homework. This approach has remained largely unchanged over time and continues to shape mainstream pedagogical practices.

This model is fundamentally influenced by the philosophy that instructional objectives serve as the cornerstone of pedagogical practices. It reflects the contributions of several prominent educators and curriculum theorists. Notably, Tyler's seminal work "Basic Principles of Curriculum and Instruction (1949)" proposes a rational model in which the formulation of educational objectives constitutes the initial and most critical phase of curriculum development. Subsequent models of curriculum design have similarly emphasized the centrality of clearly defined objectives in guiding instruction and assessment. In the same vein, Benjamin Bloom's influential taxonomy, articulated in "Taxonomy of Educational Objectives: The Classification of Educational Goals (1956)", underscores the primacy of instructional objectives by categorizing them into cognitive, affective, and psychomotor domains - thereby positioning them as the focal point of educational planning and evaluation.

It has now become clear to many teachers and educationists that only those teaching methods which actively engage students are truly effective. Such methods encourage students to ask questions, seek answers, apply what they have learned in practical contexts, and engage in respectful and constructive exchange of ideas - skills that are equally valuable in real life (Shah, 2020; Gokhale, 1995; Cooper, 1995; Koo, 1999; Mandernach, 2006; Shrestha, 2010). However, understanding the importance of these practices is one thing; implementing them effectively in the actual classroom is quite another. This is primarily because teachers are often required to complete extensive curricula within limited timeframes. Moreover, managing active pedagogical activities becomes particularly challenging in classrooms that are overcrowded with students (Willmott, 1997).

In recent times, a growing line of thought among educationists is that meaningful change in teaching and learning can be brought about not only through broad theoretical principles but also through small yet effective instructional strategies (Shah, 2021; Behar, & Niu, 2011). While the value of "big ideas" - such as active learning and CT - is frequently emphasized in educational discourse, the notion of "small ideas" refers to the practical ways in which these principles can be successfully implemented in real classroom settings (Walton, 1989). Dialogue. Therefore, learning can be made more robust and long-lasting through the use of various simple but effective classroom activities.

Several years ago, Swiss psychologist Piaget articulated that the process of learning involves interpreting new experiences through the lens of existing knowledge and cognitive structures. As individuals strive to make sense of their environment, they revise and reconstruct prior concepts, thereby enhancing their capacity to comprehend future experiences with greater depth and complexity (Burbules & Berk 1999). During the 1970s and 1980s, cognitive psychologists further advanced

Piaget's foundational theories, translating them into pedagogical frameworks applicable to classroom instruction (Neisser, 1976). Since learner constructs meaning by building upon what they already know - even when such prior knowledge may be fragmented, flawed, or grounded in misconceptions - effective teaching must begin by eliciting and addressing students' preconceptions. Teachers should initiate instruction by posing purposeful questions and clearly articulating learning goals, thereby creating a foundation for meaningful engagement. Because learning is inherently an active process involving exploration and inquiry, educators are encouraged to foster a classroom culture that promotes investigative thinking (Paul, 1993).

As inquiry is a skill that improves with guided practice, teachers should scaffold the development of students' abilities to question, investigate, gather evidence, and evaluate information critically. Ultimately, as learning reshapes existing beliefs and broadens the learner's cognitive framework, teachers have a responsibility to cultivate reflective thinking. This involves prompting students to examine what they have learned, assess its broader implications, apply it to real-world contexts, and refine their prior understandings accordingly (Slavin, R. (1994).

In the endeavor to enhance the effectiveness of teaching and learning, numerous critical pedagogues have introduced instructional methodologies that surpass the limitations of traditional approaches. One such model delineates the teaching-learning process into three distinct and interrelated phases: Anticipation, knowledge building, and consolidation (ABC) phases (Crawford, Saul, Mathews, & Makinster, 2005). This model also known as ABC Model. it represents a significant departure from conventional pedagogical practices, offering a more dynamic and learner-centered orientation.

The First Phase: Anticipation

In the Anticipation phase, for instance, educators may employ strategies such as structured overview, know - want to know - learn (k-w-l), what?/so what?/now what?, question board, question search, semantic mapping, predicting from terms, think-pair-share, directed reading/thinking chart, mix/freeze/pair, pens in the middle, walk around - talk around, and directed listening/thinking activity etc. (Crawford, Saul, Mathews, & Makinster, 2005). In CT, the teaching-learning process begins with the Anticipation Phase, which serves as a foundational stage for effective instruction. The primary aim of this phase is not the immediate construction of new knowledge, but rather the exploration of learners' existing understandings related to the subject matter, their level of curiosity, and the degree of motivation they bring to the learning experience (Cohen, 2000). This phase also facilitates the meaningful alignment of learners' interests with the instructional content. In essence, it is designed to activate prior knowledge, stimulate intellectual curiosity, and establish clear and purposeful learning intentions. In short, these approaches are designed to activate students' prior knowledge, stimulate curiosity, and establish purposeful learning intentions (Kennedy, Fisher & Ennis, 1991; Crawford, Saul, Mathews, & Makinster, 2005).

In CT pedagogy, each lesson begins with the Anticipation Phase, a deliberately structured preparatory stage designed to intellectually prime learners before the presentation of new material. This phase prompts students to recall prior experiences and knowledge relevant to the forthcoming content, while also encouraging the formulation of thought-provoking questions that foster engagement and critical inquiry. Its principal aim is to establish a cognitive foundation that supports the assimilation of new information by connecting it to existing understandings (Crawford, Saul, Mathews, & Makinster, 2005; Bonk & Smith 1998; Cooper, 1995). Simultaneously, it allows educators to informally assess learners' current conceptual frameworks, including strengths and potential misconceptions. The phase also plays a vital role in articulating clear learning intentions by emphasizing the significance and applicability of the topic. By narrowing students' attention to essential ideas, it cultivates mental readiness and enhances their capacity for sustained, meaningful interaction with the subject matter (Fischer, Spiker & Riedel, 2009; Cohen, 2000).

Not all instructional strategies are appropriate for the Anticipation Phase. As this phase is relatively brief and typically marks the beginning of a lesson, it requires the use of specific, targeted strategies. Strategies such as structured overview, know - want to know - learn (k-w-l), what?/so what?/now what?, question board, question search, semantic mapping, predicting from terms, think-pair-share, directed reading/thinking chart, mix/freeze/pair, pens in the middle, walk around - talk around, and directed listening/thinking activity etc. are considered suitable for this phase (Crawford, Saul, Mathews, & Makinster, 2005; Dam, & Volman, 2004). In contrast, strategies used in the Knowledge Building and Consolidation Phases are not appropriate here. Due to factors such as time constraints, the nature of learning, and the characteristics of the subject matter, only a select set of strategies are effective during this stage (Heyman, 2008).

As it is not possible to analyze all of these strategies within the scope of this article, only two strategies *structured overview* and *know/want to know/learn* - have been presented here. These two strategies are analyzed in the following paragraphs.

Structured Overview Strategy

Ausubel (1968) introduced the concept of the Structured Overview as an instructional strategy designed to prepare students for new learning. This approach involves a concise introduction delivered at the beginning of a lesson to spark students' interest, present key ideas, and mentally prepare them for the main content. Typically, the teacher begins with a short talk that stimulates curiosity, followed by the use of tools such as vocabulary lists, maps, or real-life objects to further engage students. The teacher then provides a focused explanation that highlights the core concepts of the lesson. As part of the

Anticipation Phase, the Structured Overview serves as a motivational entry point, setting the stage for deeper learning. It can take verbal, visual, or written forms and may be used not only at the start of a lesson but also at the beginning of a unit, module, or when introducing a new concept, helping students see how the upcoming content fits within a broader framework.

A structured overview is a scaffolding strategy that organizes complex concepts into clear, interconnected frameworks to enhance comprehension and retention. Typically presented as graphic organizers - such as concept maps or semantic webs - these overviews arrange key terms hierarchically, starting from a central idea and branching into related subtopics (Buehl, 2001). This approach activates prior knowledge, supports meaningful learning, and aligns with Ausubel's theory of advance organizers. Structured overviews can be delivered verbally, provided in written form, or designed visually (Dewey, 1910). Verbal overviews introduce core ideas, written formats serve as reference tools, and visual representations promote metacognitive skills and collaborative learning. Combining these modalities fosters deeper conceptual understanding and active engagement in constructivist classrooms (Ausubel, 1968).

A visual structured overview is a powerful instructional aid particularly for learners who find the subject matter challenging (Freire, 2000). Although typically introduced at the start or conclusion of a lesson sequence for the general classroom, its use can be intensified for students requiring additional academic support (Crawford, Saul, Mathews, & Makinster, 2005). Frequent interaction with such visual organizers enhances students' ability to communicate more advanced levels of understanding compared to those who engage with them less often. For struggling learners, consistent and repeated use of visual structured overviews can significantly boost comprehension and contribute to improved academic achievement.

The Structured Overview strategy is highly adaptable and can be effectively implemented across a wide range of group sizes. Whether working with a small cohort of six learners or addressing a larger group of up to sixty participants, this approach remains pedagogically sound and impactful. Its flexible nature makes it suitable for both intimate, discussion-based settings and larger, more lecture-oriented environments (Crawford, Saul, Mathews, & Makinster, 2005). In smaller groups, the Structured Overview allows for more personalized interaction, enabling educators to closely monitor individual understanding and facilitate in-depth discussions. Learners can actively engage with the material, ask questions, and collaboratively build on each other's knowledge. This setting supports differentiated instruction and deeper conceptual exploration.

In larger groups, although direct interaction may be less frequent, the Structured Overview remains an effective tool for presenting key concepts in a clear and organized manner. It provides all students with a shared framework for understanding, which helps unify the learning experience. Visual aids such as concept maps, outlines, and graphic organizers become especially valuable in these contexts, as they allow learners to visually process the relationships among ideas, even in a more lecture-driven format. Ultimately, whether used with six or sixty students, the success of the Structured Overview depends on thoughtful planning and deliberate facilitation. Its scalability makes it a valuable strategy for diverse classroom settings, helping learners make meaningful connections between prior knowledge and new content regardless of group size.

A structured overview serves as a vital instructional strategy that facilitates learners' cognitive organization of new information. To maintain its effectiveness, the overview should remain concise, targeted, and intentional - ideally limited to no more than five minutes (Crawford, Saul, Mathews, & Makinster, 2005). This brevity ensures that learners are cognitively primed for the lesson without being overwhelmed or diminishing the time allocated for active instructional engagement. To begin, carefully reflect on the lesson content and identify ideas or issues that are likely to be familiar and interesting to your students. Consider what prior knowledge they may already possess and determine the key concepts and vocabulary they will need to understand in order to fully engage with the lesson. Make a list of these foundational elements, as they will inform the structure and focus of your instructional approach (Crawford, Saul, Mathews, & Makinster, 2005).

Next, prepare instructional materials that will capture students' interest and stimulate curiosity. These may include maps, diagrams, or real-life objects relevant to the lesson topic. Such visual or tangible aids not only enhance understanding but also serve to make the learning experience more concrete and engaging. Following this, develop a brief introductory talk - no longer than five minutes - that clearly presents the central points of the lesson. This talk should provide a structured overview, helping students to mentally organize the upcoming content while highlighting the relevance and purpose of the lesson. When delivering the introduction, strive to make it interactive and engaging. Ask open-ended questions, invite student comments, and encourage participation to create a dynamic and inclusive learning environment. This interaction not only holds students' attention but also fosters deeper cognitive involvement.

Finally, conclude the introduction with a sense of anticipation. You might say, "We shall see," or use another phrase that signals to students that the answers and insights will be revealed through their exploration of the lesson. This sense of curiosity and expectation helps to sustain motivation and engagement throughout the instructional process.

Know/want to know/learn (K-W-L) Strategy

The K-W-L chart serves as a comprehensive framework for organizing an entire lesson. It encourages students to activate their prior knowledge related to the lesson topic, formulate inquiries they wish to explore, and subsequently seek answers to those questions through the learning process.

The KWL chart, is a visual instructional organizer developed to facilitate and enhance the learning process. The acronym KWL represents three key stages of student engagement: what learners *Know*, what they *Want to know*, and *what they have Learned* over the course of a lesson (Crawford, Saul, Mathews, & Makinster, 2005). This approach aligns with the principles of constructivist pedagogy, which emphasizes learner autonomy, active engagement, and the construction of knowledge through personal experience rather than passive reception through traditional teaching methods. Within this strategy, learners are empowered to determine their own pace and mode of learning, thereby fostering a more personalized and meaningful educational experience (Duron, Limbach & Waugh, 2006). The KWL chart was introduced as a strategic tool to scaffold this process, guiding students in organizing their prior knowledge, setting purposeful learning goals, and reflecting on their learning outcomes.

Conventionally, the chart is structured into three columns: K (what is already known), W (what the learner wishes to know), and L (what has been learned). Variations of the KWL chart exist, as educators often adapt its structure by incorporating additional elements or modifying its components to meet specific instructional objectives. Contemporary learning theories emphasize that active engagement in the learning process yields more effective outcomes than passive reception. Learners demonstrate improved understanding when they are prompted to: recall and connect with their prior knowledge; generate meaningful questions; and validate newly acquired information. The K-W-L approach facilitates all three of these cognitive processes, thereby fostering deeper and more sustained learning.

KWL strategy is well-suited for application with groups ranging in size from as few as six to as many as sixty students. In essence, it demonstrates a high degree of flexibility and scalability, making it appropriate for both small and large cohorts of learners. Such adaptability is particularly valuable in varied educational settings, where class sizes may differ significantly due to institutional, logistical, or contextual factors (Crawford, Saul, Mathews, & Makinster, 2005). When implemented with smaller groups, the strategy allows for more personalized instruction, meaningful learner engagement, and closer monitoring of individual progress. Teachers can capitalize on the smaller size to provide targeted feedback, facilitate in-depth dialogue, and address individual learning needs more effectively. Conversely, in larger groups, the same strategy can be successfully employed through the integration of collaborative techniques such as group work, peer-to-peer learning, structured tasks, and the use of educational technologies to maintain participation and manage classroom dynamics efficiently. Ultimately, the strategy's capacity to accommodate a broad range of group sizes ensures that the learning environment remains inclusive, interactive, and pedagogically sound. It reflects a thoughtful approach to instructional design that is responsive to real-world classroom conditions, thereby making it a valuable tool for educators across a range of formal and non-formal educational contexts.

The implementation of this strategy may require approximately 45 minutes to two or even three class periods, depending on the depth of engagement (Crawford, Saul, Mathews, & Makinster, 2005). This is due to its applicability across multiple phases of instruction, including the initial anticipation stage and the final consolidation phase, thereby supporting a comprehensive and reflective learning process. Activity begins by introducing the topic and encouraging students to recall and share their prior knowledge, first individually, then with a partner, and finally with the class. The teacher then creates a KWL chart with three columns: "What do we Know?", "What do we Want to Know?", and "What did we Learn?", using it to organize and display student input (Facione, 2011). Students contribute what they already know, which is recorded in the first column. They then generate questions about what they wish to learn, which are listed in the second column. The teacher may add further questions to guide inquiry. Next, students engage with the learning material - through reading, lectures, or activities - while looking for answers and new insights. Finally, they share what they've learned, including answers to their questions and additional discoveries, which are recorded in the third column. This process helps them consolidate and visualize their learning progress.

To begin, the K-W-L chart provided below should be displayed on the board. Subsequently, the purpose of the chart and the specific function of each column should be clearly explained to the students.

Table-1: KWL Chart

What do we know?	What do we want to know?	What did we learn?
……..	……..	……
……..	……..	……
……..	……..	……

Source: *Crawford, Saul, Mathews, & Makinster, (2005)*

Subsequently, in the first column of the chart, the teacher should engage students by inquiring about their existing knowledge related to the topic being introduced. This column serves to elicit and document students' prior understanding of the subject

matter. As students share their responses, the teacher systematically records their input in the designated column. An illustrative example of this process is presented in the chart below.

Table-2: KWL Chart

What do we know?	What do we want to know?	What did we learn?
Elephants are endangered.	……	……
People shoot them. Poachers kill elephants for ivory.	……	……
People destroy their habitat.		
There are laws against shooting them.		
There are game reserves set aside for them.		
Some elephants live near farms.		
Elephants might harm farmers' crops.		
Poachers kill elephants for ivory.		

Source: *Crawford, Saul, Mathews, & Makinster, (2005)*

Once students' prior knowledge has been documented in the first column, the second column should be used to capture what they wish to learn about the topic. The third column, which reflects what students have actually learned, should be completed only during the final consolidation phase of the lesson (Facione, 2000). At this initial stage, only the students' existing knowledge and their learning intentions should be clearly presented on the board.

Table-3 : KWL Chart

What do we know?	What do we want to know?	What did we learn?
Elephants are endangered.	Do elephants ruin crops?	……
People shoot them. Poachers kill elephants for ivory.	How much damage do elephants do?	……
People destroy their habitat.	How do people who live near elephants feel about them?	
There are laws against shooting them.	Who should decide whether to protect elephants?	
There are game reserves set aside for them.		
Some elephants live near farms.		
Elephants might harm farmers' crops.		
Poachers kill elephants for ivory.		

Source: *Crawford, Saul, Mathews, & Makinster, (2005)*

Second Phase: Knowledge Building Phase

The knowledge-building phase represents a critical stage in the learning process, as it is during this period that meaningful learning is actively constructed (Crawford, Saul, Mathews, & Makinster, 2005). Consequently, the selection of highly effective instructional strategies is imperative. Strategies must be deliberately chosen to align with the objectives of this phase. Therefore, the implementation of methods such as A, *paired reading/paired summarizing*, *directed reading activity (DRA)*, *reading with text coding*, *one stay/three stray*, *reading and questioning*, and *reciprocal teaching* etc. is deemed appropriate to facilitate deep and sustained learning during this stage (Crawford, Saul, Mathews, & Makinster, 2005).

Paired Reading/Paired Summarizing Strategy

In 1986, educator Vaughn developed the "Paired Reading and Paired Summarizing" strategy as an instructional approach aimed at improving reading comprehension. This method pairs students to collaboratively engage in careful reading and summarization of texts, thereby fostering interactive learning (Glaser, 1998). It is recognized as an effective pedagogical technique that encourages cooperative learning and facilitates deeper comprehension through peer collaboration (Gokhale,

1995). Like other cooperative learning strategies, the Paired Reading and Paired Summarizing approach enables students to take an active role in their own learning while also facilitating the understanding of their peers. This method is intended to stimulate diverse cognitive processes that work synergistically to improve overall comprehension.

This strategy can be used with both small and large groups of students (Crawford, Saul, Mathews, & Makinster, 2005). The Paired Reading and Paired Summarizing strategy generally demand substantially more time - approximately three to four times longer - than conventional read-aloud methods. To optimize instructional time, it is advisable to implement paired reading for the first four to six paragraphs, allowing students to complete the remaining sections of the text through independent reading (Crawford, Saul, Mathews, & Makinster, 2005).

To initiate this instructional activity, the teacher should begin by selecting an informative text of appropriate length. The chosen material should ideally be segmented into short paragraphs, each consisting of no more than three sentences. If the original text is not already structured in this manner, the teacher should divide it into concise, clearly marked sections to enhance manageability and focus during the activity. Prior to engaging students in the task - particularly those unfamiliar with the process - it is essential for the teacher to demonstrate the procedure. This involves reading a passage aloud and providing a succinct summary, thereby modeling the first role in the activity (Kim, 2003). The teacher should clarify that an effective summary is more concise than the original text but retains all essential ideas. Subsequently, the teacher should pose two questions based on the passage and explain that developing such questions represents the second key role in the task.

Following the demonstration, students should be instructed to work in pairs. One student from each pair will read the first paragraph or designated section and then summarize its content, mirroring the teacher's example. Upon completion, several students should be invited to present their summaries to the class to allow for formative assessment. The teacher should offer constructive feedback to support improvement and deepen understanding. After the summarizing phase, the second student in each pair should generate questions related to the same passage. Adequate time should be provided for this component, after which selected students can share their questions with the group. The teacher should review and offer suggestions to enhance the clarity, relevance, and analytical depth of the questions, ensuring that both components of the activity are effectively executed.

Third and Last Phase: Consolidation Phase

The consolidation phase constitutes the final and most integrative stage of CT within the teaching-learning continuum. During this phase, educators employ a range of intentional and pedagogically sound strategies aimed at deepening comprehension and reinforcing previously acquired knowledge (Van Gelder, 2005). This stage enables learners to critically evaluate newly constructed understandings, connect them with prior knowledge, and apply their insights in meaningful and authentic contexts (Willingham, 2007). It often prompts a re-examination of earlier assumptions in light of the conceptual growth achieved through the learning process (Bailin, Case, Coombs, & Daniels, 1999).

During this stage, various teaching strategies - such as *value lines, quick writing, character maps, think-pair-share, jigsaw activities, academic controversies, shared inquiry, discussion webs, debates, and save the last word* etc. - can be utilized to foster deep thinking, integrate ideas, and enhance students' conceptual clarity (Crawford, Saul, Mathews, & Makinster, 2005). Together, these strategies form part of a flexible, research-based approach that supports the creation of effective and engaging learning experiences, aimed at promoting active participation and long-term intellectual growth.

In this paper, the consolidation phase includes three key instructional strategies: the *Know/Want to Know/Learn (K-W-L) activity, the Value Line, and the Quick Write*. These strategies are designed to help students reflect on their learning, make connections to prior knowledge, and deepen their conceptual understanding (Crawford, Saul, Mathews, & Makinster, 2005). Although this phase is last phase of the teaching learning process, it is very important and fruitful for assessing learner's achievement and overall learning process of the classroom.

Value Line Strategy

Educator Kagan developed the critical teaching strategy *Value Line* in 1997. Developing the ability to acknowledge and respect differing viewpoints is an important and valuable trait. It is equally essential for students to confidently uphold their own beliefs, even in the face of disagreement from peers (Thayer-Bacon, 2000). The Value Line strategy is designed to encourage learners to engage thoughtfully with an issue, form and articulate their own perspectives, understand that multiple interpretations can exist around the same topic, and clearly express their stance along with the reasoning that supports it. Cultivating the capacity to recognize and appreciate diverse perspectives is a critical and valuable skill. Equally important is empowering students to assert their own viewpoints with confidence, even when those views differ from their peers. The Value Line strategy supports this development by guiding students to thoughtfully consider a particular issue, formulate and express their own opinions, and understand that others may hold differing yet valid interpretations.

This approach encourages learners to take a clear position and articulate the rationale behind their stance, fostering respectful dialogue and critical engagement with complex topics. Students find the Value Line engaging because it allows them to move freely within the classroom while expressing their viewpoints. The activity effectively illustrates, in a tangible way, the concepts of holding a stance and being open to shifting that stance based on new perspectives.

Value Line strategy is typically effective for student groups ranging from 6 to 60 participants, making it well-suited for both small and large classroom settings activity (Crawford, Saul, Mathews, & Makinster, 2005). However, its use requires thoughtful planning by the teacher. In situations involving very large groups, it is recommended to organize students into smaller subgroups to facilitate more effective implementation and ensure active engagement from all participants. Accordingly, the Value Line strategy is well-suited for implementation within a time frame of up to 15 minutes. It is typically utilized as a brief, focused instructional activity (Crawford, Saul, Mathews, & Makinster, 2005).

The Value Line activity commences with the teacher posing a stimulating, open-ended question to the entire class - one that naturally elicits a range of opinions, from strong agreement to strong disagreement. For instance, a question such as, "Which is more important: protecting the environment or meeting people's immediate needs?" encourages students to consider complex issues that lack a single correct answer and invite diverse interpretations activity (Crawford, Saul, Mathews, & Makinster, 2005). After the question is introduced, students are given time to reflect individually. During this stage, they may jot down initial thoughts or write a brief response to help clarify their personal viewpoint before engaging in discussion. This individual reflection ensures that each student enters the activity with a considered opinion.

To create a physical representation of the spectrum of views, the teacher and a volunteer student position themselves at opposite ends of the classroom, each expressing a clearly opposing stance on the issue. These statements serve as the two extremes of the continuum and frame the spectrum along which students will position themselves. Students are then instructed to stand along an imaginary line between the two extremes, selecting a position that most accurately reflects their own perspective in relation to the contrasting viewpoints. This physical alignment visually and experientially illustrates the diversity of opinions within the classroom. Once positioned, students are encouraged to converse with their immediate neighbors to explore the similarities and differences in their reasoning. Through these peer interactions, they are prompted to assess whether they are among peers who truly share their views. If they discover discrepancies, they are invited to reposition themselves accordingly, refining their stance based on thoughtful dialogue and reflection (Crawford, Saul, Mathews, & Makinster, 2005).

Quick Write Strategy

The Quick-Write is a concise written reflection that enables students to swiftly record their thoughts, insights, or questions on a given topic. This brief, targeted activity facilitates cognitive processing, aids in clarifying understanding, and encourages learners to express key concepts in their own words. As a consolidation strategy, it promotes reflective thinking, fosters meaningful engagement, and strengthens both the retention and transfer of knowledge. Quick-Writes are informal written responses designed to capture spontaneous thoughts and ideas. During dynamic discussions, valuable insights can easily be overlooked or forgotten if not documented promptly. This strategy prioritizes the recording of immediate reflections over concerns about formal structure or writing style, emphasizing the importance of preserving emerging ideas in their raw form.

The Quick-Write strategy is suitable for teaching learners in any type of group. It is appropriate for both large and small groups of students' activity (Crawford, Saul, Mathews, & Makinster, 2005). The Quick-Write strategy is well-suited for instruction across various group sizes, making it effective for both large and small student cohorts. However, its implementation requires thoughtful consideration by the teacher. In cases where the student group is particularly large, it may be challenging for the teacher to promptly review students' responses and provide immediate feedback.

The Quick-Write activity generally requires five to ten minutes to complete and can be seamlessly integrated at various stages of a lesson. It can be employed at the outset to activate students' prior knowledge and direct their focus, utilized during the lesson to facilitate reflection and processing of newly presented material, or implemented at the end to reinforce learning and assess comprehension. This versatility renders the Quick-Write a valuable instructional strategy for promoting CT and sustained student engagement throughout the teaching-learning process activity (Crawford, Saul, Mathews, & Makinster, 2005).

To begin the activity, inform students that they will participate in a brief, uninterrupted writing task based on a specific topic you will assign. Emphasize that the objective is to write continuously without stopping, focusing on capturing their immediate thoughts and ideas within the given time frame. Next, clearly announce the topic, ensuring that all students understand the subject on which they are expected to write. This clarity allows them to direct their thinking and respond meaningfully within the constraints of the activity. As students begin writing, keep track of the time allocated for the exercise.

While the writing period should be short and focused, you may provide an additional minute if needed to allow students to complete their thoughts without rushing. Once the writing is complete, students can either store their responses in their personal journals for future reflection or submit them for review. These written pieces can serve as valuable tools for assessing student understanding and informing instructional decisions.

K-W-L Strategy

Ogle (1986) designed the KWL strategy to engage students in actively reflecting on and summarizing what they have learned after reading a text. This strategy helps students activate their prior knowledge and connect it with new information activity (Crawford, Saul, Mathews, & Makinster, 2005). It also encourages them to express their curiosity by asking questions about

what they hope to learn and to deepen their understanding by exploring additional sources related to the topic (Ogle, 1986).

At the end of the lesson and the third phase - known as the consolidation phase - the remaining part of the K-W-L strategy is used to assess the knowledge students have acquired and to reinforce their learning. In this stage, the final column of the K-W-L chart helps identify what students have actually learned. The first column, which includes what students already know about the topic, and the second column, which outlines what they want to learn, are typically discussed during the initial phase of the lesson (the anticipation phase). The remaining column, which focuses on what students have learned, is completed during the consolidation phase to evaluate their learning outcomes.

The K-W-L strategy prompts learners to actively reflect on their prior knowledge, set clear learning goals, and later evaluate the knowledge they have gained. By guiding students through this structured reflection process, the method strengthens understanding and fosters self-monitoring of their academic development.

KWL Chart

What do we know?	**What do we want to know?**	**What did we learn?**
Elephants are endangered. **People shoot them. Poachers kill elephants for ivory.** **People destroy their habitat.** **There are laws against shooting them.** **There are game reserves set aside for them.** **Some elephants live near farms.** **Elephants might harm farmers' crops.** **Poachers kill elephants for ivory.** **Elephants live in grasslands and forests.**	Do elephants ruin crops? How much damage do elephants do? How do people who live near elephants feel about them? Who should decide whether to protect elephants?	Yes! They destroy farms and houses. They make big farms lose money. Farmers fear elephants. They also want to make money from killing them. We need to decide who should decide. That is, who should determine if some elephants are to be hunted or not?

Source: Crawford, Saul, Mathews, & Makinster, (2005)

4. CONCLUSION

Educational theorists have proposed a range of pedagogical approaches to facilitate the development of CT. Among these, the ABC Model represents a structured instructional framework comprising three sequential phases: Anticipation, Knowledge Building, and Consolidation. Each phase is designed to accommodate distinct pedagogical strategies aligned with specific learning objectives. The Anticipation and Consolidation phases are typically concise, serving as the entry and closure points of instruction, respectively. In contrast, the Knowledge Building phase generally requires an extended duration, as it constitutes the core of the learning process where learners engage with and construct substantive knowledge. Consequently, this phase necessitates the use of varied and robust teaching strategies to ensure meaningful learning. The Anticipation phase is intended to activate learners' prior knowledge, stimulate curiosity, and establish a cognitive framework for the upcoming content. Meanwhile, the Consolidation phase emphasizes the synthesis of newly acquired knowledge through reflection, critical review, and the articulation of key insights and conclusions.

The ABC Model of CT, conceptualized by educational theorists, embodies a learner-centered instructional approach. Its effective implementation requires the integration of varied teaching strategies, carefully aligned with the specific nature and demands of the lesson content. The initial phase of the model is particularly sensitive and time-bound, necessitating the use of concise and engaging instructional strategies that are suitable for short-duration learning activities. This study identifies a range of pedagogical strategies applicable to the first phase of the model, with an in-depth analysis conducted on two selected approaches.

The second phase of the ABC Model holds critical importance, as it is at this stage that instructional strategies are implemented to foster learners' acquisition of knowledge, development of skills, and formation of conceptual understanding - building upon the foundation laid during the first phase. A wide array of teaching and learning methods has been specifically designed to address the pedagogical demands of this phase. This study presents a critical analysis of one instructional strategy identified as appropriate for the second phase. Additionally, three distinct strategies have been examined in relation to the final phase. Collectively, the model provides a systematic and comprehensive account of the instructional approaches applicable across all three phases of the ABC framework. It is anticipated that this model will serve as a valuable resource

for both educators and readers, contributing meaningfully - however modestly - to the enhancement of teaching and learning practices.

REFERENCES

[1] Ausubel, D. P. (1968). *Educational psychology: A cognitive view*. Holt, Rinehart and Winston.

[2] Bailin, S., Case, R., Coombs, J. R., & Daniels, L. B. (1999). Conceptualizing critical thinking. *Journal of Curriculum Studies, 31*(3), 285-302.

[3] Behar, L. S. & Niu, L (2011). Teaching critical thinking skills in higher education: A review of the literature. *Journal of College Teaching & Learning, 8*(2), 25-42.

[4] Bloom, B. S. (1956). *A taxonomy of educational objectives: Handbook I The Cognitive Domain*. Longman, Green Co.

[5] Bonk, C. J., & Smith, G. S. (1998). Alternative instructional strategies for creative and critical thinking in the accounting curriculum. *Journal of Accounting Education, 16*(2), 261-293.

[6] Buehl, D. (2001). *Classroom strategies for interactive learning*. International Reading Association.

[7] Burbules, N.C & Berk, R. (1999). *Critical theories in education*. Routledge.

[8] Cohen, M.S. (2000). *A three-part theory of critical thinking dialogue, mental models, and reliability.* Arlington: Cognitive Technologies, Inc.

[9] Cooper, J. L. (1995). Cooperative learning and critical thinking. *Journal of Teaching of Psychology*, *22* (1), 7-9.

[10] Crawford, A., Saul, W., Mathews, S., & Makinster, J. (2005). *Teaching and learning strategies for the thinking classrooms.* The International Debate Education Association.

[11] Dam, G. T. & Volman, M. (2004). Critical thinking as a citizenship competence: Teaching strategies. *Learning and Instruction, 14*, 359-379.

[12] Dewey, J. (1910). *How we think*. Heath and Co.

[13] Dotel, S. P. (2007). *Delving into the depth of pedagogy: An auto-ethnographic study* (Unpublished Master Thesis). Kathmandu University, School of Education, Balkumari, Lalitpur, Nepal.

[14] Duron, R., Limbach, B., & Waugh, W. (2006). Critical thinking framework for any discipline. *International Journal of Teaching and Learning in Higher Education*, *17*(2), 160-166.

[15] Ennis, R. H. (1985). A logical basis for measuring critical thinking skills. *Educational Leadership, 43*(2), 44-48.

[16] Ennis, R. H. (1989). Critical thinking and subject specificity: Clarification and needed research. *Educational Researcher, 18*(3), 4-10.

[17] Ennis, R. H. (1993). Critical thinking assessment. *Theory into practice, 32*, 179-186.

[18] Ennis, R. H. (2011). Critical thinking: Reflection and perspective, Part I. *Inquiry: Critical thinking across the disciplines, 26*(1), 1-8.

[19] Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction - The Delphi report*. California Academic Press.

[20] Facione, P. A. (2000). The disposition toward critical thinking: Its character, measurement, and relationship to critical thinking skill. *Informal Logic*. 20(1), 61-84.

[21] Facione, P. A. (2011). *Critical thinking: What it is and why it counts*. Measured Reason and the California Academic Press.

[22] Fischer, S. C., Spiker, V. A., & Riedel, S. L. (2009). *Critical thinking training for army officers, Volume 2: A model of critical thinking.* (Technical Report). US Army Research Institute for the Behavioral and Social Sciences.

[23] Fisher, A. (2001). *Critical thinking: An introduction***.** Cambridge University Press.

[24] Freire, P. (2000). *Pedagogy of the oppressed*. Continuum.

[25] Glaser, J. (1998). *Reasoning, critical thinking and the critical person: Towards a dialogical theory of critical thinking* (Unpublished Doctoral Theis). The University of Melbourne, Department of Philosophy, Australia.

[26] Gokhale, A. A. (1995). Collaborative learning enhances critical thinking. *Journal of Technology Education*, *7*(1), 22-30.

[27] Halonen, J. S. (1995). Demystifying critical thinking. *Teaching of Psychology, 22*(1), 75-81.

[28] Halpern, D. F. (1998). Teaching critical thinking for transfer across domains: Dispositions, skills, structure training, and metacognitive monitoring. *American Psychologist, 53*(4), 449-455.

[29] Heyman, G. D. (2008). Children's critical thinking when learning from others. *Current Directions in Psychological Science, 17*(5), 344-347.

[30] Kennedy, M., Fisher, M. B., & Ennis, R. H. (1991). Critical thinking: Literature review and needed research. In L. Idol & B.F. Jones (Eds.), *Educational values and cognitive instruction: Implications for reform (pp. 11-40)*. Lawrence Erlbaum & Associates.

[31] Kim, H. (2003). Critical thinking, learning and Confucius: A positive assessment. *Journal of Philosophy of Education*, *37*(1), 71-87.

[32] Lai, E. R. (2011). *Critical thinking: A literature review research report.* Parsons Publishing.

[33] McPeck, J. E. (1981). *Critical thinking and education*. St. Martin's.

[34] McPeck, J. (1981). *Critical thinking and education.* St. Martin's Press.

[35] McPeck, J. (1990a). *Teaching critical thinking.* Routledge.

[36] McPeck, J. (1990b). Critical thinking and subject specificity: A reply to Ennis. *Educational Researcher, 19*(4), 10-12.

[37] Messick, S. (1989). Meaning and values in test validation: The science and ethics of assessment. *Education Researcher,* 18(2), 5-11.

[38] Nelson, C. E. (1994). Critical thinking and collaborative learning. *New Directions for Teaching and Learning, 1994*(59), 45-58.

[39] Neisser, U. (1976). *Cognition and reality: Principles and implications of cognitive psychology.* Freeman.

[40] Nickerson, R. S. (1988). On improving thinking through instruction. *Review of Research in Education, 15*(1988-1989), 3-57.

[41] Norris, S. P., & Ennis, R. H. (1989). *Evaluating critical thinking.* Midwest Publications.

[42] Paul, R. W. (1992). Critical thinking: What, why, and how? *New Directions for Community Colleges, 1992*(77), 3-24.

[43] Paul, R. W. (1993). *Critical thinking: What every person needs to survive in a rapidly changing world*. Foundation for critical thinking.

[44] Paul, R. W., & Elder, L. (2006). Critical thinking: The nature of critical and creative thought. *Journal of Developmental Education, 30*(2), 34-35.

[45] Paul, R. W. & Elder, L. (2008). Critical thinking: The nuts and bolts of education. *Optometric Education,* 33, 88-91.

[46] Pithers, R. T., & Soden, R. (2000). Critical thinking in education: A review. *Educational Research, 42*(3), 237-249.

[47] Shah, K. R. (2019a). Effective constructivist teaching learning in the classroom. *Shanlax International Journal of Education*, *7*(4), 1-13.

[48] Shah, R. K. (2019b). Effective social constructivist approach to learning for social studies classroom. *Journal of Pedagogical Research,* 3(2), 38-51.

[49] Shah, R. K. (2020). Concepts of learner-centred teaching. *Shanlax International Journal of Education*, *8*(3), 45-60. https://doi.org/10.34293/education.v8i3.2926

[50] Shah, R. K. (2021). Conceptualizing and defining pedagogy. *Journal of Research & Method in Education (IOSR-JRME), 11*(1, Ser II), 06-29.

[51] Shrestha, B. K. (2010). *Perceptions of differences in quality of graduates: Employers versus students' perception.* Paper presented on 16th International Conference on Quality, Asia Pacific Quality Organisation, Kathmandu University, Dhulikhel, Nepal.

[52] Slavin, R. (1994). *Cooperative learning: Theory, research, and practice.* Allyn and Bacon

[53] Sternberg, R. J. (1986). *Critical thinking: Its mature, measurement, and improvement.* Yale University.

[54] Sternberg, R. (1987). Questions and answers about the nature and teaching of thinking skills. In J. B. Baron, & R. Sternberg (Eds.), *Teaching thinking skills: Theory and practice.* (pp. 251-259). W. H. Freeman and Company.

[55] Thayer-Bacon, B. J. (2000). Transforming critical thinking: Thinking constructively. Teachers College Press.

[56] Tyler, R. W. (1949). *Basic principles of curriculum and instruction*. University of Chicago Press.

[57] Van Gelder, T. (2005). Teaching critical thinking: Some lessons from cognitive science. *College Teaching, 53*(1), 41-48.

[58] Walton, D. N. (1989). Dialogue theory for critical thinking. *Argumentation, 3,* 169-184.

[59] Willingham, D. T. (2007). Critical thinking: Why is it so hard to teach? *American Educator*, 8-19.

[60] Willmott, H. (1997). Making learning critical: Identity, emotion, and power in process of management development. Judge University of Cambridge.