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Ancient Indian epistemology and modern cognitive science: Exploring vedic insights in contemporary thought processes

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ABSTRACT

Backround: This article explores the connections between the concept of anviksiki in Hindu philosophy and theories in cognitive science, and how these principles can be applied in modern education. Anviksiki, which focuses on critical thinking and deep reflection, is considered to have strong relevance to cognitive science concepts such as information processing, perception, and decision-making. **Methods**: The method used in this research is literature study and comparative analysis, by reviewing various literatures that discuss Hindu philosophy and cognitive science in depth. The analysis shows that anviksiki can provide an additional perspective in understanding how humans think and process information, especially in the context of moral and ethical reflection. **Finding:** In education, the principle of anviksiki that emphasises self-reflection and critical thinking can enrich students' learning process. This concept supports active learning methods that allow students to construct their own understanding, in a way that is in line with Piaget's theory of constructivism. In addition, cognitive science provides practical insights into information processing and memory, which can be used to design more effective teaching strategies. **Conclusion**: The conclusion of this study confirms that anviksiki can be integrated with cognitive science to create a holistic approach to education, which enriches intellectual, ethical and reflective aspects. By combining Hindu wisdom and cognitive science insights, education can support the development of balanced individuals, who are able to think critically and understand the moral consequences of their decisions. This research reveals that Anviksiki, as a philosophy of critical thinking in the Hindu tradition, has strong relevance to concepts in modern cognitive science, particularly in analytic approaches, logic, and deductive methods. Thus, the heritage of Hindu thought not only demonstrates traditional wisdom but also presents a philosophical foundation that supports contemporary cognitive exploration. **Novelty/Originality of this article:** This research offers a new perspective by bridging the ancient philosophy of Anviksiki with modern cognitive science, demonstrating the continuity of concepts in the critical thinking process involving logical analysis and deductive methods. It provides new insights in understanding the contribution of the Hindu tradition of thought to the development of cognitive theory today

KEYWORDS: anviksiki; cognitive science; hindu philosophy.

1. Introduction

Human thought processes have been the subject of study since ancient times, with various great civilisations contributing to the understanding of how humans process information and make decisions. One of the oldest philosophical traditions that offers a

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unique perspective in the study of thought is Hindu philosophy, specifically through the discipline of *Anviksiki*- the sciences concerned with reasoning, logic, and critical analysis. While many Western disciplines, such as psychology and cognitive science, have focused on the mechanical aspects of the thinking process, Hindu philosophy emphasises the relationship between mind, morality, and spirituality. In the Hindu philosophical tradition, anviksiki is known as a method of attaining knowledge through critical reasoning and deep reflection. This concept stems from the logical search for truth that has been taught since ancient times, even recorded in ancient texts such as the Arthashastra (Kangle, 1965). Anviksiki is considered one of the main branches of knowledge in Hindu philosophy, comparable to the sciences that reveal the laws of nature and ethics (Sharma, 2000). With the development of *Cognitive Science* in the modern era, which encompasses a variety of interdisciplinary approaches to understanding the human mind, including psychology, neuroscience, linguistics and philosophy, there is great potential to explore the traditional wisdom of *Anviksiki*. This is all the more important in a time of globalisation, where a fusion of Eastern and Western views on human cognition can enrich perspectives. This study is expected to bring together two different realms of thought to deepen insights into the thinking process.

Many studies have shown that anviksiki is not only important in the context of building logical reasoning to sharpen the intellect, but also has elements that are very relevant to the modern understanding of human thought processes. In cognitive science, which examines how the brain and mind process information, many basic concepts such as perception, memory, and decision-making, can be understood through the lens of Hindu philosophy (Varela, Thompson, & Rosch, 1991). In general, cognitive science has evolved to map how humans understand and respond to their environment through critical and analytical thinking. Baumeister and Leary (1995) highlight that the human thought process involves a deep understanding of patterns and relationships, which is in line with anviksiki principles that encourage analysis of the self and the world around.

Anviksiki learning and cognitive science have deep significance in the context of education, self-development and scientific advancement. These two fields, when studied together, can provide rich and comprehensive insights into human thought processes. Anviksiki, with its emphasis on logic and reasoning, can enhance critical thinking skills. Ganeri (2001) highlights that the Nyaya logical system in Anviksiki offers a complex framework for the evaluation of arguments. Meanwhile, cognitive science provides an understanding of thought processes based on empirical evidence. The combination of the two can result in a more comprehensive approach to critical thinking (Sternberg & Halpern, 2020). Furthermore, studying Anviksiki together with modern cognitive science could enhance cross-cultural understanding of human cognition. Nisbett et al. (2001) point out that cultural differences can influence cognitive processes, and by understanding Anviksiki's perspective, we can expand our understanding of cultural variations in thought processes. The integration of Anviksiki's concepts into cognitive science education can also result in innovative pedagogical approaches. For example, the practice of Svadhyaya (self-study) can be integrated with modern theories of metacognition to enhance students' self-awareness and learning ability (Jankowski & Holas, 2014). In the context of technology, an understanding of Anviksiki can provide new inspiration in AI development. Concepts such as Buddhi (intellect) and the Nyaya reasoning system can offer alternative perspectives in designing more sophisticated and ethical AI systems (Dignum, 2019).

Aspects of Anviksiki relating to self-reflection and mindfulness can also contribute to the development of interventions for mental health. When integrated with the findings of modern cognitive science, this could result in a holistic approach to psychological well-being (Walsh & Shapiro, 2006). From a philosophical perspective, Anviksiki learning along with cognitive science can enrich the philosophy of science. Chakrabarti (2019) argues that an epistemological perspective from the classical Indian tradition can provide new insights in understanding the nature of knowledge and the scientific method. Concepts in Anviksiki about consciousness, such as Chitta and Buddhi, when studied together with modern theories of consciousness, can pave the way for a more comprehensive understanding of

the phenomenon of consciousness (Rao, 2019). Anviksiki's holistic approach to cognition, when combined with cognitive science's understanding of creativity, can result in new methods to stimulate creative and innovative thinking (Kaufman & Sternberg, 2019). In the context of AI ethics, Anviksiki learning can provide a unique ethical perspective. The concepts of dharma and ethics in the Hindu tradition, when integrated with ethical considerations in cognitive science and AI, can result in a more comprehensive framework for responsible AI (Dignum, 2019). Finally, the combination of insights from Anviksiki and cognitive science can offer a deeper understanding of the self, which can contribute to personal development and improved quality of life (Seligman & Csikszentmihalyi, 2000). In conclusion, learning Anviksiki and cognitive science is not only important for academic progress, but also has broad implications for personal development, technological innovation and cross-cultural understanding. The integration of these two fields can pave the way for a more holistic and inclusive approach in understanding the human mind and enhancing its potential.

Although Cognitive Science has developed rapidly in recent decades, most approaches in the discipline are still dominated by Western thinking, especially those from the empirical and positivist traditions. Previous research rarely connects modern cognitive concepts with Eastern philosophical traditions, particularly Hinduism. Moreover, the existing literature tends to lack depth on how *Anviksiki* principles can be applied to contemporary research in cognitive science. This creates a significant gap, where there has been little systematic effort to bridge these two approaches. Western cognitive approaches, which often focus on the functioning of the brain as a biological entity, lack exploration of the spiritual and moral dimensions emphasised in *Anviksiki*. Research into the potential collaboration between Hindu concepts of thought and Cognitive Science is limited, and this opens up opportunities for in-depth studies that explore their similarities and differences.

Through this analysis, we can see a deep connection between Hindu philosophy and cognitive science, especially in the context of developing critical thinking and problem-solving skills. This is relevant because in an increasingly complex world, understanding different perspectives and approaches to thinking can give us new perspectives in understanding how humans process information (Lakoff & Johnson, 1980). By linking the insights of anviksiki and cognitive science, this article aims to explore how traditional wisdom can provide additional insights for modern science.

A number of preliminary studies on this topic, including Sharma, C. (2000). A Critical Survey of Indian Philosophy, which provides a comprehensive overview of the major schools in Indian philosophy, including anviksiki. Sharma emphasises the role of anviksiki as a method of critical thinking in Hindu philosophy and compares it with other schools of philosophy. This study is relevant as it presents a strong philosophical basis of anviksiki, which will be analysed in relation to cognitive processes. Kangle, R. P. (1965). The Kautiliya Arthashastra, Part 1: Sanskrit Text with a Glossary. This classic work explores the Arthashastra, one of the oldest texts to record anviksiki as a science. Kangle examines the historical context and philosophy of anviksiki as part of intellectual education in Hindu philosophy. By referring to this authentic source, this research corroborates the theoretical basis of anviksiki which will then be linked to cognitive theory. Following is the research of Varela, F. J., Thompson, E., & Rosch, E. (1991). The Embodied Mind: Cognitive Science and Human Experience. This book discusses cognitive science from a perspective that blends with human experience, similar to the anviksiki approach that links knowledge and reflection. Varela and his colleagues argue that consciousness and cognitive understanding cannot be separated from the experience of the body and the world. This study provides a good foundation for comparing the concept of reflective thinking in anviksiki with the theory of embodied cognition in cognitive science. Subsequent research from Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 117(3), 497-529. This research investigates the cognitive aspects of the human need for interpersonal attachment. Its relevance to anviksiki lies in how this need influences decision-making and reflective thinking in social contexts. Anviksiki, as a critical thinking process, can be enriched through

an understanding of this human need. Lakoff, G., & Johnson, M. (1980). Metaphors We Live By. This study explores the role of metaphor in thinking and how this shapes our perception of the world. In the context of anviksiki, metaphors play an important role in understanding abstract concepts. This study provides an additional perspective to explore how Hindu philosophy uses metaphors in the thinking process. Anviksiki as a science of logic and reasoning in Hinduism, in a broader context, can be linked to cognitive science insights to provide a deeper understanding of the human thought process.

2. Methods

This research uses a descriptive qualitative method with a literature study approach and comparative analysis. This method was chosen to explore the relationship between the concept of anviksiki in Hindu philosophy and theories in cognitive science. Literature study was conducted by collecting primary and secondary sources related to anviksiki, Hindu philosophy, and cognitive science theories. Primary references included ancient Hindu texts such as the Arthashastra as well as contemporary scholarly works that discuss Hindu philosophy and cognitive science. The literature analysis involved reviewing classical and modern texts to identify elements of critical thinking and reflection described in anviksiki (Sharma, 2000; Kangle, 1965). After collecting data from various literatures, a comparative analysis was conducted between the principles of anviksiki and theories in cognitive science such as perception, memory, and decision-making. This comparative method allowed the researcher to highlight the similarities and differences between traditional Hindu approaches and modern scientific approaches (Lakoff & Johnson, 1980; Varela et al., 1991). The research also involved a philosophical approach to understand the value and relevance of anviksiki in the modern context.

This approach aims to explore how the thought processes in anviksiki can be applied in the context of cognitive science, as well as examine whether the concepts can contribute to the understanding of human cognitive processes (Baumeister & Leary, 1995).As part of the qualitative approach, a contextual analysis of the application of anviksiki in everyday life and how this understanding can enhance cognitive perspectives in the context of education, therapy and personal development was conducted. Through content analysis, the researcher was able to present insights that are relevant to the modern reader.

3. Results and Discussion

3.1 Link between Anviksiki and Cognitive Processes

Cognitive science is a multidisciplinary discipline that studies how humans understand, remember and process information. This field of study developed rapidly since the mid-20th century, and combines approaches from psychology, linguistics, computer science, philosophy, and neurobiology to understand mental processes holistically. Howard Gardner (1985) mentioned that cognitive science combines various disciplines to form a unified framework in understanding the human brain. Since the introduction of the concept of information processing by George Miller in 1956, cognitive science has experienced rapid development with various theories and models. One of the concepts underlying this science is information processing theory, which views the brain as a data processing device that manages information to be converted into understanding. For example, the three-stage memory model introduced by Atkinson and Shiffrin (1968) explains how information is processed and stored, which is highly relevant in understanding human memory. In addition, concepts of perception and awareness in cognitive science, such as embodied cognition proposed by Varela, Thompson, and Rosch (1991), emphasise that perception and understanding are strongly influenced by our body's interaction with the environment.

Cognitive science also studies how decision-making is influenced by logical and emotional factors, as shown by Baumeister and Leary's (1995) research, which reveals that

human decisions are influenced by emotional needs, such as a sense of belonging or interpersonal attachment. This decision-making is also coloured by various cognitive biases rooted in the human brain. In everyday life, cognitive science has wide applications, especially in education and technology development. For example, the theory of constructivism proposed by Piaget (1952) highlights the importance of experience and interaction in the learning process, which has been applied in various modern teaching methods. However, although cognitive science offers many benefits, the field is not free from criticism. Some philosophers, such as John Searle (1980), criticise the reductionist approach which is considered to oversimplify the complexity of the human mind. Searle argues that cognitive science often ignores aspects of human consciousness and subjectivity that cannot be fully explained through information processing theory, as he expresses through the analogy of the Chinese Room.

Cognitive science continues to develop and make significant contributions in various fields, but still has to face challenges in explaining deeper aspects of human consciousness. While most cognitive science theories focus on the rational and quantifiable aspects of human thought, the subjective and intuitive elements of the thinking process often remain a mystery. Nevertheless, the discipline has paved the way for a more comprehensive understanding of the way humans think and respond to the world around them, and enriched the dialogue between science and philosophy.

In the Hindu tradition, anviksiki is known as the science of logic and critical reasoning, which forms the basis of conscious decision-making. As explained by Sharma (2000), anviksiki serves as an instrument to distinguish between reality and illusion through critical thinking. In the context of cognitive science, critical thinking is the ability to evaluate information objectively and rationally (Baumeister & Leary, 1995; Wariati & Lisyaantari, 2024). In other words, anviksiki helps individuals to develop the ability to assess information based on evidence and sound reasoning, in line with cognitive theories that emphasise the importance of logical analysis in critical thinking. This suggests that anviksiki is not only relevant in the spiritual realm but can also be applied as a basis for understanding how humans think and reason.

Anviksiki, as a discipline of Hindu philosophy, focuses on deep reflection and critical thinking in understanding reality. These principles of *anviksiki* can be analysed in the context of cognitive science, which studies how humans process information, think and make decisions. In the Hindu tradition, *anviksiki* is a method of reasoning that leads one to understand truth through logical analysis and self-reflection (Sharma, 2000; Untara et al.,2024). Similarly, cognitive science describes critical thinking as the skill to evaluate and analyse information with objectivity (Baumeister & Leary, 1995).

Information processing theory, on which cognitive science is based, describes the brain as a system that manages data through the stages of perception, memory and decision-making (Miller, 1956). This concept is highly relevant to *anviksiki*, which also emphasises the importance of perception and memory in understanding reality. For example, the memory model developed by Atkinson and Shiffrin (1968) suggests that information needs to be deeply processed in order to be stored in long-term memory. *Anviksiki* supports this process by inviting individuals to reflect on past experiences and organise them in a logical context, which ultimately strengthens memory and understanding.

In addition, the concept of *anviksiki* has similarities with the theory of *embodied cognition* proposed by Varela, Thompson, and Rosch (1991), which emphasises that one's understanding is influenced by physical experience and interaction with the surrounding world. In Hindu philosophy, *anviksiki* is not only a mental reflection but also includes experiences translated through cultural symbols and meanings. This is similar to the theory of *embodied cognition*, which states that the human mind does not work in isolation but is influenced by the physical and social context. Therefore, *anviksiki* can be seen as a form of reflection that involves one's entire being in a holistic cognitive process.

Furthermore, *anviksiki* includes moral considerations in decision-making, which is in line with cognitive science findings that human decisions are often influenced by social and ethical values (Bandura, 1986). This suggests that cognitive processes are not only logical,

but also involve affective and moral aspects, as expressed in *social cognition* theory. In the context of *anviksiki*, decision-making must take into account the moral implications of the action, which gives an ethical dimension to the cognitive process.

3.2 The Role of Anviksiki in Perception and Memory Formation

Perception and memory in the context of anviksiki are considered the first steps in the process of understanding the world. Hindu philosophy places perception as one of the basic senses to recognise reality, which is then reinforced by memory as a means of storing previous experiences and knowledge (Kangle, 1965). In a cognitive perspective, perception and memory are the foundation of more complex cognitive processes. Lakoff and Johnson (1980) in their study of metaphors show that the way we understand the world is influenced by experiences and memories, which often manifest in symbolic or metaphorical forms. These metaphors help connect abstract concepts that cannot be understood directly through sensory experience. In anviksiki, this link is realised through symbols or narratives, which allow individuals to construct a richer perception of the world. The role of anviksiki in perception and memory formation, then, is highly relevant to understanding how symbols and narratives influence one's understanding.

The link between Anviksiki and cognitive processes is an exciting area of research and has the potential to provide new insights into understanding the human mind. Anviksiki, as an ancient system of reasoning in the Hindu tradition, has many concepts that show alignment with modern understandings of cognitive processes. One of the main aspects of Anviksiki that is closely related to cognitive processes is the concept of Pramana, or valid sources of knowledge. Chattopadhyaya (2017) explains that in Nyaya, one of the branches of Anviksiki, there are four main Pramanas: Pratyaksha (direct perception), Anumana (inference), Upamana (comparison), and Shabda (verbal testimony). These concepts have interesting parallels with information processing theory in modern cognitive psychology. For example, Pratyaksha can be associated with the process of sensory perception, while Anumana has similarities with the processes of deductive and inductive reasoning.

Furthermore, logical systems in Anviksiki, especially those developed in the Nyaya tradition, show structural similarities with modern formal logic. Ganeri (2001) argues that Nyaya logic offers a sophisticated framework for argument analysis, which can enrich our understanding of the reasoning process. Concepts such as avayava (parts of an argument) in Nyaya have similarities to the structure of syllogisms in Aristotelian logic, but with different nuances (Surpi, et al.,2021). In the context of consciousness and cognition, the concepts of Chitta (mind) and Buddhi (intellect) in Anviksiki show similarities to modern theories of cognitive function. Rao (2019) explains that Anviksiki's understanding of different levels of consciousness has parallels with contemporary theories of consciousness and the subconscious. For example, the concept of Buddhi as the highest discriminative faculty has similarities with our understanding of executive function in cognitive neuroscience.

The metacognitive aspects of Anviksiki also show interesting parallels with modern theories of metacognition. The practice of Svadhyaya (self-study) in the Hindu tradition, as described by Rao (2011), offers a more holistic approach to self-reflection, involving not only cognitive aspects but also ethical and spiritual dimensions. This can enrich our understanding of metacognition and self-regulation. However, it is important to note that despite similarities, Anviksiki and modern cognitive science developed in different historical and cultural contexts. Chakrabarti (2019) cautions that care should be taken in making direct comparisons and avoiding oversimplification. The paradigmatic differences between these two traditions need to be recognised and respected.

Comparative analyses between Anviksiki and modern cognitive processes also reveal some areas where Anviksiki can enrich our understanding. For example, Anviksiki's emphasis on the interconnection between cognition, ethics and spirituality offers a more holistic perspective on the human mind. This is in line with recent trends in positive psychology and the study of well-being (Seligman & Csikszentmihalyi, 2000). Furthermore,

the concepts in Anviksiki on consciousness and cognition can provide new inspiration in the development of computational models of the mind and artificial intelligence. Dignum (2019) suggested that the integration of philosophical perspectives from non-Western traditions such as Anviksiki can contribute to the development of a more ethical and comprehensive AI.

In conclusion, the interrelationship between Anviksiki and cognitive processes shows significant potential for productive interdisciplinary dialogue. The integration of insights from Anviksiki into modern cognitive science frameworks may enrich our understanding of the human mind, paving the way for a more holistic and cross-cultural approach in the study of cognition. However, further research, including empirical studies, is needed to fully explore and validate these linkages.

Anviksiki, as a branch of Hindu philosophy, has a significant role to play in the formation of perception and memory, especially in the context of how one perceives and stores the information they receive. In Hindu philosophy, *anviksiki* involves not only logical reasoning, but also how individuals interpret the world around them through direct experience. This aligns with the concept of perception in cognitive science, which serves as the first entry point for information before it is further processed by the brain. Perception in cognitive science is described as the process of identifying and interpreting sensory stimuli to form an understanding of the environment (Miller, 1956).

In the context of *anviksiki*, perception is influenced by deep reflection that leads to richer and more meaningful interpretations. This concept is similar to the *embodied cognition* approach, proposed by Varela, Thompson, and Rosch (1991), which states that perception is not separate from one's physical experience and social context. Using the principle of *anviksiki*, individuals are encouraged to relate their perceptions to their experiences and existing cultural values, resulting in a more comprehensive interpretation. This differs from the reductionist view that solely sees perception as a function of biology; *anviksiki* recognises that perception is also shaped by spiritual and philosophical reflection.

In addition, *anviksiki* plays a role in how information is stored in long-term memory. Memory theories in cognitive science, such as Atkinson and Shiffrin's (1968) model, explain that to achieve deep understanding, information needs to be actively processed and repeated. In *anviksiki*, deep understanding is achieved through meditation and reflection which helps to strengthen memory. Memory in the context of *anviksiki* is seen not only as a storage of facts, but also as a reflective process that links past experiences with present understanding.

Anviksiki also encourages individuals to reflect on and reinterpret their experiences, which is in line with the concept of *memory reconsolidation* in cognitive science, the process by which memories are renewed and strengthened over time. In practice, *anviksiki* teaches that memory is not static, but active and constantly evolving through continuous thinking. As such, *anviksiki* provides important insights into how humans can shape and enrich their perception and memory through deep and repeated reflection. *anviksiki* provides a framework for understanding perception and memory in a more reflective and holistic way, making this process not just a biological function but also a philosophical experience that enriches one's understanding of the world and their memory.

3.3 Decision Making and Moral Reasoning

As a science that includes aspects of morality, anviksiki provides guidance in the ethical decision-making process. According to Sharma (2000), anviksiki not only emphasises on what is logically right or wrong, but also considers the moral impact of an action. This is in line with Baumeister and Leary's (1995) theory which highlights that human decision-making processes are often influenced by emotional and social factors, such as the need for acceptance or interpersonal relationships. In cognitive science, morality is seen as an important element that shapes the decision-making process. Decisions that are not only based on logic but also touch on moral aspects often result in wiser decisions. As such,

anviksiki contributes to a more holistic understanding of how humans make decisions that involve moral and ethical values.

Anviksiki, in Hindu philosophy, combines logic with moral and ethical values in the decision-making process. In this context, *anviksiki* not only leads individuals to think logically, but also to consider the moral implications of any decisions made. This is in line with findings in cognitive science, which show that human decision-making is influenced by both logical and emotional factors. As stated by Bandura (1986) in *social cognitive theory*, a person's decisions are strongly influenced by the social environment and internalised values from society.

According to cognitive science, decision-making often involves moral aspects that are internalised through the socialisation process. For example, Baumeister and Leary (1995) highlight that the human need to belong to a group influences decision-making, as individuals tend to consider the impact of their decisions on social relationships. In *anviksiki*, decisions are not only measured by the end result, but also the process, which must conform to the principles of truth and goodness. This is similar to the concept in *moral cognition*, which states that ethical decisions are based on one's values, and these guide the choice between right and wrong actions.

Furthermore, *anviksiki* teaches that good decisions should be based on deep reflection and contemplation of long-term implications. This concept is in line with the cognitive science view of *moral reasoning*, which is an evaluation process that involves consideration of moral values (Greene et al., 2001; Surpi, 2022). *Moral reasoning* in cognitive science focuses on how individuals assess a situation based on ethical principles and its impact on the well-being of self and others. Similarly, *anviksiki* requires individuals to consider whether a decision is in accordance with the values of truth and justice.

Furthermore, research in cognitive science suggests that moral decision-making is often intuitive and emotionally driven. Haidt (2001) explains in the *social intuitionist model* that emotions play an important role in moral judgement, where individuals often rely on their emotional responses before rational reflection. *Anviksiki*, on the other hand, encourages a balance between emotion and rationality in decision-making, teaching that emotions should not completely overpower logic, but still be considered as part of the overall process.

Thus, both *anviksiki* and cognitive science suggest that decision-making involves more than just logic. Both approaches affirm the importance of moral judgement in decisions, where *anviksiki* emphasises deep ethical reflection, while cognitive science recognises the role of emotions in moral reasoning. These similarities suggest that traditional wisdom such as *anviksiki* remains relevant in understanding moral decision-making processes in modern contexts.

3.4 Implications for Education and Personal Development

Cognitive science plays an important role in education as it offers deep insights into how students and learners understand, remember and apply information. One of the main relevant theories is the constructivism theory proposed by Jean Piaget (1952). According to Piaget, effective learning occurs when students are actively involved in constructing knowledge based on their experiences. This suggests that deep understanding is formed through direct interaction with the environment, which allows students to associate new information with existing knowledge. Therefore, cognitive science supports active learning methods that allow students to construct their own understanding, instead of just passively receiving information.

In addition, research in cognitive science also reveals the importance of attention and perception in learning. Mayer and Moreno (2003) in their study on multimedia learning found that using visuals and audio together can improve students' understanding, but it must be adjusted to the brain's processing capacity. This approach is known as dual processing theory, which states that humans have a limited capacity to process information in visual and auditory forms. Therefore, teaching methods that utilise visual and auditory

media effectively can enhance learning by ensuring that students do not experience information overload.

Cognitive science also explains the role of memory in learning. According to Atkinson and Shiffrin (1968), memory consists of three stages: sensory, short-term, and long-term. This model suggests that information that is repeated and deeply understood is more likely to be stored in long-term memory. Based on this concept, effective teaching should involve techniques that help students repeat and deepen understanding, such as structured exercises and concept mapping techniques. This is especially important at the higher education level, where students are expected to master complex concepts that require deep understanding.

On the other hand, social learning theory pioneered by Bandura (1986) emphasises that students also learn through observing the behaviour of others and the consequences they experience. In an educational context, this means that the role of teachers and peers is crucial as models for students to follow. Collaborative learning methods, where students work together to achieve learning goals, are supported by findings in cognitive science which show that social interaction can improve understanding and critical thinking skills.

Overall, cognitive science acts as a guide for designing teaching methods that are compatible with how students' brains work. The use of learning strategies that are in line with information processing theory, such as active learning, the use of multimedia, and repetition of concepts, can help students maximise their cognitive abilities. Thus, an approach based on cognitive science not only facilitates better conceptual understanding, but also prepares students to develop essential critical thinking skills in a dynamic learning environment.

Given the similarities between anviksiki and cognitive theory, there is potential to apply the principles of anviksiki in the field of education. Lakoff and Johnson (1980) state that a person's life experiences influence their learning process. By incorporating the concept of anviksiki into education, students are encouraged to engage in deeper reflective and critical thinking. Anviksiki facilitates students in understanding information more comprehensively and encourages them to apply this knowledge in their daily lives. Moreover, in the context of personal development, anviksiki helps individuals to better understand themselves and their purpose in life. Varela et al. (1991) mentioned that understanding one's own thought process or metacognition is key to the development of wisdom. By applying the principles of anviksiki, individuals can develop deeper and more purposeful thinking habits, which will influence decision-making in their personal lives.

In terms of personal development, anviksiki offers a framework for introspection that can support self-development outside the school environment. Today's world faces the challenge of increasing self-awareness and self-reliance among youth. By instilling the principles of anviksiki, students can better understand themselves, form clearer life goals, and develop the ability to evaluate their personal decisions. In the context of Asian cultures rich with social norms, anviksiki can also help students reflect on local values and how to relate these values to modern life.

With the integration of anviksiki principles in education, there is an opportunity to produce a generation that is not only knowledgeable, but also has wisdom and the ability to think critically. It can complement existing educational reforms by adding a deep reflective and philosophical dimension, which will help students not only achieve academic success, but also become individuals who are meaningful to themselves and the environment. This anviksiki-based learning process can produce a generation that not only understands their subjects and religion, but is also able to develop critical and analytical thinking skills in facing the challenges of the modern world. anviksiki principles can be introduced as part of interdisciplinary studies, including philosophy, psychology, and education. This can enrich the perspectives of students from different backgrounds and encourage the development of holistic and inclusive knowledge.

The concept of *Anviksiki* from Hindu philosophy has deep relevance in modern cognitive studies, especially in enriching the understanding of human thought processes that include spiritual and moral dimensions. *Anviksiki* not only emphasises the importance

of logic and rationality, but also how the thinking process must be in line with morality and spirituality. This provides a more holistic perspective compared to modern *Cognitive Science* which tends to focus more on the biological and empirical aspects of cognition. For example, the theme emphasises the balance between rationality and spirituality in decision-making. This challenges Western approaches that often separate thought processes from ethical and spiritual dimensions. In *Anviksiki*, rationality cannot be separated from morality, which asserts that right thinking is not just about formal logic, but also about conformity with higher moral principles.

In addition,*self-awareness* is central to the thinking process according to *Anviksiki*. This includes not only awareness of an individual's thoughts and feelings, but also awareness of the impact those thoughts have on the world around. This approach emphasises the connectedness between the individual and the universe, which is an aspect that receives less attention in modern *Cognitive Science*, which tends to focus on the individual as a separate entity. Finally, meditation is one of the important methods in *Anviksiki* to achieve clarity in thinking. Meditation is not only seen as a way to relax, but also as a tool to improve cognitive and logical abilities. This provides insight into how an introspective approach can improve cognitive processes, which is rarely discussed in *Cognitive Science* literature that focuses more on brain function. Thus, this research shows that integrating *Anviksiki* with modern *Cognitive Science* can provide a more holistic and in-depth view of the thinking process, which includes rational, moral and spiritual dimensions. The principles of *Anviksiki* are not only relevant but can also enrich modern cognitive understanding, especially in the spiritual and moral dimensions that are often neglected by empirically-based cognitive approaches. It is hoped that this research will pave the way for broader cross-cultural studies in the field of Cognitive Science, which take into account local wisdom and non-Western perspectives.

4. Conclusions

Anviksiki shows how the Hindu wisdom of critical and reflective thinking can be utilised as a framework in line with the principles of cognitive science. By integrating the concept of anviksiki, we can see the connection between Hindu spiritual traditions and modern scientific understanding of human cognitive processes, particularly in terms of reflection and decision-making.Anviksiki's Influence on a Deeper Understanding of Thinking Processes

Anviksiki emphasises thinking that is not only logical, but also involves moral and ethical dimensions. This is in line with cognitive science which views critical and reflective thinking as the basis of our understanding and perception of the world. As such, anviksiki helps enrich our understanding of how the human mind functions, particularly in the context of wise decision-making.

The concept of anviksiki implemented in education and cognitive science offers a holistic approach to personal development. By applying the values of anviksiki, students can gain a deeper insight into themselves and the interconnectedness of their thoughts, morality and actions. This opens up opportunities for education to not only focus on intellectual aspects, but also balanced ethical and spiritual development. This conclusion suggests that anviksiki has significant relevance in bridging between Hindu philosophy and cognitive science, as well as in supporting holistic education and all-round individual development.

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