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Contextual Teaching and Learning (CTL) Strategy

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Abstract: *This abstract discusses the Contextual Teaching and Learning (CTL) strategy as an innovative approach in the learning process. The main objective of this literature review is to identify the effectiveness of CTL implementation in enhancing students' competencies and skills. The method used is a literature study by examining various journals and scientific articles related to CTL implementation across different educational levels. The findings reveal that CTL can improve learning motivation, increase active student engagement, and strengthen students' contextual understanding of learning materials. In addition, this strategy has been shown to enhance problem-solving abilities and critical thinking skills. The effectiveness of CTL implementation is influenced by teacher readiness, learning facilities, and a supportive learning environment. Therefore, CTL can serve as an effective solution to improve the quality of education in response to current educational challenges. The study concludes that the implementation of CTL requires continuous policy support and teacher training to achieve optimal outcomes.*

Keywords: *Contextual Teaching and Learning, learning motivation, student engagement, critical thinking.*

INTRODUCTION

In the modern era of education, the learning process must be able to adapt to the rapidly changing dynamics of development. The main challenge is how to deliver instructional content so that it can be understood deeply by students. One innovative approach that is increasingly being implemented is Contextual Teaching and Learning (CTL). This strategy emphasizes the importance of connecting learning materials with students' real-life contexts so that learning becomes more relevant and meaningful (Nurjanah et al., 2024).

The CTL strategy was developed as a response to low learning motivation and limited active student engagement in the learning process. By linking academic concepts with students' direct experiences, it is expected that learners can understand the material more deeply and apply it in real-life situations. This approach aims to produce students who are not only academically intelligent but also capable of critical and creative thinking in solving life problems (Nainggolan et al., 2024).

Research on the effectiveness of CTL has been conducted through literature studies, observations, and reviews of previous studies. Through comprehensive data analysis, researchers can assess the extent to which CTL improves learning outcomes and student motivation. In addition, various challenges and obstacles in implementing CTL across different educational settings have also been identified.

The results of various studies show that CTL has a positive impact on increasing students' learning motivation. Students become more active and directly involved in the learning process, making learning less passive. Moreover, learners are able to connect knowledge with their daily experiences, which ultimately enhances their understanding of the material and improves overall academic achievement (Gustina, 2023).

CTL is also considered a concrete and enjoyable learning approach, while also contributing to character development. According to Karso Mulyo, as cited in Syukri (2015), character values can be developed through contextual learning by applying components such as constructivism, inquiry, questioning, learning community, modeling, reflection, and authentic assessment. The implementation of these components helps shape students' character values.

Contextual learning occurs naturally through learning activities experienced by students, rather than through direct knowledge transfer from teacher to students. The expected learning outcomes are more meaningful, enabling students to solve problems, think critically, conduct observations, and draw long-term conclusions (Dwi Lestari et al., 2022).

Forneris explains that CTL is an educational theory that allows students to apply their academic understanding and skills both inside and outside the classroom to solve real-world problems (Forneris, 2023). In addition, CTL emphasizes meaningful learning processes that encourage students to construct their own knowledge rather than merely receiving it from teachers, making learning more effective and improving student outcomes (Sadilah et al., 2022).

However, the success of CTL implementation depends on supporting factors such as teacher readiness, adequate learning facilities, and a conducive learning

environment. Teachers need proper training and professional development to implement this strategy effectively, while support from schools and the government is essential to ensure sustainability.

Despite its benefits, CTL also faces several challenges, including limited time, insufficient resources, and the need for comprehensive curriculum adjustment. These challenges require strong collaboration among teachers, school leaders, and policymakers to ensure effective and sustainable implementation.

In the context of contemporary education, CTL serves as a relevant solution for improving the quality of learning. This approach not only focuses on academic achievement but also on character development, social skills, and 21st-century competencies. Therefore, CTL should be integrated into continuous and comprehensive educational reform to prepare students for future challenges (Elaine B. Johnson, 2002).

This study aims to comprehensively examine CTL strategy, its benefits, challenges, and strategic steps required for its effective implementation. It is expected that the findings of this study can serve as a reference for educational innovation that aligns with students' needs and global demands. With proper implementation, the quality of education can be continuously improved to produce globally competitive graduates.

According to Ikrima Maila (2019), CTL consists of seven main components, namely constructivism, inquiry, questioning, learning community, modeling, reflection, and authentic assessment. A classroom is considered to implement CTL effectively if all of these components are applied in the learning process.

METHODS

The research methodology using a literature review approach is employed to obtain data and information related to the Contextual Teaching and Learning (CTL) strategy from various existing sources. This approach is essential for gaining a comprehensive understanding of the concepts, implementation, and effectiveness of CTL in the field of education. By utilizing a wide range of references, the researcher is able to collect valid and reliable data to support the analysis and conclusions of this study.

The first step in this methodology is data collection from various primary sources such as books, scientific journals, research reports, and academic articles relevant to the CTL topic. The researcher conducts searches through digital databases such as Google Scholar, ScienceDirect, and university repositories. The keywords used typically include "Contextual Teaching and Learning," "context-based learning strategy," and "effectiveness of CTL." The selection of sources is carried out carefully based on their relevance and credibility.

After the sources are collected, the next stage is analysis, which involves critically reading each document obtained. The researcher highlights key aspects such as the definition of CTL, its basic principles, implementation steps, and research findings related to its effectiveness in various educational contexts. In this process, strengths and weaknesses identified in the literature are also noted to gain a comprehensive understanding of the strategy.

Furthermore, the researcher conducts a synthesis of findings from the reviewed literature. The purpose of this stage is to identify general patterns, differences, and

emerging trends in the implementation of CTL across different educational levels and subject areas. This synthesis helps build a strong conceptual framework and enriches the analysis of both the successes and challenges of CTL implementation.

The next stage involves evaluating the quality and reliability of the sources used. The researcher assesses the credibility of publishers, publication years, and the methodologies applied in the selected studies. This step is important to ensure that the data used in the analysis is valid and scientifically accountable. Sources with strong analytical depth and empirical evidence are prioritized.

During the writing process, the researcher also cites and summarizes important findings from the literature to construct the theoretical framework and analytical discussion. This approach ensures that the entire study is based on reliable data and supports objective argumentation. Thus, the literature review methodology provides a comprehensive overview of CTL from multiple perspectives.

This literature-based research not only serves as a means of data collection but also functions as a critical evaluation of the successes and challenges in implementing CTL. Through in-depth analysis of existing literature, the researcher can formulate appropriate recommendations and strategies to improve the effectiveness of CTL in various educational settings. This approach is highly relevant for supporting the development of innovative, context-based learning theories and practices.

The primary data sources in this study consist of scientific journals, research articles, and previous studies that directly discuss the Contextual Teaching and Learning (CTL) strategy. These sources are considered essential references because they contain information about the concepts, principles, implementation steps, and effectiveness of CTL in various educational contexts. Primary data is obtained through literature searches in academic databases such as Google Scholar, ScienceDirect, and institutional repositories.

Secondary data sources in this study include educational books, encyclopedias, official documents, seminar proceedings, and other supporting literature related to learning theories, contextual learning strategies, and educational development. Secondary sources are used to strengthen the theoretical foundation, complement information from primary sources, and provide a broader understanding of the application of CTL in the learning process.

RESULTS & DISCUSSION

Concept of Contextual Teaching and Learning (CTL) Strategy

The Contextual Teaching and Learning (CTL) strategy is a learning approach that places context at the center of the learning process. This concept is based on the view that students can more easily understand and retain learning materials when they are connected to real-life experiences, daily life, and situations relevant to their environment. Thus, CTL aims to integrate academic content with real-world contexts so that learning becomes more meaningful and effective (Winda Dianartasi & Aulia Sthephani, 2021).

CTL is an instructional approach that uses students' real-life experiences as the foundation of teaching and learning activities. According to Joyce and Weil (2010), CTL integrates subject matter with meaningful and relevant situations for learners, enabling them to understand and apply knowledge in their daily lives. This approach emphasizes the connection between academic content and students' real experiences, making learning more engaging and meaningful. Therefore, CTL is not only focused on theoretical mastery but also on developing competencies and skills

that can be directly applied in real-life situations.

According to Slameto (2010), CTL is a learning strategy designed to help students understand concepts by linking them to their everyday life context. This approach requires teachers to connect lesson content with students' experiences and environment so that learners can internalize the meaning of what they study. CTL also encourages active participation, collaboration, and critical thinking in solving real-life problems. As a result, CTL is expected to significantly improve students' learning motivation and outcomes because the learning process becomes more relevant and meaningful.

At its core, CTL emphasizes the relationship between learning materials and students' real world. The teacher acts as a facilitator who guides students in connecting theoretical concepts with their personal experiences. For example, in mathematics, students may be asked to solve problems related to personal finance or economic activities in their surroundings. In this way, learning becomes concrete, practical, and applicable rather than abstract (Anggriyaningsih et al., 2020).

One of the main principles of CTL is to foster students' intrinsic motivation by ensuring the relevance of learning materials to their lives. When students see a direct connection between what they learn and their needs, they become more motivated and engaged in the learning process. This also helps reduce boredom and increases enthusiasm during learning activities.

In addition, CTL emphasizes the use of various teaching methods and techniques that connect theory with practice. Common methods include discussion, simulation, case studies, project-based learning, and field activities. These approaches aim to enable students to apply their knowledge in real-life situations and develop competencies that are relevant to current societal needs.

In its implementation, teachers must identify appropriate contexts based on students' characteristics and their surrounding environment. This includes selecting themes, problems, or situations that are close to students' experiences while considering social and cultural diversity. As a result, learning becomes more personalized, meaningful, and responsive to both individual and group needs.

CTL also promotes active collaboration between students and teachers. Students are encouraged to participate actively in learning activities through group discussions, presentations, and project work. This approach not only improves understanding but also develops social skills and teamwork abilities that are essential in both professional and social life.

Beyond pedagogical aspects, CTL is closely related to character building and moral development. Through real-life learning activities, students can learn values such as honesty, responsibility, tolerance, and other positive attitudes. This aligns with the goal of education to produce individuals who are not only academically intelligent but also morally strong.

In curriculum development, CTL requires adjustments and innovations in designing syllabi and learning materials. Content should be flexible so that it can be linked to various relevant contexts. Assessment methods must also be adjusted to emphasize application, learning processes, and real-life outcomes of knowledge implementation.

The main advantage of CTL is its ability to enhance learning effectiveness and

produce students who are critical thinkers, creative individuals, and effective problem-solvers. Students are also expected to internalize moral and social values gained during the learning process, enabling them to become individuals who are well-prepared to face life challenges.

However, CTL implementation is not without challenges. Teachers must have sufficient competence in designing contextual learning and managing diverse learning activities. In addition, adequate facilities and learning resources are also necessary to ensure optimal implementation. With proper support, CTL can serve as an effective solution for improving the quality of education in the modern era.

Principles of Contextual Teaching and Learning (CTL)

The principles of Contextual Teaching and Learning (CTL) serve as essential foundations that must be applied to ensure that learning is effective, meaningful, and student-centered. According to Joyce and Weil (2010), one of the main principles of CTL is relevance, meaning that the learning materials must be directly connected to students' real-life experiences. This principle emphasizes that academic concepts should be linked to familiar situations so that students can clearly see the usefulness and practical application of what they learn. When learning is relevant, students become more motivated and actively engaged in the learning process.

Another important principle of CTL is active student involvement. As stated by Slameto (2010), CTL encourages students to actively construct knowledge through discussion, collaboration, and real problem-solving activities. Students are not passive recipients of information but active participants who critically engage with learning materials. Through active involvement, students are expected to better internalize concepts and apply them in real-life contexts.

Context is also a core principle of CTL. Learning must be designed within meaningful and authentic situations that reflect students' real environment. According to Joyce and Weil (2010), contextual learning helps students connect theory with practice by situating knowledge within real-life conditions. This prevents learning from becoming abstract and detached from students' daily experiences, making knowledge easier to understand, remember, and apply.

Collaboration is another key principle of CTL. Learning is expected to take place through social interaction, where students work together to solve problems and complete tasks. According to Slameto (2010), collaborative learning allows students to share ideas, learn from peers, and develop communication and teamwork skills. This interaction creates a more dynamic and engaging learning environment while strengthening students' social competencies.

Contextualization of learning materials is a fundamental principle of CTL. Learning content must be connected to students' real-life situations, environments, and needs so that it becomes meaningful and functional. For example, mathematics can be taught through real-world activities such as shopping, budgeting, or managing personal finances. This approach helps students recognize the direct relevance of academic knowledge in everyday life (Zulfania et al., 2025).

Another principle is the connection between theory and real-life application. CTL bridges academic concepts with students' lived experiences, cultural

backgrounds, and surroundings. By using real-life cases or local issues as learning materials, students are able to understand that learning is not merely theoretical but also practical and applicable in solving real problems in their environment.

The use of various teaching methods and techniques is also an important principle in CTL. Teachers are expected to apply diverse and innovative learning strategies such as group discussions, problem-based learning, simulations, role-playing, and case studies. These methods help students actively engage in the learning process while strengthening their ability to connect theory with practice (Dwi Ratnaningsih & Eges Triwahyuni, 2025).

Problem-solving orientation is another central principle of CTL. Learning activities are designed around real-life problems that require students to think critically, analytically, and creatively in finding solutions. This approach helps students develop higher-order thinking skills that are essential for addressing real-world challenges.

Student-centered and independent learning is also emphasized in CTL. Students are encouraged to take responsibility for their own learning process, actively participate in discussions, and develop independence in acquiring knowledge. Through group work and project-based learning, students build self-management skills and become more confident learners.

CTL also supports the development of social skills and moral values. Learning activities that reflect real-life situations often involve cooperation, honesty, tolerance, and responsibility. Teachers play an important role as facilitators and role models in instilling these values, ensuring that students grow not only intellectually but also morally and socially.

Recognition of student diversity is another essential principle in CTL. Students come from different social, cultural, and academic backgrounds, and these differences must be respected and accommodated in the learning process. Teachers need to adjust their teaching strategies to ensure that all students have equal opportunities to learn and develop according to their abilities and potentials.

Finally, the use of technology and diverse learning resources is an important component of CTL. Teachers are encouraged to integrate digital media, internet resources, educational software, and environmental learning sources to enrich the learning experience. The use of technology helps students access relevant information more easily and enhances interactive and engaging learning experiences.

Steps of Contextual Teaching and Learning (CTL) Strategy

The Contextual Teaching and Learning (CTL) strategy involves a series of systematic steps designed to ensure an effective and meaningful learning process. The first step is determining relevant and contextual learning objectives. At this stage, teachers formulate learning goals that align with students' needs and real-life contexts, focusing on competencies that can be applied in everyday life and are relevant to students' environments (Yuli & Indrawati, 2020).

The second step is identifying students' needs and potentials. Teachers conduct initial assessments to understand students' backgrounds, interests, experiences, and abilities. This information is essential to ensure that learning

activities are connected to students' real experiences and adjusted to their individual learning levels.

The third step is linking learning materials to real-life contexts. Learning content should be connected to real situations, problems, or needs experienced by students. Teachers may use daily life examples, case studies, or relevant current issues to make learning more meaningful and applicable.

The fourth step is using varied and interactive learning methods. Teachers implement approaches such as discussions, problem-based learning, simulations, role-playing, and case studies. These methods help students connect theoretical concepts with practical experiences in a more engaging way.

The fifth step is providing active and independent learning experiences. Students are encouraged to actively participate in learning activities that promote critical thinking, creativity, and problem-solving skills both individually and in groups. In this process, the teacher acts as a facilitator and guide rather than the main source of knowledge.

The sixth step is developing and applying contextual-based assessment. Evaluation should measure students' ability to apply knowledge and skills in real-life situations. Authentic assessment techniques such as portfolios, projects, presentations, and performance-based tasks are highly recommended.

The seventh step is providing feedback and reflection. After learning activities, teachers give constructive feedback and encourage students to reflect on their learning process and outcomes. This helps students identify strengths and weaknesses and improve future learning performance.

The eighth step is integrating technology and diverse learning resources. The use of digital tools, online platforms, and various learning materials enriches the learning experience and helps students better connect concepts with real-world contexts.

The ninth step is fostering students' motivation and interest. Teachers must create a learning environment that is engaging, enjoyable, and challenging so that students remain motivated and actively involved in meaningful learning activities.

The final step is continuous evaluation and improvement. Learning processes are evaluated regularly to assess the effectiveness of CTL implementation, and improvements are made based on the evaluation results to ensure ongoing enhancement of teaching quality.

The Role of Teachers in Contextual Teaching and Learning (CTL) Strategy

In the Contextual Teaching and Learning (CTL) strategy, the role of the teacher is highly vital and central in determining the success of the learning process. The teacher does not only function as a transmitter of knowledge but also acts as a facilitator, motivator, and guide in creating a meaningful and relevant learning environment. Teachers must be able to connect learning materials with students' real-life contexts so that students can understand and apply knowledge effectively (Utami, 2020).

As a facilitator, the teacher is responsible for guiding students in discovering, constructing, and connecting learning concepts with their own experiences. Teachers encourage students to actively participate, engage in discussions, and

carry out learning activities that are oriented toward real practice in their surroundings. This role requires teachers to create a conducive learning atmosphere that supports creativity and innovation among students (Rohman et al., 2022).

In addition to being facilitators, teachers also act as motivators who can stimulate students' interest and enthusiasm for learning. Within the CTL approach, teachers must demonstrate the relevance of learning materials to students' real lives so that learners feel encouraged and interested in the learning process. Teachers need to inspire students by showing that what they learn has direct benefits and practical applications in everyday life.

Furthermore, teachers serve as directors who guide students in planning and implementing context-based learning activities. They provide direction, support, and constructive feedback to help students develop their potential and skills optimally. In this role, teachers must be able to identify appropriate learning contexts and integrate various effective teaching methods.

Teachers also play an important role in managing and adapting instruction according to students' characteristics and their surrounding environment. They must analyze learning needs, identify real-world problems, and design relevant solutions at both local and global levels. This ensures that learning becomes more personalized, meaningful, and capable of improving learning outcomes.

In CTL implementation, teachers are expected to integrate various innovative learning methods such as discussions, case studies, simulations, and problem-based projects. Teachers must act as innovators who continuously develop their pedagogical and professional skills in order to create engaging and relevant learning experiences. This ability is essential for encouraging students to learn actively and independently.

Beyond instructional roles, teachers also function as fair and objective assessors. They must evaluate students' learning processes and outcomes comprehensively, not only in cognitive aspects but also in affective and psychomotor domains. This assessment should reflect students' ability to apply knowledge in real-life contexts and provide a complete picture of their competencies.

Equally important, teachers in CTL also play a role in developing students' character and moral values. Through learning activities connected to real-life situations, teachers help students internalize values such as honesty, responsibility, tolerance, and other positive attitudes. Teachers must serve as role models and create a supportive learning environment for character development.

The success of CTL implementation greatly depends on teachers' competence and dedication. Teachers must continuously improve their skills through training, professional development, and reflective practice. With strong competence and professionalism, teachers can create meaningful, relevant learning experiences that prepare students to face future challenges.

CONCLUSION

Based on the study and analysis conducted, it can be concluded that the

Contextual Teaching and Learning (CTL) strategy is an innovative approach that is effective in improving the quality of the learning process. By connecting learning materials with students' real-life contexts, CTL is able to enhance motivation, active engagement, and deep understanding of the subject matter. In addition, the implementation of this strategy also develops essential skills such as critical thinking, analytical thinking, and problem-solving abilities, which are highly needed in the modern era.

However, the success of CTL implementation cannot be separated from several supporting factors such as teacher readiness, adequate learning facilities, and support from the educational environment. Challenges such as limited resources and curriculum adjustments must be addressed through collaboration and appropriate strategies. With strong commitment and synergy among all stakeholders, the implementation of CTL can be carried out sustainably and can provide a significant positive impact on the quality of education, as well as produce learners who are prepared to face future global challenges.

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