



Application of Contextual Teaching and Learning (CTL) which Utilize Balinese Indigenous Insight in School Learning

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A B S T R A K T. Metodologi pendidikan modern menuntut siswa untuk menunjukkan kemampuan berpikir kritis, kreatif, dan kontekstual tentang lingkungan sosial budaya mereka. Namun, hasil Programme for International Student Assessment (PISA) tahun 2022 menunjukkan bahwa pencapaian literasi Indonesia masih rendah, sehingga diperlukan strategi pembelajaran inovatif yang relevan dengan kehidupan nyata siswa. Penelitian ini berfokus pada pertanyaan-pertanyaan berikut: (1) Bagaimana pemanfaatan Pembelajaran Kontekstual (PK) yang memanfaatkan kearifan lokal Bali di SD 5 Pemuteran? dan (2) Seberapa efektif penerapannya dalam meningkatkan efektivitas pembelajaran dan pembentukan karakter siswa? Tujuan penelitian ini adalah untuk mendeskripsikan dan menganalisis implementasi CTL yang memanfaatkan kearifan lokal Bali sebagai model pembelajaran kontekstual di sekolah dasar. Penyelidikan ini menggunakan metodologi deskriptif kualitatif dengan peserta yang terdiri dari guru, siswa, dan kepala sekolah. Wawasan yang diperoleh melalui penyelidikan, pengamatan, dan pencatatan, selanjutnya dievaluasi menggunakan model interaktif Miles dan Huberman. Hasil penelitian menunjukkan bahwa guru telah menerapkan prinsip-prinsip CTL seperti konstruktivisme, inkuiri, dan komunitas belajar, serta mengintegrasikan nilai-nilai lokal seperti *Tri Hita Karana*, *Menyama Braya*, dan *Tat Twam Asi* dalam pembelajaran. Integrasi ini membuat siswa lebih aktif, kritis, dan memiliki karakter sosial-spiritual yang kuat. Studi ini menyimpulkan bahwa penerapan CTL berbasis kearifan lokal Bali tidak hanya meningkatkan kualitas akademik siswa, tetapi juga menanamkan nilai-nilai budaya dan moral universal yang mendukung visi pendidikan karakter bangsa.

A B S T R A C T. Modern educational methodology demands students to demonstrate the ability to think critically, creatively, and contextually about their socio-cultural environment. However, the results of the Programme for International Student Assessment (PISA) in 2022 show that Indonesia's literacy achievement is still low, so innovative learning strategies that are relevant to students' real lives are needed. This research focuses on the following questions: (1) How is the utilization of Contextual Teaching and Learning (CTL) which utilize Balinese indigenous insight in SD 5 Pemuteran? and (2) How effective is its application in enhancing the effectiveness of instruction and character formation of students? The intention of the investigation is to describe and analyze the implementation of CTL which utilize Balinese indigenous insight as a contextual learning model in elementary schools. The investigation utilizes a qualitative descriptive methodology with participants consisting of teachers, students, and principals. The insights got through inquiry, observation, and record keeping, subsequently evaluated using Miles and Huberman's interactive model. The results of the study show that teachers have applied CTL principles such as constructivism, inquiry, and learning community, as well as integrating local values such as *Tri Hita Karana*, *Menyama Braya*, and *Tat Twam Asi* in learning. This integration makes students more active, critical, and have a strong social-spiritual character. This study concludes that the implementation of CTL based on Balinese local wisdom not only improves the academic quality of students but also instills universal cultural and moral values that support the vision of national character education.

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1. INTRODUCTION

Education in the 21st century demands that students have cognitive and social skills. They must also understand the subject matter, both of which can help them solve problems (Kahne and Bowyer 2017). In order for learning to be meaningful and relevant, modern education requires students not only to memorize information but also to be able to relate it to real-world situations. Education gives people the ability to bequeath, develop, and build culture and civilization for the next generation. The quality of education is very important for the progress and development of a country, because through education, people can be free from poverty (Dumont and Ready 2020; Hu et al. 2022). In order for learning to be meaningful and relevant, modern education demands that students not only successfully comprehend information but additionally be able to comprehend it with real-world situations. When receiving information from traditional learning models, which further suppress teacher presentation and memorization, students tend to become passive. As a result, their understanding of the concept became less broad. In contrast to Jean Piaget's constructivist theory of learning, which emphasizes that students' experiences and interactions with their environment shape knowledge to the maximum (Kraus et al. 2021; Simpson 2021). As a result, CTL is the solution.

Contextual learning (CTL) is a means of learning intended at assisting individuals find insights and significance from the subject matter that they are engaged in by relating it to social, cultural, and personal aspects of daily life. The preliminary results gathered from the 2022 International Student Assessment Program (PISA) show that Indonesian students have an average reading literacy score of 371 points, lower than the average from the OECD of 476 points, for math Indonesia's scores of 379 points compared to the OECD average of 472 points, while for science Indonesia scores 382 points, while the OECD estimated is 485 points (OECD,2023). Only 25% of Indonesian students reach the minimum level in reading literacy (OECD average 74%), while 34% reach the minimum level in new science literacy (OECD average 76%). This data shows that innovative learning strategies that are more contextual and appropriate to the needs of students are essential (Argina et al. 2017). A contextual learning approach (CTL) can help students achieve their goals. In other words, the teacher's job is only to implement effective teaching strategies rather than just conveying information directly to students (Belur et al. 2021). Teachers only need to manage the class as a group working together to find new ways to teach.

Contextual Teaching and Learning (CTL) It is considered an effective strategy because it emphasizes the relationship between the subject matter and the real situation that students are experiencing. CTL emphasizes that learning becomes more meaningful. CTL emphasizes that learning becomes more meaningful. In addition, CTL learning is centered on understanding theory and application in daily life. When cultural values are internalized in students' lives, CTL can work better when combined with local wisdom. This is due to the fact that these values have the ability to relate academic concepts to real-world situations (Kuijk, Wijnsma, and Bosker 2021). In Bali, it is the notion of *Tri Hita Karana*, which is the harmony of interpersonal interactions with God (*parahyangan*), other individuals (*pawongan*), and surroundings (*palemahan*), can be included in the learning of local Balinese wisdom. These values are connected to various fields, such as cultural arts (spiritual values in art), science (human relations with the environment), and PKn (social relations and solidarity). The *subak gotong royong* system can teach, social cooperation, and ecosystem concepts, irrigation mathematics and ecosystem concepts. *Menyama Braya*'s values that emphasize brotherhood can also be used as a foundation for project-based learning that requires teamwork. The application of *Tri Hita Karana* values in the elementary school curriculum can improve students' understanding of concepts, attitudes, and character. This shows that CTL which is utilizing local Balinese wisdom can result in more efficient and rewarding learning.

However, most CTL research still highlights cognitive aspects in certain subjects, while the study of CTL integration utilizing Balinese indigenous insight is still limited. Focuses more on the development of teaching materials and illustrations, not how CTL is applied in the classroom. Integrates local values in social studies learning but does not use the CTL learning model in full. In addition, the insertion of local wisdom in IPAS has begun to be carried out in the era of the Independent Curriculum, but no field research has been found in rural elementary schools that qualitatively explores the CTL process utilizing indigenous insight. SD (elementary school) 5 Pemuteran is located in an area with a strong local culture, so it is an important location to study how the application of CTL utilizing Balinese indigenous insight is applied in daily learning practices. This elementary school is located in an area with a strong local cultural richness, but cultural values are still not applied in learning. Therefore, this study is important to see how the application of CTL utilizing Balinese indigenous insight is applied in learning practices (Meixi et al. 2022).

Therefore, the researcher aims to: (1) Describe the application of Contextual Teaching and Learning (CTL) based on Balinese local wisdom in Sekolah Dasar 5 Pemuteran, as well as: (2) Analyze the accomplishments of the application of CTL utilizing Balinese indigenous insight in improving the quality of learning and character formation of students. Thus, this research is intended to make a philosophical and operational contribution in developing the application of CTL utilizing Balinese indigenous insight in learning in elementary schools (Collier and Stewart 2022).

2. METHOD

Which utilize Balinese indigenous insight the results and discussions demonstrate that the implementation of contextual learning (CTL) in SD Negeri 5 Pemuteran can enhance the contextual learning process and is focused on

character development. As a result, researchers used a descriptive qualitative approach to study the meaning of CTL, procedures, and challenges in elementary schools that have a rich local culture. That qualitative research presents data in the form of detailed descriptions of the natural setting and aims to comprehend social processes holistically based on the opinions of the participants. Data is collected purposively from relevant, credible, and up-to-date reports of educational institutions, as well as national and international journals ([Lobe, Morgan, and Hoffman 2020](#)). The researcher chose the research location at SD Negeri 5 Pemuteran, Buleleng Regency, Bali. This location was chosen purposively because this school is in an area with strong indigenous insight values, although it has not been fully embedded in the school curriculum. Both primary and secondary data are used in the study. In-depth interviews with teachers, students, and principals as well as firsthand observation of the CTL learning process, which is grounded in native indigenous insight, were used to gather primary data. Finding out how CTL implementation is perceived and what obstacles exist is the aim of this interview ([Macfarlane 2022](#)).

In the meanwhile, secondary data was gathered from a variety of sources, including activity reports, school curricula, and pertinent findings from earlier studies. The researcher uses three primary approaches to gather data: interviews, observation, and other methods. Teachers' and students' perceptions of the efficacy of contextual learning which utilize indigenous insight were monitored through interviews and observation of the application of CTL in the classroom. In qualitative research, the combination of various data collection methods is very important. The collected data was then analyzed interactively using an analysis model, which included the first several stages, namely data reduction, data presentation, and conclusion. To make the data relevant to the research objectives, the process of selecting, focusing, and simplifying the raw data is carried out ([Miller, Kral, and Ortiz Aragon 2020](#)). The research process was carried out sequentially, starting from preparation, initial data collection, field investigation, data analysis and reduction, and preparation of final reports. After determining the subject and location of the research, the researcher creates research tools, such as observation sheets and interview instructions. After that, the data collection stage began with initial observation to gain an initial understanding of the learning situation at SD 5 Pemuteran. At this stage, the researcher conducts in-depth interviews, conducts direct observations in the classroom, and collects relevant documents ([Miller et al. 2020](#)).

The initial step of this research begins with identifying the problems and formulate the focus of the study which includes, namely: 1) Explain how Contextual Teaching and Learning (CTL) is used, which utilize indigenous insight in SD 5 Pemuteran, and: (2) Examine how well CTL, which is founded on Balinese local knowledge, may be applied to raise student learning and character development. The researcher critically compares the results of global and local research so that the resulting synthesis reflects the empirical conditions experienced by teachers and students in Indonesia. Therefore, two main benefits are expected from this study, namely theoretical contributions in enriching the study of the application of the CTL model in the context of education which utilize indigenous insight, as well as practical contributions for teachers and elementary schools in Bali in developing learning that is contextual and in harmony with regional cultural values.

3. RESULT AND DISCUSSION

Result

The place of this research is SD Negeri 5 Pemuteran which is located in Gerokgak District, Buleleng Regency, Bali Province. This study aims to explain and assess the use of contextual learning (CTL) based on Balinese local wisdom in the educational process. The findings of the evaluation and the interviews with the grade IV and V instructors demonstrated that teachers had grasped the idea of CTL as a method of instruction that linked the subject matter to the students' everyday lives. However, the implementation of CTL still does not include all of its components. Although some teachers have tried to incorporate elements of local culture *such as Tri Hita Karana, Menyama Braya, and Subak* into thematic learning, this implementation still occurs spontaneously and has not been systematically designed in the Learning Implementation Plan (RPP). Learning at SD 5 Pemuteran uses an active approach. For example, in science lessons, teachers associate ecosystem material with traditional agricultural methods that use the subak system. In the civic lesson, the teacher explained the concept of mutual cooperation by giving an example of the activities of the ngayah community in the temple. The results of the observations showed that students were more engaged in discussions, more actively asked questions, and easier to understand concepts when local context was included ([Berkovich and Hazan 2022; Ivemark and Ambrose 2021](#)). CTL helps students connect the subject matter to real-world situations, resulting in more meaningful learning. In addition to observation, the results of interviews with students, show that students feel more interested in learning when lessons are associated with the culture and daily life of their environment ([Fajriah 2017](#)). They have an easier time understanding ideas because they can see the relationship between classroom lessons and community practice, that the motivation, learning outcomes, and social character of elementary school students in Bali can be improved through learning that uses the local cultural context.

This has not been the focus of much research before. In terms of methodology, this study not only describes cultural practices in learning, but also utilizes simulation methods as an interactive tool to test the effectiveness of learning strategies in increasing student activity and participation. Thus, this research presents novelty both in terms of theory, cultural context, research location, and methodology used. The study's findings demonstrate that using CTL grounded in Balinese local knowledge improves students' learning outcomes and process. Especially to foster a sense of

togetherness, social responsibility, and an attitude of caring for the environment. However, teachers still face problems. These include time constraints, the absence of a comprehensively available CTL-based teaching tool, and a lack of specialized training on integrating local wisdom values into the CTL model (Edovald and Nevill 2021).

Discussion

The Use of Balinese Local Knowledge Based Contextual Teaching and Learning (CTL) in SD 5 Pemuteran

Constructivism, inquiry, questioning, learning communities, modeling, reflection, and genuine assessment are some of the key components that have been incorporated into the CTL implementation at SD 5 Pemuteran, based on the findings of interviews and observations. However, the implementation is still not optimal. Teachers attempt to achieve contextual learning by relating the subject matter to the everyday experiences of the pupils in Pemuteran village. For example, when teachers teach science about water cycling, they associate it with the *subak* irrigation system in the surrounding environment. This method makes it easier for students to understand ideas because they can see how the process is happening in the field, that CTL emphasizes the importance of the connection between the course material and the students' own circumstances in order to give learning purpose (Marianno et al. 2022; Tsang 2020).

Furthermore, it has been demonstrated that the CTL model may enhance students' critical thinking abilities via education. They are grounded on actual problems and contextual. The implementation of CTL in SD 5 Pemuteran also shows the efforts of teachers in integrating the values of indigenous insight, especially the value of *Tri Hita Karana*. In learning activities, teachers invite students to practice a harmonious relationship with God (*Parahyangan*) through prayer before studying, with fellow humans (*Pawongan*) through group work and class discussions, and with nature (*Palemahan*) through activities to maintain the cleanliness of the school environment. The integration of these values is in accordance with the concept of Hindu education which emphasizes a balance between spiritual, social, and indigenous insight. So that the implementation of CTL which utilize Balinese local wisdom at SD 5 Pemuteran has gone well even though it is not fully optimal. Teachers already understand the basic principles of CTL and try to apply them by linking local cultural values, but improvements are needed in learning planning so that each component of CTL can be integrated more systematically (Fenwick and Edwards 2016; Malcolm 2021).

Research shows that the use of CTL which utilize indigenous insight has proven to be effective in enhancing the standard of education, particularly with regard to desire for studying, student participation, and character building. The results of the observation showed that when teachers used the local cultural context in learning, students became more active, more courageous to give opinions, and better able to work together with friends and groups (Chang and Hall 2022). For example, students are asked to examine the value of mutual cooperation in the *subak* system and relate it to the concept of social solidarity in Pancasila when the teacher explains social studies material about the social life of the community. Students that use this approach not only comprehend the theory but are also able to apply it to actual circumstances, the implementation of CTL based on local culture is able to improve learning outcomes while forming the character of caring for the environment in elementary school students (Hudde 2022). In addition, that CTL makes teachers play the role of facilitators who guide students to learn actively, creatively, and independently. In addition, the local values integrated in CTL are very helpful in the formation of student character (Fisher 2021; Jacobson, Levin, and Kapur 2019). The value of *Tat Twam Asi*, which means "I am you", is the basis for ethical reflection after learning. On the other hand, the value of *Menyama Braya*, which means brotherhood, is applied in group work and mutual cooperation activities. This is in line with the research on Hinduism that Atmanastuti self-awareness to think, speak, and do good to others must be developed in education.

By integrating these values, learning at SD 5 Pemuteran is not only academic but also moral and spiritual. CTL which utilize indigenous insight is effective in improving the quality of learning and character formation of students. This can be seen from the increased enthusiasm, positive interaction, and ability of students to relate academic concepts to the cultural values they live by. To meet the demands of education in the twenty-first century, instructors also started to change from being information hubs to learning facilitators.), including *Tri Hita Karana* values into the primary school curriculum might help pupils comprehend ideas and personalities better. However, this research makes a new contribution by showing how CTL and Balinese *Hindu* values can be integrated simultaneously in the context of basic education in rural areas, thus providing a *universal* and applicative indigenous learning model. In addition, the application of CTL which utilize indigenous insight is not only relevant to improve academic quality, but also has the potential to become a value-based character education model spiritual and cultural aspects of the archipelago that can be widely applied in Indonesia.

4. CONCLUSION

The utilization of contextual learning (CTL) utilizing Balinese indigenous insight at SD Negeri 5 Pemuteran has been proven to be able to increase instructional effectiveness and shape students' character, both spiritually and socially. Integrating values from cultures including *Tri Hita Karana*, *Menyama Braya*, and *Tat Twam Asi* makes learning more meaningful and relevant to students' daily lives. The teacher acts as a facilitator, encouraging active student participation, critical thinking, and reflection in the learning process.

Although the results of this study provide a significant initial overview of the implementation of indigenous insight-based CTL in elementary school learning, further studies with a broader scope are still needed to strengthen the findings and explore other variables not yet revealed in this research.

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