



Cultural Identity, Education, and Communication for Sustainable Development in Indonesia

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Abstract. General knowledge should not be the sole thing taught in higher education. Students' comprehension of cultural values through an ecological approach will help them develop a viewpoint that considers the ecosystem and long-term sustainability in addition to perceiving natural resources as objects of exploitation. Online games with local cultural content are one type of learning media that may be used to teach cultural values. Working together with local and international online game developers can help people establish local wisdom values, which are supposed to be the foundation for their attitudes and ways of perceiving social reality. In order to help young people develop their creative thinking abilities and have an impact on sustainable development, this study will examine online games with local cultural material that can be utilised as a communication tool and to teach cultural values. The Dakon, Lokapala, and Minecraft Hardcore Borobudur series are three categories of online games that incorporate local culture. The research technique and method selected is a qualitative approach using a case study research method. According to the findings, each game incorporates several cultural values, like the importance of precision, solidarity, and honesty. Online games can also help younger people develop strong character traits, such as critical and creative thinking and cross-cultural cooperation. In conclusion, for digital platforms to become a medium for culture-based character learning, a solid partnership between families, schools, campuses, and communities is required.

Keywords: game online, video game, local culture, sustainable development, young generations

1. Introduction

Sustainable development is the main agenda of the Indonesian Government to meet the needs of current and future generations through a long-term development strategy that does not damage the environment, does not deplete excessive natural resources, and does not cause social inequality for the welfare of present and future generations (1).

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One that plays an important role in the success of sustainable development is the preservation of the cultural environment and local wisdom, which can reflect the harmonious relationship between humans and nature. In natural resource management, local wisdom guides the community in utilizing and preserving the environment sustainably. Because one of the principles of local wisdom is related to the perspective of life, values and culture, ideology that manifests in daily behavior and ethics, as well as how humans relate to their environment based on religious guidelines or cosmic awareness (2).

In the context of education, especially higher education, students' understanding of cultural values that tend to be ecocentric and biocentric allows for a deep ecological approach. People do not only see natural resources as objects of exploitation but also consider the ecosystem and long-term sustainability. Community development that focuses on local wisdom and cultural ecology will bring extensive benefits to education, which is able to provide meaning to human life. Education can encourage Indonesian people to be more 'colorful' in the future by forming independent individuals and creating sustainable welfare (3).

The above phenomenon raises questions in this research, namely: how to teach cultural values in a society with economic independence that does not care about the surrounding environment? Therefore, culture is considered important in teaching environmental values to the community and integrating social, economic, and environmental aspects in sustainable development. One way to educate young people about cultural values is through modern technology and online games that contain local cultural content. This form of collaboration with online game developers, both local and international, able to introduce and build local wisdom values in the minds of individuals who are believed to be the basis for their attitudes and thoughts in viewing social reality. Activities that utilize local wisdom and develop sustainable practices rooted in local culture are believed to be able to provide long-term benefits for the people of Indonesia.

Video games emerged alongside computers in the 40s-50s, where games were used for research purposes and to draw public attention to the capabilities of computers. At that time, computers were still expensive, making the development of video games slow. However, the invasion of televisions used for video games marked the beginning of the gaming industry, which then pushed the development of games to the next stage, with high-quality graphics, the ability to stimulate the senses of players, and affordable prices to be privately owned and played from home (4). After some progress and stagnation, digital technology, the internet of things, and data analytics have driven tremendous development in the world of the gaming industry, especially in terms of how games are produced and monetized (4).

Cultural Identity

Cultural identity has often been equated with national identity, which is the result of the creativity of the Indonesian people to strengthen their sense of unity. National pride is instilled in the form of a cultural identity that is inherent in every behavior of every citizen's life. It is this identity and character that distinguishes a nation from other nations. In the Indonesian context, the values that build cultural identity are courtesy, respect, friendly attitude, and cooperation (5). These values must be owned by all children of the nation so that they have confidence in their own culture and then spread it to the global community. They can do it directly or utilize information technology, such

as social media or conventional media. With the interaction that occurs with other cultures in international relations, confidence and the strengthening of local cultural identity will enrich and strengthen their own cultural identity.

According to (6), cultural identity is divided into essentialist and non-essentialist culture. In an essentialist culture, people reject the influence of outside cultures to maintain their cultural identity. Meanwhile, non-essentialist cultural identity considers culture as an unfinished product, never stopping in its formation process and becoming a structured representation. On the contrary, in its development, relations between countries resulted in cultural assimilation, which is understood as a dialectic of new values with old values that dominate each other. This results in the homogenization and neoliberalization of existing local cultural values. This situation will result in a change in values because people are more concerned with modern values while ignoring transcendental values (7).

Knowledge as Sustainable Development

Knowledge plays an important role in the implementation of sustainable development. The concepts of knowledge and sustainable development are strongly interconnected and form an important collaboration for a better future. This is because sustainable development itself is a development paradigm that aims to meet the needs of the current generation without harming future generations, both in economic, social and environmental terms. Therefore, knowledge, in various forms and sources, plays an important role in determining whether sustainable development will run smoothly or fail (8).

The forms of knowledge that are useful in sustainable development also vary, including: 1) Scientific knowledge, which is knowledge generated through scientific methods to provide an understanding of natural processes, the impact of human activities and potential technological solutions (9); 2) Local (indigenous) knowledge, which is traditional knowledge held by local communities, gained from generations of experience and adaptation to the surrounding environment. This knowledge is important in understanding local ecosystems and resources (10); 3) Policy knowledge, which is knowledge gained from policy and decision-making processes such as policy analysis, program evaluation and case studies, as to be able to design and plan effective policies for sustainable development (11); and 4) Practical knowledge, which is knowledge gained from direct experience and practice such as sustainable agriculture skills or water resource management.

The various knowledge above also plays an important role in the decision-making process for sustainable development. According to a World Bank report, ignoring local knowledge can lead to policies that are not appropriate to the local context, thus failing to achieve goals. However, relying solely on scientific knowledge without considering the social and cultural context may result in solutions that are not accepted by society. It is a fact that sustainable development is closely related to innovations supported by scientific and technological knowledge. However, innovation must be sensitive to the social and cultural context to ensure its acceptance and sustainability (12).

Games as Learning Media

Research in recent years has shown that games can be an effective learning medium, increasing student engagement and helping to develop important skills such as problem-solving and collaboration (13). Learning with video games can also improve math comprehension and help students learn new cultures (14).

In the context of cross-cultural learning, games have become so widespread that they are considered part of mass media with storytelling and representation methods. Playing games affects the way people think and collaborate across cultures, allowing players to acquire cultural knowledge and develop intercultural literacy, develop sociocultural literacy, cultural understanding in different geo-political spaces, reinforce or weaken stereotypes, and to some extent also facilitate intercultural skills (15). This suggests that games played with people from diverse backgrounds help players to develop 21st century skills such as critical thinking, creativity and cultural understanding. While research has shown the effectiveness of games as a learning medium, there are still many skeptics, highlighting the importance of considering cultural context in game designed to ensure relevance and effectiveness. It is important to realize that games are a technology that allows for a variety of cultures and learning to be created in a diverse manner, through a process of dissemination that occurs much like the invention of the printing press, television and film. In this sense, it can be seen that games are part of a technology that expands cultural processes in an accessible and participatory way. Games enable people to communicate with each other more easily, share cultural experiences through social networks and online communities, and encourage the new form of cultural expression and creation, as new cultural genres and formats emerge, leading to cultural diversification (14).

Problem Formulation

This research aims to analyze how the practice of online games containing local culture as a means of learning cultural values to young generation people in honing critical and creative thinking skills so that they can have an impact on the surrounding environment.

2. Research Method

This research uses a qualitative research approach with a case study research method to examine the phenomenon of the widespread use of local cultural content in online games in Indonesia. This research aims to analyze locally charged online games used as a means of communication and learning cultural values to the younger generation. The data collection method used in the study was participant observation, where researchers conducted the culturally charged game directly in the period from February 15 to March 15, 2025. In addition, researchers also conducted document studies through statistical study reports from trusted sources and multimedia data such as game tutorial videos on YouTube.

The data analysis in this research was carried out by categorizing online game data based on themes relevant to the selected phenomenon. Furthermore, researchers conducted a video game content analysis to find themes of cultural values that appeared in each game. Furthermore, data triangulation was carried out by comparing data from various sources to get a more comprehensive picture of the cultural values contained in each of the selected games. For this research, 3 online games are the subject of research, namely Dakon game, Lokapala game and Borobudur series Hardcore Minecraft game.

These three games were chosen because they are considered to have characteristics that are very close to Indonesian local values.

3. Result And Discussion

3.1. Result



Figure 1. Dakon Game
Source : Google Play Store

As the name implies, this game makes the traditional game in the form of a digital version. The game, created by NxtPro inc in April 2021, has been downloaded more than 50 thousand times. This traditional game in Java is better known as Congklak, Dakon, Dhakon or Dhakonan. Apart from Java, this game is also known in almost all parts of the archipelago. In Sumatra, which has a Malay culture, it has a different name. For example in Lampung, people call it a Slow Boom, in Sulawesi it is better known as Mokaotan, Maggaleceng, Aggalacang or Nogarata.

However, the rules of this game are not much different. Players fill each small hole with the same number of seeds. Players take turns taking all the seeds from one of their holes and distributing them one by one to the next holes in a clockwise direction. The object of the game is to collect as many seeds as possible in one's own big hole. The Dakon game will end when there are no more seeds to collect. In the online game version, Dakon offers opponents with computer AI from easy and difficult levels. In addition, this game also offers games with fellow friends online or offline.

In playing Dakon, players acquire numeracy (counting the number of Dakon seeds that rotate according to the acquisition of each player), cultural knowledge (spread in several regions in Indonesia with different names of Dakon), social science, and aesthetics (beauty) produced by wood carvings on the Dakon board. By coming in the form of an online gaming platform that reaches the younger generation, the game can bring the local cultural values that exist in Indonesian society closer to the younger generation. In local culture, it turns out that there are values for strategy and numeracy, teaching honesty and sportsmanship, fostering a sense of responsibility and patience, and teaching that if you get sustenance, you don't spend it all at once.

Historically and culturally, Dakon is a popular game among children. Before the era where communication technology, this game was often played by children when gathering with their friends. Although it can only be played by two people, but usually his or her friends will provide mutual support by giving suggestions on which hole containing Dakon seeds will be taken to win this game.

Although only a game, this Dakon game is able to teach the value of solidarity and support for fellow friends through providing support or helping to choose which Dakon seeds to take. If associated with a situation that occurred in the past, this congklak game

is very popular with the people and is often played at any time when people need entertainment. As is known, various traditional games emerged at a time when this game has long developed in Asia, especially in the Malay Region, this Congklak game is considered the oldest game in the world. The game of congklak also has a simple philosophical value. The number seven, which is the number of holes for each player and the number of seeds in each hole, means the number of days in one week. This can be interpreted that everyone has the same amount of time in one week, which is seven days.

When a seed is taken from one hole, it fills another hole. The meaning at this stage is that each day lived will affect the next. Seeds are taken and then fill the other holes, meaning that life must give and receive, not just give or receive. This game also trains patience because it is used to wait for your turn to play. The game also trains the value of honesty, where when players take seeds in one hole and drop them in the next hole, other players do not know whether the opposing players take all the seeds and drop them one by one in each hole. The game is also agreed, as much as possible, not to cheat because the winner is the first participant who does not have a single seed in each hole.

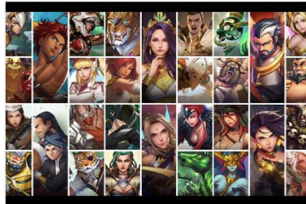


Figure 2. Lokapala Game
Source : Google Play Store

Lokapala is a Multi Player Battle Arena (MOBA) game where two teams of 5 players each compete to destroy the opposing team's main base while defending their own. This adrenaline-pumping game brings to life the richness of Indonesian mythology in an epic battle format where players can choose a ksatriya character and engage in team battles. Based on information on the Google Play Store, to date the Lokapala game has been downloaded more than 1 million times.

Lokapala is an online game made by a local Indonesian company, Antapura Studios, that introduces Indonesian culture outside Indonesia. The game encourages the formation of new communities in the MOBA genre by presenting 32 Indonesian ksatriya characters, building cultural interactions in the story and online experience in the game. Lokapala was developed through research into the leadership values of Indonesia's archipelago culture that dates back to the 6th century. In particular, the Lokapala research team took the leadership values raised in the game from the reliefs of the protector of the jagad that have been carved since 1200 years ago along the outer reliefs of Borobudur Temple and Prambanan Temple. In the Lokapala game, the Astabrata leadership values inspire the eight Ksatriya values. The leadership values represented in the ksatriya character include: (1) Vayu: dedication and responsibility in carrying out duties; (2) Varuna: honesty and sincerity in carrying out duties; (3) Surya: integrity and discipline; (4) Chandra: hopeful and knowledgeable; (5) Indra: honor and loyalty; (6)

Agni: courage and persistence; (7) Kubera: humility and modesty; and (8) Yama: justice and truth (16).

Lokapala as a MOBA game that integrates Nusantara-Indonesian cultural elements, offers a unique experience to learn and understand Indonesian culture, supporting cross-cultural experiences with a focus on elements that support historical understanding and cultural literacy (15). Lokapala emphasizes cultural representation through its local hero or ksatriya characters and storyline. Each Ksatriya has a background story rich in mythology and history.



Figure 3. Minecraft series Hardcore Borobudur Game
Image Source: YouTube

Minecraft is a video game created by Swedish Markus Persson of Mojang Studios on November 18, 2011. It is a sandbox type video game, that allows players to create, alter, and destroy areas of the game. It is an 'open-ended game,' meaning that only the player knows what the journey and ending of the game will be. In this game, players can create buildings through blocks generated from trees, soil, and rocks, which are attached to create structures. The video game is similar to a Lego game but for the computer world (17).

According to the New York Times, Minecraft is not really a video game, but it is a destination, a technical tool and a culture all rolled into one. Minecraft is like a world, and players are its creators. As of 2019, more than 100 million registered players play Minecraft. This makes it the 3rd best-selling video game in history after Tetris and Wii Sports. Three years after its launch, Minecraft was snapped up by Microsoft for US\$2.5 billion (18). As of 2022, Minecraft still holds the number one spot as the world's #1 popular game with the most sales. The game sold more than 238 million copies across all platforms such as PlayStation, PC, and Android and iOS phones (19).

The game has a high educational and creative value because players will search for detailed information about the object they want to create through internet forums. This causes interaction between players who are looking for answers and those who know more about the problem. This knowledge transfer process is believed to foster creativity in players. Concerning culture and history, Minecraft has been recommended as a learning tool in the classroom, as children can re-create past lives and use them in the classroom to learn about culture. One of them is through the game of building Borobudur Temple.

3.2 Discussion

Education based on cultural values will be able to shape the character of individuals who can adapt and make a positive contribution to the complexity of global challenges ahead. This research highlights the development of synergy between local cultural values and learning concepts for the realization of sustainable development. In it, there is

a need for a deep understanding of traditional cultural values as the main key to designing strategic steps in community development. The application of local culture through the application of local cultural values, one of which is through locally charged games, can build a strong moral foundation of society, create economic sustainability, and knit balanced social relations (20).

For primary and secondary education students as well as students in higher education who like to play games with local cultural content, it will indirectly build a strong strengthening of local cultural identity in themselves. Because he is not only playing but also trying to know the cultural values contained in the game and trying to understand the meaning and philosophical meaning in it. After understanding it, he will try to remember it in his mind and as much as possible, implement it in his daily life, including when he makes important decisions in his life. Knowledge of these cultural aspects will sharpen his or her skills of thinking to be more critical and creative thinking skills when looking at a problem. As a result, the decisions made are much more mature because they consider many things from various points of view. With the wisdom of its decision-makers, the country becomes more secure because the development ... carried out is oriented towards aspects that maintain sustainability.

In this case, locally flavored games can represent a non-essentialist cultural identity because they are considered to be in process all the time. The collaboration between technology and local culture can present a structured representation of a new way to learn local culture for the young generation. This is needed as an effort to preserve local culture in the midst of the onslaught of foreign cultures that enter Indonesia and become a trend among the younger generation. With globalization, the dialectic that arises is how to keep foreign culture from dominating and causing national culture to become extinct. If this happens, changes in social values in society will also experience a shift.

Local (indigenous) knowledge or traditional knowledge owned by local communities, which is obtained from hereditary experiences and adaptation to the surrounding environment, can gradually erode and disappear. As a result, the decision-making process is threatened by the presence of various decisions that are only oriented towards results. When globalization and capitalism are praised in such a way without considering the local context, when technological innovation is glorified without considering social values, the decisions taken by decision makers have the potential to fail in achieving their goals. As a result, sustainable development is threatened, and the current community and future generations will experience the impact (14).

4. Conclusion and Recommendation

From the explanation above, online games with local cultural content help shape the mindset of young people to be more critical and creative. Its presence not only functions to entertain as a game, but also brings values passed down from the past to the present through modern technological packaging, which can be accepted by the younger generation. As a means of communication and learning, games that are closely related to storytelling and representation methods in each of their packages are considered capable of influencing the way individuals think, create and collaborate across cultures. Because there is an element of finding out more about the culture contained in the game itself, allowing players to gain cultural knowledge and develop their respective intercultural literacy.

However, not only does it bring benefits to individuals, the existence of this local cultural game also has collective benefits, especially through the role of parents and educators (teachers or lecturers). Collaboration between schools, campuses and families in shaping the character of the younger generation is shared homework. Through games played together, players can communicate with each other more easily, share cultural experiences through social networks and online communities that are formed, and encourage new forms of cultural expression and creation, which can be seen from the birth of new cultural genres and formats, thus encouraging cultural diversification. By providing wider access to cultural values, technology can indirectly build a global network that supports social welfare. Technology that meets the needs of character education must continue to be developed and implemented. Through various games with local cultural content, digital platforms can become a medium for learning character based on culture.

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