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**Leni Anggraeni**   
Universitas Pendidikan Indonesia, Indonesia

**Idrus Affandi**   
Universitas Pendidikan Indonesia, Indonesia

**Dinn Wahyudin**   
Universitas Pendidikan Indonesia, Indonesia

**Sandey Tantra Paramitha**   
Universitas Pendidikan Indonesia, Indonesia

**Muhammad Gilang Ramadhan**   
Universitas Pendidikan Indonesia, Indonesia

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## Optimization of the Board Game as a Platform for the Concept of Peace Education: A Survey Method Study

Leni Anggraeni, Idrus Affandi, Dinn Wahyudin, Sandey Tantra Paramitha, Muhammad Gilang  
Ramadhan

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### Abstract

The implementation of peace education in the university environment has not yet found the right technical implementation, so the main goal in peace education has not been achieved, especially the application in the university environment. Therefore, this research aims to determine the general perception of board games as a media of peace education for students. This study uses a survey method collected from a representative sample of students from three different universities. The sampling technique in this study uses purposive sampling aimed at students who have courses in which peace education is integrated. The research locations this time are the Universitas Pendidikan Indonesia (UPI), Universitas Padjadjaran (UNPAD), and Institut Teknologi Bandung (ITB). This study indicates that students are very enthusiastic if this board game becomes a platform for delivering peace education in the student environment. This study concludes that students agree with the concept of delivering peace education through board game media.

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### Introduction

In implementing knowledge transfer in the campus environment, the learning environment factor greatly influences the education that students or students will obtain. An effective learning environment will develop a good, calm, and comfortable atmosphere, and education will influence the development of material values, aesthetics, and authentic engagement naturally formed by the environment. Therefore, the environment is one of the supporting factors to form good student learning attitudes (Svardal et al., 2020). However, if it is seen based on observations of conditions in the field that a good learning environment is rarely found anymore due to unfavorable environmental conditions, one example is the emergence of disputes between peers. The dispute arises because of the incompatibility of students between their peers, causing conflict through bullying behavior, conflict, and violence in the social climate of the school or campus can harm the learning process of students and students.

Based on the phenomena, efforts are needed to anticipate and handle and resolve conflicts and bullying

problems that occur among students, especially on campus. According to Cunliffe (2017), one solution is through peace education as a medium for developing the right knowledge, skills, and dispositions in building peace effectively and sustainably. Currently, scientific studies related to the implementation of peace education are still limited, especially topics that focus on technical and implementation in the educational environment. Given the importance of peace education being understood by students, studies related to the implementation of peace education must continue to be developed to solve problems among students.

The current condition is that the implementation of peace education has not yet found the right, effective, and optimal technical implementation, so the main goal of peace education has not been achieved, especially in the university environment because the application of peace education in higher education is still limited to education which is integrated with implicit courses (Rosman et al., 2019). It means that peace education cannot stand alone as a scientific study conveyed explicitly among students. The application of peace education in student circles is one of the right solutions in minimizing and overcoming conflicts and bullying behavior. Peace education contains content in increasing students' understanding of interpersonal relationships, understanding their socio-cultural environment, and growing legal awareness of their actions.

Students who are assessed as agents of change must, of course, understand and have a soul in instilling moral values that support the creation of peace in society. Universities that are the environment for students have a role in line with their role as educational institutions whose task is to grow and deepen the love for the homeland, strengthen the spirit of nationalism, and a sense of social solidarity. National education functions to develop capabilities and form a dignified national civilization in educating the nation's life, and has the aim of making people who believe and fear God Almighty have a noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic citizens, and be responsible (Law Number 20, 2003). It is the basis that many things can create justice and peace by creating a sense of security in economic access for everyone regardless of social class, access to public health, security in politics, education, and safety in public spaces. The value of higher education as a forum for knowledge transfer, especially education, will be a way to peace, through values, attitudes, practical actions to learn how to create peace without violence and ensure that all humans live side by side safely and comfortably (UNESCO, 2019). That way, universities are the key to creating peace among the people.

Transferring peace education can be started by inserting it into materials in universities. The subject matter given is in the study of ethnic and religious peace, and if it is not given in separate course material, it will be combined in a discussion of a particular subject. Based on this policy, the implementation of peace education for students continues to be improved through various forms and types of education, including the need for a comprehensive approach and utilizing multi-media and multi-methods in the development of peace education, especially in universities.

Learning media as a knowledge transfer platform among students continues to develop. One of them is through game media that make students more interested in the learning process because it is fun and not monotonous. There are many game concepts with values that positively impact those who play them. One of them is the

board game, which is popular among children, teenagers, and even college students who are still very strong in the conditions of the playing environment. Through this board game media, it is hoped that it can be one of the solutions in the technical delivery of peace education among students.

The game is a form of expression of human ludic nature. The game is also needed and serves as a tool for entertainment, recreation, learning, and intentional or unintentional behavior modification (Connolly et al., 2012). Games provide fun, passionate engagement, structure, motivation, ego gratification, adrenaline, creativity, social and emotional interaction, and satisfy the human need to learn (Prensky, 2001). Game-based learning as a broad category has made significant strides over the past ten years and is emerging as a powerful instructional tool that positively influences student learning. Several empirical studies that evaluate the impact of using games in various disciplines such as mathematics, science, language, geography, and computer science, show positive results in terms of student motivation and learning effectiveness (Klawe, 1999; Papastergiou, 2009; Rosas et al., 2003; Virvou et al., 2005). Playing games positively impacts brain activity, stimulates retention, and engages players towards more effective cognition than more traditional instruction (Wouters et al., 2013).

Today there is a growing need for teachers to help students engage with learning and keep them motivated. To do this, teachers and adults need to understand the importance of games in learning and use game-based teaching and learning. Games have recently become increasingly important in formative action, resulting in the emergence of the theory of "Ludic epistemology," which aims to identify ways to encode knowledge in the form of games and shape knowledge acquisition processes such as the play process (De Castell, 2011). Because games are goal-oriented, they often increase motivation and provide trial and error opportunities that help students develop problem-solving and critical thinking skills (McGonigal, 2011). One of them is a board game.

Board Games is a tool capable of providing hands-on skills and knowledge development for people of all ages in all subjects. Well-designed games create an engaging, non-threatening, yet competitive classroom atmosphere. While playing games, learners focus on content and reinforce and apply to learn (Treher, 2011). A growing body of research proves that well-designed team-based board games inspire learning and encourage communication, collaboration, and risk-taking. They empower players by helping build confidence. Various game design elements support a wide range of player abilities, and learning translates into behavior change (Treher, 2011). In addition, the board game media will be very effective in implementing peace education for students because it has the domains in it such as knowledge, abilities, and attitudes (UNESCO, 2019). Therefore, we will conduct a scientific study on the general perception of the board game as a medium for peace education for students as the first step in developing peace education learning media through board games.

## **Theoretical Framework**

### **Peace Education**

Peace education is a global term for carrying out all educational activities. It focuses on the importance of efforts to promote peace knowledge, to build peace construction itself through strengthening the capacity of

students in attitudes and tolerance as well as the ability to work together, to avoid conflict and to resolve conflicts so that students have to strengthen capacity and motivation, both individually and in groups to live in peace with others (UNESCO, 2019). According to Leib & Ruppel (2021), the word "peace" refers not only to an absence of conflict. Conflict is a fact of everyday life that affects various relationships, ranging from internal relations within oneself, individuals, and groups in the local area to international ones. In addition, peace itself is a unique encounter with conflict because peace is a process to resolve conflict in harmony. Koopman (2020) defines "peace" with social and cultural structures as positive and negative peace.

Certain situations or conditions cause peace to be called positive or negative. According to Owsiak et al. (2017), negative peace is the peace that is enforced as long as there is no violence, such as a ceasefire, living separately, and establishing a relationship that is not indifferent to one another, while positive peace means the presence of harmony or harmony, structural justice, as the true meaning of peace. The statement becomes quite important because it provides a basic picture that peace is not always interpreted as it means.

In order to foster commitment, peace education can be understood as an effort to grow and disseminate a sense of love for peace because commitment can occur if it has gone through an internalization process first. Meanwhile, providing complete information on matters related to peace is also important to prevent various acts of violence. The information is related to things that support the creation of peace and things that cause conditions to become unpeaceful and their impacts. Students need to be provided with various information about the consequences of war, the impact of social injustice, the essence and values of peace, forms of a just social structure, and ways to build a good social structure.

Peace education, as described by UNESCO (2019), refers to the process of promoting the knowledge, skills, attitudes, and values necessary to bring about behavioral change that will enable children, youth, and adults to prevent conflict and violence, both overt and structural, to resolve conflicts peacefully, and to create conditions conducive to peace, both at the intra-personal, inter-personal, inter-group, national and international levels. The learning experience in peace education covers three domains (UNESCO, 2019). The first is knowledge related to understanding, self-awareness, and the introduction of conflict and war, peace, labor, poverty and the world economy, international law and criminal justice, UN and international standards, Health and aid issues/HIV, and drug trafficking. Second, communication skills, reflection, cooperation, empathy and compassion, critical thinking and problem solving, artistic and aesthetic, mediation, negotiation, conflict resolution, patience and self-control, good citizenship, imagination, leadership, and vision. Third, attitudes related to ability, ecological awareness, self-respect, tolerance, human dignity and differences, intercultural understanding, gender sensitivity, caring and empathy, non-violence and reconciliation, social responsibility.

### **Board Games as Peace Education Media**

The board games-based peace education model implements the peace education model that integrates peace education through board games. Ball (2014) mentions that games are a learning media that can help teachers deliver subject matter so that students easily digest the subject matter. In line with Rao's (2014) opinion, Sandri

(2015) added that the use of media aims to implement learning more effectively and efficiently, improving the quality results of the learning that has been carried out. Pardo and Díaz (2020) explained that the selection of learning strategies and media should attract students' attention to be involved in learning in a fun context. Morett (2019) emphasized that concrete learners enjoy learning strategies that utilize games, pictures, films, cassettes, videos, and others.

Two main learning theories guide educational games: behavioral and constructivist learning theories. In games based on behavioral learning theory, the basic elements of the learning process are the question the game poses to the player, the player's response to the question/stimulus is the answer, which may be true or false. Correct answers are rewarded with a positive response from the game (e.g., a happy song or a happy face display), which further stimulates positive emotions in the player. Wrong answers trigger negative game responses (e.g., sad tones or sad emoticons). A series of correct answers trigger a bigger prize from the game, such as a mini-game or animation. Such games rely on the "practice principle" (Rugelj, 2015; Zalka, 2018).

Board games provide visual metaphors to help relate information. Elements of play, discussion, and problem-solving with fellow team members about content are vehicles for learning. Subtle redundancy to reinforce learning and ensure retention should be incorporated into game design. Good questions, problems to solve, and situations should consider allowing players to think about and apply what they learn (Treher, 2011). According to Sapulette and Pakniany (2019), the board games-based peace education model can function as a media for peace education for each individual to collectively build and strengthen a peaceful narrative during an increasingly complex and diverse environmental life. Extreme violence, radicalism, spreading hoaxes, and various other acts of violence in the name of ethnicity, religion, race, and inter-group (SARA) need to be fought with peace education. In line with the view above, Rochmah (2020) added intellectual maturity and intelligence as social capital in building a peaceful life between identities. Then, Berland and Lee (2011) said that a board game is a game that provides recreational activities, is played in groups, and can lead to competitive, cooperative, and collaborative play. In line with this opinion, Zagal et al. (2006) added that board games are one type of game that can make students always collaborate. Furthermore, Lee (2012) argues that board games have advantages in language learning as long as the teacher determines the aspects of the discussion that students will study.

## **Method**

We explored the students who participated in this survey with a randomly distributed questionnaire. Determination of respondents to this survey was carried out using purposive sampling, namely students who had courses in integrating peace education in their lectures. Respondents in this study were representative of the student population of 806 students taken during two months of data collection. The sample obtained has relatively homogeneous characteristics because it is the same generation in terms of age, both male and female, as shown in Table 1. The research locations this time are the Universitas Pendidikan Indonesia (UPI), Universitas Padjadjaran (UNPAD), and Institut Teknologi Bandung (ITB).

In this survey, we focus on the general perception of board games as a medium of peace education for students. Then we surveyed with content that emphasized when the student began to know board games, the genre of board games that have been played by students so far, what aspects made the students interested in playing board games, the most interesting tools in playing board games, the composition of how to play board games, to the most important values according to students in playing board games. In the end, we focus on opinions regarding the use of this board game as a platform for peace education among students.

This study uses a survey instrument called the "Monkey Survey", which provides survey results with various graphs that the user can select. Data can be converted into Excel (XLS), PDF, SPSS, or Powerpoint (PPT) formats with other services. The survey results can be compared with other survey forms that are more or less the same to see the comparison between the surveys made and others. This research was implemented for two months before the lectures began in the odd semester.

Table 1. Characteristics of Respondents

<b>Variable</b>	<b>Options</b>	<b>Percentage</b>
<b>Gender</b>	Man	34.83%
	Woman	65.17%
<b>Age</b>	Under 18	13.82%
	18-24	82.44%
	25-34	1.74%
	35-44	1.37%
	45-54	0.50%
	55-64	0.12%
<b>Education</b>	Senior High School	90.17%
<b>Final</b>	S1	8.83%
	S2	0.37%

## **Procedure**

In conducting this survey, we divided it into several stages, including:

### **Designing a Survey**

The first stage is the step that determines the success of a survey because it is considered the most important step. In this stage, concrete objectives are one of the most important parts of designing a survey. Then, the demographic target and the number of respondents needed to answer the proposed survey. This step will greatly affect the accuracy of the results obtained. The larger the sample, the more representative the demographic population is the target of the proposed survey. In this study, the population was students from three different universities, with 806 students as representatives of the population.

### Designing Survey Questionnaire Questions

The next stage is to design survey questionnaire questions. At this stage, what needs to be considered is to avoid bias in questions by not including personal opinions in survey questions, and this situation will impact the views of respondents who are biased in answering the questionnaire questions.

### Collecting Responses

The third stage is to collect responses from students who are part of the respondents. There are several ways to collect surveys, especially in this study. The survey was conducted online by distributing survey links through influencers we collaborated with to collect responses.

### Analyzing Responses

The last stage is to analyze the responses that have been collected from the respondents. Of course, there are also different ways to analyze depending on the purpose of the research. In analyzing the responses from the survey that we conducted, we were assisted by the "survey monkey" application. The application can analyze automatically, and of course, it has been tested by experts and has been widely used by researchers worldwide.

Table 2. Setting Categories

Collapsed category	Original categories
Time to know the board game	At school level
Board game genres ever played	Categories of several existing board game genres
Aspects of the board game that makes it interesting	Aspects that become the material of the board game
An interesting board game tool	Media used in board games
The player, while playing the board game	The composition that performs the board game
The value contained in the board game	Important elements in playing board games
The urgency of playing board games	The level of urgency of playing board games in Peace Education

### Results

In conducting the survey research this time, the researchers focused on several aspects that would be studied to find out the general perception of the board game as a medium of peace education for students, according to the design of the category setting as shown in table 2. The survey was carried out using the monkey survey application, collected over two months. The following are the results of a research survey presented on several aspects based on the content that is an element in this research.



### Time to Get to Know Board Games

The time each respondent knows the board game is the first aspect. We divide the time category in this first aspect at the school level of the respondents based on the fact that the learning period is the beginning of a person getting to know playing with their peers, and of course, playing board games is one of the games that are always played together with friends at school. Based on the survey data results obtained by categorizing the time to get to know board games during school, we get the results that the majority know board games during elementary school (SD) with a dominance of 39.50%, then during Kindergarten (TK), 27.08% (see Figure 1). This result is undeniable because, at the elementary and kindergarten levels, this is a time when children are more dominant in playing while learning than just focusing on learning.



Figure 1. Levels of Getting to Know the Board Game

### Board Game Genre

In board games, of course, there are several genres (types) that are the board game's theme. Therefore, we also chose what aspect of the board game genre has been or is often done by students. Based on the observations, eight board game genres are currently available: educational, economic, cultural, social, political, entertainment, sports, and health genres. However, because the concept is a game, the results of the survey even when respondents play board games more often play board games with the entertainment genre by 84.08% compared to other genres such as economics 22.94%, sports 20.29% to Education only 15.12% and other genres that are rarely an option to play (see Figure 2).



Figure 2. Board Game Genres

### Board Game Aspect

The next aspect that the survey researchers consider is what elements make someone interested in playing board games. In board games, there are several elements that make someone interested, including the material elements of board games, conventional digital elements, digital elements of board games, then the conventional elements of the board games, and the theme of the board games that can make someone interested in playing the board games. The elements of the board game theme are the most attractive elements for someone playing board games with a percentage of 50.62%. Conventional elements are 19.11%, and digital board games are 14.64%, which should be the most interesting element (see Figure 3)—considering that during the current pandemic, it is necessary to keep a distance by meeting face to face. It means that the theme element of a board game is very decisive to play compared to other elements.



Figure 3. Elements of Board Games that Make it Interesting

### Board Game Tools

Board games that exist today have very diverse characteristics. From the aspect of the main tools used in board games, there are several kinds, including using dice, coins, points, cards, and of course digital-based. This aspect of the tool is also an aspect that can determine someone's interest in board games. Based on the findings, board games using dice tools attract more people with a percentage of 62% compared to other tools with 17% cards, 10% digital, 7% points, and 4% coins (see Figure 4).

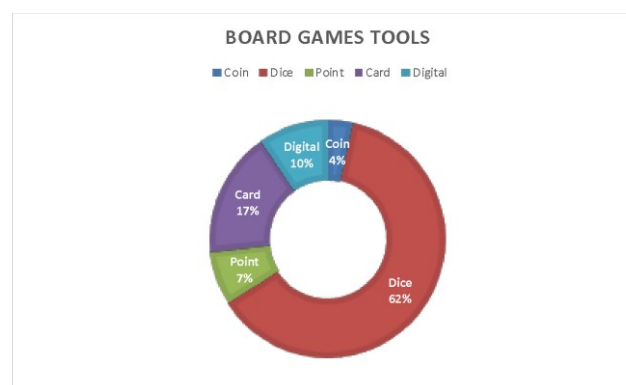


Figure 4. Frequently used Board Game Tools

### Composition of Playing Board Games

Talking about how to play board games, there are several ways related to the composition of the game. Playing board games is divided into three categories: individuals, pairs, and groups. This category is also one of the aspects in assessing someone, whether individualist or more interested in cooperating in playing board games. Based on the survey results, it was found that how to play with group composition attracted more people by 51% compared to the composition of playing individually 31% or in pairs 18% (see Figure 5). The result indicates that respondents are more interested in working in teams to conquer the challenges in the board games being played.

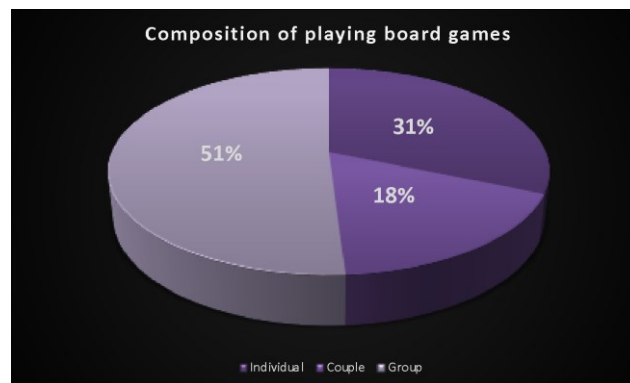


Figure 5. Composition of How to Play Board Games

### Value contained

Currently, board games have become a platform for conveying the values of life skills because board games can be a beautiful instrument for many people and promise as a platform in conveying the values of life. The values are often contained in a board game such as how to solve problems, how to sharpen the brain, how to think creatively, how to do strategies in conquering obstacles, how to work together in teams, how to compete, how to make decisions, and how to measure attitudes. Based on the findings, the most frequently contained important value in board games is how to conquer obstacles (42.98%) in the board games being played (see Figure 6).

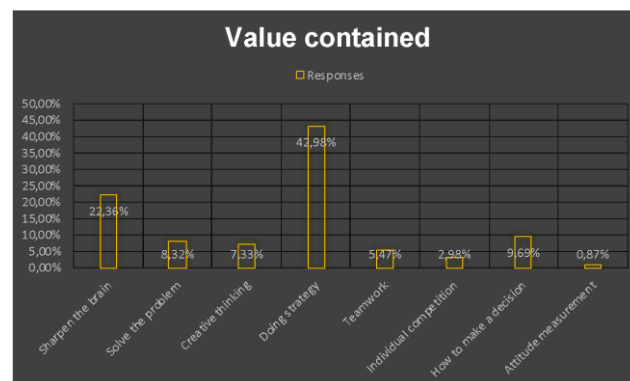


Figure 6. Value Content in Board Games

## The Urgency of the Board Game in Peace Education Transfer

The last aspect by the category settings that have been compiled is regarding the respondents' opinion or, in this case, the students towards making board games a platform for the transfer of peace education. As previously stated, this board game can be a platform for conveying certain values. So the board game can be a platform for transferring peace education among students. Based on the survey results in this study, the students also agreed (48.01%) to use board games as a platform for delivering peace education and neutral by 38.59% and strongly agreeing 12.90% (see Figure 7).

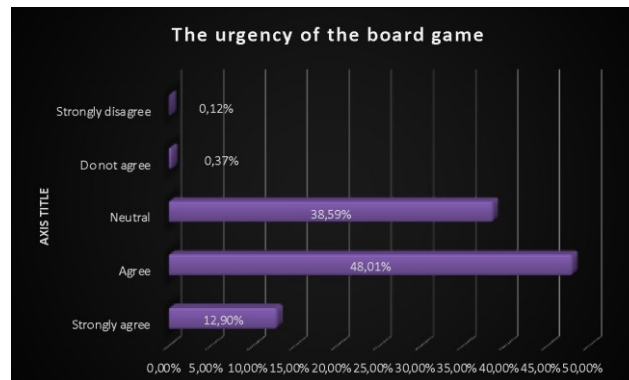


Figure 7. Board Games as a Transfer Platform for Peace Education

## Discussion

In this study, we design research using a survey method related to platform board games in the transfer of peace education for students. To determine the impact of using board games as a transfer platform for peace education, we conducted field studies on students to ensure the right media in the technical learning process. Until now, the compatibility of the media in the transfer of peace education for students is still not felt, which is considered very important in determining the direction of thinking of these students as part of the agent of change. Therefore, this research was conducted focusing on student perceptions regarding the use of board games as a learning medium for peace education. With the perception of representative students, it will be able to obtain an objective and interesting view for the student in carrying out the process of learning peace education so that students are more optimal in absorbing peace education in the campus environment. Besides that, the board games themselves provide visual metaphors to help connect information. Elements of play, discussion, and problem-solving with fellow team members about content are vehicles for learning. Subtle redundancy to reinforce learning and ensure retention should be incorporated into game design. Good questions, problems to solve, and situations to consider allowing players to think about and apply what they learn (Treher, 2011).

In this study, the researchers designed setting categories as instruments in carrying out this research survey to make it more systematic and focused. In designing these setting categories, the researcher designed them into seven main focuses. The first focus is when a person gets to know board games, which mostly begin in childhood is because board games have become a very popular game from an early age. Board games are considered very suitable for children's ages because they have values that children's ages can obtain, such as

sharpening the brain, solving problems, creative thinking, teamwork, and other values that can develop the child's potential. Board games are an important tool for providing hands-on skills and knowledge development for people of all ages in all subjects. Well-designed games create an engaging atmosphere and provide a non-threatening, fun, yet competitive environment to focus on content and reinforce and apply to learn, especially early (Treher, 2011). This result is in line with this study that most of the respondents stated that they had known board games from the elementary school level, even at the kindergarten level. Therefore, the use of board games will be very relevant as a transfer media for peace education because students will be familiar with playing board games that have the value of peace. In addition, students will be more interested because they are wrapped in fun games so that the learning process can be more optimal.

Furthermore, the second focus is on the type (genre) of board games that have been or are often played. Several genres of board games are often played, especially for entertainment purposes. However, if the teacher can optimize in terms of modification of the board games, it will certainly be a very interesting thing to improve the student learning process. In other words, board games thick with entertainment can be wrapped with more serious values with learning content that will be transferred to students. Serious games can be used in all areas where people need training and learning and at all levels of education. Games as a form of education are very popular in the army in safety, security, rescue, and health care, that is, in areas where it is difficult to train people in real situations (Boghian et al., 2019). Therefore, combining the popular board games and the integration of educational values will be the right step as learning media material.

The third focus is related to the elements of the board games. If we analyze the situation, it will not be optimal to implement the learning process using board games media carried out face-to-face, seeing the current conditions are not safe from the status of the covid-19 pandemic. Therefore, the basic elements of these board games must be modified, one of which is, of course, with digital media that can be done remotely. The research findings also describe the digital element as one of the elements that are in great demand. It is inseparable from the interest in video games in education (Copeland et al., 2013; Greenhalgh, 2016). Communities of board game players (e.g., Board Game Geek - BGG; <https://boardgamegeek.com/>) encourage visitors to engage with board games by "reading articles, becoming members, selling/buying/trading games, and posting game reviews and comments. to an existing database"(Willet et al., 2018). The community of board game players can provide valuable insight into how to see the educational potential of board games. Besides that, it means that for board game developers, the first and foremost thing that must be determined is the theme of the board games, whether it will make someone interested or not.

Next is the focus on the tools used in playing board games. Several kinds of supporting tools are often used in playing board games, including dice, coins, points, cards, and of course, digital-based. Referring to the research findings, the most popular tool in playing board games is using dice. If in this case, it can be developed digitally, especially in the current Covid-19 pandemic conditions. Everyone can interact with the user interface to generate visual feedback on the video device (Keese et al., 2012). The board and other real game elements (cards, dice) act as visual metaphors that support players/students in linking information/content, thus becoming a platform for learning. Strategy games that include questions, problems to solve, and challenging situations

involving students' critical thinking, problem-solving, organizing information and practical skills, enhancing peer learning; games also provide an opportunity to reduce the risk that students with lower levels of knowledge will feel exposed (Nakao, 2019).

Fifth is the focus on the composition of players in playing board games. To play board games, they usually have choices in carrying them out, such as games between individuals, pairs, and groups. The three alternatives have different characteristics. Individuals who demand to solve problems and do it individually while playing in pairs and groups (teams) must cooperate well in winning the game. The findings show that respondents prefer playing board games in groups (teams). In addition to requiring critical thinking, Team-based board games help build communication and relationship skills as players work face-to-face to answer questions or solve problems and see that together they often discover something they thought they did not know. The power of collaboration becomes apparent to all, and in organizational settings, it can transform working relationships (Treher, 2011). Game-based education provides students with experiences and opportunities to reflect on those experiences and draw knowledge, build new attitudes, skills, or ways of thinking based on those experiences. The interdisciplinary and constructivist learning that occurs during game-based education allows students to make mistakes without bearing real-life consequences; find their relevance; understand the relationship between reason, action, cause, and effect; learn at their own pace of learning; reflect on their experiences; perform the role of a leader and act accordingly (Rugelj et al., 2018). Board Games provide all these opportunities for students and learners of all ages.

The next focus is related to the values contained in board games, especially the values of life skills that the players can obtain. Some values that are often contained in board games include solving problems, sharpening the brain, thinking creatively, carrying out strategies in conquering obstacles, working together in teams, competing, making decisions, and measuring attitudes that can be contained in board games. Based on the finality of the game and the way it is made, the game can be classified into two aspects. First, educational games, with educational finality; practiced non-formally and informally, anywhere and anytime, with or without adult supervision. Second, didactic games designed explicitly for learning purposes are designed to teach students about certain subjects, expand concepts, strengthen development, or assist students in acquiring skills. The basic structure of didactic games consists of 1. themes/subjects and content according to the age of the participants/students; 2. didactic goals/educational finality; 3. specific operational/finality objectives; 4. didactic tasks/instructions/training elements (e.g., introduction, naming, comparing); 5. game rules; 6. elements of the game (e.g., competition, cooperation, rewards, penalties, applause, encouragement); 7. Didactic strategy (didactic procedures, materials, and game organization); 8. stages of the game; 9. game version/complication

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The last is the focus that is certainly very decisive in this research, which is related to student perceptions in applying peace education in the campus environment through board games media. As stated in the introductory section, this research has the main objective of reviewing initial studies in developing learning media using board games platforms as an instrument in the transfer of peace education. Based on the findings, almost all respondents agree on board games as a transfer platform for peace education. In the context of the need for lifelong learning and the need for shared learning, the need generated by an increasingly flexible and multicultural labor market, board games in student education are a viable solution to unite students and keep them motivated to stay engaged in the learning process by other people and from other people. Game-taking questions check to understand and help identify learning gaps or learning errors, and board games are a great way to turn abstract concepts into something more tangible and thus support the acquisition of ideas that are difficult to teach. The demands of various learning styles can be addressed through board games, too (Gonzalo-Iglesia et al., 2018). Building social competence in children means learning certain behaviors, adopting them, and using them in life situations; Students who have certain competencies but need improvement can also benefit from the game. The formal and informal education of children and students plays an important role in shaping knowledge, skills, and social competencies, the latter of which is highly desirable in the context of today's labor market (Paczynska-Jedrycka, 2020). Author of a recent literature review on board games in education Willet et al. (2018) has highlighted several descriptions and associations of games with education: games are multimodal literacy par excellence (Gee, 2003, 2005); the game provides an opportunity to practice rhetorical and persuasion skills (Bogost, 2010); games provide problems to solve and lessons to learn (Squire, 2013); games are activities that can produce solutions to real-life problems (McGonigal, 2011).

There are two main types of learning theories that guide games in education: behavioral theories and constructivist learning theories. In games based on behavioral learning theory, the basic elements of the learning process are the questions the game poses to the player; The player's response to this question/stimulus is the answer, which may be true or false. Games based on constructivist learning theory rely on the learner's active role and enable the attainment of higher levels of taxonomic knowledge and problem-based learning. Therefore, the game is designed as a life-like story or fiction in which the learner plays a role, identifies with what is happening in the game world, and actively solves the problem. The teacher's role is to select (and produce, where possible) fair play and provide guidance and feedback on learner evolution during play and outcomes; The game helps students build appropriate mental models (Rugelj, 2015).

Referring to the two main types of learning theory, it will certainly be very relevant and supportive in integrating peace education through board games platforms among students. Indeed, peace education is a process of promoting the knowledge, skills, attitudes, and values needed to bring about behavioral changes that enable children, youth, and adults to prevent conflict and violence, both overt and structural; resolve conflicts peacefully; and create conditions conducive to peace, both at the intra-personal, interpersonal, intergroup, national and international levels (UNESCO, 2014). Furthermore, the domains that will be developed in peace education using the board games platform include building peace from oneself, including self-acceptance and prejudice. Then minimize obstacles in achieving peace, including ethnic diversity, religious differences, gender differences, rich and poor, and class differences. The last is building a path to peace which includes understanding diversity, understanding conflict, rejecting violence, admitting mistakes, and forgiving.

## **Conclusion**

The research refers to several main focuses that have been designed in setting categories that board games can form and develop creative thinking, communication, intercultural awareness, and collaborative skills in students, with application in academic classes (Boghian et al., 2019; Treher, 2011). Effective play organizes information in a conceptual framework and makes it concrete. Board games provide analogies and metaphors to relate new information. When playing in teams, members learn together; no one ever feels singled out for not knowing the answers. Questions help verify understanding and signal where more learning is needed. For those who learn best from the concrete, games change abstract concepts. Others, which need to start with the big picture, are supported by the game's metaphor. Games are ideal for accommodating different learning styles. Therefore, board games are one of the media that will be a very effective instrument in transferring education in the learning process to students.

## **Recommendations**

This research innovation in peace education learning focuses on the delivery platform. It is hoped that students can understand better by using board games because they are wrapped in games that make them likable and not monotonous. Therefore, the researcher recommends that other lessons also use a board game platform or other games to be more interested and understand better when carrying out the learning process. Besides that, it would be better if the board game or other games offered as a learning delivery platform could be in the form of digital technology, which is an innovation in the current era of industrial revolution 4.0.

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### Author Information

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#### **Leni Anggraeni**

 <https://orcid.org/0000-0003-1382-8731>

Universitas Pendidikan Indonesia  
Setiabudhi Street No. 229, Bandung  
Indonesia


Contact email: [l\\_anggraeni@upi.edu](mailto:l_anggraeni@upi.edu)

#### **Idrus Affandi**

 <https://orcid.org/0000-0001-8501-3780>


Universitas Pendidikan Indonesia  
Setiabudhi Street No. 229, Bandung  
Indonesia

#### **Dinn Wahyudin**

 <https://orcid.org/0000-0003-1454-0609>


Universitas Pendidikan Indonesia  
Setiabudhi Street No. 229, Bandung  
Indonesia

#### **Sandey Tantra Paramitha**

 <https://orcid.org/0000-0002-7256-6711>

Universitas Pendidikan Indonesia  
Setiabudhi Street No. 229, Bandung  
Indonesia

#### **Muhammad Gilang Ramadhan**

 <https://orcid.org/0000-0003-1271-7634>

Universitas Pendidikan Indonesia  
Setiabudhi Street No. 229, Bandung  
Indonesia

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