

BUDDHIST SNAKES LADDERS PORTABLE AS LEARNING MEDIA FOR BUDDHIST SUNDAY SCHOOL'S STUDENTS

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ABSTRACT

This study aimed to develop a game of snakes and ladders as a learning media through the 4-D Thiagarajan model (Define, Design, Development, and Disseminate). This study's data was collected using an interview guide and questionnaires. The data was analyzed using Aiken's V, Gregory, and descriptive statistics. Aiken's V analysis showed that all of the questions were valid. Gregory's analysis showed that the game's manual book had an excellent readability level with an interrater agreement index of 0.857. The test results showed that the games developed were practical and can be used as learning media.

Keywords: Snakes Ladders; Learning Media; Buddhist; Sunday School

INTRODUCTION

Buddhist Sunday School (SMB) is a non-formal education in the *vihara*. SMB aims to instil children's faith and kindness to improve their morale. The process is held through a learning process. In addition, SMB also covered the shortage of students who do not have Buddhist Education teachers or do not understand Buddhist education subjects. The lack of Buddhist Education teachers or even their absence in schools can cause students to lack knowledge about the teachings of the Buddha. So, through the learning process at SMB, it is hoped can increase and strengthen students' understanding of Buddhist Education. The learning process in SMB is held by separating children according to education level from elementary to senior high school. The learning process emphasizes activities that involve students' intellectual, emotional, and social aspects. The learning process in SMB tends to be carried out more through playing. The learning materials are generally delivered using some media, such as puppets, PowerPoint presentations, and animated videos.

Based on the observations, some students are passive during their learning. The teachers cannot invite their students to be involved in the learning process. In addition, the methods and learning media used do not demand the students' activeness in learning. As previously narrated, the learning media commonly used by teachers in SMB are puppets, PowerPoint presentations, and animated videos. At the same time, the cone of experience by Edgar Dale stated that 90% of understanding would be obtained by students from playing, doing real things, or doing simulations (Huda, 2016; Syamsidar, Ma'ruf & Hustim, 2018; Sari, 2019). Therefore, learning media is needed to support learning optimization in SMB.

Yaumi (2018) stated that learning while playing is essential for educators because it can refresh the learning atmosphere. Games in the learning process can create a dynamic learning atmosphere. It can attract the children's attention, bring up their interactions and cooperation, encourage enthusiasm for learning, and create an energetic atmosphere. Sanjaya (2012) said that learning while playing is held by using games to find their answers through procedures, steps, and rules during the learning process. Games also can be used in the learning process

in non-formal education, such as in SMB. The game can motivate Sunday school students to obtain and understand the information in-depth, especially if the game presents a problem or question to challenge the students to learn and understand the material.

"Media" comes from the Latin "*medium*", which means "intermediary" or "introduction". Furthermore, the media is a means of channelling messages or learning information to the target or recipient. The learning media can help students to achieve their learning successfully (Mahnun, 2012). The media can be interpreted as anything that is used as a tool to channel messages or information (Asnawir & Usman, 2002; Aryad, 2003; Hamalik, 2003; Sanjaya, 2007; Miftah, 2014). Association for Education and Communication Technology (AECT) defines media as all forms and channels used to process information. According to the National Education Association (NEA), media is everything that can be seen, manipulated, heard, read, or discussed for information processing (Muhson, 2010).

In the context of learning, according to Gagne, media are various types of components in the student's environment that can stimulate them to learn (Sadiman et al, 2003). Romiszowski formulated teaching media as the carries of messages, from some transmitting source (which may be a human being or an intimate object) to the receiver of the messages (which in our case is the learner) (Hamalik, 2003). According to Djamarah and Zain (2002), media is a tool to distribute learning information or messages to achieve learning objectives. In the context of media as a learning resource, the media can be interpreted as humans, objects, or events that allow the students to gain knowledge and skills. Generally, learning media can convey messages or information for instructional purposes to stimulate students' thoughts, feelings, concerns, interests, and willingness (Arsyad, 2003; Sukiman, 2012).

One form of the game which has the potential to be used as a learning media is snakes and ladders. Snakes and ladders use dice to determine how many steps a player's pawn must take. It is included in the "board game" category or board games, such as monopoly, ludo, etc. The board contains pictures in the form of plots consisting of 10 rows and columns where each box is numbered from 1 to 100 and contains snakes and ladders (Husna, 2009). Mulyani (2013) stated that the game of snakes and ladders is a means of playing that consists of a piece of board or thick paper with pictures of certain boxes and small dice. Vitianingsih (2016) suggested the advantages of playing with snakes and ladders, namely: (1) snakes and ladders can be used in teaching and learning activities, (2) snakes and ladders can grow and increase students' learning motivation, (3) snakes and ladders can create a pleasant atmosphere in learning process, (4) snakes and ladders can stimulate students to solve the simple problems, (5) students can involve into the learning activities directly, (6) snakes and ladders can be used as stimulation on aspects of the development both of language and social knowledge of children.

Based on the conditions and potentials narrated in the previous section, the snakes and ladders game can be applied in the learning process to grow students' social interaction. It is very familiar and easy to play. Therefore, this research aimed to develop a practical, portable Buddhist snakes and ladders game. The game can be played indoors or outdoors.

METHOD

This research was a research and development using the 4-D Thiagarajan model, which includes the following stages: (1) define, (2) design, (3) development, and (4) disseminate. Research data were collected using questionnaires and interview guidelines for potential product users. All data were analyzed using percentage form using Aiken's V, Gregory, and descriptive statistics.

RESULTS AND DISCUSSION

1. Define phase

The results of student analysis provide information that the age of Sunday school students is 7 to 14 years. However, most Sunday school students are elementary school students in the upper grades. Their understanding of Buddhism is very diverse. Some of them are still very lacking. They do not receive Buddhist Education subjects because they do not have Buddhist Education teachers in their schools. They expect Sunday school teachers can teach well, supported by various media and learning methods. They also expect learning to be more fun, such as using various ice-breaking or games. The results of the teacher analysis provide information that Sunday school teachers lack the experience to provide varied and innovative learning media. They also lack the experience to select the teaching methods and games in learning. The games used are simple games to enliven the learning process. Based on these conditions, a practical game is needed to help students understand the learning materials at SMB. At the same time, the results of the material analysis based on the document study informed that the material taught by Sunday school teachers refers to the book on Pendidikan Agama Buddha dan Budi Pekerti published by the Ministry of Education and Culture of the Republic of Indonesia. It is also used in their respective schools.

2. Design phase

Buddhist snakes ladders portable was developed by adopting and modifying the traditional snakes and ladders game, which contains 100 game boxes. The size of each box is 50 cm x 50 cm. Each player will act as a pawn by standing on the game board. Buddhist snakes ladder Portable is designed by providing modifications by giving questions and commands in several game boxes. Unlike the game of snakes and ladders in general, Buddhist snakes ladders portable is played in pairs. It can develop the togetherness and social skills of children. The initial sketch of the game board can be shown in Figure 1.

The questions in this game were developed based on the material for an upper grade in primary school. The questions are also equipped with the answer in the manual book to make them easier to use. The results of the validation data analysis by six experts using Aiken's V showed that all the questions were valid. The complete results are shown in Table 1, Table 2, and Table 3.

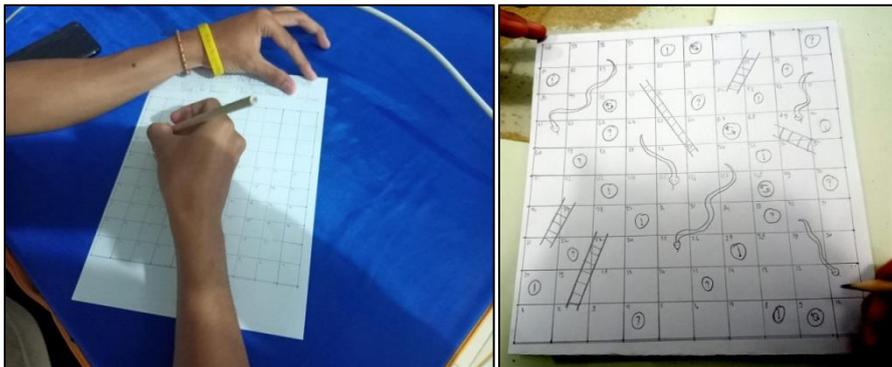


Figure 1 Board Game Sketch Process

Table 1 Validation Result of Questions for Fourth Grade

Item	Validity Coefficient	Decision	Item	Validity Coefficient	Decision
1.	0,833	Valid	19.	0,833	Valid
2.	0,833	Valid	20.	0,778	Valid
3.	0,944	Valid	21.	0,667	Valid
4.	0,778	Valid	22.	0,778	Valid
5.	0,833	Valid	23.	0,833	Valid
6.	0,833	Valid	24.	0,889	Valid
7.	0,722	Valid	25.	0,889	Valid
8.	0,778	Valid	26.	0,778	Valid
9.	0,833	Valid	27.	0,833	Valid
10.	0,944	Valid	28.	0,722	Valid
11.	0,833	Valid	29.	0,833	Valid
12.	0,944	Valid	30.	0,833	Valid
13.	0,833	Valid	31.	0,889	Valid
14.	0,833	Valid	32.	0,833	Valid
15.	0,778	Valid	33.	0,778	Valid
16.	0,889	Valid	34.	0,889	Valid
17.	0,889	Valid	35.	0,889	Valid
18.	0,833	Valid			

Table 2 Validation Result of Questions for Fifth Grade

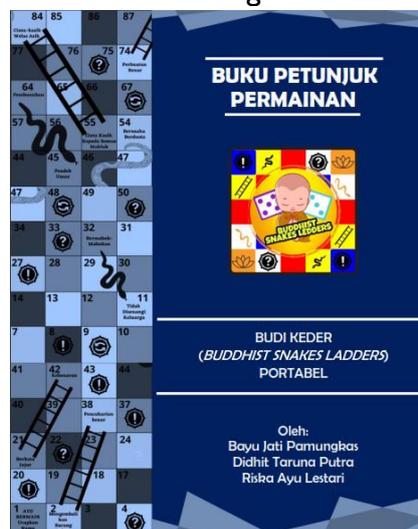
Item	Validity Coefficient	Decision	Item	Validity Coefficient	Decision
1.	0,833	Valid	19.	0,833	Valid
2.	0,778	Valid	20.	0,833	Valid
3.	0,778	Valid	21.	0,722	Valid
4.	0,944	Valid	22.	0,889	Valid
5.	0,889	Valid	23.	0,944	Valid
6.	0,778	Valid	24.	0,833	Valid
7.	0,833	Valid	25.	0,667	Valid
8.	0,778	Valid	26.	0,889	Valid
9.	0,889	Valid	27.	0,889	Valid
10.	0,833	Valid	28.	0,833	Valid
11.	0,833	Valid	29.	0,889	Valid
12.	0,944	Valid	30.	0,889	Valid
13.	0,889	Valid	31.	0,778	Valid
14.	0,833	Valid	32.	0,944	Valid
15.	0,722	Valid	33.	0,833	Valid
16.	0,778	Valid	34.	0,778	Valid
17.	0,833	Valid	35.	0,833	Valid

Item	Validity Coefficient	Decision	Item	Validity Coefficient	Decision
18.	0,833	Valid			

Table 3 Validation Result of Questions for Sixth Grade

Item	Validity Coefficient	Decision	Item	Validity Coefficient	Decision
1.	0,778	Valid	16.	0,889	Valid
2.	0,833	Valid	17.	0,833	Valid
3.	0,889	Valid	18.	0,778	Valid
4.	0,833	Valid	19.	0,778	Valid
5.	0,722	Valid	20.	1,000	Valid
6.	0,889	Valid	21.	0,778	Valid
7.	0,778	Valid	22.	0,889	Valid
8.	0,889	Valid	23.	0,667	Valid
9.	0,722	Valid	24.	0,833	Valid
10.	0,778	Valid	25.	0,833	Valid
11.	0,944	Valid	26.	0,889	Valid
12.	0,889	Valid	27.	0,778	Valid
13.	1,000	Valid	28.	0,833	Valid
14.	0,833	Valid	29.	0,778	Valid
15.	0,778	Valid	30.	0,889	Valid

The manual book was developed to help the users while using and playing the game. The game manual book contains several things, including a cover page, an inside page containing the logo, game developer, foreword, an overview of the game, how to play, a list of questions, and a list of challenges. Before being used, two experts in Bahasa validated the entire contents of the manual book. They assessed the level of readability, including the use of language rules, straightforwardness in presentation, ease of understanding, communicative level, information delivery, presentation techniques, and spelling accuracy. The results of the validation data analysis according to Gregory's interrater formulation gave an agreement index of 0.857. It indicates that the manual book has a good level of readability.



Small-scale trials were carried out involving four students. They were divided into two groups (each group consisted of two students). Based on the interviews, the results of the small-scale trial were: (1) the game were fun, interesting, sharpened skills and understanding, and have the potential to become a learning media; (2) the dice can be denser; (3) the size of the box makes it easier for players to stand on the box; (4) the color composition was attractive; (5) the pictures and writings are clear; and (6) the rule needs to be clarified. The second-phase trial was carried out involving eight students. Based on the distributing questionnaires to the respondents in the second-phase trial, the assessment results were shown in the Table 4.

Table 4 The Results of Second-Phase Trial

No.	Components	Results
1.	Board game size	Very good
2.	Dice size	Very good
3.	Board game color	Very good
4.	Dice color	Very good
5.	Image clarity	Very good
6.	Font size	Very good
7.	Game rules clarity	Very good
8.	Ease of playing	Very good
9.	Questions	Very good
10.	Challenges	Very good
11.	Potential use of the product	Yes

The third-phase trial was carried out involving 12 students. Based on the distributing questionnaires to the respondents in the third-phase trial, the assessment results were shown in the Table 5.

Table 5 The Results of Third-Phase Trial

No.	Components	Results
1.	Board game size	Very good
2.	Dice size	Very good
3.	Board game color	Very good
4.	Dice color	Very good
5.	Image clarity	Very good
6.	Font size	Very good
7.	Game rules clarity	Very good
8.	Ease of playing	Very good
9.	Questions	Very good
10.	Challenges	Very good
11.	Potential use of the product	Yes

4. Disseminate phase

Based on the results obtained, the distribution is carried out by handing over the products directly to the monastery, the head of the high school, and the Buddhist Sunday School. Dissemination was also done by utilizing technology, such as WhatsApp and Instagram.

CONCLUSION

Based on the results of the analysis, several conclusions are obtained, including Buddhist snakes ladders portable can be developed by using the 4-D Thiagarajan model (Define, Design, Development, and Disseminate), Buddhist snakes ladders portable is very possible to be used practically in SMB, as well as Buddhist snakes ladders portable is very possible to be used by all users of various educational levels.

REFERENCE

- Arsyad, A. (2003). *Media Pembelajaran*. Jakarta: Raja Grafindo Persada.
- Asnawir & Usman, M.B. (2002). *Media Pembelajaran*. Jakarta: Ciputat Pers.
- Djamarah, S.B. & Zain, A. (2002). *Strategi Belajar Mengajar, Cetakan Kedua*. Jakarta: Rineka Cipta.
- Hamalik, O. (2003). *Media Pendidikan, Cetakan IV*. Bandung: PT. Citra Aditya Bakti.
- Huda, M. (2016). Pembelajaran Berbasis Multimedia dan Pembelajaran Konvensional (Studi Komparasi di MTs. Al-Muttaqin Plemahan Kediri). *Jurnal Pendidikan*, 10(1), 125-146.
- Husna, A.M. (2009). *100+ Permainan Tradisional Indonesia untuk Kreativitas, Ketangkasan, dan Keakraban*. Yogyakarta: Penerbit Andi.
- Mahnun, N. (2012). Media Pembelajaran (Kajian terhadap Langkah-Langkah Pemilihan Media dan Implementasinya dalam Pembelajaran). *An-Nida'*, 37(1), 27-34.
- Miftah, M. (2014). Pemanfaatan Media Pembelajaran untuk Peningkatan Kualitas Belajar Siswa. *Kwangsan: Jurnal Teknologi Pendidikan*, 2(1), 1-12.
- Muhson, A. (2010). Pengembangan Media Pembelajaran Berbasis Teknologi Informasi. *Jurnal Pendidikan Akuntansi Indonesia*, 3(2), 1-10.
- Mulyani, S. (2013). *45 Permainan Tradisional Anak Indonesia*. Yogyakarta: Langensari Publishing.
- Sadiman, A.S., et.al. (2003). *Media Pendidikan: Pengertian, Pengembangan, dan Pemanfaatannya*. Jakarta: Raja Grafindo Persada.
- Sanjaya, W. (2012). *Media Komunikasi Pembelajaran*. Jakarta: Kencana.
- Sanjaya, W. (2007). *Startegi Pembelajaran Berorientasi Standar Proses Pendidikan*. Jakarta: Kenacan.
- Sari, P. (2019). Analisis terhadap Kerucut Pengalaman Edgar Dale dan Keragaman Gaya Belajar untuk Memilih Media yang Tepat dalam Pembelajaran. *Mudir: Jurnal Manajemen Pendidikan*, 1(1), 58-78.
- Sukiman. (2012). *Pengembangan Media Pembelajaran*. Yogyakarta: Pedagogia.
- Syamsidar, Ma'ruf, & Hustim, R. (2018). Pembelajaran Fisika Berbasis Cone of Experience Edgar Dale pada Materi Elastisitas dan Fluida Statis. *Jurnal Pendidikan*, 6(1), 1-12.
- Vitianingsih, A.V. (2016). Game Edukasi sebagai Media Pembelajaran Pendidikan Anak Usia Dini. *Jurnal INFORM: Jurnal Ilmiah Bidang Teknologi Informasi dan Teknologi*, 1(1), 25-32.
- Yaumi, M. (2018). *Media & Teknologi Pembelajaran*. Jakarta: Prenadamedia Group.