

Development of Language-Games Snakes and Ladders for Fun

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ABSTRACT

In 2020, Indonesia and various other countries in the world experienced a pandemic period of the Coronavirus or COVID-19. Several policies have emerged. They are starting from the Presidential Decree of the Republic of Indonesia number 11 of 2020 concerning the determination of the public health emergency of the coronavirus disease (COVID-19). And circular letter no 3 of 2020 from the minister of education and culture regarding the prevention of coronavirus disease (COVID-19) in education units. All of these regulations attempt to break the distribution chain of the Coronavirus. The education unit also took the step of learning from home (LFH). This LFH has an impact on the world of education, especially in the scope of elementary schools. Elementary school-aged children who are at home still need to learn and play to bring a happy mood. Therefore, the language ladder snake game was developed, which introduced various things about COVID-19. By playing, children are expected to learn happily. This study aims to produce a language games snakes and ladders and describe its effectiveness in generating joy. The method used is development research with 4D: define, design, develop, and disseminate. In this case, the development results are validated and tested on a limited basis. The language ladder game is declared valid for elementary school children and is recognized to cause joy and fun when playing it.

Keywords: *language games, snake and ladders, pandemic, COVID 19*

1. INTRODUCTION

In 2020, Indonesia and various other countries will experience a pandemic period of the Coronavirus or COVID-19. The Coronavirus's emergence as an epidemic in Wuhan China is contained in the article by Cristie Columbus, Karen B. Brust, and Alejandro C. Arroliga [1] entitled 2019 Novel Coronavirus: An Emerging Global Threat (December 8, 2019). The World Health Organization (WHO), on February 11, 2020, named the so-called "severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)" as "Covid-19", and exactly one month after WHO declared Covid-19 a pandemic outbreak. global [2].

Several policies also emerged in Indonesia, along with the outbreak of the corona-19 virus. They are starting from the presidential decree of the Republic of Indonesia number 11 of 2020 concerning the determination of the public health

emergency of the coronavirus disease (COVID-19) to circular letter no 3 of 2020 from the minister of education on prevention. Coronavirus disease (COVID-19) in the education unit. All of these regulations attempt to break the distribution chain of the Coronavirus. The Education Unit also took steps to learn from home (LFH). This LFH has an impact on the world of education, especially in the scope of elementary schools.

Various studies have shown that a happy mood will increase a person's immunity. The Ministry of Health (Kemenkes), through the Director-General of Disease Prevention and Control of the Ministry of Health Achmad Yuriyanto, said feelings of pleasure could affect the level of a person's immunity to the Coronavirus. When someone feels stressed and sad, their immune system can decrease, and the disease gets worse (Detiknews, April 6, 2020). He further said, "Fight Covid-19 by increasing self-immunity: eating nutritionally, always being happy, patient and calm. Adequate

rest and regular exercise, do not panic" (CNBC Indonesia, April 11, 2020).

Elementary school-age children who are at home still need to learn and play to bring a happy mood. Therefore, the language ladder snake game was developed, which introduced various things about Covid-19. By playing, children are expected to learn happily.

Snakes and ladders is a board game for kids played by two or more people. The game board is divided into small squares, and on some squares, several "ladders" or "snakes" are drawn connecting them to other squares. This game was created in 1870. Each player starts with their piece in the first square (usually the box in the lower-left corner) and turns the dice. The pawns are executed according to the number of dice that appear. If the player lands at the bottom of the ladder, they can go straight to the other end of the ladder. If they land in the box with the snake, they have to get down to the box at the snake's bottom end. The winner is the first player to reach the last square.

In this research, the snake and ladder developed aims to introduce various words/terms around the corona-19 virus, increase children's language skills, and cause joy. Therefore, some additional cards containing guesses and language games were developed.

Games (including the language-games snakes and ladders or LSL) have long been part of the spectrum of educational media and instructional design. The more popular a game is, the more interesting it is to use it in learning. In the late 1990s and early 2000s, educational researchers such as Bruckman [3], Dede [4], Rieber [5] ushered in a new era of research into the use of games for education. The field of game-based learning is continually evolving. [6]

More specifically, this research aims to produce a language ladder snake and describe its effectiveness in generating joy.

2. METHOD

This research is a Research and Development (R&D), which is a research method to produce specific products and test the effectiveness of these products [7]. The research design uses the 4D (four-D) development model from Thiagarajan, which consists of four stages, namely, define, design, develop, and disseminate. In this case, the development results are validated and tested on a limited basis. [8]

In the definition, several things were carried out, namely:

- Elementary school children need to always maintain/increase immunity by having fun.
- Primary school children love games, striking colors, simple words, exciting illustrations, or colors.
- The snake and ladder game will develop students' abilities in the scope of knowledge, skills, and attitudes.

- During and after playing, elementary students feel happy, happy, and happy.

At the design stage, the language ladder snake developed measures 1m x 1mt and consisted of boxes containing the colorful alphabet letters A-Z, then continued with AA. Images of snakes and ladders will decorate the boxes with notes that the snake's image means going down, and the picture of the ladder means going up. In this case, three cards are provided with the color (a) Yellow / Gold for the winner, (b) Green for going up the ladder, (c) Red for going down (snake).

How to play:

1) Dice are thrown. If someone gets the number 3, it means the letter C. The player must say the word starting with the letter C, for example, "search." If someone can not, then go back to the initial steps. This also applies to double letters, for example, steps stop at the letter Aa. The player must name the word group (two words) beginning with the letters A and A, such as "chicks." If someone can not, go back to the previous step (for example, inbox v).

2) If the step stops on the ladder, the opposing player takes the green card and gives a question/puzzle which is written on the card. For example, answering a riddle rhyme/mentioning five cities that end in the letter A. If the player can answer, they can go up the stairs. If someone can not answer, then stay put waiting for the next turn.

3) the same applies if the step stops at the snake's tail. The opposing player takes a red card. If someone can not answer the question, then someone has to go down. If someone can answer, stay put (no need to get off).

4) the winning player must take the yellow/gold card. The goal is to cheer up the losers, so they do not get sad. Yellow/gold cards contain entertaining stuff. For example, "reading out a humorous rhyme in style" (the rhyme contents are written on the card), then the winning player must read the humorous rhyme on the card in style. There will be a video for examples as well as game instructions.

The development stage is carried out through the form of a file for snakes and ladders, and the cards followed by printing. The trial phase was limited to elementary school-age children (low and high classes).

3. RESULT AND DISCUSSION

Validation of the language snake ladder game (LSL) consists of three things, namely 1) validation of LSL graphics, 2) validation of language use in UTB, 3) children's responses to LSL games. These three aims aim to determine the quality of LSL game products and the LSL function to provide additional insight into Covid-19 for children of primary education age and create excitement. The validation was carried out by three experts, namely graphic experts, linguists, and primary education experts.

3.1. Graphic Validation

Graphic experts do initial graphic validation. Two other validators also performed validation as a comparison and addition to suggestions. Two things are validated in the UTB game, namely the LSL game board and the LSL card. Validation is carried out on the following matters.

- 1 The language ladder-snake board size is suitable for children
- 2 The size of the language ladder snake card is suitable for children
- 3 The writing and letter sizes are suitable for children
- 4 Writing and letters clearly for children
- 5 The writing on the game instructions is bright for the child
- 6 Colors attract children to play snake and ladder
- 7 Serving snakes and ladders attract children to play
- 8 Presentation of images according to the age of the child
- 9 Presentation of images provides knowledge about differences in children
- 10 The combination of pictures and writing on the snake and ladder board is appropriate
- 11 Proportional distribution of snakes and ladders
- 12 Changing quality (overall appearance is attractive)

The validation results in table 1 show that the graphics of the LSL game are excellent. This was obtained from the dominance of the agreed and strongly agreed answers given by the validator. One validator states enough on aspect no. 10, namely a combination of pictures and writing on the LSL board because there is a mismatch between the name of the game and the name written on the LSL board. A picture of a snake body that is too fat to fill the view, especially if the snake has a pattern. The pictures on the snake and ladder board lettering boxes are too full, especially the boxes with multiple objects. It was later revised.

The general conclusions of the validator regarding the graphics of the LSL board and LSL card are as follows: In general, the design of LSL is reasonable and feasible to use; LSL games meet grammatical requirements with minor revisions.

3.2. Language Validation

Fifteen aspects are assessed in the LSL language validation (LSL board and LSL card). The following aspects are assessed.

- 1 The sentences in the LSL game instructions can be understood easily
- 2 The sentences in the LSL game instructions use standard language.
- 3 The sentences in the LSL game instructions use terms that are easy to understand.
- 4 The sentences in the LSL game guide use proper spelling.
- 5 The sentences in the LSL game instructions can be read easily by children.

- 6 The sentences and questions on the LSL card can be understood easily by the child.
- 7 Sentences and words on the LSL card use standard language.
- 8 The questions and words on the LSL card correspond to the Covid-19 topic.
- 9 The choice of words on the LSL card can add to children's knowledge about COVID-19.
- 10 *Pantun* on the LSL card according to the age of the child. Primary education.
- 11 *Pantun* and questions on the LSL card can increase children's knowledge and language skills
- 12 The letters that are presented on the LSL board can be made into words by children.
- 13 The definition of words on the LSL card can be searched on the internet so that the child can understand it.
- 14 The child can understand the word abbreviation and acronym on the LSL card.
- 15 The choice of words and rhymes presented and making words based on letters in LSL can bring out children's joy.

Input from the validator, there are five aspects that scoreless agreeably than one validator, namely aspects 4, 5, 6, 8, and 9. These five aspects are related to the Covid-19 topic carried by the LSL game and the readability and spelling of the game instructions on the LSL board and LSL card.

According to the validator, the spelling used in the LSL game instructions is not correct. The child cannot scan the sentences in the LSL game instructions. The command sentences and questions on the LSL card cannot be understood easily by the child. The questions and words on the LSL card are not by the topic of COVID-19, and the choice of words in the LSL card is considered unable to increase children's knowledge about COVID-19.

Based on the results of the language validation, the suggestions given by the validator are as follows.

- 1) Specifies point 1 in the game instructions about starting the game
- 2) The last sentence in clue number 2 is corrected.
- 3) In-game instructions numbers 3, 4, and 5, if the instructions apply to all players, it is better if the word 'player' is written instead of 'opponent player.'
- 4) There is an incoherence in the rhyme
- 5) Unclear question sentences and orders on the yellow card,
- 6) Inconsistent instructions on the green card. __
- 7) There is an incorrect use of capital letters on the red card,
- 8) Use of punctuation marks on red cards
- 9) The use of the language in the green card should be reversed in order,
- 10) The percentage of "increasing children's knowledge about Covid-19" is considered to be still lacking.

Especially for the last suggestion, namely, “ "increasing children's knowledge about Covid-19" is considered to be still lacking” or providing more material about COVID-19 is very good because the purpose of this LSL game is to provide insight into COVID-19 and cause excitement to players.

Covid-19 material is only found on green cards, so it is considered not proportional. The solution to this suggestion is to replace some questions and rhymes with questions and rhymes related to Covid-19.

Based on the validation carried out on the linguistic aspects of the LSL board and LSL card, the validator's conclusions are as follows: in general, the use of language in LSL is good. Sentences can also be understood well; the LSL game's language is good/proper only needs a little revision.

3.3. Limited Trial

The limited trial is in the form of children's responses to the LSL game. This aims to provide additional insight about Covid-19 to children of primary education age and determine whether they feel happy when and after playing snake and ladder.

Children's responses are described from children in grade 2 SD and 6 SD, The low and high-grade ranges are considered to determine whether UTB games can be used for all children (low to high grades) in primary education.

The following are the assessed aspects of the child's response.

- 1 Snakes and ladders are not dangerous because the board and cards are not sharp.
- 2 I can practice my concentration to make kara from the letters on the LSL board.
- 3 I can train my concentration to answer words and rhymes on the LSL card
- 4 LSL games train my honesty (do not peek at the answer key)
- 5 LSL is easy to play.
- 6 I often ask when I start playing LSL.
- 7 letters and words in LSL are good, and I can read them easily.
- 8 my knowledge about COVID-19 increased after playing LSL.
- 9 I learned to make vocabulary through LSL.
- 10 I love LSL colors.
- 11 I like the LSL image
- 12 I like playing LSL
- 13 I like to answer LSL rhyme puzzles
- 14 Playing LSL makes me happy.

Some children's responses refer to disagreement in aspects 4, 6, and 8. In aspect 4, half of the children think that the LSL game does not train their honesty. This could be due to the answer key located at the bottom of the card. It is different from other children. He thought that the LSL game trained his honesty. The same thing is also found in aspect 6, about often asking questions at the beginning of playing LSL and aspect eight about getting more insight into COVID-19 after playing

LSL. If we look closely, the difference between the two children's responses is due to the age factor.

In a child who is in the high class, placing the answer key at the bottom of the card does not practice honesty because he can scan it or memorize it after a few plays. This is different from children who are in the lower class who can just read fluently. Of course, children's reading ability in low classes is not as fast as children in high class. The second thing is that children in the high class can easily understand the rules of the game so that they do not need to ask many questions at the beginning of the game. This is different from children in the lower classes. The ability to understand clues is not as good or as fast as a child in a high class, so when he starts the game, he will ask many questions. Third, for children in the high class, information about COVID-19 can be obtained by themselves so that the LSL game can be considered as not adding to their insight about COVID-19. This is different from children who are in the lower class. Information about COVID-19 is new so that the LSL game can add to its insight about COVID-19.

In addition to this, the unequal information about COVID-19 in LSL game is also the cause of disagreement on aspect 8. On the other hand, the child agrees and strongly agrees with statement number 14 (Playing LSL makes me happy).

Even though there are shortcomings, the two children's conclusions about this LSL game are right. The first response states that the LSL game is excellent. The second response stated that LSL was straightforward to play and pleasant, lots of colors. In general, it can be stated that LSL is worth playing with a little revision. These results are in line with the results of the validation of the previous three validators. Thus, it can be concluded that children can play the UTB game with a little revision.

3.4. Revised Results

Based on the validator's suggestions, five things are revised in the language snake and ladder game board, as follows.

- 1) The word ladder snake is replaced with the language ladder snake by changing the title on the game board.
- 2) Packing the snake and ladder game board in the form of a folding board makes it more practical and easy to carry.
- 3) Reducing the pictures of people, namely the images of people stacked with ladders or snakes and letters.
- 4) It added a coronavirus illustration image, a masked person, and a hand sanitizer on the LSL's outer frame.

The suggestions for using language in LSL games, both on the LSL board and LSL card, are revised as follows.

- 1) Detailed initial steps on the LSL game manual (initial steps)
- 2) Change the last sentence of the second clue
- 3) Replacing rhyme puzzles that are not logical with rhymes related to COVID-19. Changing the pantun also aims to make the COVID-19 material evenly distributed across all UTB cards, not just green cards.

- 4) Change the order of the commands on the green card to be the first question then the keyword.
- 5) Correcting the use of incorrect spelling in all sentences and words found on all LSL cards.

Following the validator's suggestion, the contents of the eight rhymes were changed so that the COVID-19 material could be conveyed to UTB players. Changing the pantun also aims to make the COVID-19 material evenly distributed across all LSL cards, not just green cards.

4. CONCLUSION

Based on the analysis conducted, the language ladder snake was declared valid for elementary school children. Also, the game of snakes and ladders turns out to be fun for children when playing it. Hopefully, this ladder snake game can make children happy (feel happy), add insight about Covid-19, and inspire children/parents to do something during this pandemic.

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REFERENCES

- [1] C. Columbus, K. B. Brust, and A. C. Arroliga, "2019 Novel Coronavirus: an Emerging Global Threat," *Baylor Univ. Med. Cent. Proc.*, vol. 33, no. 2, pp. 209–212, 2020, doi: 10.1080/08998280.2020.1731272.
- [2] I. Ali, "The COVID-19 Pandemic: Making Sense of Rumor and Fear: Op-Ed," *Med. Anthropol.*, pp. 1–4, 2020.
- [3] A. Bruckman, "Situated support for learning: Storm's weekend with Rachael," *J. Learn. Sci.*, vol. 9, no. 3, pp. 329–372, 2000.
- [4] C. Dede, "Multi-user virtual environments," *Educ. Rev.*, vol. 38, pp. 60–61, 2003.
- [5] L. P. Rieber, "Seriously considering play: Designing interactive learning environments based on the blending of microworlds, simulations, and games," *Educ. Technol. Res. Dev.*, vol. 44, no. 2, pp. 43–58, 1996.
- [6] M. D. Dickey, *Aesthetics and design for game-based learning*. Routledge, 2015.
- [7] P. Sugiyono, "Metode penelitian kombinasi (mixed methods)," *Bandung Alf.*, 2015.
- [8] S. Thiagarajan, "Instructional development for training teachers of exceptional children: A sourcebook.," 1974.