

## VISUAL-BASED LEARNING MEDIA IN THE FORM OF “ULAR TANGGA” GAME TO IMPROVE THE QUALITY OF LEARNING AND TEACHING

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### **Abstrak**

Mutu pendidikan pada jenjang sekolah dasar dituntut untuk selalu lebih baik seiring dengan perubahan dunia. Guru sebagai pemeran utama dalam kegiatan belajar mengajar diharapkan mampu menggunakan media yang tepat guna meningkatkan minat belajar siswa. Media pembelajaran berbasis visual dalam bentuk permainan merupakan salah satu media alternatif yang efektif untuk meningkatkan mutu belajar. Anak-anak pada jenjang sekolah dasar memiliki kecenderungan untuk bermain. Situasi yang menyenangkan dan rileks akan membantu anak untuk meningkatkan minat belajarnya. Akhir-akhir ini muncul paradigma baru bahwa melalui bermain anak akan lebih mampu belajar dan kegiatan belajarnya akan lebih efektif apabila situasinya diatur sedemikian rupa sehingga menyenangkan. Pengembangan media pembelajaran berupa permainan ular tangga ini bertujuan untuk memberikan wacana mengenai media pembelajaran alternatif untuk jenjang sekolah dasar. Pemanfaatan media alternatif ini dapat meningkatkan mutu kegiatan belajar mengajar pada jenjang sekolah dasar.

**Kata Kunci:** *pembelajaran media visual, Media Pembelajaran, Permainan Ular Tangga*

### **Abstract**

The quality of education at elementary level is demanded to always be better along with the world's changing. The teacher as the leading role in teaching and studying activity is expected to be able to use acceptable media to improve student's learning interest. Visual based teaching media in game formation is one of effective alternative media to improve studying quality. Children in elementary level have a tendency to play. Fun and relaxing situations will help children to increase their learning interest. There is a new paradigm recently that through playing children will be able to learn more and their studying activity will be more effective when the situation is set to be fun. The development of this learning media in the form of “ular tangga” game is aimed at giving discourse about alternative teaching media for elementary level. The use of this alternative media is expected to improve the quality of teaching and studying activities at elementary level.

**Keywords:** *Visual Learning, Learning Media ular tangga*

## INTRODUCTION

This aims to improve the quality of education so that teachers (educators) and students (who are being educated) have optimal quality in carrying out Teaching and Learning Activities (KBM). The number of elementary school students who are increasing every year certainly requires serious handling. For this reason, the Department of Education is making various efforts to continuously improve the quality of education.

## ADVANTAGES OF USING “ULAR TANGGA” LEARNING MEDIA

1. Improving the quality of pre-service training, with an emphasis on learning activities and mastery of teaching practice.
2. Improving the teacher and education staff recruitment system through the selection of prospective teachers and education staff in collaboration with the LPTKs and the local regional government.
3. Improving the quality of in-service training by giving schools the freedom to organize teacher up-grading through TTIs and other professional institutions
4. Empowering professional forums for teachers and school principals as a vehicle for discussing educational and teaching problems being faced. The quality and quality of basic education is always demanded to be better because of the changing times that are happening both nationally and globally. The quality of basic education in Indonesia has been proven to be unable to optimally produce competitive Human Resources (HR).

One reason is the quality of teaching staff who are less aware of the importance of updating teaching quality and strategies. The existence of a developing paradigm in society that the learning process is synonymous with books and writing, has indirectly killed the creativity of our educators so far to explore dynamic and effective teaching systems. Thus, many complaints were made by various parties that the teaching system in elementary schools which emphasizes one-way communication (lectures) in class is a teaching system that is too boring and monotonous.

One of the causes of the teacher's lack of tips for building an interactive relationship in teaching and learning activities is the teacher's lack of knowledge about the development and use of alternative learning media. Media learning resources are useful tools in teaching and learning activities. The aids can represent something that cannot be conveyed by the teacher through words or sentences. Students' difficulties in understanding certain concepts and principles can be

overcome with the help of aids. Even assistive devices are recognized as being able to give birth to good feedback from students.

By utilizing acceptable tactics, teachers can stimulate students' interest in learning. Simple traditional games can be a source of inspiration in designing learning media. We know that the game of "ular tangga" is a type of traditional game that is worldwide. This game does not only apply in our country, but also in various other countries in the world.

This game is a type of group game, involving several people and cannot be used individually. Psychologically, "ular tangga" are proven to improve children's ability to interact with social life. In contrast to electronic media-based games that prioritize individual play, where children will concentrate on fully interacting with electronic media such as computers, video games or play stations. Psychology experts say that traditional games tend to be more profitable than games through electronic media.

"ular tangga" is modified so that it becomes a communicative and easy-to-understand game medium, with eye-catching, attractive and fun visualizations to use as a learning medium. A communicative "ular tangga" accompanied by an attractive and full color image is absolutely necessary in this "ular tangga" design. In an educational psychology research it was stated that children understand visual language more easily than verbal language. Thus, a learning media full of communicative full color illustrations will increase students' interest in learning and recalling the lessons that have been given. This "ular tangga" media is considered very effective for repeating (reviewing) certain chapters in lessons that are considered the most difficult for students to understand and less effective when delivered verbally.

In addition, students can also easily understand what is conveyed by the teacher through this media because students do not feel burdened with repeating certain units. Learning that involves children's tendency to play is much more effective because students feel more relaxed. For children learning while playing is important. An educational researcher named Peter Kline (Dryden & Vos: 1999) even assures us that learning will be effective if it is done in a pleasant atmosphere. The word media comes from the Latin *medius* which literally means middle, intermediate or introduction. Media when understood broadly is human, material, or events that build conditions that enable students to acquire knowledge, skills or attitudes (Arsyad, 2003: 3). In this sense, teachers, books, the text and the school environment are the media. more specifically,

With the term media mediator shows its function or role, which is to regulate an effective relationship between the two main parties in the learning process, students and lesson content. Media learning resources are useful tools in teaching and learning activities. The aids can represent something that cannot be conveyed by the teacher through words or sentences.

The effectiveness of students' absorption of difficult and complicated subject matter can occur with the help of tools. Students' difficulties in understanding certain concepts and principles can be overcome with the help of aids. Even stone tools are recognized as being able to generate good feedback from students. By utilizing acceptable tactics, teachers can stimulate students' interest in learning (Djamarah and Zain, 2002:137).

The ideal condition for interaction between teacher and student is when the teacher consciously plans his teaching activities systematically by utilizing everything for the benefit of teaching. (Arsyad, 2003:98). Each field of study requires a different approach to be understood by students. Therefore, knowing a material for the benefits of choosing an approach is very necessary. Teachers are required to be able to use the tools that can be provided by the school, and it is possible that these tools are in accordance with the developments and demands of the times. At least teachers can use inexpensive and efficient tools which, although simple, are still effective in achieving the expected goals. Besides being able to use the available tools,

Arsyad (2003: 98) said that teaching media as a tool can provide students with similar experiences about events in their environment, as well as allow for direct interaction with teachers, the community and the environment. In a teaching and learning process, two very important elements are teaching methods and teaching media. These two aspects are interrelated.

The choice of one particular teaching method will affect the appropriate type of teaching media, although there are still various other aspects that must be considered in selecting media, including the purpose of teaching, the types of tasks and responses that students are expected to master after teaching takes place. Even so, it can be said that one of the main functions of teaching media is as a teaching aid which also influences the climate, conditions, and environment that are arranged and created by the teacher (Djamarah and Zain, 2002:82).

The use of learning media in the teaching and learning process can generate new desires and interests, generate motivation and stimulate learning activities and even bring psychological influences on students. The use of learning media at the

teaching orientation stage will greatly help the effectiveness of the learning process and the delivery of messages and lesson content at that time. In addition to arousing student motivation and interest, instructional media can also help students improve understanding, present data in an interesting and reliable manner, make it easier to interpret and condense information (Djamarah and Zain, 2002:136). Seels and Glasgow (1990:181-183) grouped various types of media in terms of technological development, divided into two broad categories, namely:

- 1) traditional media choices and
  - 2) choice of the latest technology media.
1. traditional media choices
    - a. Projected still visuals, examples: opaque projections, overhead projections, slides, film strips
    - b. Projected visuals, for example: pictures, posters, photos, charts, graphs, diagrams, exhibitions, info boards
    - c. Audio, for example: disc recording, tape, cassette, reel, cartridge
    - d. Presentation of Multimedia, for example: slide plus sound (tape), multi-image
    - e. Projected dynamic visuals, eg film, television, video
    - f. Print, for example: textbooks, modules, programmed texts, work books, scientific periodicals, loose sheets (handouts)
    - g. Games, examples: puzzles, simulations, board games
    - h. Realia, examples: models, specimens (examples), manipulatives (maps, dolls)
  2. choice of the latest technology media.
    - a. Telecommunications-Based Media, for example: Teleconferences, distance lectures
    - b. Microprocessor-Based Media, for example: Computer assisted instruction, Computer games, Intelligence tutoring systems, Interactive Multimedia, Hypermedia, Compact (video) discs At first the concept of literacy was only used in a verbal context, namely reading and writing. It was only in the mid-1960s that the concept of visual readability began to emerge, in the form of sketches, photographs, drawings, diagrams, tables and others.

Thus, textbooks began to display visual messages through various illustrations to clarify verbal readability. More than that visual messages are also presented in



various mass media such as TV, printing and production. Visual messages are very effective in clarifying information (Sudjana and Rivai, 2002:27).

According to Djamarah and Zain (2002:144) visual-based media is media that only depends on the sense of sight. Visual-based media (images or parables) play a very important role in the teaching and learning process. Visual media can facilitate understanding and strengthen memory. Visuals can also foster student interest and can provide support between the content of the subject matter and the real world. To be effective, visuals should be placed in meaningful contexts and students must interact with the visuals (images) to ensure information processing occurs. Visual forms can be:

- a. Representative images, such as drawings, paintings or photographs showing how
- b. seems to be an object;
- c. A diagram depicting the relationship between concepts, organization, and structure of the content of the material;
- d. Map showing the spatial relations between the elements in the material content;
- e. Graphs such as tables, charts (charts) that present a description or trend of data or the relationship between a set of pictures or numbers. Students receive visual messages, influenced by several factors.

There are two very important variables, namely the development of the child's age and the background he adheres to. The findings of child development psychologists show that visual readability is influenced by the maturity of the child's soul. For example, before the age of 12 children tend to interpret visual messages in parts rather than as whole scenes and report inferences about the meaning of pictures.

If various abstract symbols or series of images that are related to each other are not clearly understood by students, this will result in the failure of the educational communication process for all age levels. The age of child development can affect the interpretation of artistic discoveries in the use of lines, for example sketches, schemes, distance measurements and others (Sudjana and Rivai, 2002:13).

The value of graphic media lies in its ability to attract attention, interest in conveying certain types of information quickly. Its main role is to visualize facts and ideas in a concise and concise form. In other words, graphic media can be defined as media that combines facts and ideas in a clear, strong and integrated way, through a combination of words and images.

This medium is very appropriate for the purpose of conveying information in the form of condensed summaries. Thus, good graphic media should develop the imagination or image of students. Imagination power can be generated by arranging and compiling visual elements in learning media (Sudjana and Rivai, 2002:20).

The results of research on visual readability associated with learning outcomes, show that the visualization of messages on both abstract and concrete poles has relatively the same effect on student learning outcomes. Simplicity in the layout (lay out) is one of the things that need attention in making visual learning media. Decorations that are excessive and deemed unnecessary can be minimized.

Student attention must be focused on the main idea or core of the lesson. Likewise with cohesiveness, which means that all the visual elements displayed must work together in a coherent manner. In other words, images that are too abstract are not very clear to students, while images that are too concrete also cause confusion for students. So when designing a visual learning media, we must pay attention to visual readability (visual literacy) in order to increase the effectiveness of student learning outcomes (Arsyad, 2003:104-107).

Children are elements of personality taken from children's feelings and experiences that contain the potential for intuition, spontaneity, creativity, and fun (Rachmat, 2002: 123). Children have the potential to imitate (imitate), while adults have a role as objects to be imitated. Therefore, in education teachers are expected to be moral educators and be good examples for their students.

Children have no limits and experiences that allow them to accept all the goals formulated by adults. When a child asks an adult about something, the most important thing is not the answer, but the process of speaking the adult when giving the answer that makes them feel interested. The children are interested in the process. If they talk, what is very interesting for them and what becomes their goal is the activity of talking itself (the activity of talking). Because children are always interested in the process, it is more important for teachers to provide guidance and direction than education that seems formal, let alone cooperation (Hamalik, 2002: 102).

Child psychologists emphasize the importance of the need for play for children. For children, playing is a natural and very meaningful activity. By playing children get the opportunity to establish close relationships with people and the environment around them. The game is a means of introduction as well as a training ground for behavior, thinking symbolically and solving problems. In addition, games are very important for training muscles, physical skills, balance, working with others, learning conversation, friendship and practicing manners. The game will also provide the emotional satisfaction that he gets from group life, achievement, recognition from others, and freedom.

In other words, the game will provide acceleration for children to practice physical skills, social skills, and get emotional satisfaction and intellectual training

(Hamalik, 2002: 104). The purpose of this research is;

1. Develop learning media in the form of games that are able to optimize both the role of teachers and students in teaching and learning activities.
2. Analysing the influence of learning media in the form of games in teaching and learning activities.
3. Finding factors that influence the improvement of the quality of dynamic and creative teaching and learning activities.
4. Providing insight to the world of education about alternative learning media.

## **FORMULATION OF THE PROBLEM**

The background of the problem is filled with the problems encountered. At least 1 paragraph or 3 problem formulations in Calibri (Body) 11 font, spacing 1.0.

### **1) SCOPE OF PROBLEMS**

Related to the limitations of this problem, it is focused on the scope of research, there are media that you want to use/develop, including the material that is prepared and adapted to the media that is being developed.

### **2) PURPOSE OF MAKING LEARNING MEDIA**

1. Develop learning media in the form of games that are able to optimize both the role of teachers and students in teaching and learning activities.
2. Analysing the influence of learning media in the form of games in teaching and learning activities.
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4. Providing insight to the world of education about alternative learning media.

## **BENEFITS OF MAKING LEARNING MEDIA**

Is the answer to the function of the developed media. At least 1 paragraph or 5 benefits of the developed media. font Calibri (Body) 11, spacing 1.0.

## **STAGES OF MAKING LEARNING MEDIA**

1. Planning Stage. In this stage there are several activities;



- a. Observation of the process of teaching and learning activities in several schools
  - b. Reviewing the review process is carried out by teachers in schools to measure students' memory and understanding of the lessons that have been given.
  - c. Conceptualize interesting and effective learning media, able to involve students' abilities optimally.
2. Planning a Program of Action. This stage is the stage where the research personnel begin to arrange time for research implementation, media creation, structured activities, implementation and evaluation techniques
  3. Media Making Stage. Starting from rough sketches of media shapes to printing and finishing processes.
  4. Media Trial Stage. Implementation of learning media in several schools according to the planned schedule.
  5. Final Evaluation. Make final reports and articles and submit them to all related parties. In conducting this research, several research instruments were used, including;
    - a. Three sets of instructional media in the form of "ular tangga" games which have been modified for the fields of science, social studies and English. Each 1 set of learning media consists of; game tiles (snakes and ladders) which are designed to be more colorful and varied, game instructions, 40 question cards, dice and pawns (mascots).
    - b. Pre-Test and Post Test in the form of questions with selected answers made according to the field of study and the chapter to be evaluated. For science and social studies, it consists of 10 choice questions, while for English it consists of 8 questions. The questions were given to students before and after using learning media in the form of a "ular tangga" game. The purpose of this pre-test and post-test is to measure students' initial abilities and find out to what extent this learning media plays a role in efforts to increase elementary school students' understanding of lessons after students use this learning media.
    - c. Questionnaire with closed answer model. This questionnaire is intended for students who have used "ular tangga" learning media. It consists of several questions to measure students' responses to this learning media.
    - d. Evaluation sheet for accompanying teachers. This evaluation sheet is intended to find out what the accompanying teacher thinks about

learning media in the form of a “ular tangga” game and the level of student activity.

## IMPLEMENTATION RESULTS

After making observations about the teaching and learning system in elementary schools, we found that in general, the motivation of elementary school teachers to improve the teaching and learning environment in the classroom was still lacking. So that teaching and learning activities seem monotonous and tend to be boring. Through this research, we hope to contribute ideas and motivation that make learning media not difficult.

The little things around us can actually be a great inspiration in making learning media as long as we are willing to think creatively. The media we create is inspired by the conventional game of “ular tangga” which is well known by children all over the world. We modified this popular conventional game in such a way that it can become a learning medium that children like and is effective in increasing elementary school students' understanding of lessons.

By applying design principles and aspects of child psychology to learning media in the form of games, we created 3 sets of learning media for the fields of science, social studies and English. Each set of learning media consists of:

- a) game tiles,
- b) question cards,
- c) game instructions,
- d) dice and pawns (mascots).

The game plots are designed to be more colorful and equipped with illustrations that are in accordance with the discussion of the field of study. The illustration displayed on the game tiles and question cards is a type of caricature (caricature) illustration because according to some child psychologists this type of illustration is preferred and easier for school-aged children to grasp.

## CONCLUSION

Based on the research results, it can be concluded that;

- a) in general, visual-based learning media in the form of a “ular tangga” game is an effective medium for increasing students' absorption and understanding of lessons, especially discussions that are difficult to accept without media intermediaries. This can be seen from the increase in students' post-test scores after using learning media;

b) student interest in visual-based learning media is very good, this can be seen from the enthusiasm of students when using this learning media. When students study in pleasant conditions, students can absorb and remember more of the material presented;

c) from the teacher's perspective, this learning media is less profitable if there is no additional accompanying teacher to supervise and guide students when using instructional media, whereas in general there is only one accompanying teacher in each class. Without supervision, students can easily get caught up in the game of "ular tangga" without being able to absorb the important values conveyed by learning media.

## SUGGESTIONS

In order to improve the quality of teaching and learning at the elementary school level, teachers are expected to utilize acceptable tactics to stimulate students' interest in learning. The ideal condition for interaction between teacher and student is when the teacher consciously plans his teaching activities systematically by utilizing everything for the benefit of teaching.

Creating a tool is not always difficult, small things around us can be an inspiration in making learning media. Elementary schools are expected to provide more participation in order to support teacher activities in improving the quality of teaching and learning. This participation can be in the form of organizing trainings on improving the quality of teaching and learning as well as financial assistance for teachers who create new effective and creative learning media.

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