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Development of ICT (Information And Communication Technology) Media of The Bamboozle Type Using The Discovery Learning Model in Indonesian Language Learning at Madrasah Ibtidaiyah

Abstrak

This study aims to describe the implementation of Information and Communication Technology (ICT)-based learning media, specifically the Bamboozle platform, in Indonesian language learning for fifth-grade elementary school students on the topic of intrinsic elements of a story. Bamboozle is an online educational game-based learning media that does not require students to create accounts or use special devices, making it highly suitable for collaborative and interactive learning contexts. This research employs a descriptive qualitative approach, utilizing observation, interviews, and documentation as data collection methods. Using a qualitative approach, the study involves Madrasah Ibtidaiyah (MI) students as subjects to explore their learning experiences when using Bamboozle integrated with the Discovery Learning model. The results indicate that the use of Bamboozle positively impacts student engagement during the learning process, particularly in aspects of communication, collaboration, and fostering a healthy competitive spirit. This media facilitates the understanding of abstract concepts and increases students' learning motivation through a fun and participatory classroom environment. One of Bamboozle's main advantages is its ability to promote teamwork without the need for complex technological infrastructure. Nevertheless, the study also identifies several challenges, such as the limitation on the number of characters allowed in question creation and the absence of an individual assessment system. These issues present obstacles in objectively evaluating each student's learning achievements.

Keywords: ICT Media, Bamboozle Type, Discovery Learning, Language Learning

1. Introduction

In the Indonesian Dictionary (Kamus Besar Bahasa Indonesia), *media* is defined as a tool, means of communication, intermediary, or connector. The word originates from the Latin term *medius*, which means “middle,” “intermediary,” or “conveyor.” Therefore, instructional media can be interpreted as an educational bridge. Based on this understanding, instructional media refers to tools or intermediaries that facilitate the learning process, with the objective of enhancing the effectiveness of communication between teachers and students.

Instructional media can be classified into eight categories: audio media, printed media, still visual media, moving visual media, semi-moving visual media, still audiovisual media, and

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moving audiovisual media. However, Heinich classifies media into three main categories: (1) Graphic media, which includes visual aids that convey messages through visual communication symbols; (2) Audio media, which are related to the sense of hearing, delivering messages in verbal or non-verbal auditory symbols; and (3) Static projection media, which are similar to graphic media in delivering visual stimuli, but differ in that graphic media allow direct interaction with the medium.

The selection and use of instructional media are grounded in several foundational principles: philosophical, psychological, technological, and empirical. Philosophical foundations guide the use of media based on views of learning objectives, the role of the teacher, and how students acquire knowledge. Psychological foundations align media design with established psychological principles to support learning, helping media developers to understand learners' needs and characteristics. Technological foundations encourage effective use of technological tools to enhance learning quality and experiences. Empirical foundations adjust media usage to accommodate students' learning styles and characteristics, ensuring decisions are based on evidence of the media's effectiveness and impact on learning.

ICT-based instructional media are tools used to process, transfer, and deliver data or information from one device to another. They simplify the communication of data or information in the learning process. Essentially, all instructional media—ICT-based or otherwise—are tools that help educators convey messages to learners. Instructional media consist of two aspects: the content or message (software), and the delivery tool (hardware). Broadly, ICT-based media include computer technology, media technology, and network technology. Examples include PowerPoint slides, images, animations, videos, audio, computer-aided instruction (CAI), and simulation programs. The advantages of using ICT-based media include the ability to visualize abstract concepts, simplify complex materials, simulate processes difficult to perform manually, present materials in engaging multimedia formats, provide up-to-date content, facilitate interaction between learners and materials, accommodate different learning styles and speeds, overcome limitations of time and space, and support the teacher's evolving role as a facilitator rather than the sole source of knowledge. Furthermore, it enhances users' individual skills.

One example of ICT-based instructional media is Bamboozle. Bamboozle is an educational game platform similar to a quiz competition but conducted online, and students are not required to create accounts beforehand. It is played in groups, where each group selects a numbered box containing a question. These boxes may also contain extra points, point swaps with the highest-scoring team, point deductions, or zero points. Correct answers are rewarded with points, while incorrect answers do not result in penalties.

The chosen Indonesian language material at the primary school level is “intrinsic elements of a story.” These include theme, plot, setting, language style, moral message, characters, and characterization. The *theme* is the core idea or main issue of the story. The *plot* is the sequence of events and structure of the narrative, which may be linear, flashback, or mixed. *Setting* refers to the time, place, and social environment in which the story occurs. *Language style* reflects the author's expressive techniques used to evoke specific atmospheres. The *moral message* is the positive lesson conveyed through events and characters, often shown indirectly. *Characters* are the story's actors, carrying the narrative and its moral. *Characterization* is how the author builds personalities through actions, dialogue, and explicit description.

Bamboozle is an easy-to-use media tool that can be accessed anywhere and anytime. Teachers can select and customize content to suit their classroom needs. It fosters an interactive and engaging classroom atmosphere. For researchers and practitioners, this platform offers a user-friendly interface that aligns well with desired classroom dynamics.

2. Research Method

This study is classified as qualitative research. According to Sugiyono, qualitative research methods are based on the philosophy of post-positivism and are used to examine natural conditions of objects (as opposed to experiments), where the researcher serves as the primary instrument, data collection is conducted through triangulation (a combination of methods), data analysis is inductive or qualitative, and the findings emphasize the meaning behind general phenomena. Qualitative research provides a detailed description of research findings through words or analysis rather than numerical data.

The term *qualitative* is generally understood not only as a type of information but also refers to the analysis and interpretation of research subjects. As cited by Andi Prastowo, Bogdan and Taylor define qualitative methodology as a research technique that produces descriptive data in the form of written or spoken words about observed individuals and behaviors. This study employs a qualitative approach because the data obtained consists of observations, interviews, and other information regarding the use of ICT-based learning media, specifically Baamboozle, integrated with Discovery Learning in the development of Indonesian language instruction.

The subjects of this study were fourth and fifth-grade students at MI Rakha Amuntai. The participants included Muhammad Yazid Mubarak (Grade 5), Muhammad Raihan (Grade 5), Muhammad Khairun Nizam (Grade 5), Khairiansyah (Grade 5), and Muhammad Rizkan (Grade 4).

The data analysis method for qualitative research, following Creswell's steps, involves: (1) organizing and preparing the data, (2) reading, comprehending, and reflecting on all the data related to ICT-based learning media Baamboozle with Discovery Learning in the development of Indonesian language learning, (3) summarizing the data, (4) providing detailed descriptions, (5) identifying and connecting related themes, and (6) interpreting the themes within the study.

3. Results And Discussion

3.1. Implementation of Indonesian Language Learning Using ICT-Based Media Bamboozle with the Discovery Learning Model

The lesson began with a greeting, checking on the students' condition, followed by a prayer and attendance check. After that, the learning objectives were presented. The lesson then continued with an explanation of the material on intrinsic elements of a story. This included discussions on theme, characters and characterization, setting, plot, and the moral message contained in the story.

During this phase, I used the **Discovery Learning** model. At the end of the main activity, I conducted an evaluation using an ICT-based tool, **Bamboozle**. In this activity, I divided the class into two groups: Group 1 and Group 2. The groups were determined by having students play rock-paper-scissors, and the winner was allowed to choose which group they wanted to join.

Next, I displayed a quiz on Bamboozle. Representatives from each group did rock-paper-scissors again to decide who would go first. The winner then chose a number from 1 to 16. After selecting a number, a question appeared, which the student had to answer. After the student answered, I checked and confirmed whether the answer was correct or incorrect. This process continued until all the questions were answered. At the end, the winning team was shown on the screen.

After the evaluation, I and the students reviewed the material again and went over the key points and the assignments for the next meeting. Finally, the class ended with a closing prayer and a farewell greeting from the teacher.

However, several challenges were also observed during the implementation. One of the main limitations was the inability to assess individual student performance accurately, since

the quiz was conducted in groups. This made it difficult to determine the understanding level of each student. To address this issue, a possible solution is to modify the quiz format by having individual representatives from each group answer specific questions, which would allow for a more focused and personal assessment.

Another drawback identified was the character limitation when creating questions in Bamboozle. This constraint made it difficult to include complex or longer-form questions that might better assess higher-order thinking skills. Additionally, if a group answered a question incorrectly, there was no built-in feature for the question to be passed to the other group, which could have enhanced the competitiveness and engagement even further. Currently, the only alternative is to allow the opposing team to “steal” the points, rather than answer the question directly.

Despite these challenges, the lesson still succeeded in promoting key 21st-century skills such as communication, collaboration, and problem-solving. Communication skills were demonstrated through class discussions, question-and-answer activities, and during the evaluation process. Collaboration was evident in the way students worked together in their teams, shared roles, and supported each other in answering questions. Problem-solving skills emerged during the quiz session, as students had to think critically, discuss with their peers, and come up with the best possible answers under time pressure.

These findings are consistent with previous studies highlighting the importance of integrating interactive technology and student-centered approaches into classroom instruction. By combining the strengths of ICT-based tools like Bamboozle with the Discovery Learning model, teachers can create a more dynamic, student-driven learning environment that fosters deeper understanding and skill development.

In conclusion, while improvements can still be made in terms of assessment and technical limitations, the integration of Bamboozle into Indonesian language learning has proven to be a beneficial strategy to enhance student engagement, foster collaboration, and develop essential academic and interpersonal skills. This approach holds strong potential for broader application across various subjects and educational levels.

3.2. Analysis

Implementation of Indonesian Language Learning on the Topic of Intrinsic Elements of a Story Using the Discovery Learning Approach Combined with ICT-Based Media Bamboozle

The implementation of Indonesian language learning focused on the topic of intrinsic elements of a story using the Discovery Learning approach, combined with ICT-based learning media Bamboozle, demonstrated an increase in students' active participation during the learning process. The initial learning phase, which began with greetings, attendance checks, prayer, and the presentation of learning objectives, helped to create a conducive and structured environment for students.

In the core activity, the teacher delivered the material systematically, starting from the theme, characters and characterization, setting, plot, to the moral message of the story. The Discovery Learning approach encouraged students to independently explore and discover information, promoting active understanding of the material. This served as a solid foundation before students proceeded to the interactive evaluation session using Bamboozle.

The use of Bamboozle as an evaluation tool added a fun and competitive dimension to the learning experience. The fair group division using rock-paper-scissors promoted unity and encouraged active participation. Bamboozle not only fostered a healthy competitive spirit but also strengthened teamwork among students as they worked together to answer the questions.

The evaluation session, which involved selecting random numbers and answering the questions that appeared, kept students focused and enthusiastic until the end. The teacher's immediate feedback on students' answers also helped reinforce their understanding.

This activity showed that the chosen method successfully fostered learning motivation, improved mastery of the material, and enhanced 21st-century skills such as collaboration, communication, and problem-solving. However, one notable limitation was the lack of individual assessment, which is an important point to address to ensure each student is evaluated personally.

One of the advantages of using Bamboozle in teaching the intrinsic elements of stories to 5th-grade students is that it does not require students to use their own devices or log in to participate in the quiz. This allows students to focus more on the teacher and makes the learning process more active and interactive. Additionally, the game is conducted in groups, helping students practice teamwork and unity, while also encouraging positive competitiveness among classmates. Moreover, Bamboozle includes scoring features such as point deductions or additions for incorrect or unanswered questions, which adds excitement and enjoyment to the classroom.

However, there are also limitations to using Bamboozle, such as the restricted number of characters when creating questions and the fact that quizzes are not answered individually, making personal evaluation less effective. A possible solution is to modify the evaluation process so that each question is answered by one representative from each group, allowing the teacher to conduct individual assessments. Another drawback is that incorrect answers from one group cannot be passed on to the other group. Currently, no effective solution exists for this issue—only a point-stealing mechanism by the other group is available when a team fails to answer..

This learning activity highlighted several important student skills: communication, collaboration, and problem-solving. Collaboration skills were evident during the group prayer, interactive discussions, and team assignments. This aligns with the view of Nur Qomaria and Ana Yuniasti Retno Wulandari in their journal titled *"Developing Students' Collaborative Skills through Learning with the Ethno-STEAM Project-Based Approach in the Context of Pesapean,"* which defines collaboration as the skill of working together, sharing responsibilities and roles to achieve common goals in addressing problems and their solutions.

Communication skills were evident during attendance, question-and-answer sessions, and the Bamboozle-based evaluation. Communication was present throughout nearly all aspects of the learning process. This supports the view of Hayu Almar'atus Sholihah and colleagues in their journal *"The Jigsaw Learning Method to Improve Junior High School Students' Communication Skills,"* where they state that communication occurs when people interact with one another. Communication affects all areas of human life, and research suggests that humans spend 70% of their waking hours communicating. Communication determines the quality of human life.

Problem-solving skills were demonstrated during the evaluation activity using Bamboozle. This is in line with the view of Sutarto Hadi and Radiyatul in their journal titled *"Polya's Problem Solving Method for Developing Students' Mathematical Problem-Solving Skills in Junior High School."* They argue that problem-solving is a fundamental human activity. In reality, much of life involves dealing with problems. If one solution fails, individuals must try alternative approaches. Thus, teaching problem-solving helps students become more critical and creative in making life decisions. Problem-solving involves mental processes that help individuals confront issues and find solutions through systematic and thoughtful reasoning.

4. Conclusion and Suggestions

Learning media serve as tools that facilitate the learning process with the goal of enhancing the effectiveness of communication between teachers and students. Based on various types of media—such as audio, visual, and audiovisual—as well as the use of information and communication technology (ICT), these tools play a crucial role in education. The use of ICT-based media, such as Bamboozle, offers many benefits, including the ability to visualize abstract concepts, facilitate the understanding of complex material, and support better interaction between students and the learning content. Bamboozle, which emphasizes educational online games, helps create an interactive and enjoyable classroom atmosphere while promoting teamwork and positive competition among students—without requiring personal devices or special accounts.

The implementation of Indonesian language learning using the ICT-based media Bamboozle in Grade 5, specifically on the topic of intrinsic elements of a story, has proven to be effective in increasing student interaction, collaboration, and communication skills. Its advantages include not requiring additional devices from students and encouraging teamwork as well as a healthy competitive spirit. However, there are some limitations, such as character limits when creating questions and the lack of individual assessment. Proposed solutions include revising the evaluation process to enable individual assessment and improving the point-stealing mechanism between groups. Overall, the use of Bamboozle strengthens communication, collaboration, and problem-solving aspects in learning, supporting findings from various studies on the importance of these skills in educational contexts.

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