Development of E-Modules to Improve Motivation and Learning Outcomes of Catholic Religious Education for Public Elementary School Students

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Abstract: This study aims to determine the feasibility of electronic modules developed, to determine the effect of using e-modules on increasing learning motivation and to determine the impact of using e-modules on the learning outcomes of fifth grade students of Palangka Raya City Public Elementary School. This research approach uses an R&D approach. From student learning motivation and showed an increase of 72%. E-modules also affect student learning outcomes. This research resulted in developing a new and feasible e-module for grade V elementary school students that utilizes information and communication technology in the learning process. This means that there is an effect of using e-modules on student learning outcomes in Catholic religious education. This research contributes to the field of education by developing innovative learning tools, increasing student learning motivation, and proving the effectiveness of using E-modules in improving student learning outcomes in Catholic Religious Education subjects.

Keywords: Development E-module, Improve Motivation, Learning Outcomes

A. Introduction

The Law of the Republic of Indonesia number 20 of 2003 concerning the National Education System, especially article 1, states that the concept of learning is an interaction between students and educators and learning resources (Depdiknas, 2003). The concept of learning above gave birth to a multi-source-based learning model. Learning based on various sources allows students to learn from anyone, anywhere and about anything. Learning based on various sources allows the creation of a lively and interesting learning situation (Pusdiklat, Pendidikan, & Kebudayaan, n.d.). This is in line with the demands in the Indonesian government regulation number 19 of 2005 concerning national education standards which states that the learning process at the education unit level is organized interactively, inspiring, fun, challenging, motivating students to take part in learning activities (Depdiknas, 2005).

All things related to education are quite difficult to achieve when the covid-19 pandemic hits the world(Sari, 2020). All aspects including educational aspects are
affected by this pandemic. The covid-19 pandemic has made many decision makers realize that learning activities that are required according to their standards are not easy to achieve (Saifulloh & Darwis, 2020). The interaction that occurs face-to-face, is less influential when learning online, fun learning activities are hindered by tasks that sometimes without clear explanations and instructions from the teacher (Wardhani & Krisnani, 2020).

The pandemic situation that is starting to improve gives courage to decision makers to open limited face-to-face meetings (PTMT) in several areas with strict health protocol requirements and the most obvious is the reduction of learning time or duration in existing subjects (Yuangga & Sunarsi, 2020). This causes several advantages and disadvantages experienced by educators and students. PTMT that is carried out brings fresh air in the midst of a pandemic but also brings incompleteness of competencies that must be mastered by students due to limited time (Yuangga & Sunarsi, 2020).

Educators certainly do not remain silent in addressing the problems that arise as a result of learning, especially since there are many media as a post-pandemic learning solution (Höttecke & Allchin, 2020). Behind this pandemic, the positive side that can be obtained is the opportunity for educators to find various ways to be able to overcome learning problems faced during learning with limited time, providing a space for creativity for educators to improve their competence so that the classroom in learning becomes a classroom that motivates students to learn independently and is fun for students so that it has an impact on student learning outcomes that increase (Kang, 2021).

The environment that researchers face is an educational environment that prepares prospective Catholic religion teachers who are creative, innovative and ready to face all situations (Manullang, Gultom, Tobing, & Sitorus, 2022). The author also interacts a lot with alumni, most of whom have become professional educators who carry out Catholic Religious Education learning at both elementary and high school levels. The problems they face during learning such as limited teaching time during the pandemic even though face-to-face is limited so that the learning objectives that should be completed at that time cannot be maximally completed, the problem of lack of motivation of students during learning, the lack of media or methods used and packaged in an attractive manner are a small part of the problems seen. If these problems cannot be resolved properly, it is possible that it will have an impact on student motivation and learning outcomes (Lusila, Daniel, & Ivan, 2020).

One way that can be used is by developing electronic modules or electronic teaching materials that can be accessed by students in the form of images, videos, and audio visuals (Utama, 2017)(Yuangga & Sunarsi, 2020). This e-module contains learning materials that must be mastered by students with videos of teacher explanations or practice questions that are explained in audio to students (Rahmayanti, Risdianto, & Putri, 2023). The video and audio can help educators in
explaining the material more completely and without time limitations such as in the classroom (Rulia, 2012). This e-module will include a barcode on each material so that students learn more easily with explanations in the form of video and audio in the e-module (Saptono, Herwin, & Firmansyah, 2023). The e-module that will be developed is expected to overcome learning problems in pandemic situations, in distance learning or during time constraints during PTMT.

The purpose of this study is to test the feasibility of electronic modules made using the ADDIE (Analyze, Design, Develop, Implementation, Evaluation) research stages to increase motivation and learning outcomes of Catholic Religious education for elementary school students. The ADDIE model is one of the most commonly used models in the field of instructional design to produce an effective design. This model helps instructional designers create effective and efficient teaching designs in any online or face-to-face environment. Each stage in ADDIE design is related and interacts with each other. This study makes a valuable contribution to the realm of education through the creation of innovative learning resources, boosting students' motivation to learn, and providing evidence of the efficacy of employing E-modules to enhance academic achievements in the subject of Catholic Religious Education.

B. Methods

This research includes development research to produce certain products and test the effectiveness of these products by referring to the ADDIE (Analyze, Design, Develop, Implementation, Evaluation) development model to develop electronic modules and quantitative descriptive methods to see the effectiveness of electronic modules on student motivation and learning outcomes, the effect of e-modules on learning motivation and student learning outcomes (Susilo, H., Chotimah, H., & Sari, 2022). This research was conducted for 3 months in several primary education units in Palangka Raya City, which implemented limited face-to-face. From the sample results, it is known that there are 3 public elementary schools that become research sites with a total sample of 20 students. Data collection was carried out when the product was developed. After the module is suitable for use, the module is given to students to see the motivation and learning outcomes of students. The research design used a one group pretest posttest design (fitrah, 2017). Data collection techniques using observation and learning outcomes test. The data analysis technique uses the t-test formula.

C. Results and Discussion

Catholic Religious Education for Elementary School

Catholic Religious Education in Indonesia is an education system that teaches Catholic religious teachings and values to students in Catholic-based schools. Catholic
religious education in Indonesia has several objectives, including introducing Catholic religious teachings. Catholic religious education aims to teach students the basic principles of Catholicism. This includes teachings on Catholic beliefs, rites and sacraments, morality, prayer, and spiritual life. Another goal is to help students understand and live the teachings of Catholicism in their daily lives. Catholic religious education seeks to mold students into pious individuals, having strong moral values, and being able to make good decisions based on religious teachings. Catholic religious education also seeks to build ecumenical awareness among students. This includes an introduction to other Christian denominations, interfaith dialog, and an appreciation of religious diversity in society (Santi Dey et al., 2021).

In Indonesia, Catholic religious education is organized at various levels of education, ranging from elementary school to university level. Catholic schools in Indonesia, whether managed by ecclesiastical foundations or private foundations, have a Catholic religious curriculum that integrates religious teachings with other subjects. In addition, in the Indonesian national education system, there are also religious subjects taught in public schools, including Catholicism. Catholicism is taught as an option for Catholic students in public schools, in accordance with the freedom of religion guaranteed by the Indonesian Constitution. Catholic religious education in Indonesia plays an important role in shaping the character and morals of Catholic students, as well as providing an understanding of Catholic religious beliefs and practices (Siswantara, 2021).

Catholic Religious Education for elementary schools in Indonesia focuses on introducing the basics of Catholic religious teachings to children. Here are some of the key points that are usually covered in the Catholic religious education curriculum for primary schools. Students are introduced to the basic teachings of Catholicism, including belief in God, Jesus Christ, and the Holy Spirit. They learn about basic concepts such as the Trinity, Scripture, the Church, and the Sacraments. Children are taught important stories in the Bible, such as the story of creation, the story of Adam and Eve, the story of Noah, the story of Abraham, the story of Jesus Christ, and the stories of the saints. Children are taught various important Catholic prayers, such as the Lord's Prayer, the Hail Mary, the Angelus prayer, the Thanksgiving prayer, and daily prayers. They are also taught the meaning and importance of prayer in spiritual life. Students are introduced to the sacraments in the Catholic Church, especially the Sacrament of Baptism, the Sacrament of Communion, and the Sacrament of Confession. They learn the meaning, preparation, and role of these sacraments in religious life (Pranata, Wahyuningrum, & Jelahu, 2020).

Catholic religious education for elementary schools also emphasizes the development of moral and ethical values based on Catholic religious teachings. Children are taught about love, justice, loyalty, forgiveness, and respect for others. Students are introduced to Catholic worship and liturgical celebrations, such as Mass and ecclesiastical festivals. They learn the rites of worship, the symbols used, and their
importance in religious life. In addition, Catholic religious education for elementary schools usually also provides extra activities such as retreats, prayer meetings, and social services as part of the students' spiritual experience. Catholic religious education in elementary schools aims to form a strong foundation of Catholic faith, introduce moral values, and help children build relationships with their spirituality (Bule, 2020).

Motivation and Learning Outcomes

If various sources are examined, different notions of learning will be found, depending on the type of source and who formulates the notion. The difference is due to different views or starting points. But the difference is only a difference in emphasis or difference in terms of where to see it. Almost all experts have tried to formulate and make interpretations about learning. Often the formulation and interpretation are different from one another. Hamalik defines learning as the modification or strengthening of behavior through experience (learning is defined as the modification or strengthening of behavior through experiencing). According to this understanding, learning is a process, an activity and not a result or goal. Another definition of learning put forward by Fontana in Panen learning is a process of relatively permanent changes in individual behavior as a result of experience. Gagne in Panen also states that learning is a process of change in ability that lasts a long time and does not come from the process of growth (Wigfield, Faust, Cambria, & Eccles, 2019). Meanwhile, according to Winkel, learning is a mental / psychological activity, which takes place in active interaction with the environment, which results in a number of changes in knowledge-understanding, skills and values-attitudes. The changes include internal things such as understanding and attitudes, and include external things such as motor skills and speaking in a foreign language. Skinner in Gredler defines learning as a change in behavior.

Motivation plays a crucial role in one's learning process. A strong inner drive to achieve a goal or attain a certain achievement is the key difference between success and failure in learning. When a person has intrinsic motivation that drives them to learn, such as great curiosity or personal satisfaction from deep understanding, the learning process becomes more meaningful and fulfilling. In addition, extrinsic motivation, such as praise and appreciation, can also provide positive reinforcement to boost learning enthusiasm. Support from the learning environment, such as caring teachers and collaborating peers, also plays an important role in generating motivation. Therefore, understanding the importance of motivation and implementing the right strategies to generate it are key in promoting successful learning outcomes (Wigfield et al., 2019).

In teaching and learning activities at school and at home, motivation is important. At least students must have motivation to learn, because learning activities will work well if the child concerned has strong motivation. Motivation in learning
activities is important, because it is a condition that can draw out behavior (Suhono, Pratiwi, Ariyanto, & Lala, 2022). Necessary for reinforcement (stimulus that strengthens and maintains the desired behavior) which is an absolute condition for the learning process. Causes a variety of behaviors, one of which may be the desired behavior. Motivation to learn is an impulse, a desire that drives and gives a purpose to someone to carry out learning activities (Hasanah et al., 2021). This agrees with Winkel who argues that "Motivation to learn is a non-intellectual psychological state that plays a role in fostering passion, taste and enthusiasm for learning". From this description, in the education process, students need to be stimulated so that learning motivation grows in them or certain conditions need to be provided so that students exert energy to learn.

In general, people who have high learning motivation will succeed well in their teaching and learning activities and tend to be successful people. So between someone who has low and high learning motivation has different characteristics that are different. Perseverance in facing tasks (can work on tasks continuously for a long time, not stopping before completion). Tenacious in facing difficulties (does not give up easily, is not quickly satisfied with the results he has achieved). Shows interest in various problems. Prefers to work alone (does not depend on others). Get bored quickly with routine tasks (things that are mechanical, repetitive, so less creative). Can defend his opinions (already convinced of something). Not easily let go of things that are believed. Happy to find and solve problems (not worried when facing learning problems, participate in solving problems).

The indicators in learning motivation are as follows:
- a. Perseverance in learning
- b. Tenacious in facing difficulties
- c. Interest and sharpness of attention in learning
- d. Achievement in learning
- e. Independent in learning

If someone has the above characteristics, it means that someone has high motivation. These motivational characteristics are very important in learning activities. Learning activities will succeed well, if they are diligent in doing their tasks, resilient in solving various problems and obstacles independently. Conversely, in ongoing teaching and learning activities or outside the classroom, students are less eager to ask questions and less eager to study in groups, unless told by the teacher, then he wants to do it and is often passive in all activities he does. This shows that the child has a low learning motivation.

Learning outcomes are a measure of individual achievement after following the learning process. Learning outcome parameters include knowledge, skills, understanding, and attitudes and values. Through formal education, a person can increase knowledge of various concepts and facts, develop practical skills, and broaden understanding in various contexts. In addition, learning outcomes also reflect
changes in positive attitudes, such as empathy and a sense of responsibility towards the surrounding environment. During the learning process, the role of the educator, relevant curriculum and a conducive learning environment are important factors in helping to achieve maximum learning outcomes. Evaluation of learning outcomes helps identify individual development and improvements needed in the education system, thus improving the quality of learning for a better future.

According to Dimyati and Mudjiono, learning outcomes are things that can be viewed from two sides, namely the student side and the teacher side. From the student's side, learning outcomes are a better level of development when compared to before learning. According to S. Benyamin, there are 3 domains that affect student learning outcomes, namely cognitive, affective and psychomotor (Mahmudi et al., 2022). The cognitive domain is the most assessed by teachers. To improve learning outcomes, educators are invited to design or use various methods or media that allow for an active learning process in the classroom (Ansorida, 2022). The involvement of students in the learning process, intellectual and emotional involvement in learning activities such as sharing experiences, analyzing things and behaving in the learning process, creative student participation in creating a comfortable situation for the learning process, an effort from educators to provide learning facilities and not dominate learning are characteristics of good learning activities that occur in the classroom (Kristianto, Susetyo, Utama, Fitriono, & Jannah, 2023).

In learning outcomes, it is important to understand that learning is a continuous process and is not limited to formal environments such as schools or colleges. Learning can occur in a variety of contexts, including through everyday experiences, on-the-job training and participation in various activities. It is also important to recognize that learning outcomes do not only depend on the student, but are also influenced by learning methods, curriculum, support from teachers or instructors, and a conducive learning environment. Evaluation and monitoring of learning outcomes is important to identify strengths and weaknesses in the learning process and to improve the quality of education.

**E-Modules to Improve Motivation and Learning Outcomes**

The research activities began by implementing the ADDIE stages as follows:

a. Analyze

Analysis is the first step in designing an applicable learning model, which requires careful observation of several learning needs and components that must be carefully considered. The concept or purpose of this analysis stage is to identify the probable causes for a performance gap, meaning that at the initial stage researchers must be able to find/identify the possible causes of gaps in the implementation of education and learning. Gaps in performance (designers, teachers, learners) are a lack of knowledge or skills that may be caused by several reasons such as problems with strategies, methods, media, or learning models.
In this case, the analysis of learning needs and components that will be carried out, namely in Catholic Religious Education subjects (Branch, 2009) states that there are 6 steps or procedures carried out at the analysis stage, namely: (validate the performance gap), meaning that in this step the researcher will produce a statement of purpose, namely a statement in accordance with the existing performance gap. To measure a performance, researchers need to take three steps, namely a) measuring actual performance, b) ensuring desired performance, c) identifying the causes of performance gaps. This performance gap or gap can be known after getting the difference between actual performance data and desired performance data. Actual performance data can be collected through several techniques such as observing (observe), giving tests (conduct the test). Information will be obtained in relation to student motivation and learning outcomes. Data will also be collected, namely through giving tests to class V students of State Elementary School. The purpose of giving this initial test is to identify the initial abilities possessed by students, especially in learning outcomes on Personal Learner material. Researchers will also ascertain how students perform by observing directly in the learning process.

The performance gaps that researchers found in this first stage were:
1) Students' lack of motivation to learn because the media used in learning is less interesting.
2) The lesson materials prepared are less developed according to the characteristics of grade V students and at the age of 11 years.
3) Students' opportunities to learn independently by repeating the learning that has been given tend to be lacking.
4) The learning outcomes obtained on the personal theme of students still do not exceed the KKM which is 70.
5) Students like learning activities using gadgets, simple technology such as power points, videos, animations.

b. Design
Designing is the second stage of the learning planning stage. In this stage, it is the process of designing a lesson after analyzing a number of aspects that are carefully considered in learning. The concept or purpose of this stage is to verify the desired performances and appropriate testing methods (Branch, 2009). In this design stage, the researcher develops a learning design with reference to the teacher's teaching materials that have been used in learning so as not to change the existing Catholic Religious Education curriculum and syllabus. The design developed is more about developing learning that is packaged in electronic modules. Learning is simpler for students and can be repeated. Learning is also adapted to the age and characteristics of students.
c. Develop

This development activity is focused on learning patterns independently and developing guidance or guidance for teachers; starting from designing basic competencies, learning objectives, learning materials, patterns in implementing learning to testing patterns (evaluation) of the achievement indicators. (Develop guidance for teachers), make improvements to the design of the learning model and all components related to the learning activities that have been developed. This activity is to review all the results of the design that has been developed and then make improvements after receiving input and corrections from material experts. From the results of input conducted by 2 material validation experts, several improvements are needed in order to get an e-module that can be feasible to use in learning. Some of these inputs are simplifying the language used in learning objectives and adapted to the age characteristics of students, using fonts that attract students' attention, providing color elements in important parts, paying attention to spacing and using effective and efficient words.

d. Implementation

The concept of the fourth stage is to prepare the learning environment and involve students in the application of the developed model. After making improvements and revisions to the suggestions of the expert team, students and teachers after the trial activities, the next stage is the application of the learning model that has been developed and revised. Students are prepared in a learning atmosphere using e-modules. Researchers also conducted a pre-test to determine student learning outcomes before using the e-module. Learning activities were carried out in 3 meetings with 3 materials in the personal theme of students.

e. Evaluation

Evaluation is carried out in each phase starting from analysis, design, development and implementation. (Branch, 2009), suggests that assessing the quality of a product and learning process is done before and after its implementation. From the results of the performance analysis to explore the problems, review the e-module design and assessment of 2 material experts and revisions that have been made at the development stage, checking the completeness of learning components and implementation, e-modules can be used in learning. After the feasibility of learning media is known, this research is continued to see the effect of using e-modules on student learning motivation. Initial observations were made to see student learning motivation and during learning, observations of learning motivation were made. The results of the observations:

<table>
<thead>
<tr>
<th>School</th>
<th>Learning Motivation I</th>
<th>Learning Motivation II</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDN 13 Palangka</td>
<td>53%</td>
<td>92%</td>
<td>39%</td>
</tr>
<tr>
<td>SDN 5 Langkai</td>
<td>55%</td>
<td>87,5%</td>
<td>32,5%</td>
</tr>
<tr>
<td>SDN 2 Palangka</td>
<td>57%</td>
<td>88%</td>
<td>31%</td>
</tr>
<tr>
<td>Average</td>
<td>55% (Good enough)</td>
<td>89% (Very Good)</td>
<td>72% (Good)</td>
</tr>
</tbody>
</table>
When viewed from the average increase, student learning motivation from stage I to stage II increased by 72% and it can be concluded that there is an effect of using e-modules on student learning motivation.

In addition to conducting research on learning motivation, this study also aims to see the effect of using e-modules on student learning outcomes. An initial test was conducted to see student learning outcomes and during learning and after learning was carried out.

Hypothesis testing is carried out using a significance level of 0.05 if $t_{count} \geq t_{table}$ at $db \ n-1$ with a significant 0.05 then $H_0$ is rejected and $H_a$ is accepted. Conversely, if $t_{count} \leq t_{table}$ then $h_0$ is accepted and $h_a$ is rejected. In this study, the significance level ($t_{table}$) 0.05 at $db = n - 1$ is 2.093. From the calculation results using the $t$-test formula, the results obtained $t_{count} = 12.06 \geq t_{table} = 2.093$, then $H_a$ is accepted and $H_0$ is rejected. This means that there is an influence of the use of e-modules on the learning outcomes of students' Catholic religious education.

D. Conclusion

E-modules developed using the ADDIE development model are suitable for use in learning. The feasibility was obtained from the validation results of two material experts with revisions that have been made for the development of learning media. From the results of the analysis conducted, student learning motivation has increased with an average of 72%. This can prove that the e-module developed can increase student learning motivation. The analysis was also conducted to see if there was an effect of the e-module used on the learning outcomes of Catholic religious education. Hypothesis testing is carried out using a significance level of 0.05 if $t_{count} \geq t_{table}$ at $db \ n-1$ with a significant 0.05 then $H_0$ is rejected and $H_a$ is accepted. Conversely, if $t_{count} \leq t_{table}$ then $h_0$ is accepted and $h_a$ is rejected. In this study, the significance level ($t_{table}$) 0.05 at $db = n - 1$ is 2.093. From the calculation results using the $t$-test formula, the results obtained $t_{count} = 12.06 \geq t_{table} = 2.093$, then $H_a$ is accepted and $H_0$ is rejected. This means that there is an influence of the use of e-modules on the learning outcomes of students' Catholic religious education.

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