

Analysis of the needs of teachers of SMAN 3 Sidoardjo in the creation and use of learning media

Jacky Anggara Nenohai^{1*}, Zelen S. Minata¹, Deni A. Rokhim¹, Burhanuddin Ronggopuro¹, Nur I. Agustina¹, Kafita K. Islamiyah¹, Habidin¹, Ristiwi Peni², Bambang Wahyudi², Asnan Wahyudi²

¹ Universitas Negeri Malang, Indonesia.

² SMAN 3 Sidoardjo, Indonesia.

* Corresponding Author. E-mail: jackynenohai82@gmail.com

ARTICLE INFO

Article History

Received:
20 November 2022;
Revised:
06 June 2023;
Accepted:
23 June 2023;
Available online:
30 September 2023.

Keywords

Analysis of the needs;
Creation of learning
media; Use of learning
media.

ABSTRACT

This study aims to analyze the needs of teachers of SMAN 3 Sidoardjo in the creation and use of learning media in the teaching and learning process. The research method used is descriptive qualitative by taking data through a Google form-based questionnaire filled out online. The subjects of the study were 51 teachers of SMAN 3 Sidoardjo. The results of the survey based on questionnaire data obtained showed that the learning media used by the teachers of SMAN 3 Sidoardjo in the teaching process was made by as much as 72.5% and 27.5% were not made by themselves, so the media was obtained from Youtube, Google, and colleagues. The media created by several teachers has obstacles, namely mastery of IT (editing and programming languages), a long time in the development process, and its use has not adjusted to the characteristics of students and unites several media and materials in one platform such as Learning Management System. Therefore, teachers need training and direct assistance in making intensive and simple learning media without using programming languages, flexible time, and accessible anywhere and anytime. Website-based media to accommodate all the material and learning resources taught so that students can easily use the press and improve their understanding of the material and the quality of learning So that teachers and students can adjust the scope and face problems in the learning process by the demands of the times.



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How to cite:

Nenohai, JA., et.al., (2023). Analysis of the needs of teachers of SMAN 3 Sidoardjo in the creation and use of learning media. *Jurnal Inovasi Teknologi Pendidikan*. 10(3), 265-273. <https://doi.org/10.21831/jitp.v10i3.54691>

INTRODUCTION

The development of science and technology has resulted in many changes and benefits in the current field of education, especially in the learning process (Azmi et al., 2020). The role of teachers today is to make learning exciting and fun so that they can keep up with developments in information technology and the ever-evolving world of entertainment (Nurseto, 2011). Learning in schools is considered adequate if there is an active interaction between teachers and students. Teachers must try optimally to foster students' learning motivation because it is one of the keys to achieving learning objectives (Rokhim et al., 2022). Many studies inform that various learning innovations such as approaches, models, strategies, assessment instruments, and learning media that have been developed

to be attractive to students are considered more effective in application compared to conventional learning, which tends to focus on the explanations presented by the teacher (Minata et al., 2022). One is by utilizing adequate, relevant, and functional media to be applied in the classroom so that the information conveyed can affect student learning outcomes.

Using learning media for teachers can help make concepts or ideas concrete (Asmara, 2015). For students, the media can help them think critically and encourage them to study independently to achieve student-centered learning (Jamil, 2019). Thus, the media can support the tasks of teachers and students to attain predetermined essential competencies (Abdullah, 2017). In using learning media properly, teachers must understand their learning needs and problems related to the material being taught to students (Sudarisman, 2015). In this context, media must be developed according to students' relevance, basic abilities, material, and characteristics (Fernandes, 2019). Teachers can act as designers, creating and using appropriate, effective, and entertaining media for students. However, when used in class, it must be emphasized that students should use the learning media (Karo-Karo & Rohani, 2018).

Teachers need to have more teachers' understanding of instructional media development or media use during most schools' instruction. Such problems often only make learning flexible and more varied in the learning process. As a result, students feel sleepy, less active, bored, and do not even make the class atmosphere energetic and lively. The current field reality shows that with the help and assistance of learning media, it is straightforward for students to comprehend the teaching of teachers/educators (Syamsussabri et al., 2018). Teachers play an essential role in teaching media, but it does not necessarily mean that some teachers/educators cannot use teaching media in the classroom. Several problems can hinder teachers from developing and using learning media in teaching, such as a lack of understanding of the use of learning media, the cost of producing learning media, the material is relatively tricky and complex, so it is difficult for teachers to plan and make this form of media (Alwi, 2017).

This is in line with research from Putri and Citra (2019) that social studies teachers at Madrasah Ibtidaiyah Darussalam Kota Bengkulu encounter several problems in planning learning media, namely difficulties in determining social studies learning media that are by the material in the curriculum in other words, there are some learning materials whose media are difficult to find and design as well as difficulties in creating IT-based social studies learning media itself. Another problem that is also faced by teachers when using instructional media is their use in learning. Based on the results of interviews and observations, it was found that many teachers need more skills in using educational media and limited facilities and infrastructure owned by schools.

This problem is also experienced by teachers of SMAN 3 Sidoarjo based on an analysis of the situation at school and the learning process, namely the uneven mastery of science and technology among teachers and students, the lack of learning media that supports distance learning activities, the limited interaction between teachers and students, and the allocation learning time causes literacy activities to be hampered and the unavailability of unique digital learning platforms that provide learning resources.

Therefore, from the description above, the researcher intends to analyze the needs of SMAN 3 Sidoarjo teachers in creating and using learning media in the learning process to minimize these problems and increase the renewal of the skills of teachers in the development and application of learning media in schools based on needs in media design to be used. With this, it can be seen the needs of SMAN 3 Sidoarjo teachers to be able to face problems in the learning process so that they can achieve the learning objectives themselves.

METHOD

This research was conducted in July 2022. The subjects in the study were 51 teachers of SMAN 3 Sidoarjo using the sampling technique, namely simple random sampling, where the sample was randomly taken from the population. This is qualitative descriptive research, in which the results are presented in descriptive words and sentences. Data collection techniques through questions related to the research object, namely the need for teachers to create and use instructional media, which are packaged in a questionnaire based on a Google form filled out online. This questionnaire consists of

3 parts: the first part identifies the use of media used by teachers in the learning process, and the second part includes an explanation of the constraints experienced by teachers when creating or preparing learning media. The third part contains teachers' suggestions regarding the needs and how to solve problems in preparing learning media. Data analysis consists of three stages: data reduction, presentation, and conclusion. The method of data analysis is presented in Figure 1. The results of the filled questionnaire were analyzed by data reduction to separate the data included in the classification of the object under study. The presentation of data in this study depends on the subject matter and research objectives. At the end of the research results, conclusions were drawn to analyze the research object (Nenohai et al., 2021).

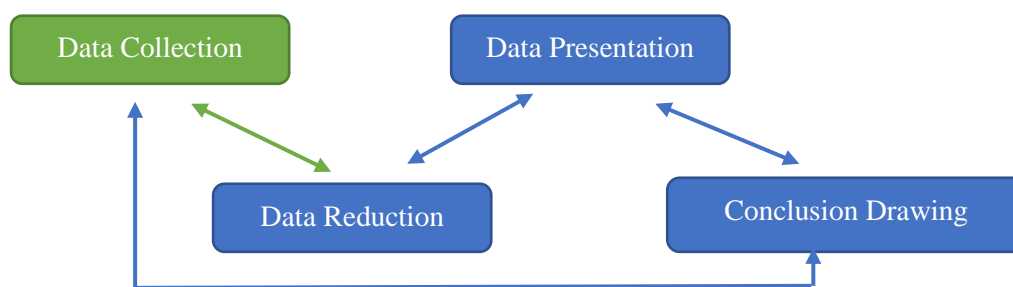


Figure 1. Process of Data Analysis

RESULTS AND DISCUSSION

Results

In this study, filling out the questionnaire consisted of 3 parts: identification, explanation, and suggestions. The identification section determines the creation and use of learning media implemented by SMAN 3 Sidoarjo teachers. This identification section includes the use of media in class, the result of media by the teacher, the type of media, the form of media, and which part of the learning process the press applies to. Based on the results of filling out the questionnaire, it was found that all 51 teachers at SMAN 3 Sidoarjo used instructional media in the learning process, and the press made reached 72.5% of the total. In contrast, 27.5% of the press was not self-made but obtained from YouTube, Google, and colleagues. The type of media used by the teachers of SMAN 3 Sidoarjo is explained in Figure 3. The variety of media that teachers mostly use is audio-visual media, with a percentage of 78.4%, while the form of media most used by teachers is in the form of applications installed on cellphones, laptops, and the like by 76.5%, and animated videos via PowerPoint by 54.9% it presented in Figure 4. In addition, in using this media, SMAN 3 Sidoarjo teachers apply it in the learning process in the core section of teaching materials by 82.4% and the initial part, namely apperception, by 49%, presented in Figure 5.

The data obtained by filling out the questionnaire in the identification section can be seen in the following figures.

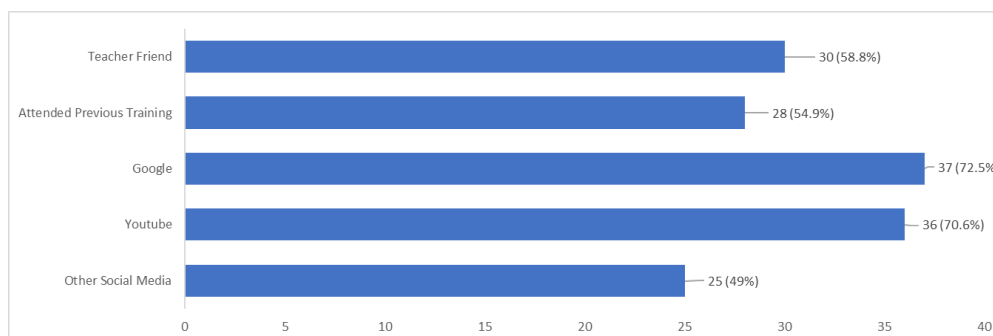


Figure 2. Media Sources Used by Teachers of SMAN 3 Sidoarjo

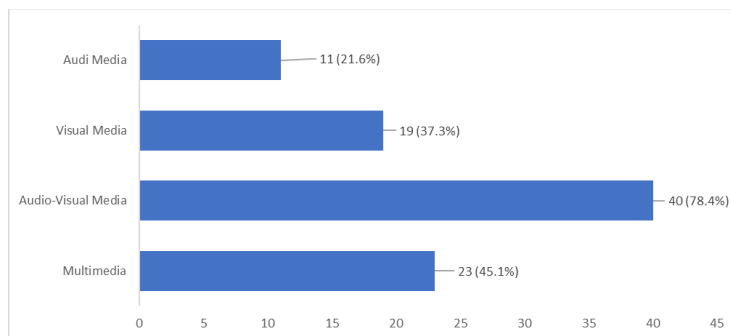


Figure 3. The Type of Media Used by The Teachers of SMAN 3 Sidoarjo

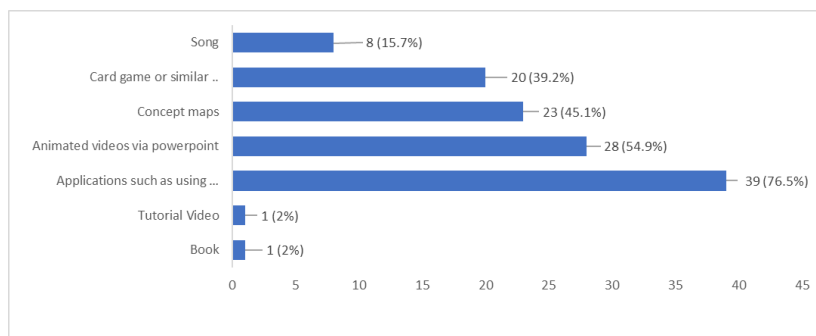


Figure 4. The Form of Media Used by Teachers of SMAN 3 Sidoarjo

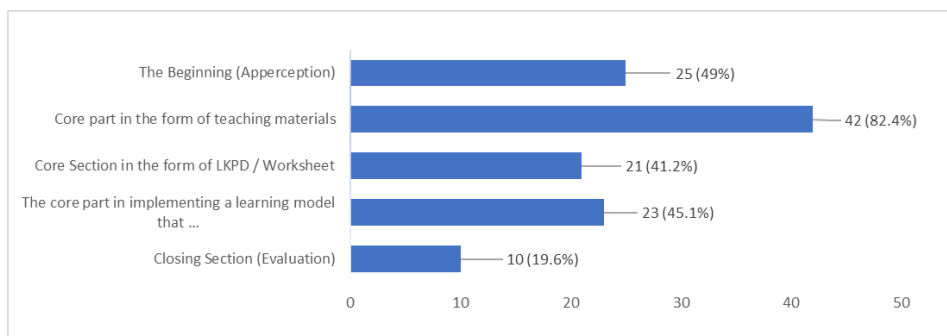


Figure 5. The Application of The Media Used in The Learning Process

The explanation section consists of the constraints of SMAN 3 Sidoarjo teachers in creating or preparing instructional media and the effect of using instructional media on students' understanding based on the teachers' observations. Based on the results of the filled questionnaires, it was found that several teachers had problems, one of which is that in preparing the media, it took quite a long time for the results to be excellent and suitable for use. The results of filling out the questionnaire in the explanation section related to the use of learning media on students' understanding based on the observations of teachers that learning media is very influential in the learning process because it can help and direct students in constructing their knowledge of learning material.

The last part of the filled-out questionnaire is suggestions. This section aims to enable the teacher to convey whatever is needed to overcome problems in preparing learning media for the material to be taught. The answers from the teachers of SMAN 3 Sidoarjo varied, one of which is that they often practice using applications that will be developed into learning media and can also take part in workshops/training on creating learning media held by nearby tertiary institutions or those carried out by the government. Other suggestions from the teachers of SMAN 3 Sidoarjo are (1) sharing with fellow teachers from the same cluster and forums for teachers, (2) creating the contextual learning media so that it is easier to understand, for Internet access, it can also be

downloaded beforehand, so that an Internet connection is not required if the media will be used several times, (3) being able to modify existing media and adapting it to class conditions, (4) finding appropriate information in creating and using learning media that is appropriate to learning material, (5) increasing teacher digital competence, through digital skills training activities such as bringing together several media and materials in one platform such as Learning Management System, (6) first determining the cognitive level of students, then designing learning concepts and materials according to the level of each student and (7) always asking colleagues who have more skills in the Information and Technology field.

Discussion

Today's learning media is beneficial for the teacher's task in providing information about the material to be taught to students. Based on the research results related to the analysis of teacher needs in the use of learning media, it was found that in the identification section, teachers at SMAN 3 Sidoarjo used learning media in the teaching and learning process. This indicates that the teachers tried to use media from several sources presented in [Figure 2](#). In the learning process, the teachers need to be competent in using digital learning media, and they must not stutter in technology to provide excellent and clear explanations to students ([Khairunnisa & Ilmi, 2020](#)). This is supported by research from [Iwantara et al. \(2014\)](#), which shows that in the learning process using YouTube video media, discussions between students can occur due to watching the videos, thus making the learning atmosphere more interactive.

About 78.4% of SMAN 3 Sidoarjo teachers used the type of media as audio-visual media because it is adapted to the current student learning style and makes it easier for students to understand the material provided by the teacher quickly. This is supported by research by [Pradilasari et al. \(2019\)](#), which shows that audio-visual-based learning media on Colloidal learning material is very suitable for use in the teaching and learning process and can increase student motivation and learning outcomes. Research from [Parera et al. \(2022\)](#) states that the way to make it easier for students to understand the contents of teaching materials is to create media that can combine writing with pictures and is assisted by direct explanations (voice) so that the material becomes more precise and more enjoyable.

In applying this media, most teachers at SMAN 3 Sidoarjo use it in the core part of the learning process. In this section, media is used the most because, in the core section, students usually seek information to solve questions given by the teacher so that learning objectives can be achieved by the data obtained, such as research from [Loe et al. \(2022\)](#) who developed media, namely e-Worksheet, which is helpful for students in accessing information and working on questions on Worksheet using mobile phones and assisting teachers in checking and recording scores automatically. In the apperception section, media is widely used because, at this stage, the teacher provides a stimulus to students to attract students' focus on new material that will be delivered by the teacher and creates an atmosphere for early learning that is effective and encourages students' motivation to be involved in learning. This is evidenced by research from [Mariska et al. \(2013\)](#), whose results show that the learning process that begins with apperception by using media is said to be effective at SMPN 13 Purworejo.

The application of media in the teaching and learning process is beneficial. Still, the teacher needs help creating and developing the press, which requires quite a long time to complete the media so that the results are excellent and suitable. In addition, sometimes, some revisions must be made in its implementation. This can be an improvement in subsequent performance. In addition, they need to be proficient in creating learning videos, and the facilities still need improvement. This is due to the mastery of IT (editing and programming languages), and the teacher states that the obstacles are inevitable because they adjust to students' cognitive levels. In creating the media, it is necessary to match the characteristics and needs of students in receiving material according to the level of understanding of the sub-subjects per subject. This is supported by [Lubis and Ikhsan \(2015\)](#), who state that the media that has been developed, namely those based on Android, must be based on scientific stages and characteristics of students that are by the development of the technological age, namely visualization that is attractive, practical and flexible, and has various evaluation questions

based on the level of questions so that students can learn the material independently without being bound by time and place, and can improve their memory of the material being studied. In addition, teachers must also prepare content in the media, for example, questions in the form of HOTS, to support students in developing skills in the 21st century by directing students to work on HOTS-based questions as a learning evaluation (Minata et al., 2022).

Therefore, teachers must be able to design and develop media according to the needs of the present students because learning media can direct students in constructing their understanding of learning material and help students solve problems through discussions in cooperative learning models. For students who partially understand, learning media can help students to be able to fully understand the material (Turrahmi et al., 2018). Another answer from the teachers is that the use of media is very influential because it increases students' motivation and interest in learning so that they can think and analyze the subject matter provided by the teacher well in pleasant situations, and the material is easily comprehended. This is supported by research by Parera et al. (2021), which states significant differences in learning outcomes between students taught using Android-based digital teaching materials and problem-based learning models on acid-base materials and students trained using printed teaching materials. Besides that, it is also supported by the research of Novitasari et al. (2015), which states that the use of audio-visual media using the Problem-Based Learning model in excretion system material is very effective in increasing student motivation and learning outcomes with 79% knowledge competence and 91% skills competency.

The statement from other teachers is that the use of media. However, it only reaches a portion of 100%. It can at least help the teacher's performance in providing the material and making students feel comfortable in operating the media used, such as using application-based game media like Android in the learning process. This is supported by research by Nenohai et al. (2022), which states that student responses were very positive in using media to study reaction rate material because students also found it fun apart from receiving the material. After all, games were added to attract student learning interest. Research conducted by Putri et al., (2022) also supports this because the use of digital games is more widely applied in learning due to greater interest in educational technology and having a better evaluation of the subject matter being studied and achieving a deeper understanding. Research conducted by Yunus and Fransisca (2020) proves that 94.1% of students interacted with Smartphones, indicating that Smartphone facilities need to be used, but only 29.4% of teachers used Android-based media. Therefore, teachers must adjust media development based on students' means and learning styles.

Based on the needs and problems faced by teachers of SMAN 3 Sidoarjo in creating learning media, it is expected that teachers and the school parties can cooperate with partners such as higher education and technology experts related to applications so that they can increase new insights in terms of creating learning media and its use for students in the learning process because teachers must be able to carry out a learning innovation and have a very strategic role in the learning process (Sumarni et al., 2020).

CONCLUSION

Based on the results of the research on the needs analysis of SMAN 3 Sidoarjo teachers that have been carried out, it can be concluded that teachers need direct training and assistance in creating intensive and simple learning media without using programming languages, flexible time, media that can be accessed anywhere and anytime such as website-based media so that it can accommodate all the material and learning resources being taught, so that the use of learning media can be maximized, making it easier for students to operate to increase understanding of the material, motivation, interests and activities of students in the learning process. The recommendations based on the needs analysis carried out are that school parties must work together with the Department of Curriculum and Educational Technology to conduct training and create learning media for teachers that are easy for teachers to operate, keep up with the times, and can be performed based on students' learning styles so that teachers and students can adjust the scope and solve problems in the learning process by the demands of the times. In addition, teachers must continue to practice and try to develop media so

that the training provided is not in vain and they will be more proficient in operating or using technology.

ACKNOWLEDGEMENT

Sincere gratitude is extended to Lembaga Penelitian dan Pengabdian kepada Masyarakat (LPPM) of the State University of Malang for funding the writing of this journal.

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