



Berbanjar.com: Open Educational Resources Use to Initialize Instructional Digitalization

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ABSTRACT

This main objective of this study is to acknowledge the use of berbanjar.com as open educational resources and to seek its potential use by the prospective teacher. Using case study by capturing data of the website content for the last two years after launched in 2020. Interviewing ninety-four respondents of pre-service teacher user of berbanjar.com as prospective teacher regarding their ability to develop their instructional materials and their preference to use web-based open educational resourced such as berbanjar.com. The result of the study captures more than three thousand of teaching materials has been uploaded to berbanjar.com. Instructional video, editable PowerPoint presentations and infographics is by sequence the most numerous contents of berbanjar.com. More than fifty respondents confident about their ability to develop their own materials and have the willingness to share it to others by using berbanjar.com. The use of web-based open educational resources such as berbanjar.com can help teacher to deliver their instruction digitally. The high reception of berbanjar.com by its user, in this case indicate that open educational resources can help initiate the digitalization of education.

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1. INTRODUCTION

Open Education Resources (OER) are educational resources which are open and can be accessed freely by anyone. OER includes various types of learning materials, such as textbooks, videos, presentations, interactive modules, and more. OER promotes accessibility, flexibility, and collaboration in education (Biswas-Diener & Jhangiani, 2017; Ossiannilsson et al., 2017; Walton, 2020). The potential of OER in education has been noted and explored in various research and scientific publications. OER is considered to be able to overcome the cost problem which is often an obstacle for students in accessing learning resources (Hilton, 2016). By using OER, students can save significant costs and have access to quality learning materials without having to purchase expensive textbooks.

In addition, OER also has the potential to increase educational inclusion and accessibility (Croft & Brown, 2020; Lapum et al., 2022). OER can be optimized to help overcome gaps in educational access for disadvantaged groups or those in complex environments. Website-based OER can be accessed for free when there is an internet connection, thereby opening up equal learning opportunities for all individuals, regardless of their social or geographic background (Croft & Brown, 2020).

In addition to the benefits of accessibility and inclusion, OER also allows for flexibility in learning so that it can be tailored to individual needs and preferences (Bliss & Blessinger, 2016; Kanwar, 2015). In addition to the benefits of accessibility and inclusion, OER also allows flexibility in learning so that it can be tailored to the needs and preferences in Teachers and educators can adapt and change OER learning materials to suit their context and learning goals. This allows for a more personalized learning experience tailored to student needs.

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Apart from that, collaboration and active participation are also important potentials of OER. UNESCO emphasizes that the application of OER is intended to encourage collaboration and exchange of knowledge between educational institutions, teachers and students throughout the world (UNESCO, 2020). OER provides opportunities for educators and students to contribute, improve, and share existing learning resources.

Even though the digitalization process is already underway and showing good progress. However, efforts to ensure that digital technology has a role that suits its needs is a task that must be ensured (The Commonwealth of Learning, 2017; UNESCO, 2020). The use of open educational resources needs to be increased as an effort to adopt technology in learning and facilitate various gaps that have occurred after the adaptation period for the Covid-19 pandemic.

Open educational resources provide efficiency options for teachers in preparing lessons so that they can focus more on optimizing learning interactions. However, whether teachers, especially prospective teachers who have the prospect of teaching in the future, are willing to use products produced from Open educational resources, this is also attempted to be answered through this study.

2. RESEARCH METHODS

Using case study method to explore berbanjar.com in the context of its open educational resources application (Creswell, 2014; Priya, 2021). This main objective of this exploratory study is to explore the use of berbanjar.com as open educational resources and to seek its

potential use by the prospective teacher (Yin, 2018). Capturing data of the website content for the last two years after launched in 2020. Interviewing ninety four respondents of pre-service teacher user of berbanjar.com as prospective teacher regarding their ability to develop their instructional materials and their preference to use web-based open educational resourced such as berbanjar.com.

3. RESULTS AND DISCUSSION

3.1. Berbanjar.com as Open Educational Resources

Berbanjar.com is a website sharing digital teaching materials that applies the concept of open educational resources, by providing various digital materials, especially for learning in elementary schools with several variations in the form of teaching materials such as videos, PowerPoint slide shows and infographics. Adopting a classification based on the curriculum structure implemented in Indonesia, berbanjar.com created a categorization of material for the six classes implemented in basic education in Indonesia. The topics and sub-topics provided are relevant to national content standards, plus some general character education content for the target audience. The main target users of the berbanjar.com website are elementary school teachers, parents of elementary school age children, elementary school age children and educators who are enthusiastic about elementary school education. Meanwhile, the target content uploaded to the berbanjar.com website is content aimed at elementary school age children (6-13 years).

Berbanjar.com was developed at the Indonesian University of Education in early 2020. It was officially launched at the end of 2020 at the UPI Cibiru campus in a combination of online and offline for teachers to help adopt digital learning during the early days of the Covid 19 pandemic. Until now this website has 1.633 total users and the content continues to grow. Even though the pandemic status has been lifted, teachers and students can return to school (Sutisna et al., 2021). Berbanjar.com is designed as a learning resource center with a material directory style. One of the technical challenges that was focused on during its development was to make it easier for users to find teaching materials that are relevant to what they need (Hendriyana & Sutisna, 2021).

Applying the openness principle, collaboration and feedback which are part of the principles of open learning (AbuJarour et al., 2015; Brown & Adler, 2008; Johan et al., 2020), berbanjar.com has a uniqueness that makes it relevant to the current learning context. The principle of openness is fully implemented, so that all materials on berbanjar.com are not only open but can also be accessed and used for free. Applying the principle of collaboration by providing a comments column between fellow website users to provide suggestion for the teaching materials used. The principle of reciprocity is also enforced through the display of statistics relating to shared teaching materials, such as the number of views and downloads. All responsibility for the content of teaching materials is held by the developers themselves, the only treatment carried out by berbanjar.com is only managing the classification of the material presented. This is done to facilitate discovery and is expected to increase the relevance of the adoption of teaching materials, so that it can directly help the efficiency and effectiveness of user learning.

The initial aim of berbanjar.com is to collect as many digital materials as possible developed by various parties so that they can be reused either with modifications or directly in learning in elementary education. So that, many digital teaching materials can be collected and can be used, and then each user have the option to use them immediately. As the characteristic of

the learning resources by utilization type, they provide high availability and variety of resources (Ely, 2008; Januszewski & Molenda, 2009).

The collection of digital teaching materials on berbanjar.com uses two patterns, the first is collecting teaching materials from existing platforms such as Youtube and then categorizing them to make the search process easier. and the second independently collects digital teaching materials developed by berbanjar.com users. Although both patterns lead to the inclusiveness of teaching materials that can be accessed and used by anyone. So that the developer can save the sources they design in a catalog that is ready to be used again. As the characteristics of the by designed type of learning resources, it has a higher level of relevance even though it has a higher level of cost (Ely, 2008; Januszewski & Molenda, 2009). That is why berbanjar.com can also be called a website-based digital learning resource center which has the potential to increase efficiency because it allows the discovery of various digital teaching materials designed by developers and becoming digital teaching materials that are used by other users.

3.2. Content Profile of berbanjar.com

Currently there are total of 3031 digital materials have been provided by berbanjar.com. The variations of digital teaching materials provided are currently in the form of video teaching materials, editable slides and infographics. There are one thousand six hundred and seventy one (1671) video materials, seven hundred and fourteen (714) editable slides and six hundred and forty six (646) teaching materials in the form of infographics.

Table 1. The Numbers of Digital Teaching Materials at berbanjar.com

Video Materials	Slideshow Materials	Infographic Materials
1671	714	646

Each digital material can be used by copying the link or downloading it for offline use. Each user can provide comments and grades on every material found on berbanjar.com, it become a reference for the quality of the material for other users.

Hopefully in the future, berbanjar.com users will increase and the digital materials will have better quality so it can encourage teachers in elementary schools to focus more on preparing the learning interaction process (UNESCO, 2020). Providing quality digital materials can be achieved by implementing the Open Educational Resources concept in a collaborative and participatory manner so far by berbanjar.com. It reflects that, in implementing OER teachers can act as creators, curators, editors and direct users (Brown & Adler, 2008).

3.3. Self-Confidence in Developing Digital Teaching Materials

In general, most of the prospective teachers feel quite confident or very confident in being able to develop digital teaching materials, only a small number feel not confident in being able to develop digital teaching materials. A high level of self-confidence opens up space for the presence of various original digital teaching materials (Richter & McPherson, 2012). Which means the supply of teaching materials will be very abundant. On the other hand, the existence of some teacher candidates who lack self-confidence opens up opportunities for the need for the availability of teaching materials to be utilized so that differences in levels of self-confidence can be exploited to initiate collaboration to help one another.

Table 2. Recapitulation of the Interpretation of Self-Confidence on Prospective Teachers in the Context of Developing Digital Teaching Materials

<i>Aspect</i>	<i>Very Confident</i>	<i>Fairly Confident</i>	<i>Somewhat Confident</i>	<i>Not Confident at All</i>
Confident in developing digital media/teaching materials	13	70	11	0

3.4. Patterns of Use of Various Digital Teaching Materials

Apart from asking about the general level of confidence in developing digital teaching materials, confidence was also explored in presenting a variety of teaching materials digitally. The results showed that the majority felt quite confident and very confident in providing a variety of teaching materials in more than one type of teaching material. Meanwhile, the remaining small part felt less confident in being able to present a variety of digital teaching materials, in other words, they were only confident in developing one type of digital teaching material or even lacked confidence at all. These results show the prospect of learning that is presented in a dynamic and fun way by presenting a variety of learning through a variety of teaching materials (Mishra, 2017; Susilana, 2019).

Table 3. Recapitulation of Self-Confidence in Prospective Teachers When Developing a Variety of Digital Teaching Materials

<i>Aspect</i>	<i>Very confident</i>	<i>Fairly confident</i>	<i>Slightly Not confident</i>	<i>Not confident at all</i>
Self-Confident to be able to present a variety of digital media/teaching materials	10	69	15	0

3.5. Personal Assessment in Mastering the Development of Various Forms of Digital Teaching Materials

In particular, personal assessment of mastery in developing various forms of digital teaching materials, try asking through confirmation regarding the respondent's mastery of developing various types of teaching materials ranging from slideshow, graphics, audio, video, animation, and mobile applications or website-based ones. It was found that there was a large variation in respondents' confidence in developing various forms of teaching materials. However, the insignificant number of respondents who stated that they lacked confidence and were not confident at all is a positive sign of the potential presence of not only an abundant variety of teaching materials, but also high relevance (Susilana, 2019; Susilana et al., 2022).

Table 4. Recapitulation of Prospective Teachers' Self-Confidence in Developing Digital Teaching Materials Based on the Type of Form

Variety Teaching Materials	Very confident	Fairly confident	Slightly Not confident	Not confident at all
Graphic Materials	15	55	22	2
Slideshow Materials	22	60	12	0
Audio Materials	21	58	14	1
Video Materials	16	61	17	0
Animated Materials	10	48	33	2
Mobile Apps/Web-Based Materials	13	56	24	1

Of all the types of digital teaching materials mastered by respondents, there are two forms of digital teaching materials that are all mastered, that are slideshow and video materials which have zero respondent not being confident at all. Further investigation was carried out to find out the pattern of use of teaching materials in the form of slides and videos. It was found that there were three types of patterns for using slide and video teaching materials which were in line with the general pattern of using teaching materials by teachers, (1) independently making their own; (2) collaborating with colleagues to develop joint teaching materials; and (3) utilize teaching materials that are already available, and engineer them to be more appropriate to real learning needs (Smaldino et al., 2014; Susilana, 2019).

Regarding slideshow materials, most respondents admitted to designing the contents of the slides themselves and then looking for presentation templates design that were considered good for beautifying the appearance of the teaching materials being developed. Others develop their own design and content from scratch. Only a very few draft existing slide material that has been created by someone else and then make adjustments and personalization to present it in the lesson.

Table 5. Slideshow Materials Types of Use

Types of Use	Respondents
Develop your own entire slides from scratch	12
Design the contents of the slide yourself, and look for a good template design	75
Search for existing slide material drafts, edit them and personalize them (adding and subtracting content)	7

There is a slight difference in the use of video-based teaching materials, the differences in the patterns depicted tend to be more even. Most admitted to working together to create video-based teaching materials with other colleagues. With numbers alike, some others claim to make their own learning videos from scratch. And the rest admitted to browse for videos on Youtube platform that were considered relevant for use in instructional settings.

Table 6. Video Materials Types of Use

Types of Use	Respondends
Browsing for relevant video on YouTube, and display them in classroom	14
work together to create videos that can be used together with colleagues	45
Makes their own video materials	35

3.6. Willingness to Share Digital Teaching Materials with Other Teachers

All respondents positively expressed their willingness to share the teaching materials they had developed for use by others. Some of the reasons put forward are because of the motivation to share the beneficial values of the teaching materials that have been developed. Various benefits by providing greater benefits, efficiency of preparation time, bridging differences and gaps in the abilities of each teacher. Others hope that the mutual use of teaching materials can initiate collaboration between users and developers of teaching materials or in other words between fellow teachers. Initiating collaboration, opening up the possibility of working together, providing motivation, and providing mutual input between teachers and teaching material developers.

With mutual use, teachers also hope to indirectly improve the quality of learning through improving the quality of teaching materials and digitalization of learning. Improving the quality of learning, making use of teaching materials developed by teachers and other developers that are more useful, increasing the possibility of variations in the use of digital teaching materials, and opening up more enjoyable learning opportunities. The process of sharing teaching materials also has an impact on religiosity and gives personal pleasure to several teachers who share their teaching materials. Personal pride and satisfaction when the digital teaching materials developed are used by others, allowing for references to each other, thereby increasing the culture of scholarship.

3.7. Willingness to use berbanjar.Com for Learning

Prospective teachers were asked about their willingness to use teaching material sharing platforms such as berbanjar.com in classroom learning situations. The results stated that all respondents very openly admitted that they would be willing to use berbanjar.com in learning. This is an excellent opportunity for Open education resources to be used in the learning process and help improve the quality of learning. Apart from stimulating direct collaboration, this also opens up digital transformation in learning. This fact is a positive signal regarding opportunities for educational development in the future.

3.8. Advantages (Plus) and Weaknesses (Minus) of berbanjar.com

As evaluation material for berbanjar.com which applies the Open education resource concept, respondents were asked regarding the strengths and weaknesses of berbanjar.com. The results showed that berbanjar.com's advantages include ease of use, its simple design appearance and features that suit your needs which are considered to be its current advantages. Meanwhile, many respondents complain about the speed of access, which is a weakness that needs to be improved. The openness of respondents' opinions about the strengths and weaknesses of berbanjar.com opens up opportunities for the development of the berbanjar.com platform to become better so that it can be used more openly and widely.

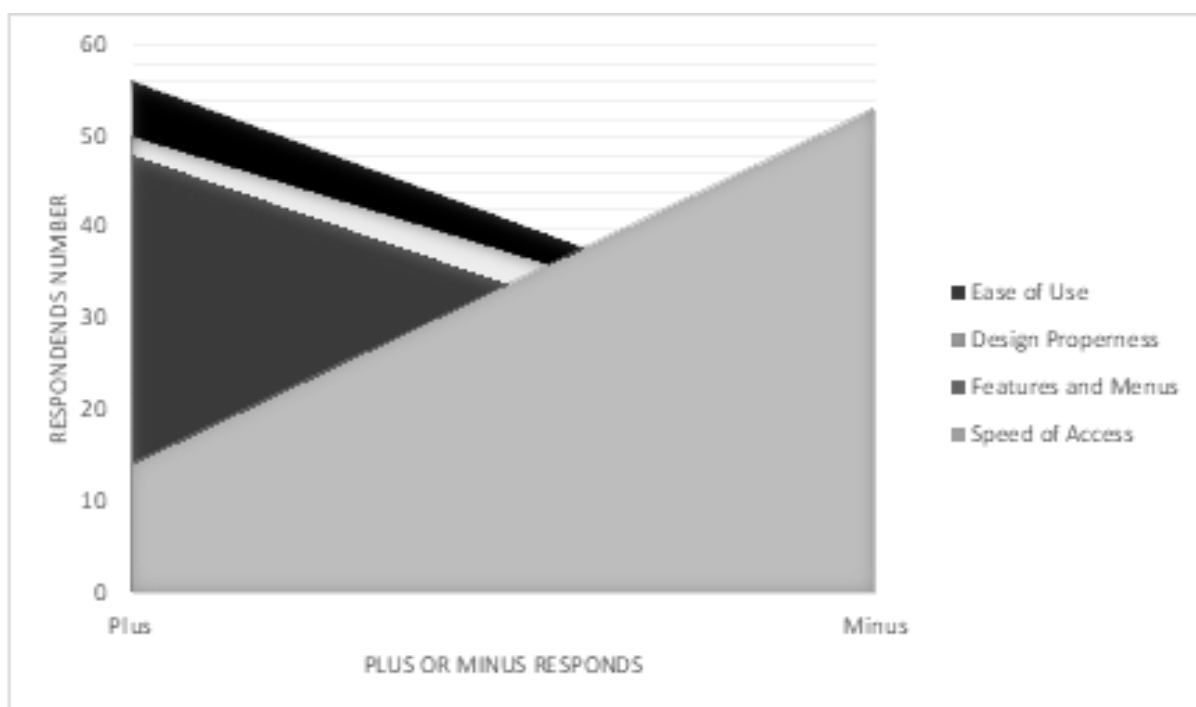


Figure 1. Advantages (Plus) and Weaknesses (Minus) responds of berbanjar.com

Table 7. Advantages (Plus) and Weaknesses (Minus) responds of berbanjar.com

Aspect	Plus	Minus	Average
Ease of Use	56	26	12
Design Properness	50	25	19
Features and Menu	48	20	26
Speed of Access	14	53	27

3.9. Suggestions for berbanjar.com

The input given by respondents mainly asked for technical improvements in information technology related to the login process, upload and download input processes that are more user friendly and more attractive designs, navigation that makes the search process easier, the search process and the filtering process related to relevant content according to their individual needs. It is hoped that content users will also be better, more qualified, more relevant and more interesting. The features provided by berbanjar.com are also expected to be richer so that interaction between users and berbanjar.com is not only limited to downloading digital teaching materials but also can carry out various other activities such as providing ratings, providing suggestions for use and providing best practice cases for using digital teaching materials available at berbanjar.com. Other suggestions include the desire and hope that berbanjar.com can survive and even be introduced to a wider audience in the educational community so that it can develop and be used more widely and provide wider benefits.

4. CONCLUSION

Berbanjar.com is only one of many platforms that implements the concept of Open education resources. The choice of using a website-based platform makes it easier for users to access and facilitate various types of teaching materials that can be used as alternatives. Improving service quality from technical aspects of support capacity to improving content quality are some of the homework that must be completed by developers so that berbanjar.com can become more perfect and complete.

The high acceptance of prospective teachers to use the berbanjar.com platform which applies the Open educational resources concept is an opportunity to not only improve the quality of education but also to initiate the process of digitizing education as expected. Namely, one that utilizes technology in a proportionally equal and open manner so that it can provide broad benefits to the entire community and is expected to be able to overcome one of the educational problems, namely equal access to quality education.

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