A NEED ANALYSIS OF ENGLISH HYBRID LEARNING USING OPEN BROADCASTER SOFTWARE THROUGH PROJECT-BASED LEARNING MODEL TO PRIMARY SCHOOL STUDENTS

Freshy Loisan Pandesha

Universitas Sriwijaya, Palembang E-mail: freshysimanjuntak@gmail.com

Makmum Raharjo

Universitas Sriwijaya, Palembang E-mail: makmunraharjo@fkip.unsri.ac.id

Soni Mirizon

Universitas Sriwijaya, Palembang E-mail: smirizon@gmail.com

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Abstract: This study aimed to determine the need for English hybrid learning using the Open Broadcaster Studio (OBS) through Project Based Learning (PjBL) model. This research applied research and development (R&D) approach. The development model used was ASSURE model and Tesmer Evaluation. Preliminary study conducted on 37 respondents consisting of 12 teachers and 25 students of primary school at RSI Indonesia School. The results of the study showed that the need for English hybrid learning is very necessary to overcome problems found during the learning process. Teachers need teaching model that can support the learning process and provide solutions if students experience obstacles during learning. The results of the research at the needs analysis showed that there were obstacles in the implementation of online learning that need to be solved. A learning model that can solve problems occurred in online learning, and also has a systematic learning stages to make students participate actively in learning process and to produce a project that can improve students' creative thinking is crucially needed. This study expected to provide an overview and direction to teachers to continue developing effective hybrid learning and become a resource for further research in hybrid learning model development.

Keywords: English; hybrid learning; Open Broadcaster Software; project based learning.

INTRODUCTION

The 21st century is an era of openness where there are many extraordinary changes caused by century as the century of industrial openness & Mitrohardiono, 2020). development of technology is increasing rapidly at this time, requiring educational institutions to improve the quality of their instruction through technology in order to better motivate students. According to Jannah et al. (2020), modern information and digital technology advancements have an impact on classroom instruction. The number of people who implement digital technology is ever-increasing. Not only is digital technology increasing in society, it can additionally be used in dynamic learning

interactions and activities. In particular, due to the COVID-19 pandemic, in order to reduce the risk of spreading the virus, educational institutions technological advances. It is known as the 4.0 have needed to reconsider meeting completely face-to-face at schools. Because of this, educational institutions today must choose the best implementation of learning, in particular, the use of digital technology.

One of the solutions that had been implemented is online learning. However, even though online learning has provided opportunities for students and teachers to carry out learning activities, problems are still found in the online learning process. Dewantara & Nurgiansah (2020) explained the implementation of online learning during The Covid-19 pandemic has also triggered many problems. Functionally, online learning is environments and can facilitate student learning considered beneficial for technological modernity

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and the accessibility to free applications is advantageous, there are still crises or obstacles in carrying out this learning environment. According to Indrawan et al. (2020), the crisis in online learning includes students having difficulty mastering knowledge and abilities according to their level, facilities, and infrastructure in conducting online learning are still not supportive such as access to electricity, internet, mobile phones or computers, as well as the accumulation of tasks. What is distributed to students is sometimes not equal to the study time. According to the explanations of these experts, it can be concluded that online learning has not been felt optimally and has found many obstacles in its implementation such as a lack of student understanding of the material presented and also internet connectivity problems.

Observing the above situation, educational institutions are currently in this scenario; students must choose the best implementation for their preferred learning style. Ultimately, students can continue to learn effectively and efficiently. There is now an advanced learning model that uses technology where students who can participate in face-to-face classes can engage in direct learning with students who take online classes at the same time. This learning is called Hybrid Learning. It is one of the choices that schools are implementing because it reduces the risk of virus exposure. With the rapid development of technology, it has become an important option and must be implemented by schools because it provides opportunities for all students, as it is a combined learning model between online learning and offline learning. Hybrid learning is defined as a learning method that combines two or more approaches in learning to achieve the objectives of the learning process and also is applied face-toface and online learning. (Hediansah & Surjono, 2020; Juwita & Purwoko, 2022; Gultom et al., 2022; Febnesia et al., 2021).

Furthermore, Hidayatullah & Anwar (2020) explains Hybrid Learning provided various positive impacts in developing the competence of educators and education personnel for take advantage of developments in technology and information. When implementing hybrid learning, it is not carried out entirely online, but face-to-face learning is also available for students as a means of offering supplementary materials that may or may not have been discussed through online lessons. Based on the explanations from these experts, it can be concluded that hybrid learning is a learning model that integrates

innovation and technological progress through an online learning system by using the interaction and participation of traditional learning models. It can be presented in combination at the same time, between students who are in face-to-face classes, and students who are in their respective homes.

The use of media in learning will assist educators in carrying out the learning process more effectively and efficiently. The development of technology itself plays a vital role as the teacher conveys information through media in order to increase students' learning motivation. Therefore, the teaching and the learning process can take place effectively and the expected learning objectives will be achieved. Widodo & Wahyudin (2018) explains that learning media is a tool that can be used by educators to convey messages to students. This is in line with the opinion of Puspitarini & Hanif (2019) which explains that learning media can be interpreted as hardware or software used in the delivery of materials presented by teachers to students in the learning process. In learning, the media is expected to make the learning process more effective and efficient in accordance with the learning objectives.

supporting Hybrid learning, In media assistance is needed to increase student motivation. One of the tools that users should acquire and develop their skills in is Open Broadcaster Software (OBS). OBS is a software that can be used to record video and broadcast live which is then connected to a website. According to Basilaia (2020), Open Broadcaster Software is a recording and support software for live streaming. In line with this opinion, Qorib & Zaniyati (2021) explained that the OBS application is very helpful for educators to be able to design learning while recording the lesson and can directly upload the lesson to social media channels and internet-based learning media. This application can be extremely helpful in the hybrid learning process because it can help students when they experience connection problems that may occur during the learning process. The OBS is a free application in the form of video recording and live streaming that is easily accessible. Educators can use this application to facilitate the distance learning system that is applied to students.

Based on some of the opinions above, it can be concluded that Open Broadcaster Software (OBS) is a free and open-source software whose main function is to manage various available input sources. It is a free and open-source cross-

platform streaming and recording program built with Qt and managed by a free and open-source software suite project for real-time sourced recording and live streaming and device capture, scene composition, coding, recording, and broadcasting. This learning application media is certainly expected to assist teachers in providing interesting and innovative learning materials and can be used by students to receive live or real time learning from educators.

To function such a tool to stimulate creative thinking amongst students, an appropriate learning approach is certainly needed. Therefore, educators should choose an appropriate method to teaching through the different learning styles. Kurniawan (2020) explains that the learning model can be a guide for educators in planning and applying the learning process. One learning model that will allow educators to effectively reach the objectives of the Merdeka curriculum is Project Based Learning (PjBL). PjBL is a model that is rooted in the concept of sustainable elements. According to Sari & Angreni (2018), PjBL is the learning process that directly involve students to generate a project. On basically this learning model is more develop solving skills in working on a project can produce something. Furthermore, Surya et al. (2018) stated that PjBL learning is an innovative learning studentcentered (Student Centered) and places the teacher asmmotivator and facilitator, in which case students are given the opportunity to work autonomously construct their learning.

In line with the opinion of Diana *et al.* (2021) that explain that PjBL is a learning model that obligates students to deal with a problem together as a group, therefore, to solve the given problems in detail in PjBL, students must adhere to a set of learning steps known as syntax. Furthermore, according to Yunita *et al.* (2021), Project Based Learning model activities help students develop a strategy for solving problems by involving a variety of skills.

Based on the opinion above, it can be concluded that Project Based Learning (PjBL) is an innovative learning model that involves the active role of students so that they can take the initiative in producing real projects and provide motivation in learning activities.

Along with the current era of technological developments, foreign language skills are urgently needed. English is a universal language and is used as the main language by most countries in the world. Therefore, English is one of the most important international languages to learn.

In Indonesia English is taught as a second language. According to Al-Arifi (2020), English is the language of communication and understanding among many countries around the world, as it is the language of political and scientific conferences and forums, as well as the language of publishing and scientific research in many fields, particularly technical and medical ones.

However, the communication carried out by students is a process, and knowledge of the linguistic order is still very lacking. The basic principle of learning English as a foreign language is the application of English in social contexts. In line with Minshar (2020), he explains there were indications of students' weakness in English language, such as difficult to speak English and the weaknesses of to comprehend and understand written texts. Language is used in interactions carried out in everyday life. The main goal of language learning is to prepare students to successfully communicate in society the language they have studied.

Learning is an important process because it can bring changes to the behavior of students. The learning process is the acquisition of sentences that have been carried out by students, however, the application of language that has been obtained is sometimes only limited to acquisition in linguistic form without the application of communicating itself after the learning process in class, Cahyati & Madya (2019) explains that the optimal period is the age of 2 to 14 years. This means that learning English will be easier to learn at that age. Over 14 years old or adults will have more challenges when they learn English. This is reinforced by the perspective of Maili (2018). English learning can begin at the elementary school level, because the age of 6 to 13 years is a time for children's language development, at this age it is very easy to accept language because of the process of separating the functions of the left brain and right brain. for children, therefore, it is very unfortunate if at these times English lessons are not given at the elementary school level. Based on statements of these experts, it can be concluded that the optimal development of children aged 6 to 13 years is the most important part in a child's growth period and is the right age to receive foreign language learning. Due to the continuously of the pandemic situation, the school really need an innovative learning model and media to support the hybrid learning. The hybrid learning process can take place optimally and increase student motivation. The previous study

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conducted by Hediansah & Surjono (2020) and Adnyana (2022) had the result of hybrid learning has the potential to increase student motivation, learning achievement and develop creative thinking skills, improve their skills and aslo involve students to be more motivated and is the right alternative in this pandemic situation.

In its application the innovative learning model is really need to be applied to help the hybrid learning process become more optimal. Several previous studies have found effective results in the learning process based on the learning model that has been developed. This learning model increases learning achievement and motivates students in the learning process, (Bahtiar *et al.*, 2018; Sarimanah, 2018; Asri *et al.*, 2020).

Based on this explanation it is very necessary to develop English learning with the help of media and use innovative learning models to support learning during a pandemic that is still ongoing.

This study develops hybrid English learning by using Open Broadcast Software (OBS) media to equip teachers in streaming and recording learning videos and using a Project-Based Learning (PjBL) model where students will be actively involved in the learning process and will produce a product from the material provided. This learning model will be developed based on the needs analysis in English learning for primary school students.

The objective of this study is to find out the primary school teachers and students' need for English Hybrid Learning using the Open Broadcaster Software (OBS) application through Project based Learning Model. This research is development research with using ASSURE development model that has six stages on its application and also combine with Tesmer Evaluation.

METHOD

This study applied research and development approach, adopting the ASSURE Model and Tesmer Evaluation. The procedures of this model were arranged with sequences of activities at each stage of systematic development. There are six stages, namely (1 Analysis, (2) State Objective, (3) Choose method, media, and materials, (4) Utilize Media and Materials (5) Require learners' participation. (6) Implementation. The research product developed in this study was the English Hybrid Learning model using Open Broadcaster Software (OBS) through Project based model.

The analysis stage was carried out to find out the understanding and needs of teachers and students for the development of English Hybrid Learning using Open Broadcaster Software (OBS) application and Project based Learning (PjBL). In the analysis stage, an analysis of the scope of educators and students, analysis of the learning environment, and student characteristics was conducted. In the development of learning methods, the feasibility (validity and practicality) of the method was developed, validated by media experts, design instructional expert, language expert and material experts. Meanwhile, the potential effects of using this model were evaluated through the assessment of the project outcomes at the time of field tests to see an increase in learning outcomes.

There were 37 respondents participating in this study, consisting of 12 primary teachers and 25 students from the fifth grade at RSI INDONESIA school in Palembang.

Data collection was carried out using questionnaire. The data collected from the teachers includes (1). Educators' Perceptions of the Need for Innovative Learning Models, (2). Difficulties of educators in applying project-based learning during online learning. (3) Media needs to facilitate hybrid learning. (4) Learning Models Used During the Pandemic (3). Platforms Used During the Pandemic, (4) Educators' Knowledge of Open Broadcaster Software (OBS) Applications and (5). Features are expected to be present in applications used in hybrid learning. The data collected from the students include (6) Students' Perceptions of the Need for Learning Syntax (7) Students' Perceptions of the Need for Social System in Learning Model (8) Students' Perceptions of the Need for Reaction Principle in Learning Model (9) Students' Perceptions of the Need for Support System in Learning Model. Data analysis was carried out using descriptive statistics and analysis techniques to reveal the meaning of the data.

RESULTS AND DISCUSSION

A needs analysis was carried out by distributing a needs analysis questionnaire to the respondents of this study. The results of the needs analysis are as follows:

Needs analysis based on the Educators perspectives on hybrid learning

Based on the questionnaire regarding the teacher's experience during online learning carried out, the

results of the needs of teachers were found as follows:

The need for innovative learning models

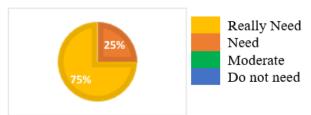


Figure 1. The need for learning models

From the needs analysis, it was found that 75% of teachers really needed innovative learning, 25% of teachers needed innovative learning. So, it can be concluded from that school that teachers really needed an innovative learning model.

Media needs to facilitate hybrid learning



Figure 2. The need for learning media

From the needs analysis, it was found that 58.3% of teachers really needed media and 41.7% needed media to facilitate hybrid learning. So, it can be concluded from that chool that teachers really needed media to facilitate the hybrid learning. So, when the students had difficulties in following the lesson during class, they were still able to see the learning process.

Platforms used during the pandemic

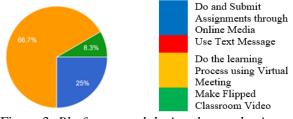


Figure 3. Platforms used during the pandemic

From the figure, it can be seen the teachers had been using some platforms during the pandemic. It was found that 66,7% of educators carried out learning through virtual meetings, 8,3% of made flipped classroom videos, and 25% educators only did and sent assignments through online media. It can be concluded that teachers dominantly used virtual meetings in learning, but were supported

by assignment assistance through online media and others.

Educators' knowledge about Open Broadcaster Software (OBS)

The following is the result of a survey on the extent of the knowledge of educators regarding the Open Broadcaster Software (OBS) application.

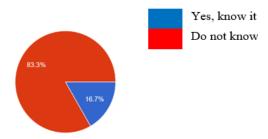


Figure 4. Educators' knowledge about Open Broadcaster Software (OBS) applications

From the results of the Figure 4 above, it is known that there were only about 16.7% teachers knew the existence of OBS application and 83.3% of teachers did not know about this application.

Needs analysis based on the students' perspectives for learning model

Based on the questionnaire regarding the students' needs about the learning model, the results of the needs of students were found as follows;

Students' perceptions of the need for learning syntax

Table 1. RSI Indonesia students' perceptions about the learning syntax

about the learning syntax			
	Questions	Students who answered Yes (%)	Students who answered No (%)
1.	Is there a need for a systematic explanation when working on a writing project?	92%	18%
2.	Do you need examples that are relevant in English language learning?	84%	16%
3.	Do you have difficulty in understanding English material during online learning?	80%	20%
4.	Are you used to using a laptop?	100%	0%
5.	Do you need help	76%	24%

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from teachers when you are unable to attend online learning?

6. Do you have
difficulty in working
on writing projects 84% 16%
given by teachers in
online learning?

From the needs analysis, it is stated that 92% of students really needed for a systematic explanation when working on a writing project and 84% of students needed examples that are relevant in English language learning. 80% of students had difficulty in understanding the English materials during online learning, 76% students needed help from teachers when they were unable to attend the online learning ,84% students struggled in working on writing project, and all the students used laptop during the online learning process. So, it can be concluded from that school the students really needed a learning model that has systematic stages to understand the lesson well.

Students' perceptions of the need for social system in learning model

Table 2. RSI Indonesia students' perceptions about the social system in learning model

	Questions	Students who answered Yes (%)	Students who answered No (%)
1.	Do you need group interaction to work on a writing project?	88%	12%
2.	Do you need teacher interaction during the online learning process?	96%	4%
3.	Do you need interaction between groups at the time of learning?	88%	12%

From the needs analysis table above, it is concluded that 88% of students really needed group interaction on a writing project and 96% of students needed teachers' instructions during the online learning and 88% of students needed interactions between group at the time of learning. So, it can be concluded from that school the students really needed a learning model that has social system to support them during the learning process.

Students' perceptions of the need for reaction principle in learning model

Table 3. RSI Indonesia students' perceptions about the reaction principle in learning model

	Questions	Students	Students
		who	who
		answered	answered
		Yes (%)	No (%)
1.	Do you need an		
	explanation from		
	the teacher about	88%	12%
	the English subject		
	matter?		
2.	Do you need		
	interaction		
	between students	96%	4%
	during the learning		
	process?		
3.	Is there any group		
	interaction during	48%	52%
	online learning?		
4.	Do you need		
	interaction		
	between groups	92%	8%
	during the learning		
	process?		
	.1 1	1 1 11	1

From the needs analysis table above, it is concluded that 88% of students really needed teacher's explanation about the English subject matter and 96% of students needed instructions between students and 92% students needed interaction between group during the online learning and it's only 48% of students answered that there was the group interaction during the online learning. So, it can be concluded from that school that students really needed a learning model that had reaction principle to support them during the learning process.

Students' perceptions of the need for support system in learning model

Table 4. RSI Indonesia students' perceptions about the support system in learning model

Questions		Students who	Students who
		answered	answered
		Yes (%)	No (%)
1.	Do you need a video about the explanation from the teacher during the lesson so that the previous learning material can be repeated?	96%	4%
2.	Based on your experience, have you	100%	0%

	found many obstacles		
	in participating in		
	online learning?		
3.	Do you need visual		
	media during online	92%	8%
	learning?		
4.	Do you need audio		
	media during online	88%	12%
	learning?		
5.	Do you need audio-		
	visual media during	92%	8%
	online learning?		
6.	Do you need a		
	reference of the		
	materials in full as a	0.60/	40/
	resource for the	96%	4%
	material of writing		
	your project?		

From the needs analysis table above, it is concluded that 96% of students really needed a video about the explanation from the teacher during the lesson so that the previous learning material can be repeated, 88% of students needed audio media, 92% of students needed visual and audio-visual media, 96% of students needed a reference of the materials in full as a resource for the material of writing their project, and 100% of students found many obstacles in participating in online learning.

Based on the results of the need analysis from the teachers and students, it can be stated the teacher needed the innovative learning model to facilitate the online learning and also, they needed a media that can facilitate the online learning becoming more efficient, and also helpful to the student if they have problem to follow the online learning. The online learning has been carried out online using various digital-based platforms such as zoom meetings and google classrooms. There were found that most of the students experienced the problems during the online learning. One of the solutions that overcome this problem is provide the Hybrid learning for the learning process. In line with the previous studied conducted by Lestari et al. (2021) entitled "Hybrid learning on problem-solving abilities in physics learning: A literature review". With the results Hybrid learning was one of the alternative to overcome the learning problems. Furthermore, Sutisna & Vonti (2020) in their research entitled "Innovation Development Strategy for Hybrid Learning Based English Teaching And Learning". As the result, hybrid learning model increased student literacy. Next is the research produced by Mahendra (2020) entitled The Implementation of Hybrid Learning Method for English Language Learning at AMA Yogyakarta with the results was the implementation of hybrid learning motivated students to be more disciplined still the students face some obstacles.

Based on the result of students' perspectives for the learning model, it can be concluded that students had obstacles in following the online learning. They were also need the media that has audio and visual to support them understand the materials well and have difficulty in working on writing projects given by teachers in online learning. The use of media in learning will assist teachers in carrying out the learning process more effectively and efficiently. The development of technology itself plays a vital role as the teacher conveys information through media in order to increase students' learning motivation. Therefore, the teaching and the learning process can take place effectively and the expected learning objectives will be achieved. Widodo & Wahyudin (2018) explains that Learning media is a tool that can be used by educators to convey messages to students. This is in line with the opinion of Puspitarini & Hanif (2019) which explains that learning media can be interpreted as hardware or software used in the delivery of materials presented by teachers to students in the learning process. In learning, the media is expected to make the learning process more effective and efficient in accordance with the learning objectives. The students were also needed an innovative learning model that provide the systematic learning syntax to help them overcome their problems in learning, especially in doing their projects. This is in line with Muhali (2019),Koesnandar (2020),Wijaya Arismunandar (2018), Annafi & Agustina (2018), Yunita et al. (2021), Ramadhani & Zulela (2021), Annafi & Agustina (2018), they explained Innovative learning is available to develop human resources that are literate in information, data, and technology, which are required to compete for life and the labor market in the current and future eras of globalization. The Learning model also is able to increase the students learning outcomes, their attitude, and they are able to work as a team and collaborate together.

For this reason, it is necessary to have media that can be developed so the process of hybrid learning will be more optimal. One of the media that can be an alternative to support the hybrid learning is Open Broadcaster Software (OBS). Based on the previous studies about OBS by Qorib & Zaniyati (2021) explained that the OBS (Open Broadcast Software) application is very

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helpful for educators to be able to design learning while recording the lesson and can directly upload the lesson to social media channels and internet-based learning media. This application can be extremely helpful in the hybrid learning process because it can help students when they experience connection problems that may occur during the learning process.

Overall, from the results of the questionnaire, it can also be seen that the knowledge of educators about open broadcaster software applications to support the hybrid learning process is still very limited.

According to the results of the preliminary study, The English hybrid learning using OBS through project-based learning (PjBL) is necessary to be developed. So, that it is hoped that learning can be more motivate students in learning where students will be actively involved in the learning process and will produce a product from the material provided. For this reason, hybrid learning needs to be given serious support so that the current learning process can be carried out well even in difficult situations like today.

CONCLUSION

The results of the study at the needs analysis stage show that in the implementation of the online learning so far, there were obstacles that need to be solved. The teachers needed an innovative learning model and instructional media that can support the online learning becoming more effective and have a systematic syntax in the learning process to help the students understand the materials given, especially in doing the English project. The students also needed a learning model also to support them in the learning process. They needed a learning model that has a systematic syntax, social system, reaction principles, and support system to participate actively and produce a project that can improve students' creative thinking in the learning process.

Based on those results, it is important to develop a learning model to support the online learning process. Hybrid Learning has the potential to increase student motivation and develop creative thinking skills and involve students to be more motivated and is the right alternative in this pandemic situation. This study develops English hybrid learning by using Open Broadcast Software (OBS) media to equip teachers in recording learning videos and through a Project-Based Learning (PjBL) model where students will be actively involved in the learning

process and will produce a product from the material provided. This study is expected to provide an overview and guidance for teachers to continue developing the effective hybrid learning and become a resource for further hybrid learning development research.

REFERENCES

- Adnyana, I. K. S. (2022). Meningkatkan keterampilan berbicara bahasa Inggris dengan menerapkan model pembelajaran hybrid learning pada masa pandemi covid-19 siswa kelas X. *Journal of Education Action Research*, 6(2), 235–241.
- Al-Arifi, R. S. (2020). Difficulties facing teaching English Language at the primary level from the point of view of teachers and the proposed solutions for them in Al-Quwaiyah Governorate. *Reading and Knowledge Journal*, 20(2), 117-148.
- Annafi, N., & Agustina, S. (2018). Pengembangan model pembelajaran Project Based Learning (PBL) berbasis kearifan lokal untuk mempersiapkan calon pendidik yang berbudaya development of learning model Project Based Learning (PBL) based on local wisdom to prepare cultured educator candid. *Jurnal Inovasi Pendidikan Sains*, 9(1), 1–10.
- Asri., Junaid, R., & Saputra, S. (2020). The development of learning model through video documentary to improve environmental knowledge of coastal residents of Palopo City, Indonesia. *Jurnal Pendidikan IPA Indonesia*, 9(3), 396–407. https://doi.org/10.15294/jpii.v9i3.23358
- Bahtiar., Rahayu, Y. S., & Wasis. (2018). Developing learning model P3E to improve students' critical thinking skills of Islamic senior high school. *Journal of Physics: Conference Series*, 947(1), 1–6. https://doi.org/10.1088/1742-6596/947/1/012067
- Basilaia, G. (2020). Replacing the classic learning form at universities as an immediate response to the covid-19 virus infection in Georgia.

 International Journal for Research in Applied Science and Engineering Technology, 8(3), 101–108.
 - https://doi.org/10.22214/ijraset.2020.3021
- Dewantara, J. A., & Nurgiansah, T. H. (2020). Efektivitas pembelajaran daring di masa pandemi covid 19 bagi mahasiswa Universitas PGRI Yogyakarta. *Jurnal Basicedu*, 5(1), 367– 375. https://doi.org/10.31004/basicedu.v5i1.669
- Diana, N., Yohannes, & Sukma, Y. (2021). The effectiveness of implementing project-based learning (PjBL) model in STEM education: A literature review. *Journal of Physics: Conference Series*, 1882(1), 012146. https://doi.org/10.1088/17426596/1882/1/01214

Febnesia, H., Nurtanto, M., Ikhsanudin, I., & Abdillah,

- H. (2021). Pengaruh model pembelajaran hybrid learning dengan metode tutor sebaya terhadap hasil pengelasan pada siswa SMKS Yabhinka. Research Development Journal and Education, 7(2),532-543. https://doi.org/10.30998/rdje.v7i2.11265
- Gultom, J. R., Sundara, D., & Fatwara, M. D. (2022). Pembelajaran hybrid learning model sebagai strategi optimalisasi sistem pembelajaran di era pandemi covid-19 pada perguruan tinggi di Jakarta. Mediastima, 28(1), 11-22.https://doi.org/10.55122/mediastima.v28i1.385
- Hediansah, D., & Surjono, H. (2020). Hybrid learning development to improve teacher learning Pendidikan, 3(1),https://doi.org/10.17977/um038v3i12019p001
- Hidayatullah, F., & Anwar, K. (2020). Hybrid learning pembelajaran pendidikan jasmani sekolah dasar dan menengah maupun pendidikan tinggi. olahraga perguruan Prosiding SENOPATI (Seminar Olahraga Pendidikan Dalam Teknologi Dan Inovasi), 1-7.http://publikasi.stkippgri-I(1),bkl.ac.id/index.php/senopati/article/view/502/35
- Indrawan., Irjus., Wijoyo, H., Muliansyah, D., Sunarsi, Ramadhani, S. P., & Zulela, M. S. F. (2021). Analisis D., Lutfi, A. M., Irawati, L., Maduningtias, L., Hanny, R., Khoiri, A., Santamoko, R., & Handoko, A. L. (2020). Pembelajaran di era new normal. CV. Pena Persada.
- Jannah, M., Prasojo, L. D., & Jerusalem, M. A. (2020). digital technology based learning in the 21st century: Promoting digital technology as the proponent learning tools. Al Ibtida: Jurnal Pendidikan Guru MI, 7(1), https://doi.org/10.24235/al.ibtida.snj.v7i1.6088
- Juwita, R., & Purwoko, L. F. (2022). Design and implementation of hybrid learning. Journal of Educational Dynamics, 4(2), 14-23. https://doi.org/10.24036/ijeds.v4i2.340
- Koesnandar, A. (2020). Pengembangan model pembelajaran inovatif berbasis Teknologi Informasi Dan Komunikasi (TIK) sesuai kurikulum 2013. Kwangsan: Jurnal Teknologi Pendidikan, 8(1), 33-61. https://doi.org/10.31800/jtp.kw.v8n1.p33--61
- R. (2020).Pengembangan Kurniawan, pembelajaran guided project based learning untuk mahasiswa slowlearner. Refleksi Edukatika: Jurnal Ilmiah Kependidikan, 10(2), 144-153.
 - https://doi.org/10.24176/re.v10i2.4128
- Lestari., Syafril, S., Latifah, S., Engkizar, E., Damri, D., Asril, Z., & Yaumas, N. E. (2021). Hybrid learning on problem-solving abiities in physics learning: A literature review. IOP Conference Series: Earth and Environmental Science, 1796(1). 012021. https://doi.org/10.1088/1742- Wijaya,

- 6596/1796/1/012021
- Mahendra, F. F. N. (2020). Students' learning styles in speaking. Journal of Teaching and Education, 71–81. https://doi.org/10.30650/ajte.v4i2.3288
- Maili, S. N. (2018). Bahasa Inggris pada Sekolah Dasar: Mengapa perlu dan mengapa dipersoalkan. Jurnal Pendidikan Unsika, 6(1), 23-28.
- Minshar, M. A. (2020). The effect of using educational games on third-grade students' achievement of English vocabulary in the Hebron governorate. Psychological and Educational Studies Journal, *13*(3), 309-319.
- management. JKTP: Jurnal Kajian Teknologi Muhali, M. (2019). Pembelajaran inovatif abad ke-21. Jurnal Penelitian Dan Pengkajian Ilmu Pendidikan: E-Saintika, 3(2),25-50. https://doi.org/10.36312/e-saintika.v3i2.126
 - Puspitarini, Y. D., & Hanif, M. (2019). Using Learning Media to Increase Learning Motivation in *Elementary School.* 4(2), 53–60.
 - Qorib, A., & Zaniyati, H. S. (2021). Penggunaan Open Broadcast Software Studio dalam mendesain video pembelajaran era pandemi. SYAIKHUNA: Jurnal Pendidikan dan Pranata Islam STAI Syichona Moh. Cholil Bangkalan, 12(1), 87–98.
 - kebutuhan desain pengembangan model ipa project based learning berbasis meningkatkan berpikir kritis siswa di sekolah dasar. Jurnal Basicedu, 5(4), 1819–1824. https://doi.org/10.31004/basicedu.v5i4.1230
- Elementary school teachers' perceptions of Sari, R. T., & Angreni, S. (2018). Penerapan model pembelajaran project based learning (PjBL) upaya peningkatan kreativitas mahasiswa. Jurnal VARIDIKA, 30(1), 79–83. https://doi.org/10.23917/varidika.v30i1.6548
 - Sarimanah, E. (2018). Developing ERIES learning model to improve students-teacher basic teaching skills through the implementation of lesson study. International Journal of Multi Discipline Science (IJ-MDS), 1(1), 29-35. https://doi.org/10.26737/ij-mds.v1i1.417
 - Surya, A. P., Relmasira, S. C., & Hardini, A. T. A. (2018). Penerapan model pembelajaran project based learning (PjBL) untuk meningkatkan hasil belajar dan kreatifitas siswa kelas III SD Negeri Sidorejo Lor 01 Salatiga. Jurnal Pesona Dasar, 41-54. https://doi.org/10.24815/pear.v6i1.10703
 - Sutisna, E., & Vonti, L. H. (2020). Innovation development strategy for hybrid learning. English Review: Journal of English Education, 9(1), 103–114.
 - Widodo, S. A., & Wahyudin. (2018). Selection of learning media mathematics for Junior School Students. **Turkish** Online Journal Educational Technology - TOJET, 17(1), 154-160. http://www.tojet.net/
 - & Arismunandar, Н., A. (2018).

A need analysis of English hybrid learning using Open Broadcaster Software (OBS) through Project-Based Learning (PjBL) model to primary school students

Pengembangan model pembelajaran kooperatif tipe STAD berbasis media sosial. *Jurnal Jaffray*, *16*(2), 175-196. Yunus, https://doi.org/10.25278/jj71.v16i2.302

Yunita, Y., Juandi, D., Kusumah, Y. S., & Suhendra, S. (2021). The effectiveness of the Project-Based Learning (PjBL) model in students' mathematical ability: A systematic literature review. *Journal of Physics: Conference Series*,

1882(1), 012080. https://doi.org/10.1088/1742-6596/1882/1/012080

nus, M., & Mitrohardjono, M. (2020). Pengembangan tehnologi di era industri 4.0 dalam pengelolaan pendidikan sekolah dasar Islam Plus Baitul Maal. *Jurnal Tahdzibi: Manajemen Pendidikan Islam, Vol 3*(2), 129–138. https://doi.org/10.24853/tahdzibi.3.2.129-138