

Problem Based Learning on Vocational School Student's through Online learning in The Covid-19 Pandemic

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Abstract: *The purpose of this study is to discover the effectiveness and the motivation on the implantation of problem-based learning method during the pandemic covid outbreak of the teachers at school. Our finding revealed that, the online learning, mitigate some consequences even the implementation is easier. In fact, that teaching mode should be shifted to online teaching, teacher's feel that the traditional learning is quite effective and motivated. One reason they rated their online learning effective during the COVID-19 pandemic is that their ability to adapt to a new culture of online instruction, which supported by school infrastructure well which then contribute to their motivation in teaching. Therefore, the findings imply that an appropriate online instructional design for online learning must be prepared more comprehensively.*

Kata Kunci:

Pemberlajaran Berbasis
Masalah,
Pemberlajaran Online,
Siswa SMK,

Abstrak: Tujuan dari penelitian ini adalah untuk mengetahui efektivitas dan motivasi guru terhadap penggunaan metode pembelajaran berbasis masalah secara online pada saat pandemi covid. Temuan kami mengungkapkan bahwa, pembelajaran jarak jauh, mengurangi beberapa konsekuensi bahkan implementasinya lebih mudah. Padahal, jika mode pengajaran harus dialihkan ke pengajaran online, guru-guru merasa bahwa pembelajaran tradisional cukup memberikan motivasi dan cukup efektif. Salah satu alasan mereka menilai pembelajaran daring mereka efektif selama pandemi COVID-19 adalah kemampuan mereka untuk beradaptasi dengan budaya baru pengajaran daring, yang didukung oleh infrastruktur sekolah dengan baik yang kemudian berkontribusi pada motivasi mereka dalam mengajar. Oleh karena itu, temuan tersebut menyiratkan bahwa desain instruksional online yang sesuai untuk pembelajaran online harus disiapkan secara lebih komprehensif.

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A. LATAR BELAKANG

The coronavirus disease of 2019 (COVID-19) epidemic has had a significant negative impact on our health and economy, it has also given rise to innovation and ingenuity. It has prompted higher education institutions all around the world to reconsider how they conduct their instructional activities, among other things. The COVID-19 pandemic in Denmark prompted the government to impose a national lockdown on March 13, 2020. As a result, for an as-yet-undetermined duration, all university staff and students were required to stay at home (Madsen, Haslam, & Nielsen, 2020, Haslam, Madsen, & Nielsen, 2020). In this paper, we examine and offer lessons from a case study of how vocational students focused on problem-based learning (PBL) responded to this challenge by choosing to continue the semester in a digital format, effectively turning the university fully digital without much notice or planning. We focus on the favourable effects of digital PBL in project groups on the enthusiasm of learners during the lockdown phase.

Education is the most vital thing for achieving national and state progress. Quality education produces quality human resources. Education can take place in the home, through formal education (school), or in the community. Elementary school education is the first level of education for pupils to improve basic knowledge to a higher degree. Social studies must be taught to pupils in primary school. Social studies do not stand alone as subjects in the 2013 curriculum, but are incorporated into one strategy. The subject is also solely integrated for the upper primary 4 to 6 classes. Learning materials are related to life around students in the lessons so that students can relate the theories they learn by applying them in their daily lives. Economic activities on the theme of my area of residence in class 4, which was taught using the lecture technique, are one example of learning materials. Meanwhile, this content is related to everyday difficulties that encourage students to think critically and creatively in order to solve problems and provide solutions to challenges that students encounter in their daily lives.

The use of the internet has proven quite significant in aiding the issue. Online learning activities are heavily reliant on technology (Pangondian R. A., Santosa, and Nugroho, 2019). Technology has a network configuration that allows synchronization, which is important in transmitting information, and students have the convenience of getting the information they require in a network that is time-based. The online learning methods used by educators to encourage active student participation in learning must guide students in realizing learning outcomes in their daily lives. Relevance to the student's daily life definitely makes it easier for the student to complete the given tasks. Apart from that, there are more important things for students than studying and getting the right to learn. Students should also be given opportunities to develop their interests and talents. Teachers must be able to not only provide teaching materials as part of the cognitive development of students, but also learning content that can train emotional and psychomotor students. Of course, this requires good learning models during the Covid-19 pandemic. A learning model that includes cognitive, emotional, and psychomotor development.

The development of teachers are also support by seeing their background in teaching. Teachers' motivation plays an important role in promoting a healthy teaching environment. Self-determination theory (Deci & Ryan, 2000) can provide important insight into the understanding of teachers' motivation, including the reasons they do their work, continue to teach, experience success, and enjoy what they do. Either internal not external motivation could give beneficial effect toward the way teacher's taught the students and presenting the material.

Learning by online currently exists is certainly far from perfect. There are many obstacles and challenges felt by teachers, parents and course students. These disorders consist of several factors related to learning technology. It can be seen that online learning is being carried out using technology and information such as mobile phones (mobile phones). Therefore, educators should make the most of their learning materials when providing them. Common obstacles encountered with this online system range from limited data and signals to too many assignments and difficulty for students to understand the material presented by the teacher. Limited implementation of the learning process and difficulty for students to understand the material.

Other problems, such as a shortage of resources such as teaching aids, huge class sizes, a pupil-teacher ratio, and materials for practical lessons, lead teachers to present lessons conceptually (Edward and Fisher, 1995; Hanushek, 1997). Again, most teachers disregard practical courses due to time restrictions (Ogula & Onsongo, 2009). This is because the syllabus is designed in such a way that a specific scope must be covered before the quarterly examinations, and because practical courses take a long time to arrange and deliver, they prefer to teach it theoretically. Most students regard physical science as a difficult subject, and as a result, they are disinclined to study it, which has resulted in the development of unfavourable attitudes about the field (Legotlo, Maaga & Sebege, 2002). Other variables that contribute to students' low science performance include teachers' lack of content expertise and the sort of teaching approach utilized (Van der Berg, Taylor, Gustafsson, Paul, & Armstrong, 2011; Kriek & Grayson, 2009). They have minimal expertise of the subject's substance and other practical issues, making it difficult to teach the students. A more engaging teaching technique should be used by the teacher to improve the performance of students in Physical Science. The Problem Based Learning (PBL) approach is one of these strategic teaching strategies. This research examines problem-based learning as a teaching technique and how it might be utilized to improve students' progress in physical science. The study explicitly examines how PBL can be taught effectively in high schools using this mode of education.

One of the teacher's roles is to guide students through questions that lead them to find possible solutions to problems. Students ponder problems through an inquiry process by applying strategies that lead to them. Groups of students go through several steps to solve a problem through observations, predictions, and drawing conclusions based on assumptions (Bell, 2010; Blumenfeld et al., 1991). In implementing PBL, the open-ended questions will be given related to problems, finds possible solutions through problem-solving activities, analyses

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data using guided questions, Finally, we suggested assessing problem-solving skills and critical thinking. A student's skill that determines the amount of knowledge a student has acquired. In addition, members of the PBL group were always accountable to each other (regardless of agreement) (i.e. appropriate agreements with case companies, scientific reports and reviews)

B. METODE

This mixed research (Mix Method) study was conducted in Vocational Schools in Makassar where the students do online learning for all subject. The data presentation method is descriptive qualitative via literature review, whereas data analysis techniques are quantitative via questionnaires.

This study was carried out using qualitative methodologies and research material from journals, publications, and other sources. The qualitative approach of data gathering produces descriptive data that is explained through words about an observed activity. Data gathering is done in order to grasp a situation spontaneously and comprehensively (all at once). Research conducted through an observational phase, including observations, interviews and data analysis (Subandi, 2011). This research topic is determined on a deliberative basis according to the rules established by the researcher. This research also conducted to measure the success factors of online learning, it refers to research conducted by (Selim 2007) where the results show that the determining factors in the success of online learning are teacher characteristics, student characteristics, technology, and support.

The study design consisted of completing a brief survey completed by 23 teachers who teach the who teach in all level of subject. The research instrument were questionnaires based on teacher's perception of the successful learning during online teaching by using PBL model approach of the teacher, and teacher's motivation. A second data source then comes from a literature survey. Although the variables included in the literature review are non-standard in nature, research should be done with caution. Collecting data in literature is not just reading a lot of magazines and literature, but also reading, recording, and processing the results of literary research (Melfianora, 2019).

C. HASIL DAN PEMBAHASAN

Online learning at Telkom Vocational school requires that the learning conditions are carried out online. By implementing an online learning system, teachers use information technology to teach. Since the online learning strategy is new, the educators need to prepare various learning methods in order to realize a comprehensive learning system that utilizes information technology. The result of the questionnaires to find teacher's perspective about the effectiveness and the motivation during online learning using PBL were depict as follows.

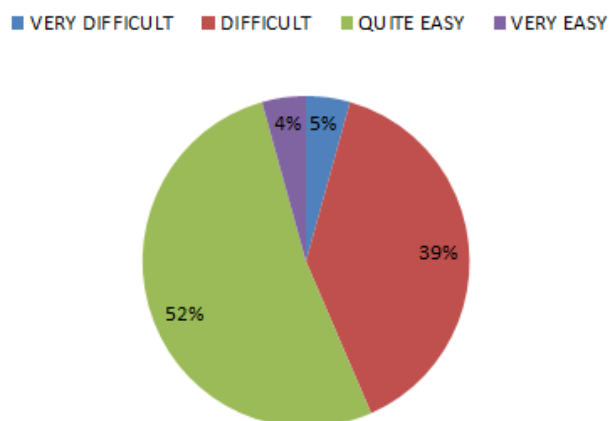


Figure 1. Teacher's perspective on the effectiveness of online learning using PBL

There were 52% of 23 respondents said they believe distance learning is fairly easy to implement. On the other hand, 39% answered that it was difficult. This is certainly caused by various factors. However, the possibilities of obstacles and interruptions were necessary might happened during the process. At this research, all teachers were direct to improve their preparation to the online so that students can study properly. As well as the approach using Problem Based Learning, must also meet the student's need. The Respondents also indicated that teachers use different learning methods and models when learning online. Technology allows teachers to experiment with different learning methods using platforms available online. Additionally, teachers also create learning media as a form of innovation that occurs during distance learning. Commonly the teachers use Youtube, creating powerpoints, creating learning modules, quizzes, and various other new platform endeavours. This is so that students can actively participate in conducting this online learning. Even if it has to go online. The teaching became a challenge for educators to keep innovating. However, this is not completely smooth. Since there were always challenges and obstacles. Obstacles and solutions.

Moreover, findings in the literature report that if a teacher's role in the learning activity is to act as a learning facilitator or to make it easier for learners to learn rather than to simply supply of knowledge, information and communication technology-based learning will proceed smoothly (World Bank Group, 2020). In other words, S.T Cook (2016) state that a learner is not merely a passive recipient of information from the teacher. Learners are still expected to be more engaged, creative, and active in the learning process. During the learning activity, learners are not only recalling facts or re-revealing information received from the teacher, but they are also producing or discovering new information or knowledge, through both independent and cooperative group learning with other students. Therefore, in teaching it is beneficial make teacher's believe that they have responsibility to gain student's motivation and this too could be done by being motivated on the learning preparation to reach learning competency at the end. The rate about motivation were explained as follows.

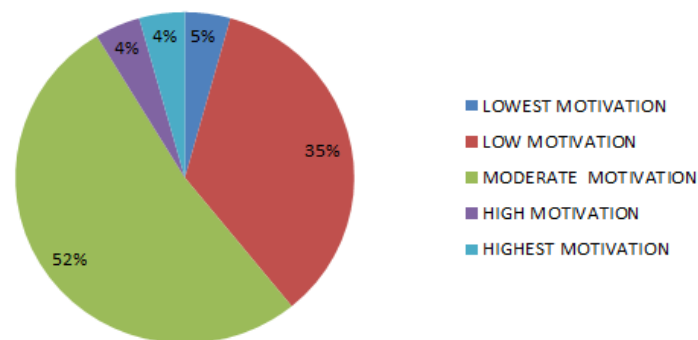


Figure 2. Teacher's motivation of online learning using PBL

The practice of problem-based learning by online system has truly make teachers confused about the delivery system. However, it seemed from the data that 52 % teachers were on moderate mode. This number implied that the practiced by several educators of Vocational School Telkom Makassar were motived due to some consideration, as such, on one condition, this research could see that informing the school administrations by demonstrating why they should take care to ensure that their teachers are supported and having a psychologically sound experience. Since this review focuses on some of the key environmental factors that are relevant to teachers, it will provide school administrations some key areas they can work on to promote, within their own organizations, more motivated teaching and better outcomes for both the teachers and students.

The issues of motivation could be also seen from how teachers prepare the delivery mode in classroom. Model learning which easy and playful to understand by students become effective and supportive during online learning. conversely, the teachers' inability to adapt to the new culture of online education could also be interpreted as a result of the fact that they do not prepare their classes online. Thus, online learning does not effectively address cognitive, emotional, and psychomotor learning objectives. Therefore, using PBL has made the model learning quite challenging even is not only easy to implement, but also very easy and interesting for students. Students do not feel trained or taught to develop their cognitive, emotional, and psychomotor potential because the skills are developed in a simple and effective way The problem-solving learning model asks students many questions to help them find different information to solve their problems. This desire and motivation as a solution in the midst of a pandemic with many obstacles is a positive one. It allows students to feel happy while learning. A study implied that, it seems that the enthusiasm of the teachers for learning is very good. Teachers are expected to provide the best learning if they are able to carry out the learning process with enthusiasm and passion. The learning process that educators do takes place in a variety of ways. One possibility is to apply problem-based learning (PBL) models.

To sum up, there are some issues about online learning using PBL that could be listed, from the collection of empirical data, teachers found online lessons to be technically simple and more effective than expected. One of the most important issues is that learning activities are not designed to be completed online (O. Viberg and Å. Grönlund, 2017 and F. Martin and D. U. Bolliger, 2018). Therefore, detailed planning of online learning activities, including learning design, learning tools, learning media, learning implementation, and evaluation is highly required before starting the online learning based. However, teachers also noted that online instruction presented some challenges related to limited social interaction. They found it difficult to concentrate all day long alone in front of a small screen at home and missed the variety and interaction of learning activities on school in many classes. Therefore, the variety of method in teaching is preferred to avoid boredom during the learning. Secondly, knowing that undergraduates are notoriously difficult to stay focused and inspired for long periods of time when studying online classes. Teachers indicated that staying motivated is hard and choosing the activity which directly involve the students to the material became essential. Which should be related to their daily activity and further workplace but still bringing the point of the material competency will definitely make the teaching process livelier.

D. SIMPULAN DAN SARAN

The crisis that encountered the educational sector - due to the outbreak of the Coronavirus - has certainly pushed e-Learning towards the forefront, so it became an irreplaceable option. However, online learning is considered quite effective and motivated the teachers to prepare the online learning platform in Vocational School Telkom Makassar since both teachers and stakeholders are directly aware with the supporting infrastructure to fulfil the teaching activity. The involvement of learning by problem-based learning models (PBL) is considered give additional value since problem-based learning (PBL) learning models have the following advantages such as, Improving critical thinking, Improve analytical and logical skills and Improving Problem-Solving Skills. Problem-based learning helps students develop cognitively, emotionally, and psychomotorly. Problem-solving involves asking questions that guide students to investigate, analyze, and identify the problem presented. Learning using problem-based learning models to develop student skills significantly effective during the Covid-19 pandemic. The results of these respondents indicated that teachers who have good motivation (i.e knowledge, planning the learning, supporting media), interest, and interest in presenting the material in online learning, have the ability to use technology appropriately.

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