

Team-Web Based Learning (T-WBL): A Alternative Learning in Pandemic Covid19

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Abstract: The COVID-19 pandemic has accelerated the transformation in the field of education. Technology, especially the internet, is important in this era. Distance learning or online learning is a must even with various limitations. Team-Web Based Learning offers a new experience in learning during a pandemic. This research is a literature study that aims to describe various theories, studies, research results, and the implementation of T-WBL in learning during the COVID-19 pandemic. Data were collected through various sources such as research notes, articles, books, and related documents. The data were analyzed using a systematic literature review method. The results of this study conclude that T-WBL is recommended as an effective learning model to be used in online learning both during the covid19 pandemic and post-covid19 pandemic. Team-Web Based Learning provides enormous learning opportunities as well as access to a vast amount of knowledge and information.

Keywords: team, web baseb learning, pandemic, covid19

Abstrak: Pandemi COVID-19 telah mempercepat transformasi di bidang pendidikan. Teknologi, khususnya internet, menjadi penting di era ini. Pembelajaran jarak jauh atau online learning adalah suatu keharusan meski dengan berbagai keterbatasan. Team-Web Based Learning menawarkan pengalaman baru dalam belajar di masa pandemi. Penelitian ini merupakan studi kepustakaan yang bertujuan untuk mendeskripsikan berbagai teori, kajian, hasil penelitian, dan penerapan T-WBL dalam pembelajaran di masa pandemi COVID-19. Data dikumpulkan melalui berbagai sumber seperti catatan penelitian, artikel, buku, dan dokumen terkait. Data dianalisis menggunakan metode tinjauan pustaka sistematis. Hasil penelitian ini menyimpulkan bahwa T-WBL direkomendasikan sebagai model pembelajaran yang efektif untuk digunakan dalam pembelajaran online baik pada masa pandemi covid19 maupun pascapandemi covid19. Pembelajaran Berbasis Web Tim memberikan peluang belajar yang sangat besar serta akses ke sejumlah besar pengetahuan dan informasi.

Kata kunci: tim, pembelajaran berbasis web, pandemi, covid19

INTRODUCTION

The peak phase of the COVID-19 pandemic has indeed passed, but its impact is still being felt today, including in the field of education. There are many things that can be used as lessons after the covid 19 pandemic. One of them is the important role of technology, especially the internet in education and teaching. Imagine if without internet technology

how would education take place during the COVID-19 pandemic, which requires everyone to work from home.

Given the important role of internet technology, it is only natural that educational practitioners implement internet technology in learning. This can be started from government policies regarding the use of internet technology in learning. Then followed by teacher training on the development and use of internet technology in learning. This is necessary considering that there are still many teachers who are not technology literate.

Actually there are many models and methods for applying internet technology in learning. Both online learning and blended learning. In addition, there are also various learning applications or platforms, the most popular being Google Classroom.

However, what is often a problem in online learning is the neglect of collaborative or team activities in learning. In fact, collaboration is an important ability for students to have as learning abilities in the 21st century. Team-Web Based Learning (T-WBL) offers an online learning experience by involving collaboration between students during learning.

METHOD

This research is a literature review study. Literature Review is a critical and in depth evaluation of previous research (Shuttleworth, 2009). The purpose of this research is to deepen knowledge about Team-Web Based Learning (T-WBL), Knowing the results of related research and those that have been carried out, Knowing the development of Team-Web Based Learning (T-WBL).

Clarifying problems related to Team-Web Based Learning (T-WBL), Knowing the latest methods proposed by researchers to solve these problems. After conducting a literature review, the researcher summarizes, analyzes and performs a critical and in-depth synthesis of the reviewed or reviewed papers. Systematic literature review or often abbreviated as SLR or in Indonesian called systematic literature review is a literature review method that identifies, assesses, and interprets all findings on a research topic, to answer research questions that have been previously determined (Kitchenham, 2004). The SLR method is carried out systematically by following stages and protocols that allow the literature review process to avoid bias and subjective understanding of the researchers.

RESULT AND DISCUSSION

Pandemic Covid19

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2) better known as the corona virus is a new type of coronavirus that causes infectious diseases to humans. Covid-19 is an infectious disease caused by a newly discovered type of coronavirus. Although it mostly attacks the elderly, this virus can actually attack anyone, from infants, children, to adults. This corona virus can cause mild disorders of the respiratory system, severe lung infections, and even death.

Corona Virus Disease 2019 (COVID-19) was first discovered in the city of Wuhan, China at the end of December 2019. This virus spreads very quickly and has spread to

almost all countries, including Indonesia, in just a few months. So that on March 11, 2020 WHO declared this outbreak a global pandemic.

All aspects of life are affected by Corona, one of which is the education sector. The Corona virus has changed the learning model. Suddenly, all countries are forced to conduct online learning. From elementary school to college level. All learn through the internet. The world educational and cultural institution or UNESCO recorded interesting data during the Covid-19 pandemic. Based on UNESCO data, in April 2020 as many as 300 million more school-age children in the world experienced barriers to the learning process. Both students in developed countries and developing countries. Including Indonesia.

This has made several countries set policies to impose lockdowns in order to prevent the spread of the corona virus. In Indonesia itself, a Large-Scale Social Restriction (PSBB) policy was implemented to suppress the spread of this virus. Because Indonesia is carrying out PSBB, all activities carried out outside the home must be stopped until this pandemic subsides.

Since the issuance of Circular Number 36962/MPK.A/HK/2020 dated March 17, 2020 by the Minister of Education and Culture and enforced a few days later, all teaching and learning activities both in schools and campuses have been carried out online as an effort to prevent the development and spread of the pandemic Covid-19. Teaching and learning activities that are usually carried out face to face directly, where educators and students are physically present in classrooms and learning places, are now being replaced with distance learning activities through digital media commonly called e-learning.

Team-Web Based Learning (T-WBL)

Team-Web Based Learning (T-WBL) is a learning design that is designed based on Team Based Learning (TBL) by modifying the implementation process, namely through Web Based Learning (WBL). So there are two terms here, namely TBL and WBL. This research will describe them one by one.

TBL is a collaborative learning and teaching strategy that allows people to follow a structured process in order to improve student engagement and the quality of student or trainee learning. Larry Michaelsen, a key figure in the development of the TBL method at the University of Oklahoma in the 1970s, popularized the term and concept as an educational strategy he developed for use in academic settings, such as medical education. The team-based learning methodology can be used in any classroom or training session, whether at school or at work (Michaelsen, Watson, Cragin, and Fink: 1982).

Team-based learning modules can be taught in three steps: preparation, in-class readiness assurance testing, and application-focused exercise. It has five essential components, with a final optional stage called peer evaluation: (1) Personal pre-work, Students must read a set of preparatory materials, which may include readings, presentation slides, audio lectures, or video lectures. (2) Personal Readiness Assurance Test (IRAT), Students complete the IRAT in class, which consists of 5-20 multiple-choice questions based on the pre-work materials. (3) Assurance of Team Readiness Test (TRAT), Following the submission of the IRAT, students form groups and take the same test and

submit answers as a group. IRAT and TRAT scores both count toward the student's overall grade. (4) Session of clarification, Students will have the opportunity to clarify multiple-choice questions in the tests after taking both the IRAT and the TRAT. Instructors can then respond to the questions and lead a discussion about the topics and concepts covered. (5) Exercises in application, Students work in groups to solve problems that allow them to apply and expand on what they've just learned and tested. Instructors then facilitate a discussion or debate among teams to consider potential problem solutions. (6) Peer review, This final stage is optional in the team-based learning process. Some faculty members conduct peer evaluations for their teams in the middle or end of the course.

According to Michaelsen and Richards (2005), the implementation of TBL is based on four underlying principles: Students are accountable for their pre-learning and team work, team assignments should promote learning and team development, and students need frequent and immediate feedback. Team-Based Learning has been proposed as a way to assist students who appear uninterested in subject matter, do not complete homework, and have difficulty understanding material. TBL can transform traditional content by developing application and problem-solving skills as well as interpersonal skills. According to Vaughn et al. (2019), team-based learning is an effective method for improving "content acquisition, vocabulary growth, and reading comprehension." According to Jakobsen & Knetemann (2017), team-based learning allows students to take a much deeper look at course content and holds their attention better than traditional methods. Its incorporation into education can also be beneficial in terms of developing skills and abilities that are useful for businesses, organizations, careers, and industries where many projects and tasks are completed by teams.

Learning how to learn, work, interact, and collaborate as part of a team is critical for success in this environment. Individuals who learned through an active team-based learning curriculum had greater long-term knowledge retention than those who learned through a traditional passive lecture curriculum, according to a study conducted by the Washington University School of Medicine. Clearly, faculty at professional schools are shifting their focus away from simple course objectives like memorizing a concept and toward developing application and integration of knowledge beyond content-based curricula. Controlled studies of initial team learning implementations found increases in student engagement but mixed results for other outcomes.

In its "The Future of Jobs and Skills" report, the World Economic Forum identified the Top 10 required skills as complex problem solving, critical thinking, creativity, people management, coordinating with others, emotional intelligence, judgement and decision making, service orientation, negotiation, and cognitive flexibility. TBL is frequently contrasted with the traditional one-way lecture format, which does not allow students to develop these skills. TBL, on the other hand, can engage students and foster a collaborative learning and discussion environment. The Education Resource Information Center (ERIC) contains over 500 publications that provide evidence for the positive educational outcomes of using TBL in the classroom.

TBL conserves resources. TBL reduces the amount of paper used for the lesson in digitally enabled classrooms. Instructors do not need to prepare hardcopy materials and

can easily change the questions to be discussed in class, remotely, or on the go. Because the majority of learning occurs in class through discussions and feedback sessions, unnecessary paperwork is eliminated. Furthermore, instructors can collect data on class performance and automate student grading.

The second term is web-based learning (WBL). Because it includes online course content, web-based learning is also known as online learning or e-learning. The web allows for email discussion forums, videoconferencing, and live lectures (videostreaming). Static pages, such as printed course materials, may also be available in web-based courses. One advantage of using the internet to access course materials is that web pages may contain hyperlinks to other parts of the internet, allowing access to a vast amount of web-based information Giesbers et al (2014).

There are several approaches that can be used to create and deliver web-based learning. These can be thought of as a continuum. On one end, there is "pure" distance learning (in which course material, assessment, and support is all delivered online, with no face to face contact between students and teachers). An organizational intranet, on the other hand, replicates printed course materials online to support what is essentially a traditional face-to-face course. Websites that are simply knowledge repositories with no links to learning, communication, or assessment activities, on the other hand, are not learner-centered and cannot be considered true web-based learning courses. In reality, most web-based learning courses are a mix of static and interactive materials, and most make individual face-to-face instruction for students a key component of the program (Ifenthaler, 2014).

The first step in creating a web-based course is determining the needs of the learners and whether they should be considered as part of a group or as individual learners. The internet can be a useful tool for connecting isolated learners in "virtual" groups, such as through a discussion forum. There are numerous online resources for creating web-based learning programs (Weinberger & Fischer, 2006).

In an institution, web-based learning is frequently integrated with traditional, face-to-face teaching. This is usually done through an intranet, which is "password protected" and only accessible to registered users. Thus, it is possible to protect the intellectual property of online material while also facilitating the confidential exchange of communication among students.

It is beneficial for students to receive constructive, timely, and relevant feedback on their progress in all types of learning, including web-based learning. The medium in which online assessment operates can sometimes limit its effectiveness. Computer-marked assessments alone are insufficient for marking or providing feedback on assignments such as essays or projects that require more than mere knowledge reproduction (Phirangee et al, 2016).

It is critical to determine what will be assessed when planning an online assessment. When testing knowledge reproduction, objective questions (such as multiple choice or "true or false") with instant or model answers can provide excellent feedback. Higher cognitive functions, such as analysis and synthesis, will necessitate more complex tests. Automated marking may be difficult for such assessments, and the teacher will

almost certainly have to do a significant amount of work before adding his or her comments to the student's record (Thorpe, 2016).

The needs and experiences of learners must be considered when designing web-based programs (as with any learning program). To get the most out of web-based or online learning, appropriate technology and reasonable computer skills are required. Different technical specifications and software versions can be accommodated by programs and web pages. It is frustrating for students, however, if they are attempting to work on the internet but cannot download the images and videos they require.

Course designers must keep in mind that younger students are more likely to be familiar with the internet than older students, who may feel less at ease with a web-based course. Learners require basic computer skills, support, and guidance to get the most out of their learning experience. Teachers' courses must be designed to encourage effective web-based learning rather than aimless "surfing." As a result, program design should filter out bad information while also pointing to key information sources (Sweet & Michaelsen, 2012).

Electronic patient records are being used by a growing number of clinicians. As a result of this shift, doctors are becoming more adept at using computers and online resources to support their daily work and continuing professional development. Access to evidence-based resources, such as the Cochrane Library, can be facilitated by electronic media. These web-based clinical support sites are excellent postgraduate "on the job" learning resources. Teachers should be encouraged to use the web and other information technology systems in their classrooms through training and support. They require examples and awareness of best practices, and standards for how teachers present information and manage the learning environment should be established.

Supporting Theory

Hrynchak & Batty (2012) provide a thorough examination of the theoretical foundations of team-based learning. They contend that team-based learning incorporates the main elements of constructivist learning, in which "the focus is on the learner's mental representation of information" (Svinicki, 2004 & Kaufman, 2003): (1) The teacher serves as a guide to facilitate learning. (2) In order to provide a foundation for the development of new understandings, learners must confront inconsistencies between preconceptions and new experiences. (3) A focus on relevant issues combined with group interaction promotes learning. (4) Learning necessitates reflection.

All of these elements are consistent with team-based learning. The teacher establishes learning objectives and chooses a problem for students to focus on, but then acts as a guide as the team works toward a solution to the problem. Careful problem selection can assist in revealing common student misconceptions, and constant interaction and debate among team members allows students to compare their current understanding with that of other team members and build new understanding. Team-based learning includes group interaction and a focus on relevant issues. Finally, team-based learning allows for several opportunities for reflection: during group readiness

assessment tests, while listening to other teams' reports on their conclusions, and during the peer evaluation process, which frequently includes self-evaluation.

Team-Web Based Learning (T-WBL) Design

There are four key aspects to designing T-WBL application exercises: (1) a description of the class context, (2) the design of the application exercise (the four S's), (3) the design of collaboration and interaction, and (4) the technology required to support collaboration. Furthermore, the emerging field of data analytics has the potential to capture and analyze interaction, performance, and assessment data in the online environment. Class context is depicted as an aspect that includes all other aspects and serves as the foundation for any application exercise design decisions. Application exercise design includes thinking about how collaboration and interaction design will inform what technology and infrastructure support is required. Depending on the nature of the data captured, data analytics has the potential to be informed by all aspects.

Because it encourages learners to learn from their team members, team-based learning experiences can improve learning outcomes in an online course environment. Additionally, teams improve learner accountability because learners are held accountable not only to themselves but also to their teammates (Muljana & Luo, 2019).

Four best practices for creating T-WBL courses by Palsolé & Awalt (2008): (1) Teams formed by learners outperform teams formed by course administrators; (2) By making individual and team questions public, learners can more easily find potential complementary teammates; (3) Course providers should limit team size and provide clear expectations about roles and responsibilities; and (4) The optimal online team size is around 4-6, enough to engage with many ideas but not so many that it becomes overwhelming.

Team leaders can also help to promote successful teams. Because team leads either initiate team formation or step up and assume leadership responsibilities, team leads can push the team forward to achieve team success, especially when guided by the teaching team (Ku et al, 2013).

Interaction and timing, multiple-choice question application exercises, and free response applications are all areas of analysis. T-WBL practitioners generally agree that time management becomes much more important in online environments. Learning activities in an online environment often take longer to support necessary communication. Because it can be difficult to visually observe and track team progress online, monitoring tools are essential for establishing facilitator presence. For example, knowing how much time teams need to complete an application exercise within a given timeframe can help identify potential areas of concern that require more facilitator presence. Educators may find it useful to examine the distribution of team responses in order to assess team comprehension and potential sources of confusion (Thomas & Thorpe, 2019).

Furthermore, educators may discover that tracking team response data (from a free response application) can identify misunderstandings that can be used as plausible distractors in future multiple-choice question applications. Educators can examine the length of responses (word counts), response format (free text versus files versus images),

and keyword usage. Electronic gallery walks, in which teams vote for the best team response other than their own, may provide educators with additional insight into what teams are thinking.

In the future, online text chat or writing functions could be used to assess team members' relative contributions. Furthermore, if chat functions can capture team discussions and provide the necessary data to train artificial intelligence teammates, they may be useful for simulating a team learning environment, even for teams that are missing some team members or for an individual learner. Future use may become more widespread as instructors and students value trust in specific data metrics as valid student feedback (Dascalu et al.,2015). Ethical and theoretical considerations pertinent to the implementation of online learning analytics must also be taken into account (Knight & BuckinghamShum,2017). In online TBL applications, learning analytics tools provide an opportunity that is not readily available in face-to-face sessions.

CATME, iPeer, and InteDashboard, in particular, provide instructors with data and information about students' collaborative behaviors. Interest in analytics, specifically for group learning, has grown in response to instructional challenges in the delivery of connected massive open online classes (MOOCs) and as a means for instructors to regulate student collaboration (Wang et al., 2017 & Van Leeuwen et al., 2015). In addition, progress has been made in identifying variables of asynchronous online discussions that can guide instructors to early interventions to improve online interaction (Kim et al.,2016). TBL application data captured by LMS systems may include the amount of participation in discussion boards, the number of emails, the number of video exchanges with team members, and other measures of text exchanged via messaging and documentation.

In all cases, course participants should be informed about the information collected, and students should be made aware of the importance of data collection in order to provide meaningful evaluation of team and student performance. Furthermore, course assessments should be directly related to learning objectives and learning activities.

CONCLUSION

Team-Web Based Learning provides enormous learning opportunities as well as access to a vast amount of knowledge and information. Teachers' role is to ensure that the learning environment provided meets the needs of the students and that they are effectively prepared and supported. Online learning has advantages, but it should not always be considered the preferred method because barriers (such as insufficient equipment) can easily detract from student learning. As a result, technology must be used appropriately rather than simply because it is available and new, or because students and teachers have specific expectations of this mode of course delivery.

It takes time to learn how to teach effectively online. It necessitates even more disciplined class scheduling and management than in-person instruction. Technology access and timezones are included in the definition of "inclusive teaching." At the very

least, online learning provides an excellent opportunity to experiment with new teaching methods that supplement – and even improve – the classroom experience.

This paper examined key aspects of WBL and TBL in order to identify best practices principles for designing application exercises for T-WBL. The designer's ability to identify which quadrant of the space/time matrix to build applicable activities for student engagement is critical to the design of application exercises. Determining whether asynchronous or synchronous application activities are aligned with the course design will aid in the systematic design and development of T-WBL. Another critical component of developing effective application exercises is defining the type of facilitator presence required and clearly communicating this to students.

According to research, knowing how an instructor will facilitate and being present will improve student performance and retention. Faculty must also determine the appropriate technological resources required to carry out the activities. Choosing ineffective tools and utilizing multiple tools to complete the application exercise may be time-consuming, preventing faculty from deploying T-WBL. Finally, when deciding whether to collect such data, the use of analytics to improve individual and team activity should be considered. Regardless of the type of analytics chosen, research indicates that data collection and use transparency is critical.

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