STUDENT'S PERSPECTIVE ON THE IMPLEMENTATION OF THEPROJECT BASED LEARNING (PJBL) METHOD IN PROJECT MANAGEMENT COURSES DURING THE COVID-19 PANDEMIC

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ABSTRACT

The development of information and communication technology (ICT) in the era of globalization has had a major influence in all aspects of life, including in the world of education. In the development of information and communication technology, Android-based learning media was developed as a means of learning for students. The limited number of books that can be used by students and in conditions likenow where the learning process is carried out online requires learning media that can be used and accessed easily by students. The objectives of this study are: (1) developing android- based learning media, (2) knowing the feasibility of android-based learning media, and (3) knowing the digital literacy ofstudents by using android-based learning media as a learning resource. The development of this android- based learning media uses a research and development model with stages including identification of potential and problems, data collection, product design, design validation, design revision, small-scale trials, product revisions, large-scale trials, and product revision. The results of this study indicate that the learning media developed was declared "Decent" by material experts, media experts and linguists and students stated "Very Decent" to be used as learning media in the subject of Plantation and Herbal Commodity Processing Production. Furthermore, the learning media is applied in learning by using One Shot Case Study. Based on the results obtained, the digital literacy that students have is already in the "Very High" category for the aspect of using. As for the understanding aspect, the indicators of analyzing and creating are in the "High" category and the indicators for reflecting and acting are in the "Very High" category.

***Keywords:** Android Based, Digital Litarature, Learning Media, Research and Development.*

1. INTRODUCTION

The learning process occupies a very important position and role in educational activities. In learning activities, there is a process of transmitting and transforming learning experiences to students according to the times, so the curriculum that applies in schools must be in accordance with the demands of current developments. In the midst of a volatile, uncertain, complex and ambiguous era (VUCA), the learning process is one of the keys to giving birth to a generation that is able to contribute to solving problems around them. One of the entrances to solve these problems is through the learning process. The approach to the learning process needed in the 21st century is a learning approach that can improve students' higher order thinking (HOT). High-level thinking skills include the ability to solve problems, think critically, think creatively, argue, and make decisions. One of the learning models that can improve higher order thinking skills is discovery-inquiry learning. The discovery-inquiry learning model focuses on the problem-solving process so that students must explore information in order to determine their own concepts (Adamsari, 2021).

One of the courses in the vocational education program at the Unversitas Indonesia that applies the discovery-inquiry model is the project management practicum course, in which students will be asked to look for problems that exist in the community and then formulate solutions to solve these problems, so that the learning process in practicum courses Project management is not only carried out in the classroom but outside the classroom based on real problems (project-based learning / PjBL).

In the year of the implementation, which is even semester 2021, the learning process for the project management practicum course must undergo a change in learning methods from offline learning to online learning due to the covid 19 pandemic that has hit all countries in the world, including Indonesia. Due to the spread of the Covid-19 virus which spreads through the air (droplets), activities that have the potential to cause crowds are limited by the government through the policy of Enforcement of Community Activity Restrictions (Pemberlakuan Pembatasan Kegiatan Masyarakat / PPKM) including office activities, education and worship. (Andriani, S.Si, Apt, M.Sc, Ph.D, 2020). All industry players including the education industry are trying to adapt to existing situations and conditions. The learning process must continue and the achievement of student competence must be guaranteed. So that many teachers are trying to develop learning methods that are interactive, easy to understand, and still add competence for teaching participants, especially for practical classes.

The project management practicum process which is usually carried out in the field directly to the community must be changed to online. Learning materials to support the competence of teaching participants in the field of project management are provided through the e-learning management system provided by the campus. Likewise, the process of identifying problems, formulating solutions, designing activities and implementing projects by students, are all done online. The mentoring process is carried out regularly every week for 13 meetings, at the 14th-16th meeting the project is carried out online using a zoom meeting with the webinar method.

The application of project-based learning in practicum project management courses is very challenging. The PjBL learning model is said to be successfully implemented if it has achieved the learning objectives, fulfilled the learning competencies, impressed students and had good learning outcomes. The PjBL learning model indicator in the project management practicum course is said to be successful if it meets seven aspects consisting of aspects of student interaction with the group, being able to motivate/increase student interest in learning, competence to understand learning materials, critical thinking competence, time management competence, student learning outcomes that good and the suitability of the application of the learning model with the characteristics of the subject. In this study, the researcher wanted to know the success rate of implementing project-based learning in project management practicum courses.

2. METHODOLOGY

This study describes the successful implementation of Project Based Learning in the Project Management Practicum course at the Office Administration and Secretarial Study Program, Vocational Education Program – Universitas Indonesia, during the Covid-19 pandemic. Lecture activities are from February to July 2021. Lecture activities are carried out entirely online using the Moodle, Zoom, Office365 and Bitrix24 applications.

The successful implementation of Project Based Learning in this study uses the concept of discovery-inquiry learning. discovery-inquiry is learning that focuses on the problem-solving process, so students must explore various information in order to determine their own mental.

3. FINDING AND DISCUSSION

a. Respondents Characteristics

In this study, the total population of participants for the Project Management Practicum course was 21 participants, given the limitations of the study due to COVID-19, lecture activities were carried out online, as well as the collection of questionnaires in this study was carried out online as well. From a total of 21 course participants, 21 questionnaires were returned. This research was conducted in the odd semester of 2021 at the Vocational Education Program – University of Indonesia. The data collection process is carried out from February to July 2021

b. Student Perceptions of PjBL Success Dimensions

Project-based learning is successfully implemented if it has been achieve 7 (seven) success dimensions derived from the discovery-inquiry learning model.

1) Teacher and Students Interaction

The first dimension of successful PjBL implementation is the interaction dimension between lecturers and students. In this dimension there are 5 indicators, firstly, students are more active in doing assignments in project management courses, secondly, they dare to ask the teacher, the third teacher always gives direction to each assignment, the fourth student consults with the teacher in completing the assignment work and fifthly, the student dares to express an opinion in the classroom.

Table 1.
Teacher and Student Interaction

	Sangat Tidak Baik	Tidak Baik	Baik	Sangat Baik
Lebih aktif mengerjakan tugas dimata kuliah manajemen proyek	5%	5%	52%	38%
berani bertanya kepada pengajar setiap menghadapi kesulitan dalam mengerjakan tugas	0%	14%	52%	33%
Pengajar selalu memberi arahan pada setiap tugas	0%	14%	62%	24%
berkonsultasi dengan pengajar dalam menyelesaikan pekerjaan tugas	0%	10%	52%	38%
berani mengemukakan pendapat di kelas	0%	10%	81%	10%
Interaksi mahasiswa dengan dosen	1%	10%	60%	29%

In general, it can be seen that in the dimensions of implementing PjBL online during the pandemic,it turns out to have high success. This can be seen from this dimension, the respondents stated their agreement that if the implementation of PjBL would increase the interaction between students and lecturers by 89%.

Then from the 5 indicators that form the dimensions of the interaction between lecturers and students, there are three indicators that have a value above or equal to 90%, the three indicators are, the indicator that the implementation of PjBL makes students more active in doing assignments, then the second is the indicator that the implementation of PjBL improves the respondent's desire to consult with teachers and the last indicator is that students dare to express their opinions in public.

2) Motivate

The second dimension of the successful implementation of PjBL is the PjBL method of motivating students to carry out the learning process. In this dimension there are four indicators. The first indicator, PjBL is considered capable of realizing the imagination of participants as project implementers. The second indicator, PjBL is able to increase enthusiasm in working on the final project. The third indicator, PjBL is considered capable of providing students' ability to manage time and the fourth PjBL is considered to never give students fatigue

Table 2.
Learning Motivation

	Sangat Tidak Baik	Tidak Baik	Baik	Sangat Baik
penerapan PJBL mewujudkan imajinasi saya sebagai seorang sekretaris	0%	5%	76%	19%
saya selalu bersemangat dalam mengerjakan final project	0%	10%	67%	24%
penerapan PJBL menambah kemampuan dalam mengelola waktu	0%	14%	43%	43%
saya tidak pernah merasa lelah dalam mengerjakan tugas	19%	38%	38%	5%
Motivasi Belajar	5%	17%	56%	23%

Based on the table above, it can be seen that 76% of students considered that the PjBL method was able to increase student learning motivation. From the four indicators, it can be seen that one indicator has a very weak level of approval, namely 43%, on the fourth indicator, namely, the statement that students never feel tired in doing assignments. During the pandemic, all courses are held online and almost all courses provide assignments every week. This makes students feel very tired, especially when they have to do project assignments in this course.

3) Understand the Learning Materials

Table 3.
Learning Motivation

	Sangat Tidak Baik	Tidak Baik	Baik	Sangat Baik
saya jadi lebih terlatih dalam mencari solusi pada setiap permasalahan yang menghambat dalam proyek	0%	0%	71%	29%
proyek manajemen yang saya kerjakan dapat diterapkan dalam proyek yang sebenarnya	0%	0%	57%	43%
penerapan PJBL dapat menggali potensi dalam diri saya	0%	0%	67%	33%
model PJBL membuat saya menemukan ide-ide baru dalam melaksanakan proyek	0%	0%	76%	24%
Kompetensi Memahami Materi	0%	0%	68%	32%

Students' perceptions of the understanding of learning materials in the project management practicumcourse of office administration and secretarial study programs are viewed from indicators of understanding of learning materials. Questionnaire data for this variable consists of 4 questions, consisting of question indicators 1) better trained in finding solutions to every problem that hinders the project, 2) project management that is being carried out can be applied in actual projects, 3) PjBL implementation can explore potential in me, and 4) PjBL model makes finding new ideas in implementingprojects.

Based on the 4 indicators above, 100% (21 people) gave a good and very good score that PjBL makes students better understand the learning material.

4) Critical Thinking

Table 4.
Learning Motivation

	Sangat Tidak Baik	Tidak Baik	Baik	Sangat Baik
dengan penerapan PJBL saya jadi tau persis apa yang dihadapi oleh project manager	0%	0%	71%	29%
saya menjadi lebih paham detail management project yang harus dikerjakan nanti dilapangan	0%	0%	57%	43%
model PJBL membuat saya lebih mudah memahami tentang management project	0%	0%	67%	33%
penerapan PJBL membuat saya memahami arti setiap fase manajemen proyek	0%	0%	76%	24%
Berfikir Kritis	0%	0%	68%	32%

Student perceptions of critical thinking competence in the project management practicum course of office administration and secretarial study programs are viewed from critical thinking indicators. The questionnaire data for this variable consists of 4 questions, which consist of question indicators 1) with theimplementation of PjBL I know exactly what the project manager is facing, 2) become more aware of the details of project management that must be done later in the field, 3) the PjBL model makes it easy to understand about project management and, 4) implementation of PjBL makes understanding the meaning of each phase of project management.

Based on the 4 indicators above, 100% (21 people) gave a good and very good score that PjBL provides critical thinking competence.

5) Time Management

Table 5.
Learning Motivation

	Sangat Tidak Baik	Tidak Baik	Baik	Sangat Baik
final proyek yang diberikan selesai tepat waktu	0%	5%	43%	52%
final proyek yang diberikan selesai tepat kualitas	0%	5%	57%	38%
final proyek yang diberikan selesai tepat biaya	0%	10%	57%	33%
saya menghabiskan waktu dirumah untuk mengerjakan final proyek	0%	0%	52%	48%
waktu belajar saya jadi lebih berarti dengan penerapan pjbl	0%	14%	71%	14%
manajemen waktu	0%	7%	56%	37%

Students' perceptions of time management competence in the project management practicum course for office administration and secretarial study programs are viewed from time management variables. The questionnaire data for this variable consists of 5 questions, which consist of question indicators: 1) the final project given is completed on time, 2) the final project is completed on time, 3) the final project is completed on time, 4) time at home runs out to work on the final. projects and 5) learning time becomes more meaningful with the implementation of PjBL.

Based on the 5 indicators above, the indicator that has the highest value is indicator 4) the time at home runs out to work on the final project, which is 100% of people. The second highest indicator is indicator no. 1) the final project given was completed on time and 2) the final project was completed on time with quality, namely 95% (20 people) gave good and very good marks. Furthermore, indicator 3) the final project was completed on cost with good and excellent scores of 90% (19 people). And lastly, indicator 5) learning time becomes more meaningful with the implementation of PjBL, which is 86% (18 people) giving good and very good scores, there are 14% (3 people) who say it is not good.

Overall, students stated that 93% of PjBL implementations provided good time management competencies.

6) Better Students Learning Outcome

Table 6.

Better Learning Outcome

	Sangat Tidak Baik	Tidak Baik	Baik	Sangat Baik
saya puas dengan hasil nilai saya	0%	5%	38%	57%
model PJBL dapat meningkatkan hasil belajar saya	0%	5%	57%	38%
saya mendapatkan pengalaman yang nyata dari penerapan manajemen proyek pada mata kuliah ini	0%	0%	62%	38%
hasil belajar	0%	3%	52%	44%

Students' perceptions of learning outcomes in the project management practicum course of office administration and secretarial study programs are viewed from the variables of better learning outcomes. Questionnaire data for this variable consists of 3 questions, which consist of question indicators 1) satisfied with the results of the scores, 2) PjBL models improve learning outcomes, and 3) get real experience from the application of project management in this course.

Based on the 3 indicators above, the indicator that has the highest score is indicator 3) getting real experience from implementing project management in this course, namely 100% of students giving good and very good marks. The second highest indicator is indicator no 1) satisfied with the results of the score and 2) the PjBL model improves learning outcomes, which is 95% (20 people) stating good and very good.

Overall, students stated that 97% of PjBL gave better learning outcomes.

7) Suitability of the Application of Learning Models with Learning Characteristics

Table 7.
Better Learning Outco

	Sangat Tidak Baik	Tidak Baik	Baik	Sangat Baik
saya menemukan kemudahan dalam mengerjakan final project	0%	14%	62%	24%
penerapan PJBL membuat mata kuliah ini menjadi lebih menarik	0%	14%	67%	19%
manajemen proyek yang saya kerjakan membuat tugas mata kuliah ini menjadi lebih nyata	0%	0%	76%	24%
model PJBL membuat mata kuliah ini menjadi lebih bermanfaat sesuai bidangnya	0%	10%	57%	33%
menurut saya, model PJBL sudah tepat diterapkan dimasa pandemi	0%	14%	62%	24%
menurut saya, model PJBL sudah tepat diterapkan pada mata kuliah ini	0%	5%	62%	33%
kesesuaian penerapan model	0%	10%	65%	25%

Students' perceptions about the application of project-based learning models (PjBL) in the project management practicum course, office administration and secretarial study programs are examined from the suitability of the application of the learning model with the characteristics of the subject. Questionnaire data for this variable consists of 6 questions, consisting of question indicators 1) finding ease in doing questions, 2) PjBL application makes courses more interesting, 3) project management makes course assignments more real, 4) model PjBL makes courses more useful according to their fields, 5) the PjBL model is appropriate to be applied during the pandemic and 6) the PjBL model is appropriately applied to this course.

Based on the 6 indicators above, the indicator that has the highest score is indicator 3) project management makes course assignments more real, namely 76% (16 people) give good marks, and 24% (5 people) give very good marks, if the indicators are added together. It received 100% positive response from students. The second highest indicator is indicator no. 6) The PjBL model has been appropriately applied to this course, which is 95% (20 people) gave good and very good grades, then indicator 4) the PjBL model makes the course more useful according to their field with good grades and very good by 90% (19 people). Next is indicator no 1) finding ease in doing questions, 2) the application of PjBL makes the course more interesting, 2) the application of PjBL makes the course more interesting and 5) the PjBL model is appropriate to apply during the pandemic, which is 86% (18 people).) rated both good and very well.

Overall, students stated that 90% of the application of the learning model with the characteristics of the subject was appropriate.

8) Student Perceptions of the Successful Implementation of PjBL

Table 8.
Successful implementasi of Project Based Learning

		Sangat Tidak Baik	Tidak Baik	Baik	Sangat Baik
01	Interaksi mahasiswa dengan dosen	1%	10%	60%	29%
02	Motivasi Belajar	5%	17%	56%	23%
03	Memahami Materi Pembelajaran	0%	5%	50%	45%
04	Berfikir Kritis	0%	0%	68%	32%
05	manajemen waktu	0%	6%	52%	41%
06	hasil belajar	0%	3%	52%	44%
07	kesesuaian penerapan model	0%	10%	65%	25%
Keberhasilan Penerapan PjBL		1%	7%	58%	34%

Based on table 3.3 above, we can conclude that the implementation of the PjBL method in the project management practicum course at the Office Administration and Secretarial Study Program, Vocational Education Program - University of Indonesia, has been successful, this is indicated by a score of 92% of respondents agreeing that the implementation has been successful.

Then when viewed from the seven dimensions that make up the successful implementation of PjBL, it can be seen that the fourth dimension, namely critical thinking, is the dimension with the highest level of approval, namely 100%. All respondents stated that the implementation of PjBL sharpens students' ability to think critically.

The next dimension that is considered successful in improving students' abilities is the dimension of improving learning outcomes, which is 97%, then the third dimension is an increase in understanding of learning materials by 95% and the fifth dimension is time management with an approval rate of 94%.

From the seven dimensions, one dimension is seen with the lowest value, namely the second dimension, namely increasing learning motivation. Based on the survey results, it can be seen that in this dimension the approval value in the questionnaire is only 79%. This happens because many assignments cause students to feel tired, and moreover b

4. CONCLUSION

Based on the results of the discussion above, it can be concluded that of the 7 dimensions of successful implementation of PjBL in the project management practicum course, all of them are considered successful, this can be seen from 92% of the total respondents stating that the implementation of PjBL has proven successful. Then when viewed from the 31 indicators that form the concept of PjBL success, there is one indicator that has the lowest value, namely the implementation of PjBL during the covid-19 pandemic does not give a sense of fatigue, 57% of respondents disagree and say the PjBL method is very tiring because the tasks given are very many while the courses Others give assignments too.

5. REFERENCES

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