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Validity of Problem-Based Learning (PBL) Module of Automation for Personnel Governance

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ABSTRACT:

In the learning process at a Vocational High School, a teacher requires learning materials that are by the 2013 Curriculum to facilitate students in increasing their learning independence. This research aims to explain the validity of the product resulting from the development of a problem-based learning (PBL) employee management automation module based on student needs. This research method is a type of development research (R&D) using the ADDIE development model. The research focused on the module assessment results of validation experts consisting of material, language, and graphics experts. The research results show that the module is included in the very appropriate criteria by experts with an average score of 96% from a maximum score of 100%. The results of the material expert assessment were 90%, the language expert assessment was 100%, and the graphics expert assessment was 97%. This states that the module developed by researchers is suitable for use in the learning process according to learning objectives and student competency standards.

INTRODUCTION

Education has an important role in producing quality human resources. In its implementation, education must be carried out in accordance with the government curriculum,

one of which is the 2013 curriculum in the national education system so as to produce quality education and improve the quality of human resources (Mantiri, 2019) . The problem that is often faced in the world of education is the weakness of the learning process. In the learning process, education involves teachers and students as well as the RPP design created by the teacher (Khoirunnisa et al., 2020) . One of the characteristics of educational development is changes in the components of the education system, including teaching and learning strategies, learning media and learning resources. This is in accordance with the opinion (Suhirman, 2018) that learning resources can develop various and diverse student potentials. Therefore, teachers are expected to be able to create a learning process according to the 2013 curriculum that has been determined.

Based on the results of observations and interviews of teachers' teaching sessions for the Civil Service Automation course at Ketintang Vocational School, Surabaya, the facts in the field are that most students are less active in participating in the learning process, still have difficulty in analyzing information and are less able to judge friends' opinions from the results of other groups' presentations. Apart from that, the teaching materials (student worksheets) used, especially in class This is certainly not in accordance with the demands of the 2013 curriculum used. More than 40% of teachers feel that they do not understand the objectives of the 2013 curriculum, resulting in low understanding of the material studied by students so that students' cognitive, psychomotor and affective learning outcomes are still poor (Krisdiana et al., 2014) . One solution that researchers can use to overcome this problem is to create teaching materials in the form of Problem Based Learning (PBL) based modules.

Teaching materials as a reference used by teachers and students in achieving learning competency. According to Anharuddin & Prastowo (2023) teaching materials are all materials (both information, tools and texts that are arranged systematically, completely based on the competencies that students will learn and used in the learning process in accordance with the objectives of planning and implementing learning. Students need teaching materials to The material is packaged more efficiently, attractively and is easy to carry around for learning. One type of teaching material that can be developed is a module, which is a printed teaching material designed to be studied independently by students It is felt that a learning process that can train students' critical thinking skills can be used to make it very easy for teachers to carry out the learning process in the classroom, so that learning objectives can be achieved effectively and efficiently (Sarafina et al., 2018), one way can be done by using an active learning model that is in accordance with the 2013 curriculum. One of them is the problem based learning (PBL)

model.

Problem Based Learning (PBL) is a problem-based learning process that exposes students to real problems before starting the learning process, students are asked to research, describe and look for solutions (Aldo et al., 2021) . This learning model aims to improve understanding of concepts, develop thinking skills and problem-solving abilities (Hidayanti et al., 2022). In classroom learning using the PBL model, students learn not only about knowledge but also experiences and feelings related to students' real lives. Therefore, it is hoped that students will be more interested and active in increasing their enthusiasm for acquiring knowledge both independently and in groups to learn how to solve problems given by teachers that exist in the reality of everyday life. Apart from that, there are several difficulties in implementing the PBL model according to Tyas (2017) , including several difficulties, namely the teacher must play an active role in guiding the learning process, it is not easy to ask students to solve the questions given because it takes longer.

The subject of Automation in Personnel Management is one of the productive subjects in the Office Management and Business Services (OMBS) department, this subject requires students to understand how to think critically in solving problems in personnel. The importance of learning OTK Staffing is because character formation and work quality are formed from employees, namely from the individuals themselves (Octavianis & Ranu, 2019). According to Supriadi (Sholihah & Firdaus, 2019) states that in order for education to fulfill its role, it must be related to the world of work, meaning that education graduates must have skills and abilities that are relevant to their field according to the demands of the world of work.

Based on the background above, researchers are interested in conducting research entitled "Development of a Personnel Management Automation Module Based on Problem Based Learning (PBL) for class XI OTKP-2 students at SMK Ketintang Surabaya". This research has significant urgency and novelty, the urgency includes: 1) Relevance to educational needs, 2) Improving the quality of learning. Meanwhile, the novelties include: 1) Application of Problem Based Learning (PBL), 2) Development of a PBL Module. Module development in this research uses the ADDIE development model. The purpose of this research is to determine the module development process, the results of the feasibility of the module and the results of student responses to using the module. It is hoped that this module will support the learning process, help students understand the material and be able to meet students' learning needs by adjusting the students' level of competency.

METHOD

This research is a type of research and development (R&D) with the aim of producing certain products and testing the effectiveness of these products (Sugiyono, 2016). The development model used is the ADDIE (Analysis, Design, Development, Implementation and Evaluations) model where the results are focused on the results of validity assessments by experts consisting of material experts, language experts and graphic experts. The data collection technique used by researchers is unstructured and direct interviews (Rachmawati & Pahlevi, 2023) . In addition, the aim of this research is to explain the results of the validation of the development of a PBL-based personnel management automation module based on student needs, because it is based on student needs regarding the importance of conforming the material to the syllabus and RPP (Learning Implementation Plan). This module was developed on the subject of automation of personnel management which has been adapted to the 2013 Curriculum.

The product validation assessment in this research was supported by creating a research instrument used to assess product quality which was carried out by validators, namely validation sheets (material experts, linguists, graphic experts). Apart from that, this research also presents the results of a student response questionnaire conducted on class XI OTKP-2 SMK Ketintang Surabaya students. The indicators used in product assessment in this research were adapted from research (BSNP, 2017) , namely in table 1 as follows.

Table 1. Assessment Indicators

No.	Component	Indicators
Materials Expert		
1	Dimensions of knowledge	Material coverage Accurate material Current and contextual Compliance with laws and regulations
2	Skill dimensions	Presentation Techniques Supporting Material Presentation Presentation Completeness Module characteristics
Linguist		
3	Language Eligibility	Suitability to student development Legibility Ability to motivate Straightforwardness Coherence and consistency of thought flow Conformity with Indonesian language rules Use of terms and symbols

Graphic Expert		
4	Graphic feasibility	Module size Module cover design Module content design

This research uses a Likert Scale (Riduwan, 2015) with a score of strongly agree: 5, agree: 4, disagree: 3, disagree: 2, strongly disagree: 1. Apart from that, the data analysis technique in this research uses quantitative descriptive and qualitative descriptive analysis models.

Qualitative data results were obtained from suggestions and criticism from experts and students, while quantitative data results were obtained from score assessments on validation sheets and response sheets. Furthermore, the data results that have been obtained both on the validation sheet and the student response questionnaire sheet using quantitative and qualitative methods are then analyzed by calculating the average score using the eligibility percentage calculation formula (Sugiyono, 2016) which can be seen as follows:

$$\text{Persentase Kelayakan} = \frac{Jumlah\ Skor}{Jumlah\ Skor\ Maksimum} \text{ x } 100\%$$

Then, the average score obtained is interpreted in the form of a percentage included in the eligibility criteria which can be seen in table 2 so that conclusions can be drawn (Riduwan, 2015).

Table 2. Feasibility Interpretation Criteria

Grading	Interpretation
0%-20%	Totally Not Worth It
21%-40%	Not feasible
41%-60%	Decent Enough
61%-80%	Worthy
81%-100%	Very Worth It

RESULTS AND DISCUSSIONS

Validation of the PBL-based personnel management automation module was validated by 3 validators, namely material experts, language experts and graphics experts. Validation of material experts was carried out by teachers in the Civil Service Management Automation subject majoring in the OMBS expertise at Ketintang Vocational School, Surabaya, providing suggestions for improvements to the material contained in the module. Linguist validation was carried out by lecturers from the Indonesian Language and Literature Education Undergraduate Study Program, Universitas Negeri Surabaya, providing suggestions for input on the use of the language presented in the module. Validation of graphic experts by undergraduate lecturers in the Department of Educational Technology, Universitas Negeri Surabaya provides an

evaluation of the development of learning media. The validation results from 3 experts will be explained in the following subchapter.

Material Expert Validation Results

The results of material validation carried out by material experts who teach the OTK Civil Service subject in this PBL-based module are included in the very appropriate criteria with an average score of 90% so it can be concluded that the material expert on the module is suitable for use with revisions according to suggestions for improvement. The evaluation given is 1) the material must be in accordance with the syllabus, 2) a summary of the material after the end of each chapter, 3) the questions in the questions are clarified according to the competency and given sequential numbers so that students answer according to instructions and 4) changes in the meaning of the "independent assignment" module format ” changed to “practice questions”. The results of these revisions were then used as guidelines for improving the module in accordance with the learning objectives and students' needs for teaching materials on OTKP skill competencies at Ketintang Vocational School, Surabaya. To assess the results of material expert validation, see table 3 below:

Table 3. Material Expert Validation Results

No.	Indicator	Total	Maximum score
1.	Material coverage	5	5
2.	Accurate material	12	15
3.	Current and contextual	9	10
4.	Compliance with laws and regulations	10	10
5.	Presentation Techniques	8	10
6.	Supporting Material Presentation	31	35
7.	Presentation Completeness	22	25
8.	Module characteristics	25	25
Amount		122	135
Average Value of Material Experts		90%	Very Worth It

Language Expert Validation Results

The results of language validation carried out by linguists, Indonesian language and literature education lecturers, have an average score of 100%, including very appropriate criteria. So it can be concluded that the module is suitable for use with revisions according to the advice given to the module, namely that the module spelling is adjusted to PUEBI (General Guidelines for Indonesian Spelling). For assessment of the results of material expert validation, see table 4 below:

Table 4. Linguist Expert Validation Results

No.	Indicator	Total	Maximum score
1.	Suitability to student development	5	5
2.	Legibility	10	10
3.	Ability to motivate	10	10
4.	Straightforwardness	10	10
5.	Coherence and consistency of thought flow	10	10
6.	Conformity with Indonesian language rules	10	10
7.	Use of terms and symbols	10	10
Amount		65	65
Linguist Average Score		100%	Very Worth It

Table 4 above shows that compliance with Indonesian language rules gets the maximum score and this is in line with the input of linguists, namely that it is necessary to change the spelling of several words in sentences to be in accordance with the rules of good grammar. The results of these revisions are then used as guidelines for improving the module so that the use of the language presented is easy for students to understand in accordance with the purpose of creating the module and learning needs.

Graphic Expert Validation Results

The results of graphic validation carried out by graphic experts, educational technology lecturers on the teaching module, have an average score of 97%, so it can be concluded that the module is suitable for use with revisions according to the suggestions given, namely 1) adding a skills program major to the cover (front cover), 2) pay attention to the level of increase in subtitles or the order of numbering (letters, numbers) must be consistent, 3) eliminate images that are not related to the material; 4) correct the decorative design so that it does not interfere with the contents of the module. For assessment of the results of material expert validation, see table 4 below:

Table 5. Graphic Expert Validation Results

No.	Indicator	Total	Maximum score
1.	Module size	5	5
2.	Module cover design	24	25
3.	Design the content of the learning module	39	40
Amount		68	70
Average Chart Expert Rating		97%	Very Worth It

The results of these revisions are then used as guidelines for improving the module according to the module creation. In this graphic expert assessment, it was stated that all indicators received a very decent average score so that the cover design and contents of the

module were valid and suitable for students to use.

Recapitulation

The feasibility results from the expert assessment were analyzed using Riduwan's (2015) interpretation criteria with a percentage of 81% -100% which shows the module is included in the very feasible criteria. Based on the average results of assessments by experts, namely: Material experts, language experts and graphics experts, an average score of 96% was obtained, so it can be concluded that the PBL-based OTK Human Resources module using the ADDIE model is included in the criteria as very suitable for use. The results of the recapitulation of assessments from material, language and graphic validators are presented in the form of table 6 below:

Table 6. Recapitulation of the average expert assessment scores

No.	Aspect	Percentage	Information
1	Materials Expert	90%	Very Worth It
2	Linguist	100%	Very Worth It
3	Graphic Expert	97%	Very Worth It
Average percentage		96%	Very Worth It

So, the results of the expert assessment in table 6 above, looking at the aspects of the indicators assessed by the validator, show that the module developed by the researcher is declared very suitable for use by students in the learning process. Thus, these results imply that the Personnel Management Automation Module based on Problem Based Learning (PBL) is "very suitable" for use with students, namely class XI OTKP-2 students at Ketintang Vocational School, Surabaya.

CONCLUSION

This research produced a product in the form of a Personnel Management Automation module based on Problem Based Learning (PBL) which was developed in accordance with the 2013 curriculum syllabus for class XI majoring in OTKP using the ADDIE development model. The development of this module is said to be feasible with research results showing that the module is included in the very feasible criteria by experts with an average score of 96% of the maximum score of 100%. The results of the material expert assessment were 90%, the language expert assessment was 100%, the graphics expert assessment was 97%. So, this research shows that the module is suitable for students to use in the learning process as supporting teaching material.

It is hoped that the implementation of this module can make a positive contribution to

the learning of the subject of automation of personnel management in vocational schools. By using the PBL approach, students are expected to develop problem solving, critical thinking, collaboration and communication skills, which are important competencies in preparing them to enter the world of work.

Apart from that, this module is also expected to increase students' interest and motivation in learning, because the learning material is presented in the context of problems that are relevant to real life. Thus, this module can be an instrument to improve the quality of learning in vocational schools and help students face complex challenges in the future.

However, further research and in-depth evaluation are needed to validate the effectiveness and sustainability of using this module in the learning context at vocational schools. The evaluation may include measuring student learning achievement, student response to the module, and its impact on the student's long-term skill development.

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