Advances in Social Science, Education and Humanities Research, volume 651
Proceedings of the 4th International Conference on Innovation in Engineering and Vocational Education (ICIEVE 2021)

Enhancing the Ability of Vocational School Teachers in Compiling Indicators of Competence Using Lesson Plan Module Based on Vocational Curriculum

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***Abstract*—The gaps in student competence with industrial demands make graduates of vocational high schools not widely absorbed in the workforce. This study aims to enhance the ability of vocational teachers in compiling indicators of competency using a lesson plan module based on a vocational curriculum. The study was conducted with a qualitative approach through the action research method. The participants involved in this study came from three vocational schools in Bandung, West Java, Indonesia. The informants involved in this study were six male teachers, having more than five years of work experience and teaching productive subjects. Data collection by Focus Group Discussion (FGD) to obtain general information and individual interviews to obtain more specific data. After the data is documented and evaluated, then proceed with guiding respondents to develop indicators of competence using the lesson plan module. The results of the research are expected to increase the ability of teachers to compile indicators of competence through the guidance of the lesson plan module based on the vocational curriculum. So that this research will have implications for the achievement of student competencies in accordance with the demands of the job/industry.**

Keywords—indicators of competence, lesson plan module, vocational teachers, vocational curriculum

I. INTRODUCTION

Vocational high schools (VHS) prepare graduates to work in industry [1,2]. Students are equipped with competencies in certain fields to lead them to be immediately accepted to work in the industry [3]. In addition, VHS is directed at increasing students' independence in entrepreneurship in accordance with their competencies [4]. In the VHS curriculum currently applicable in Indonesia [5], competencies consist of core competencies (KI) and basic competencies (KD) [6]. Core competencies describe graduate competency standards which include aspects of knowledge, attitudes, and skills [7]. While the derivatives are basic competencies that contain a number of abilities that must be mastered by students in certain subjects [8]. Learning procedures and organization to achieve one basic competency are compiled in a lesson plan [9]. Lesson plan is a guideline in teaching to achieve learning objectives and teaching success. Each teacher must determine what and how he or she teaches in the classroom. In vocational education, learning is carried out in theory and practice. The composition of practice is more dominant to facilitate students gain hands-on experience [10]. Practical activities in vocational schools provide the first experience for students in learning, thinking, and solving problems [11,12]. The workshop/laboratory becomes a place for practicum activities in vocational schools [13]. Experience in a workshop/laboratory is key to achieving learning objectives because students can engage and learn from any practical activity and acquire the skills needed to carry out work assignments in industry [14,15]. All learning experiences from students must be well measured in the lesson plans. Therefore, teachers must formulate competency indicators that are relevant to the demands of the industry to become a necessity.

However, there are still vocational schoolteachers who have difficulty in compiling lesson plans and formulating competency indicators according to industry standards. During the learning process, teachers often lose context and deviate from the discussion [16], even the use of learning time is not optimal [17]. Teachers who do not use lesson plans during the learning process often get lost or lose their way. Therefore, lesson plans need to be prepared to achieve learning objectives. Preparing lesson plans before lessons are mandatory for teachers regardless of their teaching experience [18]. Failure to prepare lesson plans can affect the quality of teaching [19].

Previous researchers have done various ways to improve the ability of teachers in preparing lesson plans. The application of SamrtLP as a web-based planning system is carried out to help teachers' problems [20]. This process adopts the concept of Case-Based Reasoning (CBR). Next is the use of the wiki platform and peer review to help teachers make lesson plans [21]. At this stage the teacher is asked to upload the lesson plans to the wiki application, and then peer review gets constructive feedback so that the quality of the lesson plans is better. Furthermore, the lesson study method is used to

improve teachers' knowledge and skills about lesson planning [22]. The results show that lesson study is effective for improving teaching cognition and lesson planning skills.

Although various ways have been done to improve the ability of teachers to prepare lesson plans, there are still some weaknesses found. The use of web applications requires teachers to upload as many lesson plans as possible to the database. While the RPP uploaded has not yet been ascertained its feasibility and reliability. Meanwhile, in using the lesson study method, before the teacher prepares a lesson plan, he or she must design, observe, and reflect on learning activities together and continuously. This requires a long time and good communication when working collaboratively. To correct these shortcomings, this study aims to improve the ability of teachers to prepare lesson plans using modules. Research focus is on compiling competency indicators that are relevant to industry demands.

II. Methods

The research was conducted with a qualitative approach through action research methods. The participants involved in this study came from three vocational schools in Bandung, West Java, Indonesia. The informants involved in this study were six male teachers, having more than five years of work experience and teaching productive subjects. Data collection was conducted by Focus Group Discussion (FGD) three times to obtain information related to the use of the module. First, the FGD discussed how to use the module. This session explains the stages of compiling competency indicators in the cognitive, affective, and psychomotor domains in the lesson plan. At the end of this session, all informants were assigned to create a lesson plan document by referring to the guide module. Second, the FGD discussed the lesson plan documents created by the informants. After the data is documented and evaluated, it is continued by guiding the informant to revise his work specifically on the competency indicators section by using the lesson plan module. The data collected in this activity is the alignment of competency indicators and lesson plans made by the informants. Finally, evaluate the lesson plans document according to the module. The activities in this FGD were to explore the experience of informants in compiling competency indicators and lesson plans based on the module guidelines that have been provided. After that, all informants assessed the guide module for preparing the lesson plans that had been used. Next, in-depth interviews were conducted to find out the obstacles experienced in compiling competency indicators in the lesson plans. The list of interview questions was pre-prepared and structured. However, during implementation, interview questions can become unstructured if some information emerges in practice which requires further study.

III. Results and Discussion

A. Focus Group Discussion (FGD)

FGDs were conducted to obtain information about the use of the lesson plan guide module. The FGD was conducted three times with the first stage of socializing the use of the module, the second reviewing the lesson plan document made by the informant, and the third evaluation and assessment of the informant on the module used. The lesson plan formulation guide module is shown in Figure 1.

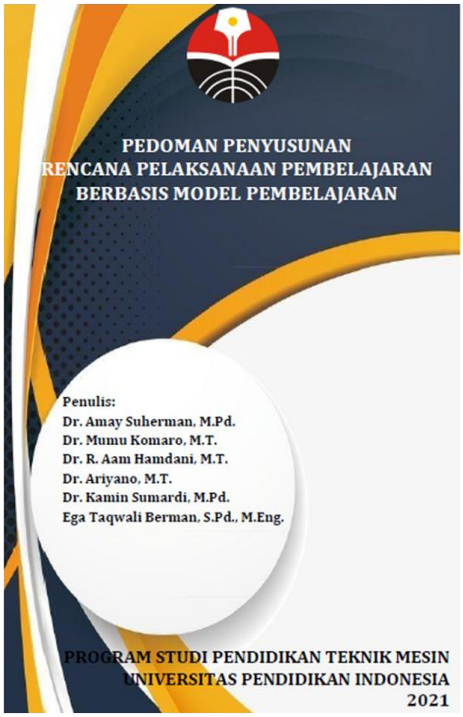

Fig. 1. The guide module for preparing lesson plans.

The FGD begins with an explanation of the contents of the module and how to use it (Figure 2). Based on the module, the initial stage of the filling guide is to write the identity of the lesson plans. Then proceed to describe core competencies (KI) and basic competencies (KD). After that, describe the indicators of competency achievement. In general, all the informants in this FGD stated that they had no difficulties in completing stages one and two. In this section they simply copy from the curriculum document for each subject to be taught. Then at the stage of filling out the competency indicators, the informants began to experience problems. The problem is in filling out the parameter descriptions for each domain (cognitive, affective, and psychomotor) on the competency indicators. In the cognitive domain, the informant failed to include a description of how the components work and the provisions for acting (SOP). While the shortcomings in the psychomotor and affective domains are that the descriptions are not in accordance with the parameters in the cognitive domain.

Fig. 2. FGD on the explanation of the use of the lesson plan module.

In the next steps include learning objectives, learning materials, learning methods, learning media, learning resources, and assessment, most of the informants stated that they did not experience significant problems. However, there are some informants who still find it difficult to fill in the time allocation. They stated that the time allocation had to be filled with estimates, when in fact they knew that the determination of the time allocation could be done by way of shadow teaching. Meanwhile, problems related to learning resources are solved by looking for e-books from open sources on the internet.

In the last FGD, the informants conducted an evaluation and assessment of the guidelines for preparing lesson plans. In general, they think that the content of the module is easy to understand, and the steps can be followed easily. However, the difficulty experienced is when determining the learning steps. At this stage they must determine the learning model, learning method, and learning media that are in accordance with the subject matter being taught. The formulation of the syntax of the learning model and the learning scenario was not well understood by the informants. Often, they only list methods that are commonly used, such as lecture and question and answer methods.

B. Individual Interview

Individual interviews were conducted on one informant who was selected based on the evaluation results in the FGD session. This informant seemed active when discussing during the FGD. The questions posed to this informant were to complement the information that had been obtained from the FGD. The informant said that the obstacle he experienced when formulating indicators of competence was that he always relied on the operational verb that he had to choose. In addition, the informants assumed that the competency indicators in the cognitive domain were not related to other domains. However, after listening to the explanation of the content of the module, they understood that what is more important is the description of the parameters of each domain (cognitive, affective, and psychomotor) not operational verbs. Then the linkage of the three domains must be a priority of attention because it relates to competency standards (Figure 3).

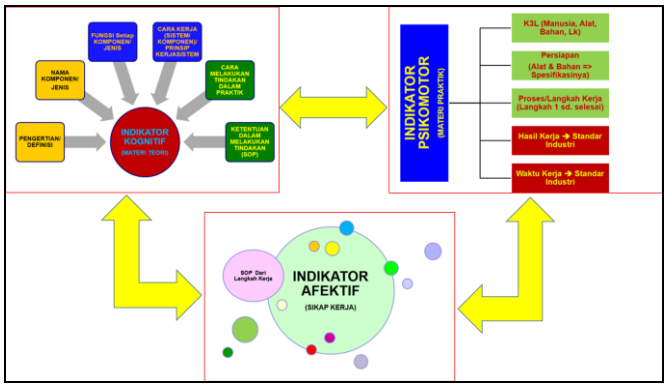

Fig. 3. The relationship between cognitive, affective and psychomotor domains in compiling competency indicators.

IV. Conclusion

The preparation of lesson plans is a core competency (pedagogic competence) that must be possessed by teachers. The lesson plan is the preparatory stage before the teacher appears in front of the class or in the workshop. The presence of a guide module for preparing lesson plans provides new insights to teachers and can improve their ability to develop good lesson plans.

Acknowledgment

This research was supported by funding from Universitas Pendidikan Indonesia (UPI) fiscal year 2021, “Skim Penelitian Penguatan Kompetensi”.

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