Improving the Ability to Create Learning Modules for Vocational School Teachers

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Improving the Ability to Create Learning Modules
for Vocational School Teachers

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Abstract (English)

The purpose of this activity is to improve the ability of teachers to arrange learning modules. This program is carried out through in-service training (IST) and on-service training (OST) methods. The andragogy approach is used in IST activities to improve teachers' ability to analyze learning materials that can be the basis for learning modules. OST activities are intended to assist partner teachers in learning module preparation activities. The results of the IST activities provide an overview of the situation of SMK Muhammadiyah 1 and 2 Tiles that most teachers have been able to analyze learning materials so that they can be used as a basis for preparing learning modules. The results of the OST show that teachers have the potential to develop themselves in preparing learning modules. During the implementation of service activities, teachers consistently always follow the exercises well. The resulting learning modules can be categorized as good and, in general, have met the criteria of the learning module.
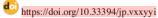
Introduction

Modules are one of the essential parts that must be considered in learning. Modules are needed in the learning process (Khabibah et al., 2017; Samsu et al., 2020) because, in the module, there is information or knowledge required by learners to receive learning materials and also achieve the expected competencies. Modules are an integral part needed in the learning process. Therefore, modules in learning need to be carefully considered. Learners require modules at the vocational middle level. It is because students need competencies that can support them in entering the world of work. Modules containing learning messages will be handy for them to understand the learning material better. Students learning styles are very diverse, and their learning needs are also very diverse (Pardede, 2019; Pashler et al., 2008).

Learners need modules in helping them to be able to understand the material being studied. With the module, learners will be able to form their knowledge. It can make it easier for learners to create their understanding more deeply. By developing their knowledge, the learner will have an impression of the learning material (French et al., 2021; Wang, 2021), and it will be easier to understand the material he is studying.

The learning process is a communication method (el Iq Bali, 2019; Prasanti & el Karimah, 2021), conveying messages from the source of messages through certain channels/media to the message reception. The components of the community process are the letter, the message's head, the channel/medium, and the recipient of the message. The process that is communicated is the subject matter that is indeed prepared and used in learning. Message's source can be

learners, other people, the book's author, and the media. In the learning process, not only are learners required to be active, but learners are only passive in interpreting and listening to the material presented. Learning demands the activities of both parties equally as the subject of education. So, if the learner's creativity characterizes knowledge while the learner is only passive, then, in essence, the activity is only taught. It is also true that learning is where the learner is active without involving the learner's actions to manage it properly and purposefully. Then it is only called learning. It shows that education demands the obedience of learners and learners.

Learning is an activity carried out by learners to form their knowledge. Developing knowledge by the learner takes a lot of time. Knowledge formation in learners is complex because it is bumped with little time to study at school and teaching materials that are not good at shaping their knowledge. The limited class hours in schools and textually formed teaching materials make it difficult for learners to build knowledge and create an understanding of the material being studied. Learning is closely related to learning (ARIANTI, 2019; Jou et al., 2016). According to the constructivist view, learning is an attempt to build an account or perception based on the experiences that the learner experiences. Therefore, learning according to the constructivist process provides an authentic experience for the learner. In the world of learning, it is impossible to be separated from the so-called learning problem. Learning problems are a problem and a distinctive feature that exists in the world of learning; learning problems will be bothersome if they are not solved correctly. If we observe it more deeply, various learning problems will be encountered in the learning around us. However, the problem seems "trivial"; if it is not handled quickly and well, it will have a very extraordinary impact in the future (Sugrah, 2020; Yuntawati, 2019).

The knowledge received from the learner based on text alone will cause the ability to pass only in the learner's mind. Learning will be well absorbed and absorbed by the learner if the learner himself forms their knowledge. By constructing their knowledge, a learner will perfectly understand the material given. By extracting his brand knowledge as well, the knowledge gained by the learner will be able to remember deeply. So far, the teaching materials given to learners are less able to help them construct their knowledge. The teaching materials provided by the learner are ready-made knowledge and are only transferred to the learner without the learner forming their understanding. If this is not addressed immediately, then the learner will only be a learner who exemplifies the definitions and applications in the book. With such teaching materials, it will cause learners cannot explore and form their knowledge. It will undoubtedly harm learners in the future. As a person who is struggling in the field of education, of course, he is no stranger to the term learning system. The learning system can be said to be an insight into moving learning to become more meaningful. With the learning system, teaching and learning activities carried out by learners and learning become more lively and colorful. A system can be interpreted as a collection of two or more interrelated components helpful in achieving a particular goal. In a system, everything is interrelated and affects each other. The relationship between each element and other features helps achieve the previously set learning objectives to the maximum.

Diverse students are spread throughout Indonesia, including in the Banyuwangi Regency area. As one of the education offices that has a must in implementing independent learning, Banyuwangi Regency also needs understanding that can support the independent learning program. The Educational Technology study program, Faculty of Education, Universitas Negeri Surabaya, collaborates with Banyuwangi Regency as a PKM partner. Geographically

Cab. The Banyuwangi District Education Office is located in Banyuwangi district, East Java Province, Indonesia. Banyuwangi District Education Office, approximately 305 km from Universitas Negeri Surabaya. Teachers in the agency deeply feel it. Therefore, a vocational high school teacher in Banyuwangi Regency needs the training to develop independent learning modules. Community services are in the form of providing training on the development of learning modules for teachers. Community Service activities are carried out by providing solutions through a series of IST and OST activities. IST activities use an andragogic approach with the hope of improving the ability of teachers, namely: (1) analysis of learning problems, (2) concepts about learning modules, (3) concept of learning module drafting, and (4) evaluation concepts in learning modules. OST activities are intended to assist in implementing learning module preparation activities

Method

This activity was carried out in July 2022 at SMK Muhammadiyah 1 Genting, Banyuwangi, as a partner school that has continuously collaborated in learning quality development activities. Training on learning module preparation activities is carried out using the IST and OST methods as problem-solving methods (Table 1).

Table 1. Judul tabel

Solution	Method	Material	Executive
IST	Discussion, Presentation, Q&A	Analysis of learning problems Concepts about learning modules The idea of learning module drafting Evaluation concepts in learning modules	Team and Partner Teachers Dr. Andi Kristanto, M.Pd. Dr. Irena Y. Maureen, M.Sc. Hirnanda Dimas Pradana, S.Pd., M.Pd.
OST	Mentoring, training	Assistance in the implementation of learning module preparation activities	Team

Results and Discussion

Partners in this activity are all teachers at SMK Muhammadiyah 1 and 2 Genteng. The high level of teacher interest in participating in training activities shows that teachers are aware to understand better and can prepare learning modules. The partner's interest is demonstrated by the partner's participation in the implementation of this community services activity, which consists of the school (manager/management) and teacher participation. The forms of participation carried out by the school are (1) provision of places for the implementation of activities, (2) provision of facilities needed during the implementation of activities, and (3) together with the community services team to carry out monitoring and evaluation activities of the implementation process and product activities produced by teachers during the community services process. (2) prepare learning tools used in research activities, (3) prepare all facilities in the form of tools and materials or in other forms used in learning as the implementation of research activities, and (4) participate in the full training and mentoring process during service activities.

The preparatory stage, which includes compiling the ToR; identification of potential participants; internal meetings of the service team for the determination of training time, venue, and materials; and the processing of permits to carry out service activities, is carried out in 2 (two) weeks from July 1-14, 2022. Activities carried out at the preparatory stage are preparing

participants and administration of activities. Internal preparations are also carried out where in ToR, the service team regularly meets to discuss activity materials.

Delivery of concepts about learning modules
At this stage, the community service team provides an understanding of the learning modules, which include the concept, design, and examples of learning modules when implemented in the classroom. The concept and design of the learning module presented to the partner teacher refer to the idea and design of the learning module.

Delivery of the concept of preparing learning module
In the module provider, a teacher must pay attention to the stages of preparation. The writing of the module is carried out with the following steps:

a. Module Needs Analysis
   Module needs analysis is an activity to analyze the syllabus and Learning Implementation Plan to obtain module information required by students in learning the competencies that have been programmed. The name or title of the module should be adjusted to the competencies contained in the syllabus and Learning Implementation Plan. Each competency standard is developed into one module and consists of 2-4 learning activities. It needs to be conveyed that what is meant by competence here is a competency standard, and learning activities are essential competencies. The module needs analysis aims to identify and establish the number and title of modules that should be developed in a given program unit. The program unit can be interpreted as one school year, semester, subject, or other. Module needs analysis should be done by the team, with members consisting of those with expertise in the program being analyzed. Module needs analysis can be done with the following steps:
   1. Set the program unit that will be used as the limit/scope of activity. Whether it is a three-year program, a one-year program, a semester program, or other
   2. Check whether there is already a program or operational signs for implementing the program—for example, annual programs, syllabus, Learning Implementation Plan, or others. If there is, study the schedule.
   3. Identify and analyze the competency standards to be studied so that learning materials are obtained that need to be learned to master these competency standards.
   4. Furthermore, arrange and organize units or units of learning materials that can accommodate these materials. This teaching unit or unit is named and used as the title of the module.
   5. From the list of required units or module units, identify which ones already exist and which are not yet/available in the school.
   6. Prepare modules based on the priority of their needs.

b. Map of Modul
   Once the module needs are set, the next step is to create a map of the module. A module map is the layout or position of a module on a program unit depicted in the form of a diagram. Module map-making is prepared to refer to the competency achievement diagram contained in the Curriculum. Each module title is analyzed for its relationship with other

module titles and sorted its presentation according to the order in which the learning will be carried out.

c. Module Design

The design of the module writing referred to here is the Learning Implementation Plan that the teacher has prepared. The Learning Implementation Plan has contained learning strategies, media used, an outline of learning materials, and assessment methods and tools. Thus, Learning Implementation Plan is referred to as a design in the preparation/writing of modules. However, if the Learning Implementation Plan does not yet exist, it can be done with the following steps.

1. Set the framework of the material to be drawn up.
2. Set a final goal (performance objective), which is the ability that students must achieve after completing a module.
3. Set an enabling objective, a specific ability supporting the ultimate goal.
4. Define the evaluation system (scheme/condition, method, and device).
5. Establish outlines or outlines of substance or material to achieve the goals, namely the components: competence, a brief description, estimated time, and library sources. If the Learning Implementation Plan already exists, it can be referred to in this step.
6. The material/substance in the module is in the form of concepts/principles. These essential facts are directly related to and supportive of the achievement of competencies and must be mastered by students.
7. Tasks, questions, and or practices/exercises that must be done or completed by the learner.
8. Evaluation or assessment that serves to measure the ability of learners to master modules
9. Answer the key to a question, practice, and or task

Delivery of concepts about evaluation in learning modules

Assessment of learning outcomes is intended to determine students' mastery level after studying all the material in the module. The implementation of the review follows the provisions that have been formulated in the module. Learning outcomes are assessed using instruments that have been designed or prepared at the time of writing the module.

Modules that have been and are still used in learning activities must be evaluated and validated. Evaluation is intended to determine whether learning with modules can be implemented by the design of its development. For evaluation purposes, an evaluation instrument can be developed based on the characteristics of the module. The device is intended for teachers and learners since both are directly involved in implementing a module. Thus, the results of the evaluation can be objective.

Validation is a process to test the suitability of modules with the competencies that target learning. If the module's content is appropriate, meaning that it is effective for studying the competencies that are the target of learning, then the module is declared valid (valid). Validation can be done by asking for the help of experts who master the competencies learned. If there is none, it is carried out by some teachers who teach in this field or competence. Validators carefully re-read the contents of the module. Validators check whether learning objectives, material descriptions, forms of activities, tasks, exercises, or other existing activities are believed to be adequate to be used as a medium for adjusting the competencies that are the

target of learning. If the validation results state that the module is invalid, then the module needs to be repaired to become valid.

To guarantee that the module compiled has met the provisions set out in the development of a module, then during the manufacturing process, it needs to be monitored to ensure that the module has been prepared by the established design. Similarly, the resulting module needs to be tested to determine whether it meets every quality element that affects the quality of a module. For quality assurance of a module, a standard operating procedure and instrument can be developed to assess the quality of a module.

Picture 1. Community service.

OST as a follow-up to IST

Based on the description of the presentation, it can be stated that the teachers of Muhammadiyah Vocational School 1 and 2 Genteng have the potential to develop themselves in the preparation of learning modules. It is evident during the implementation of service activities. Teachers consistently always follow activities well. Products are expected to be produced well even though they need to be improved in certain parts. However, in general, these results have met the criteria of the learning module.

Conclusion

This activity involving teachers of SMK Muhammadiyah 1 and 2 Tiles has gone well according to planning. A series of IST activities conclude that the teacher has been able to analyze learning problems; the teacher has understood well the concept of the learning module; the teacher has been able to understand the idea of preparing a learning module, and the teacher has been able to understand the concept of evaluating the learning module. A series of OST activities conclude that teachers have the potential to develop themselves in preparing learning modules; the resulting learning modules can be categorized as good and, in general, have met the criteria for learning modules.

The school and teachers are advised to increase collaboration between fellow teachers to facilitate each other so that the learning module preparation activities can run optimally, and all teachers are expected to be able to carry out similar activities independently.

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