

DEVELOPMENT OF A LABORATORY MODEL IN ECONOMIC EDUCATION

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Abstract: *The laboratory is a necessity needed by all study programs to support the smooth learning process, including the Economic Education study program. In this study, the authors used a research method known as library research, which is a series of activities in line with the data collection methodology. In this research, the author uses a type of research known as library research which is a sequence of actions that follow data collection techniques. According to Abdul Rahman Sholeh, library research is research that uses techniques to collect information by placing the facility at the center and only contains research that connects to the research objectives. Laboratory-based education helps students understand concepts more easily, facilitate understanding of the material presented to them, strengthen understanding of related material, and develop critical thinking skills.*

Keywords : *Development, Laboratory Model, Economic Education*

INTRODUCTION

Quality improvement is still the main focus of education development efforts in Indonesia. The aim is to improve student learning in the classroom by paying close attention to each student's progress. Straightforwardly, students aim to achieve real learning experiences that excite, challenge and cover every aspect of their personal growth.

Essentially, education is a lifelong learning process that aims to provide students with useful information and skills. The goal is to help people become useful people for themselves, their families, communities, countries, and nations. In facing the difficulties of increasingly fierce global economic competitiveness, the Economics Education Study Program feels the need to improve the ability of entrepreneurial practices or entrepreneurial skills in students (Nata, 2015).

According to Article IV of Law 49 of 2014 concerning the National Curriculum for Teacher Education, learning in primary schools should be interactive, holistic, inclusive, contextual, thematic, effective, collaborative, and focused on student needs. Proficiency in teaching methods that can

encourage students to play an active role in fulfilling course requirements. In addition, successful learning also has a positive impact on the availability of quality resources and materials, such as laboratory facilities. Article 31 of Law Number 49 of 2014 states that the laboratory is a minimum requirement that must be met by a qualified teaching staff in order to support educational activities. For this reason, laboratory facilities are very important for students to maximize instruction based on laboratory work.

Currently, discussions about laboratories are usually related to science laboratories that provide practical training. It is important to note that laboratories are not only necessary for exact studies, such as science and technology, but are also relevant for social science studies such as economics. Laboratories are an important component in any academic program to support the teaching process, including in the context of economic education.

In Economics Education, laboratories are used for Economics teaching activities that target students and instructors and provide miniaturized versions of economic activities.

Initially, the majority set up laboratories for business practice activities, such as mini offices, stock exchanges, banks, and shops. However, not all study programs have all types (Noviani & Wahyuni, 2015).

Laboratories have several roles, including: 1) generating various problems that need to be solved, 2) being an ideal place for students to conduct experiments, exercises, demonstrations, or other methods, 3) encouraging students' understanding and awareness of the role of scientists, 4) increasing students' understanding and awareness of facts, principles, concepts, and generalizations, 5) encouraging students to work with the latest tools and materials, collaborate with peers, be inspired to express ideas and find solutions, and show pride in achieving the goals achieved. 6) outline positive traits, reasonable judgment, and constructive criticism. It is important to avoid plagiarism by rephrasing sentences and using different words and giving appropriate credit to the source of information (richard oliver (in Zeithml., 2021).

According to this view, the laboratory serves as a place that allows the development of understanding of concepts, increasing Knowledge, Skills, and sharpening learning methods. In addition, the laboratory is a place for students to analyze economic principles through process optimization and intellectual improvement. There are four reasons for the importance of practicum: First, motivation has a substantial impact on the learning process as a learning motivator. Students who have high motivation to learn tend to go deeper into the material. The humanistic psychology perspective emphasizes that every individual has an inner drive to acquire knowledge and skills (Yelon, 1977). This motivation is intrinsic and separate from extrinsic motivation. Through practice, students are given the opportunity to feel what it is like to understand and want success. This principle greatly enhances practical activities where students can develop their understanding and develop their sensitivity through the exploration of natural phenomena.

The second is to strengthen the basic skills through experimentation of

measurement, estimation, and basic observation needed to conduct experiments. In the process of developing students' experimental skills through practice, it is important to learn how to observe appropriately. This is done to help students see similarities and differences and highlight important details of the phenomena being studied. (Firman, 2019).

METHOD

In this research, the author uses a type of research known as library research which is a sequence of actions that follow data collection techniques. According to Abdul Rahman Sholeh, library research is research that uses techniques to collect information by placing the facility at the center and only contains research that connects to the research objectives.

RESULTS AND DISCUSSION

The Importance of an Economics Education Laboratory

Etymologically, the term "laboratory" comes from the Latin word "place of work.". Finally, the word "laboratory" is understood as a literal translation of "place of work," but only in the context of scientific research.

According to Sukarso, a laboratory can be defined as a place where work activities are carried out to obtain certain results. This space can be used as a bedroom, living room, or open space, such as a garden or anything. The laboratory serves as a model for teaching and learning activities. What is meant by "facilities" includes all physical forms and facilities. The equipment can be used for production, distribution, educational activities, and purchasing goods and services (Muhith et al., 2022).

The laboratory is a place where individuals carry out various research activities such as study, teaching, research, and theory development in various disciplines. Science development or

learning activities are carried out on necessary knowledge or new knowledge. In general, laboratories can be used in bedrooms, living rooms, or other areas (Nurhadi, 2018).

In accordance with Government Regulation (PP) No. 19 of 2005 Article 42 Paragraph 1 concerning Facilities and Infrastructure Standards stipulated (Number of institutions must have facilities that include classrooms, places of study, study rooms for participants, study rooms for lecturers, study rooms for students, laboratory rooms, study rooms for employees, work spaces for production units, study rooms for students, places for care and reception of guests, places to exercise, worship, study rooms, recreation areas, classrooms, and other areas need to provide flexible and broad support for the learning process. Laboratories are an important component in education because they function as a place to conduct research in various fields of science.

According to the provisions in Government Regulation Number 5 of 1980 Article 29, there are two main roles of the laboratory, namely: 1) providing learning resources for teaching and learning in one or more subjects related to science, technology, or art in accordance with related academic standards, and 2) providing support for implementing research in one or more relevant fields of science, technology, or art in accordance with related academic standards (Muliati, 2016).

The Economics Laboratory is a location used to conduct research, teaching, and other activities related to economics. Here are some functions of the economics laboratory:

1. Laboratories as a learning resource for Economics; The economics laboratory functions as a teaching demonstration process that can be utilized to solve problems or conduct experiments related

to skills in economics classes. For example, the stock exchange can be used as a learning resource to obtain knowledge and data about the capital market and to run simulations of stock and bond trading.

2. Economic laboratories as educational infrastructure; Economic laboratories function as teaching facilities in carrying out the teaching process. Equipped with various tools and able to handle various situations, economic laboratories specifically provide the means to carry out economic simulations. (Economic Laboratory Application Model in Secondary Schools, 2012).

Laboratory is one component of the educational framework used in the teaching and learning process. Its function is to improve students' understanding of the material and the ability to learn comprehensively, with the ultimate goal of producing a quality final product. According to Moejadi Hadiat, et al (1998: 15), the laboratory functions as follows:

1. Provide facilities to integrate theory and practice as a unit in learning. This learning process allows the connection between the theory learned with its application in practice.
2. Increase the intellectual work experience of students or graduates, allowing them to participate in research and experimentation.
3. Improve writing skills by using various available media to accelerate the research process while reducing anxiety when seeking information about natural or social objects.
4. Increase students' desire to learn as a means of acquiring knowledge, helping students return to campus with fresh knowledge and information.
5. Develop and build self-confidence as one of the skills inspired by the

laboratory experience (Septiani, 2017).

types of laboratories can be classified according to their purpose and function, among others:

1. When compared to the research laboratory, the education laboratory has a greater capacity.
2. Learning laboratories, also called school laboratories, are mainly used to support teaching activities, practices and other activities that support the learning process. (Kartiasa, 2013)
3. The basic laboratory is a place where students can learn and understand basic concepts which are the foundation for deeper understanding.
4. The development laboratory is a place where certain tasks are carried out in accordance with the knowledge they have.
5. The teaching methodology laboratory has a very special role, because it affects the performance of lecturers in carrying out their duties (Noviani & Wahyuni, 2015).

The term laboratory comes from the Latin word "workplace". Finally, the word "laboratory" is understood as a literal translation of "workplace", but only in the context of scientific research. A laboratory, according to A.S. Hornby, is a room or structure used for scientific research, experimentation, testing, and so on (Kartiasa, 2013). A laboratory is a place where experiments, research, and other activities related to the physical, biological, or other sciences are conducted ("IX. Laboratory," 2019).

Based on the explanation above, the concept of a laboratory does not only refer to the building structure and its contents, such as science, technology, engineering, and so on. Understanding Laboratories can also provide benefits to schools or universities, and even society as a whole.

Organizations, associations, institutions and the surrounding environment can also be used as laboratories that function as learning resources and media in an ongoing learning process.

Laboratories are closely related to practicums, so practicums have a significant role in supporting the success of the learning process. With practicum, students can understand through direct observation phenomena and processes, build scientific thinking skills, develop and develop a scientific attitude and use scientific methodology to investigate and solve problems (Anggraeni et al., 2013).

The role and operation of the economics laboratory has a strong influence on the success of teaching activities. Apart from being a place for experiments and research, the Economics Department Laboratory helps students understand and transmit lecture material taught or assigned by teaching staff. In addition, laboratory-based learning activities make it easier to explain concepts that may be difficult for students to understand. This can reduce students' verbal potential, make learning more interesting, and ultimately help students develop skills and economic success throughout their academic careers (Noviani & Wahyuni, 2015).

Functions of the Economic Education Laboratory

One of the facilities needed to grow three areas in three middle school divisions is a high school laboratory. However, unfortunately, several cases show that laboratories are increasingly being used for educational purposes rather than for research and community outreach (Social & Education, 2017).

According to Sukarso (2005), in general, the role of laboratories in the economic

education process can be described as follows:

1. The laboratory functions as an environment where the practice of developing intellectual skills can be carried out through research, observation and analysis of natural phenomena.
2. Teach students motor skills by giving them time to use tools and facilities that can be used to search for information. and understand relevant information.
3. Facilitate and encourage students to explore and understand the nature of knowledge obtained from natural and social objects. (Kertiasih, 2016)

According to Decaprio (2013), laboratories generally have various functions, namely:

1. Recognize the difference between theory and practice to integrate the two. In this context, both are quite useful, because theory can be a basis for practice and research, while research serves as a means to strengthen arguments.
2. Provide academic support to researchers, including research assistants, master researchers, research assistants, and other researchers.
3. Encourage and support researchers, including students, teachers, research assistants, students, lecturers and other researchers, so that they can investigate the potential of knowledge obtained from a particular social and environmental environment.
4. Maximize the enthusiasm and perseverance of researchers in using the tools and resources available in the laboratory to study and test hypotheses based on various experiments or research carried out.
5. Encourage the recipient of information's desire to know about

variables in the field of science, who will continue to explore and search for scientific truth through trials, experiments and research. (Yanuarta et al., 2019)

Based on the laboratory functions explained above, the following are the functions of the economic laboratory:

1. Laboratory as a source of Economics learning

The economics laboratory acts as a guide to solving problems or carrying out tasks related to economic competencies in class.

2. This laboratory simulates real and virtual spaces. The range is limited by the opportunities and disturbances in the accessible situations, in the simulation of economic activities. On the other hand, open space can be used as a learning resource, for example economic activities that occur around the campus environment. The laboratory can be used by students and lecturers to apply simulation methods.

The Economics Laboratory that is being developed is a space that contains various open materials, research materials, data and economic books. Students and lecturers can use this facility to understand economic concepts. In this way, the transfer of knowledge related to innovative teaching methods can occur, which is especially useful for practicum courses (Noviani & Wahyuni, 2015).

Implementation of Economic Learning in the Economic Education Laboratory

The following are several examples of procedures used in economic practice as guidelines for using an economics laboratory:

1. Simulation of Scarcity and Choice in the Indonesian Economic Context

Students are asked to act as producers of both types of commodities in this activity so that they can solve customer concerns. Students are expected to be able to function as two products so that they can alleviate customer problems. Utilizing a person as a resource to produce two goods, or one of them. In the first material, the instructor explained that the students would work as producers. Divide into small groups, with two to three people in each group. The rectangular or triangular group is given media in the form of pictures and descriptions. Groups have the same amount of time to produce several minutes by the Lecturer to create an eight-point grid and/or a ten-point grid. Students prepare tables and draw production capacity curves based on experimental findings. The force required to make triangles and squares explains the opportunity cost and feasibility of the production curve. The lecturer provides information on topics obtained through real-world production experiments and hypotheses at the end of the lesson. Based on the results of the experiment, students create a table and show the variance in production capacity in graphical form. Students are expected to be able to identify and explain the following details based on their experiences: challenges faced by the group, everyday materials used in the production of small and medium goods, explanation of opportunity costs, and variances in production capacity. The instructor confirms the ideas obtained through the use of real and hypothetical production experiences at the end of the lesson.

2. "Block Note" Production Simulation; Students learn about the importance of productivity for economic growth and techniques for increasing it through this industrial simulation. The aim of this production practical training is to enable the master to:

- a) Explain the advantages and disadvantages of production based on wholesale systems and special systems
- b) Explain employee productivity as the output of work results.
- c) Analyze the effect of new technology on worker productivity
- d) Analyze how specialization, training, education, capital investment, and technological advances can increase productivity.

In this lesson, students can use scissors or scrap paper as drafting tools when creating block diagrams. They can also use glue, paper, pencils and pens. During the first material, the lecturer divides the class into 2 large groups: one for specific purposes and the other for general purposes. Each large group is divided into smaller groups. Each small group is willing to make a notebook using the dates provided according to techniques appropriate to the larger group. If the small group is part of a specialized group, then it is better to use special methods, and vice versa. The lecturer reduced production time to three rounds or three times throughout the production process. Lecturers provide production equipment as a means of exchange for groups that are able to produce as many products as possible.

After the production process is complete, students discuss the advantages and disadvantages of each manufacturing method, the need to increase employee productivity, and the role of technology in the production process. At the end of the lesson, the instructor explains and connects the topics learned through practical training with the idea of economic growth.

CONCLUSIONS

Laboratory-based education helps students understand concepts more easily, facilitates understanding of the material presented to them, strengthens

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understanding of related material, and develops critical thinking skills. The function of the Economic Education Laboratory includes providing learning methodology and teaching philosophy.

As a learning resource, the Faculty of Economics laboratory functions as a place for activities related to teaching, learning and problem solving to achieve learning goals. The laboratory uses experimental and observation methods as teaching tools. As an educational tool, laboratories provide a learning environment rich in conditions and abilities that can be applied. The role and function of the Department of Economics Laboratory has a significant influence on the success of teaching and learning activities. The laboratory functions as a place for research and teaching, making it easy for students to understand and perfect the lecture material.

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