



Student Activity in Local Area Network (LAN) Installation

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ABSTRACT

The purpose of this study is to determine the implementation of the Direct Instruction learning model to students' activeness in Local Area Network (LAN) installations in class X TKJ of SMKN 2 Central Bengkulu. The method used in this research was the descriptive qualitative method. Research on the implementation of the direct instruction learning model to students' activeness in class X TKJ of SMKN 2 Central Bengkulu, totalling 25 students. Data collection techniques used were observation, interview, and documentation. The data analysis technique in this research uses interviews and direct observations that can be combined. The results showed the implementation of the direct instruction learning model to students' activeness in Local Area Network (LAN) installations is implemented by researchers in well-structured stages. Includes orientation, presentation, structured practice, and independent practice. Students' activeness in the learning process went well and active participation was seen when the researcher applied the direct instruction learning model, as evidenced by the observation sheet of students' activeness from the 12 elements in the 4 assessment indicators that had been filled in by observers with the results obtained namely that 9 element indicators were 75% while for the other 3 indicator elements it is 25%.

INTRODUCTION

One of the schools, namely SMK Negeri 2 Central Bengkulu, is an educational institution where the teaching and learning process is still not running in a conducive manner. Based on the results of observations by researchers in the field, the researchers saw that students' learning activities in lessons, especially in learning about local area network (LAN) network installations, were deemed to be still less than optimal. According to Sulastri (2017), the teacher only uses the lecture method without any structured practice, if there is material that requires practice but the teacher only explains the theory without direct practice due to limited time and tools for practice. So, it can be seen that the learning atmosphere makes students quickly feel bored, resulting in students not being enthusiastic and not focused on participating in the learning process activities. When the teaching and learning process in class is ongoing, students at the beginning of learning pay attention to the teacher's explanation. A few minutes later the students were bored and sleepy. Students show boredom by not paying attention to

the teacher's explanations, playing with their cellphones, scribbling in notebooks, and talking to their friends by themselves (Anggito & Setiawan, 2018). This causes teaching and learning activities to decrease because students are said to be active if they find behavioural characteristics such as: often asking the teacher or other students, being willing to do the tasks given by the teacher, being able to answer the questions given, happy to be given learning tasks, and so on. Therefore, there is a need for appropriate learning methods. By looking at the conditions of the problem, the author feels he can apply the learning model directly.

In this research, the researcher assumes that the appropriate learning model for this subject is the Direct Instruction model or the direct learning model also has several advantages, such as this learning model controlling the content of the material and the sequence of information received by students so that they can maintain focus on what must be achieved by the students. students can be applied effectively in large and small classes, the most effective way to teach concepts and skills explicitly to low-achieving students (Mentessori, 2019).

The Direct Teaching Learning Model emphasizes listening activities (through lectures) so that it helps students who are suited to learning in this way. Lectures can be useful for conveying information to students who do not like to read or who do not have skills in compiling and interpreting information, as well as for conveying information that is not directly available to students, including relevant examples and the results of the latest research.

Direct Teaching Learning Models (especially forced activities) can provide challenges to consider the gap between theory and observation. This allows students to concentrate on the results of a task and not the techniques in producing them. This is especially important if the student does not have the confidence or skills to perform the task. Students who cannot direct themselves can still excel if the direct learning model is used effectively.

Direct learning (direct instruction) developed by Nainggolan (2019) is a way of introducing students to the subject matter to be taught. This was also conveyed by Arianti et al. (2016) that the appropriate research to look at learning process activities is descriptive. This learning model has several structured stages in its application, teachers can use it to assess students' level of knowledge (Syarafina, 2021). With a direct learning model, it can provide a challenge to consider the gap between theory and observation (Lindsay, 2007). So, it can be said that the direct instruction learning model facilitates students in learning activities because it is implemented using well-structured stages that make it easier for students to accept the lesson material presented by the teacher during classroom learning. Of course, teachers must be able to organize students well so that the objectives of implementing the direct instruction learning model can be achieved and are expected to be able to increase student learning activities when learning about local area network (LAN) installation. Based on the background of the problem described above, the problem identified in this research is that teachers tend to use the lecture method. When learning requires practice, the teacher only explains the theory without any direct practice. There is a lack of student learning activeness in network installation learning. local area network (LAN) in class X TKJ SMKN 2 Central Bengkulu due to the monotonous learning model. This research aims to increase learning activities, especially productive subjects in class X TKJ at SMKN 2 Bengkulu City.

METHOD

This research used a qualitative descriptive type of research because this research aims to find out more about the direct instruction learning model regarding student activities. The subjects of this research were students of class X TKJ 1 SMKN 2 Central Bengkulu. The data collection techniques included interviews and questionnaires of students and teachers. This approach was used by researchers because the data collection process in this research was descriptive and qualitative. Following the type of research to be carried out, to obtain as much data as possible and in-depth

during research activities in the field of qualitative research, the researcher carried out direct observations and conducted interviews with resource persons during the teaching and learning process. In activities at school, researchers observed directly how the learning process occurs by applying the direct instruction learning model to students while in class. Data from interviews and direct observation could be combined. Researchers as the key instrument were trying to obtain data about the application of the direct instruction learning model in Computer and Basic Network subjects in the classroom which was collected and was truly relevant and had guaranteed validity. The researcher also conducted direct interviews with the local area network (LAN) installation teacher in class X TKJ regarding the learning process and other additional information needed by the researcher.

RESULTS AND DISCUSSION

This research activity has achieved its goal, namely increasing student learning activities, especially in LAN subjects. Research activities were carried out from February 27 to March 6 2023. The research was carried out by following the observation sheet made by the researcher regarding student activity during the learning process in class X Computer and Network Engineering at SMK Negeri 2 Central Bengkulu. There was a change in the curriculum at the school, which is now an independent curriculum, so the researcher carried out the learning process using the ATP (Learning Objectives Flow) guide. Based on observations made by researchers, ongoing teaching and learning activities show a lack of activeness before implementing the direct instruction learning model, including asking questions and activities that students often do, namely listening. In this research, researchers applied the direct instruction model in local area network (LAN) network installation lessons, carrying out learning activities by forming groups to practice creating simple networks or LAN networks. There are 4 groups consisting of 6 and 7 people in each group of 25 students. The researcher aimed to form groups in the learning process activities to see and measure student activity during the learning process through student activity observation sheets.

After carrying out this research, almost all student activities increased from before the research and after the researchers implemented the direct instruction learning model, namely paying attention, taking notes, asking questions, and doing practical assignments because there were still some students who were not yet motivated to follow the researchers' learning and explanations in front of the class. When researchers carried out teaching and learning activities using the direct instruction learning model, almost all activities fell into very good criteria. This increase in activity is because students can see directly the process of creating a simple network or LAN cabling. The application of the direct instruction learning model means that students will learn directly by seeing and hearing precise and real explanations, not just reading. Therefore, in the learning process activities, students are allowed to try or practice as a group what the researcher has done directly.

The subject of this research was attended by 25 students. This research has been carried out according to the research flow. At the beginning of the lesson, the researcher opened the lesson by praying, attending and conveying the learning objectives related to the teaching material that would be delivered, namely material about creating a simple network or LAN network. Researchers prepare tools that will be used in practical learning such as laptops, UTP cables, RJ 45, crimping pliers, and testers, as well as motivating students communicatively so that students are enthusiastic about participating in the learning process. Next, the researcher explains the topic that will be explained regarding creating a simple network or LAN network, then directs students to follow the practical steps for creating a LAN network as explained directly by the researcher. Researchers asked students who wanted to ask questions and did not understand the material. In the process of teaching and learning activities for the next 20 minutes, each student in groups carried out practical activities in creating a simple network or LAN network using the practical tools that were available with material guidance and explanations by the researcher directly. The researcher explained again and accommodated various questions asked by students during the teaching and learning process so that interactions and learning objectives were achieved. After that, the researcher concluded the results of

the learning and practice that the students had carried out. In the final activity, the researcher explained in outline the material that had been explained and closed with a prayer.

CONCLUSIONS

This research concluded that the direct instruction learning model could increase student activity in the subject of Local Area Network (LAN) network installation in the classroom. Students could follow learning well such as orientation, presentations, structured practice, and independent practice. Student activities in the learning process went well and active participation was seen when researchers implemented the direct instruction learning model shown by students' activeness when asking questions and answers in class, working together with groups, paying more attention without being told by anyone when the researcher explains the material. Students paid attention and some recorded some important information that was conveyed, this was done without anyone telling them to. Student activities are getting better and there is active participation as evidenced by the observation results sheet of student activities and assessment indicators that have been filled in by observers.

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