



## **Implementation of Independent Teaching in Network System Administration Teaching Materials at SMK Negeri 2 Makassar**

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### **ABSTRACT**

This article discusses the implementation of Merdeka Mengajar (Independent Teaching) in the Network System Administration teaching material at SMK Negeri 2 Makassar. This study aimed to describe the implementation of Merdeka Mengajar-based network system administration learning at SMK Negeri 2 Makassar, as well as student creativity in the applying Merdeka Mengajar. This was a qualitative descriptive study. Data collection techniques were obtained using observation and interview methods from various sources, namely network system administration teachers and students at SMK Negeri 2 Makassar. Documentation was in the form of photographs of the interview process, school profiles, and learning activities.

The results of the study indicate that the implementation of Merdeka Mengajar in network system administration learning at SMK Negeri 2 Makassar has been carried out quite well, although it requires many improvements because various related parties are still in the process of adjustment. This can be seen from the planning stage, implementation stage, and evaluation stage. Supporting factors for the implementation of Merdeka Mengajar-based network learning administration system include: (1) Adequate facilities and infrastructure. (2) Teachers who always strive to improve their competence. As for student creativity in the application of Merdeka Mengajar, the effectiveness of Merdeka Mengajar learning lies in the readiness and learning methods of the students themselves, whether done independently or in groups. Creativity is a key aspect that needs to be considered to develop creative thinking skills, so that students can turn their ideas into real actions that are beneficial.

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## **INTRODUCTION**

The Indonesian education system has experienced continuous growth, including a series of activities to update and analyze the curriculum. Various perspectives indicate that every change made by policymakers plays a role in influences curriculum modifications. Indonesia, a country committed to advancing curriculum development, has undergone more than ten revisions since its independence.

Education is often considered a path to wealth for all individuals. The quality of education reflects the extent of development and modernity in society. Education is widely viewed as a primary catalyst for cultural progress, as it facilitates the evolution of societal norms and the changes brought about by the educational process. Education can generate imaginative and innovative concepts that align with the demands of contemporary progress.

Since Indonesia's independence, successive governments, from the Old Order to the New Order and the current era, have prioritized the education sector. Continuous efforts are being made to improve Indonesia's education sector by implementing policy reforms. The goal is to raise

the standard of education and fulfill the government's ethical obligations, as outlined in the preamble to the 1945 Constitution. Merdeka Mengajar (Freedom to Teach) is a progressive development of the 2013 curriculum. Although adopted in 2021, there is still criticism from teachers and students regarding the scientific approach and Merdeka Mengajar learning, which places a greater emphasis on student engagement. (Anggraini et al., 2022) . SMK Negeri 2 Makassar is an example of a school implementing Merdeka Mengajar (Freedom to Teach). Therefore, this study was conducted to assess the implementation of Merdeka Mengajar in the Network System Administration teaching material at SMK Negeri 2 Makassar. The goal of Merdeka Mengajar is to improve students' attitudes, knowledge, and abilities, thereby enhancing their overall competency.

The implementation of Merdeka Mengajar (Freedom to Teach) is crucial because it provides learning benefits that assist students in problem solving, foster creativity, and enhance collaborative skills. Teachers are expected to demonstrate innovative and high-quality teaching methods, which are assessed by students using various evaluation tools, considering both the process and outcomes, in accordance with competency requirements (Khoirurrijal et al., 2022).

The introduction of Merdeka Mengajar (Merdeka Mengajar) brought significant changes to the secondary school environment, where students engaged in independent learning activities. This has led to progress in the cognitive, psychomotor, and affective domains, stemming from both internal and external sources (Khoirurrijal et al., 2022).

Education serves as a transformative process that shapes students' ability to adapt effectively to their environment, particularly the school environment. This leads to a transformation in students, empowering them to actively contribute to the well-being of their surrounding communities. The primary goal of learning outcomes is to effectively integrate learning activities into schools using deliberate and organized efforts to improve learning outcomes and foster beneficial transformations in the teaching and learning processes.

According to an interview conducted on August 27, 2023, with Mr. Muh. Amin SSPd., MM, Head of the Computer and Network Engineering Department at SMK Negeri 2 Makassar, highlighted the positive impact of implementing Merdeka Mengajar (Merdeka Mengajar) in the Network Systems Administration teaching material for Class XI Computer and Network Engineering. He specifically emphasized that this has significantly improved students' creativity and competence.

During the interview, Mr. Muh. Amin SSPd.. and MM stated that in the 11th grade Computer and Network Engineering, teachers prioritize project-based activities. This approach allows students to actively engage and enhance their innovation and creativity, thereby preparing them for the professional world.

The implementation of "Merdeka Mengajar" (Freedom to Teach) was well-received at SMKN 2 Makassar because it effectively harnessed students' potential. Throughout the learning process, students were given the freedom to choose their preferred learning methods, honing their creativity while still adhering to academic and classroom regulations.

Researchers are interested in investigating the potential of implementing Independent Teaching in Network System Administration teaching materials at SMK Negeri 2 Makassar based on the difficulties described in the background context.

## **METHOD**

This study used a qualitative method that focused on understanding phenomena and their interrelationships. This method collects descriptive data in the form of words or sentences from observed subjects. This data include information about their behavior, such as actions and holistic

perceptions (Hardani, 2020). The data collection process was conducted over a month at the SMK Negeri 2 Makassar. This research methodology uses a survey design, with the aim of conducting a comprehensive study of the implementation of Merdeka Mengajar (Merdeka Mengajar) in the Network System Administration teaching material. The data collection methods included observation, interviews, and documentation.

## RESULTS AND DISCUSSION

### Research result

#### **Implementation of Independent Teaching in Network System Administration teaching materials at State Vocational School 2 Makassar**

Merdeka Mengajar (Freedom to Teach) is an educational method that empowers schools to maximize their resources and allows teachers to teach essential subjects. Formulated in 2013 by the Ministry of Education and Culture, Merdeka Mengajar aims to improve Indonesian education by enabling students to develop new ideas, acquire knowledge independently, and unleash their creative potential. This approach considers individual interests, skills, and abilities, aiming to enhance progress and contribute to the nation's growth (Kurniasih, 2022).

According to the principal of State Vocational School 2 Makassar:

*" The implementation of Merdeka Mengajar (Merdeka Mengajar) gives students the freedom to choose their areas of interest and tailor learning approaches to their unique attributes. Therefore, it is important for educators to understand student dispositions in order to adapt teaching methodologies to each individual's unique characteristics ."* (School Principal, 2023).

In line with that, Mrs. Siti Rokhmah, the class teacher of XI TKJ 1 and XI TKJ II at SMK Negeri 2 Makassar, said:

*" In the implementation of the Merdeka Mengajar Curriculum, it is more directed towards the profile of Pancasila students, while the 2013 Curriculum is more directed towards theory "* (Siti, 2023)

In line with the interview with Arari Sabriana and Rifqi as students of class XI TKJ I and XI TKJ II at SMK Negeri 2 Makassar, they stated:

*" Using Independent Teaching in classroom learning, I feel freedom in activities and freedom in learning, so I feel there is no sense of pressure in learning "* (Rifqi, 2023; Sabriana, 2023).



**Figure 1.** Practical Activities in the Network Lab



**Figure 2.** Interview with Muhammad Rifqi Hidayat, class XI TKJ II

Interviews with Network Systems Administration teachers and 11th-grade TKJ students at SMK Negeri 2 Makassar indicated that the implementation of Merdeka Mengajar (Freedom to Teach) was considered a very good idea. This initiative is seen as beneficial because it allows students to explore their potential, abilities and creativity. Furthermore, it serves as a source of motivation for teachers to create meaningful learning experiences that encourage creativity and empower students as independent learners. However, it is important to remember that the freedom recognized in this curriculum is still subject to the school's academic regulations, and teachers must ensure that this freedom does not raise concerns.

Based on the interview findings and researcher observations, the implementation of the Merdeka Mengajar-based curriculum at SMK Negeri 2 Makassar in the Network Systems Administration course can be considered successful. However, further improvements are needed as several stakeholders undergo adaptation.

The steps in the Independent Teaching Curriculum process include planning, implementation, and assessment.

### **Planning Stage**

The planning stage involves the development of the Educational Unit Operational Curriculum (KOSP), which is based on curriculum implementation guidelines for learning recovery. The operational curriculum plan for SMK Negeri 2 Makassar follows Decree of the Minister of Education and Culture No. 56 of 2022. In this plan, educational objectives are established, knowledge and learning programs are personalized, and a project-based learning approach is implemented. The curriculum also includes two subject groups: general subjects that meet student needs and vocational subjects developed in collaboration with the industry.

Mrs. Siti Rokhmah said:

*" The curriculum at SMK Negeri 2 Makassar no longer fully adheres to the government's standard curriculum. Instead, it aligns with industry demands to assess necessary components and eliminate unnecessary ones "* (Siti, 2023).

Based on the interview that was conducted, Mrs. Siti Rokhmah said the following:

" *Network Systems Administration teaching materials can enhance and strengthen the profile of Pancasila students by instilling in them a strong sense of faith, piety, and noble character. This helps them recognize their role as global citizens with a global mindset and the skills necessary to be independent, creative, critical thinkers, and effective team players.*" (Siti, 2023) .

**Figure 3.** Interview with Mrs. Siti Rokhmah



In the Independent Teaching Curriculum at SMK Negeri 2 Makassar, the planning steps include developing a flow of learning objectives and teaching modules. The flow of learning objectives serves as a comprehensive guide for learning activities that target specific content or subjects. Within the learning modules, teachers are given the autonomy to design instruction, emphasizing essential content and considering student needs. The goal of this policy is to increase the significance, satisfaction, and depth of the learning outcomes.

According to the results of an interview with Mrs. Siti Rokhmah:

" *Teachers are given the autonomy to provide basic or essential content based on current needs and circumstances, thus enabling them to offer such information using effective methods and methodologies that can be adapted to meet industry demands.*" (Siti, 2023) .

In an interview with class XI TKJ II students, the following was stated:

" *The learning strategy used by the teacher is effective with the concepts taught through observation, question, and answer*" (Rifqi, 2023).

In line with Sabriana, he said:

" *The learning strategy that teachers often use is through observation*" (Sabriana, 2023).



**Figure 4.** Interview with Sabriana, class XI TKJ I

Based on interviews, in the Independent Teaching Curriculum, Network System Administration teachers need to analyze learning outcomes based on student levels and stages. They also need to organize learning objectives that can be tailored to relevant phases. A potential challenge is setting learning objectives if they lack prior knowledge of students abilities. Network System Administration teachers prioritize teaching content based on its significance and relevance rather than following a specific sequence in teaching materials or textbooks.

Mrs. Siti Rokhmah said:

*“ The aim is to evaluate the needs of students and the industry ” (Siti, 2023).*

Network System Administration teachers assess students' abilities and observe teaching materials to determine specific student needs. They then create teaching materials and organize the content to deliver to students. A teaching module is a well-organized collection of resources, materials, techniques, instructions and guidelines. Teachers have the autonomy to organize, select, and adapt teaching materials to suit students' circumstances and needs. The government also provides illustrative teaching modules as a source of inspiration for schools to develop their curriculum.

### **Implementation Stage**

Learning is organized in an active and engaging manner, involving students through the implementation of predesigned programs. The defined learning objectives serve as guidelines for this process. Effective learning requires careful preparation. Teachers at SMK Negeri 2 Makassar have begun implementing the Merdeka Belajar curriculum policy based on the research findings. This policy has been implemented for two years.

The implementation of Independent Teaching in Network System Administration learning at State Vocational School 2 Makassar involves several steps, including:

#### **Implementation of Student-Centered Learning.**

The implementation of "Merdeka Mengajar" (Freedom to Teach) in Network System Administration learning at SMK Negeri 2 Makassar involves the implementation of student-centered learning. Teachers assess students' talents and weaknesses to select approaches, learning tactics, and resources that best suit their needs. The goal is to encourage student engagement and adapt the curriculum to individual learning preferences of students.



**Figure 5.** Observation Strategy during Lab Practicals

#### **Implementation of Student-Centered Learning.**



**Figure 6.** Fun Learning

Network Systems Administration teachers at SMK Negeri 2 Makassar create a conducive learning environment. They inspire and guide students to understand the importance of acquiring knowledge in Network Systems Administration. The goal is to motivate students to achieve their learning objectives. Furthermore, teachers use innovative methods and advanced technology as teaching media to ensure that the knowledge gained can be applied in practical situations.

This is in line with the principal's statement:

" *Learning materials within the Merdeka Belajar curriculum policy are expected to progress further, not only through traditional textbooks, but also through digital media, social media, and platforms. This means that individuals can acquire knowledge from any location. However, it is important to note that young people are guided to engage in constructive activities, and their access is limited; they are not given unlimited freedom. Mobile phones can serve as effective learning tools by accessing group discussions or assignment links.*" (Principal, 2023).

Mrs. Siti Rokhmah added that:

" *Supporting factors include adequate facilities*" (Siti, 2023).

Interviews with class XI TKJ I and II students at SMK Negeri 2 Makassar:

" *Classroom teaching combines various educational tools such as multimedia presentations, PowerPoint slides, project-based activities at the fifth-grade (P5) level, interactive question-and-answer sessions, and traditional lectures.*" (Rifqi, 2023; Sabriana, 2023).



**Figure 7.** Learning Media using PowerPoint

Network System Administration learning activities at State Vocational School 2 Makassar include three main components: preliminary, core, and closing activities.

The following is an explanation given by the Homeroom Teacher of Class XI TKJ I & II:

" *In the initial training, there were no explicit instructions, but rather a process of apperception and relaxation. This is followed by the introduction of stimuli or incentives so that children do not become complacent. Subsequently, children will be provided with a more contextual and interactive form of education, encouraging greater engagement and participation among young people. Teachers are responsible for supervising specific groups of students at school.*" (Homeroom Teacher, 2023).

Interview with students of class XI TKJ I and II of SMK Negeri 2 Makassar:

" *Greetings, performing religious services, participating in educational sessions, and asking questions about the material discussed the previous day. Before starting the session, the instructor assessed the cleanliness of the classroom and our tidiness. The distribution of instructional content is followed by homework assignments. Continue praying before going home*" (Rifqi, 2023; Sabriana, 2023).

" *Activities carried out at the end of the learning process include improving students' skills and abilities.*" (Homeroom Teacher, 2023).

The Network Systems Administration teacher conducted a retrospective analysis of the content presented and provided feedback to students who did not understand. The implementation of Network Systems Administration learning based on the Independent Learning Curriculum at SMK Negeri 2 Makassar was entirely handled by the teacher and students in the classroom setting. The teacher designed engaging and enjoyable educational exercises to stimulate students' enthusiasm for learning. The Network Systems Administration learning process at SMK Negeri 2 Makassar followed three stages: initial, core, and closing activities. In the closing stage, the teacher conducted an introspection to improve student retention and understanding.

## **Evaluation Stage**

Curriculum assessment measures the extent to which learning objectives have been achieved. Evaluation is used as an input to improve teaching strategies. Through evaluation, accurate information is obtained about the implementation of learning and the achievements of students and teachers.

*" Assessment findings can inform the assessment of curriculum, learning, challenges, and necessary guidance efforts "* (Siti, 2023).

Learning assessment at SMK Negeri 2 Makassar involves various parties to ensure fairness and completeness of the assessment. Merdeka Mengajar (Freedom to Teach) is an educational revitalization initiative that emphasizes adaptability, essential content, and student-character development. This curriculum uses a project-based learning approach and prioritizes essential subject areas. The previous curriculum suffered from information overload and a lack of flexibility in the learning approach.

Assessment methods for Network Systems Administration learning include the evaluation of attitudes, knowledge, and skills. Attitude evaluation is conducted through observations, self-evaluations, peer evaluations, and journaling. Knowledge evaluation is conducted through daily, mid-semester, and end-of-semester assessments. Skills evaluation is conducted through performance, product, portfolio, and other computer activities, such as configuring networks, installing Debian, and implementing projects to enhance the Pancasila Student Profile (P5).

In line with the interview, students of class XI TKJ I and XI TKJ II said that:

*" P5 activities, where these activities are carried out at the end of the semester "* (Rifqi, 2023; Sabriana, 2023).

In an interview with Mrs. Siti Rokhmah, she stated:

*" Holding an end of semester meeting "* (Siti, 2023).

Evaluations in each class assess the extent to which the learning objectives have been achieved. All students participate in activities, including projects designed to develop their soft skills and character in line with the Pancasila Student Profile.

In line with the interview with the homeroom teacher of Class XI TKJ I:

*" Every learning activity serves as a crucial assessment to improve the grades of each subject. Diagnostic assessment, for example, involves teachers asking questions to evaluate students' basic computer skills before beginning the learning process. In contrast, formative assessment includes group projects, short quizzes, and other evaluative measures. Summative final performance tasks include activities such as writing papers, taking school exams, or practicing network installation "* (Homeroom Teacher, 2023).

In the Independent Learning Curriculum, we use various types of assessments, such as diagnostic evaluations before learning begins, formative evaluations during learning, and summative assessments after students achieve their learning objectives. Diagnostic evaluations assist in individualized learning and assess student readiness. Formative evaluations provide feedback to improve learning, whereas summative assessments evaluate the overall achievement of learning objectives. We do not use a ranking-based evaluation system at SMK Negeri 2 Makassar, which follows the Independent Learning Curriculum. The goal is to avoid measurements that focus solely on student intelligence, as each student has their own strengths and weaknesses in different subjects.

According to the results of the interview with the homeroom teacher:

*" Teachers are not advised to conduct rankings in schools, as each child has unique talents, strengths, and weaknesses. The process is more important than the end result ."* (Homeroom Teacher, 2023)



**SMK NEGERI 2 MAKASSAR**  
**DAFTAR NILAI ASESMEN SUMATIF**

**LEGENDA**  
 80-100 Asesmen Sumatif Unggul (Merah Hijau)  
 70-79 Asesmen Sumatif Baik (Kuning)  
 60-69 Asesmen Sumatif Cukup (Oranye)  
 50-59 Asesmen Sumatif Buruk (Merah)

| No | NIS                          | NAMA SISWA | UMUM MATA PELAJARAN |    |    |    |    |    |    |    |    |    | RATA-RATA | KETERANGAN |    |
|----|------------------------------|------------|---------------------|----|----|----|----|----|----|----|----|----|-----------|------------|----|
|    |                              |            | ASESMEN SUMATIF     |    |    |    |    |    |    |    |    |    |           |            |    |
|    |                              |            | 1                   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |           |            |    |
| 1  | PERSEPTI PERCAYA             | 75         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 2  | PERSEPTI ANIL BISSARI        | 70         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 3  | PERSEPTI ANIL RAHMANABASA    | 75         | 75                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 4  | PERSEPTI ANIL                | 75         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 5  | PERSEPTI ALEP ARDIANINGRAT   | 80         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 6  | PERSEPTI ANIL NUR            | 77         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 7  | PERSEPTI ANIL YOHANIS WANGSA | 80         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 8  | PERSEPTI ANIL ANTONYAN ABAS  | 70         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 9  | PERSEPTI ANIL YULIANTI       | 87         | 85                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 10 | PERSEPTI ANIL ANGGYAN ELIJAH | 70         | 85                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 11 | PERSEPTI ANIL                | 80         | 87                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 12 | PERSEPTI ANIL NUR SYAHRIAN   | 75         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 13 | PERSEPTI ANIL RAHMAN ABASA   | 80         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 14 | PERSEPTI ANIL ANTONYAN ABAS  | 87         | 85                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 15 | PERSEPTI ANIL ANTONYAN ABAS  | 81         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 16 | PERSEPTI ANIL ANTONYAN ABAS  | 75         | 75                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 17 | PERSEPTI ANIL ANTONYAN ABAS  | 80         | 75                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 18 | PERSEPTI ANIL ANTONYAN ABAS  | 77         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 19 | PERSEPTI ANIL ANTONYAN ABAS  | 80         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 20 | PERSEPTI ANIL ANTONYAN ABAS  | 85         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 21 | PERSEPTI ANIL ANTONYAN ABAS  | 81         | 87                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 22 | PERSEPTI ANIL ANTONYAN ABAS  | 80         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 23 | PERSEPTI ANIL ANTONYAN ABAS  | 85         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 24 | PERSEPTI ANIL ANTONYAN ABAS  | 80         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 25 | PERSEPTI ANIL ANTONYAN ABAS  | 77         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 26 | PERSEPTI ANIL ANTONYAN ABAS  | 80         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 27 | PERSEPTI ANIL ANTONYAN ABAS  | 85         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 28 | PERSEPTI ANIL ANTONYAN ABAS  | 80         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 29 | PERSEPTI ANIL ANTONYAN ABAS  | 75         | 70                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 30 | PERSEPTI ANIL ANTONYAN ABAS  | 70         | 87                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 31 | PERSEPTI ANIL ANTONYAN ABAS  | 75         | 80                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |
| 32 | PERSEPTI ANIL ANTONYAN ABAS  | 75         | 85                  | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80        | 80         | 80 |

Figure 9. Summative Assessment XI TKJ II

**Inhibiting and Supporting Factors in the Implementation of Independent Teaching in Network System Administration Teaching Materials. This study produced the following results:**

1) Supporting Factors

Supporting Facilities and Infrastructure Based on an interview with Mrs. Siti Rohkmah, the researcher observed the following:

" Supporting factors for adequate facilities " (Siti, 2023).

This was further strengthened by the statement of the XI TKJ I student who said:

" Suggestions in terms of facilities or amenities because most students do not have facilities " (Sabriana, 2023).

Some teachers always try to improve their competence. According to an interview with Mrs. Siti Rokhmah, teachers try to do the following:

" Transforming oneself into a tutor, facilitator, and motivator to encourage students to become active, inventive, and creative learners. This is achieved by improving their skills through training ." (Siti, 2023) .

Therefore, the Network Systems Administration teachers at SMK Negeri 2 Makassar consistently strive to improve their skills by speaking at Subject Teacher Conferences (MGMP) to foster their professional skills. They also actively participated in training to enhance their understanding.

2) Factors Inhibiting Teacher Understanding

Teachers often face challenges when trying to modify the previous curriculum to align with the unfinished Independent Curriculum. According to Siti Rokhmah,

*" Not all teachers are willing to adapt the new curriculum to the previous curriculum due to internal factors (Siti, 2023).*

Thus, it is evident that not all educators at SMK 2 Makassar have successfully integrated the Merdeka Mengajar-based curriculum with the previous curriculum. Consequently, owing to a limited understanding of the curriculum and ongoing adaptations, some teachers remain uncertain about selecting learning strategies that suit their children's unique characteristics.

### **Student Creativity in the Implementation of Independent Teaching in Network System Administration Teaching Material at State Vocational High School 2 Makassar**

Merdeka Mengajar emphasizes the importance of developing student activity and creativity in the learning process. Creativity is an individual's ability to create new things that are useful. In the student context, creativity aims to improve the quality of education, empower students to solve problems, and stimulate curiosity. Teachers play a crucial role in fostering student creativity by presenting creative and diverse learning experiences.

Creativity plays a key role in Network Systems Administration learning, stimulating creative thinking in addressing various solutions. Unfortunately, creative thinking is often neglected in education, which focuses more on knowledge acquisition and logical reasoning than on creativity. Teachers are expected to create a supportive learning environment that encourages students to ask questions, express opinions, and generate creative ideas.

### **Critical Thinking Skills**

Critical thinking is the ability to use logical reasoning to solve problems and answer questions. Students who think critically use knowledge and ideas to analyze phenomena, draw conclusions and formulate new rules or predictions. They can also evaluate ideas, overcome difficulties, and correct errors.

### **Emotional Sensitivity**

Rifqi stated:

*" The difficult thing is understanding a friend's opinion, such as when discussing, my opinion is like this, if a friend is like that, it's like having to be patient and understanding " . (Rifqi, 2023).*

Talent

In an Interview Mrs. Siti Rokhmah said:

*" There are children who are talented in installing networks quickly, so they are also willing to help their friends who are experiencing problems" (Siti, 2023).*

### **High Imagination**

Mrs. Siti Rokhmah added that:

*" Group Projects are a form of learning that can show how students think critically, respect their friends, and share their imaginations/opinions, because in this group project, students are required to be active and creative " (Siti, 2023).*

To foster student creativity, it is important to provide indicators that encourage active and imaginative learning. Students must engage in critical thinking to analyze the subject matter. They also need to learn to regulate their emotions to maintain emotional stability and develop self-esteem and respect for their peers. Regarding talent, students need to hone their abilities to develop creative imaginations and achieve proud achievements. Factors influencing student creativity include age, parental education level, access to facilities, and the use of free time. (Munandar, 2009).

## **Discussion**

The process of integrating theoretical study data and field data is called the discussion of the research findings. The goal is to analyze the content related to the implementation of "Merdeka Mengajar" (Freedom to Teach) in the Network System Administration course at SMK Negeri 2 Makassar and formulate its significance. Next, the data and information will be processed comprehensively and systematically, including the planning stages of the Merdeka Mengajar implementation, current implementation, and evaluation of the Network System Administration curriculum at SMK Negeri 2 Makassar.

## **Implementation of Independent Teaching in Network System Administration Teaching Material at State Vocational School 2 Makassar**

The implementation of Merdeka Mengajar in the Network System Administration teaching material at SMK Negeri 2 Makassar significantly increased student engagement and encouraged independent learning (SMK). Infrastructure Conditions and Challenges Facing the Literacy Era and the Industrial Revolution 4.0 (Li, 2021). By incorporating Merdeka Mengajar into the Network System Administration teaching material at SMK Negeri 2 Makassar, students will have the opportunity to control their own learning and develop important skills such as problem solving, critical thinking, and self-discipline (Zulfi & Khairat, 2023).

Furthermore, the Implementation of Independent Teaching in Network System Administration teaching materials at SMK Negeri 2 Makassar will empower students to become proactive learners and prepare them to face real-world professional challenges (Munandar, 2009; Utomo, 2023).

The implementation of "Merdeka Mengajar" (Freedom to Teach) in Network Systems Administration at SMK Negeri 2 Makassar has had a positive impact on students' learning outcomes and long-term success (Fakhrudin et al., 2023). This approach provides a comprehensive strategy for equipping students with practical skills and information relevant to professional fields. One strategy is contextual learning through authentic case studies or simulations that can be directly applied to the field of network administration. This helps students comprehensively understand the practical application of network systems management (Ningrum & Suryani, 2022).

The implementation of "Merdeka Mengajar" (Freedom to Teach) in Network Systems Administration at SMK Negeri 2 Makassar involves student collaboration and communication in group assignments that involve problem-solving or collective network design. Students also have the opportunity to undertake internships or industrial visits and collaborate with companies in the computer networking sector (Siddik et al., 2023).

SMK Negeri 2 Makassar also emphasizes an entrepreneurial mindset, developing soft skills, and integrating ICT into education to achieve its vision. The goal is to equip students with the technical and soft skills needed in the complex and diverse world of work.

## **Student Creativity in the Implementation of Independent Teaching on Network System Administration Teaching Material at State Vocational School 2 Makassar**

Merdeka Mengajar encourages critical, creative, and innovative thinking and behaviors among students. Students are encouraged to actively engage in problem solving and produce original work that strengthens their creativity. They are also guided to cultivate good moral qualities and become role models who contribute to the nation's progress. The goal of Merdeka Mengajar is to develop students' artistic talents and moral qualities necessary to face future challenges. (Murdiyanto et al., 2023). The implementation of Merdeka Mengajar at SMK Negeri 2 Makassar is tailored to the needs of the students and the vocational school environment. The participation of all stakeholders, including school leaders, educators, and parents, is crucial. It is

hoped that the implementation of Merdeka Mengajar will produce a creative, competitive, and character-driven generation of students.

The Independent Teaching (PMM) approach at SMK Negeri 2 Makassar is a teaching method that encourages student creativity and innovation in the field of Network Systems Administration. This approach encourages critical thinking, problem-solving, and knowledge application in the real world. By integrating problem-based learning into hands-on learning using multimedia elements, students can improve their achievement, interest, and problem-solving skills while fostering creativity and innovation (Setiawan & Ahla, 2023).

The Independent Teaching Program (PMM) at SMK Negeri 2 Makassar allows students to develop their creativity through hands-on learning methods such as designing local networks or creating applications. This not only enhances students' understanding of the material but also develops the critical thinking and problem-solving skills needed in the workplace. Collaboration between students, teachers, and schools can address challenges such as time management and lack of resources (Putra & Giatman, 2020).

Evaluating and monitoring student creativity are crucial for optimal student development. Regular reflection sessions help teachers assess student progress, understand the challenges faced, and identify effective learning strategies. Recognizing student creativity through awards or exhibitions strengthens motivation and creates an inclusive learning environment. Integrating creativity principles into the curriculum is crucial for preparing students to face future challenges (Utomo, 2023).

Providing adequate facilities and infrastructure is crucial to support student creativity in implementing Merdeka Mengajar (Freedom to Teach). Access to the necessary hardware and software, comfortable learning spaces, and technical support is essential. Teacher capacity building is also crucial for supporting implementation (Davies et al., 2013). Merdeka Mengajar fosters and facilitates student creativity through various methods. Quality training and guidance help teachers design lessons that enable creative expression and well-organized collaborative activities. Constructive feedback from teachers helps students identify their strengths and areas of creative development. In conclusion, the Merdeka Mengajar approach at SMK Negeri 2 Makassar is successful in fostering student creativity, enhancing learning, and preparing students for the digital era.

## **CONCLUSION**

A study of the implementation of Merdeka Mengajar (Freedom to Teach) on Network System Administration at SMK Negeri 2 Makassar shows that the policy has been in place since 2023 and has generally been well executed, although improvements are still needed as all parties involved adapt. Smooth implementation is evident in the planning, implementation, and assessment stages of learning, which begin with curriculum development, formulation of learning objectives, development of teaching modules, and design of projects that support the strengthening of the Pancasila Student Profile. The learning process is implemented using a student-centered approach, with teachers acting as facilitators who create a conducive learning environment, both inside and outside the classroom. Furthermore, the implementation of Merdeka Mengajar has been shown to enhance student creativity, as reflected in critical thinking skills, imagination, emotional sensitivity, and the ability to translate ideas into concrete practices, both individually and collaboratively, with ongoing teacher guidance.

Based on these findings, future researchers should conduct a more in-depth study of the Merdeka Mengajar (Freedom to Teach) strategy, which directly impacts student creativity in the classroom. Students need consistent guidance and supervision in learning Network System

Administration to maintain their enthusiasm for learning and ensure that the acquired competencies can be applied in everyday life. Meanwhile, teachers are expected to continue improving the quality of lesson planning through the development of comprehensive lesson plans, varied material management, and the implementation of various innovative learning strategies to encourage active student engagement, thus enabling Network System Administration material to be understood in a more engaging, effective, and meaningful way.

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