

Analysis of School Readiness in the Application of Visual, Auditory, and Kinesthetic-Based Differentiated Learning in Accounting Subject

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Abstract

This study aims to determine the readiness of SMK Negeri 2 Jiwan in applying differentiated learning based on VAK (Visual, Auditory, and Kinesthetic) learning styles in accounting subject. The method used for this research is qualitative descriptive, with data collection techniques such as in-depth interviews, classroom observations, and documentation. Informants consisted of the principal, vice principals of curriculum and school infrastructure, accounting teachers of grades X-XII, and students of various levels. The results showed that the school had demonstrated initial commitment through the implementation of Merdeka Curriculum and encouragement of learning innovations. Teachers understood the concept of differentiation, but its application was still limited and not equipped with a systematic mapping of students' learning styles. Teaching tools and learning media available did not fully support the VAK learning style, and practice facilities were inadequate. The school environment was considered to be quite supportive, though further teacher training, provision of interactive learning media, and continued assistance are still needed. In general, the school's readiness is at an early stage, and requires improvement in the aspect of implementation strategies. Aspects of readiness include teachers' understanding, curriculum, infrastructure, and learning environment.

Keywords: differentiated learning, VAK learning style, school readiness.



INTRODUCTION

Learning in the 21st century demands a significant transformation in the academic process in terms of strategy, approach, and teachers' role in managing the classroom. One of the main challenges in the world of education today is adjusting the learning process according to students' diverse characteristics, which include interest differences, initial abilities, socio-cultural backgrounds, and learning styles. To respond to these challenges, the differentiated learning approach becomes one of the most relevant and urgent strategies to be applied in various levels of education, including in the Vocational High School (SMK) level.

Differentiated learning is an approach emphasizing the importance of adjustments in the delivery of academic materials, processes, and products based on students' needs (Roby et al., 2024). In its practice, this approach gives room for teachers to utilise strategies and methods that accommodate diverse students (Nurjannah et al., 2024). One approach widely used in the context of differentiated learning is based on learning styles, known as VAK (Visual, Auditory, and Kinesthetic). The VAK model focuses on how students receive and process information optimally in line with their sensory preferences (Fitra et al., 2025). Visual students prefer materials in the form of visualization, such as images and graphs; auditory students digest information more easily through verbal explanation and discussions; while kinesthetic students learn more actively through movement, direct experience, and manipulation of objects.

In the vocational school environment, differentiated learning based on learning styles is essential to apply, considering the variety of students' backgrounds and learning tendencies (Azmy & Fanny, 2024). Accounting, which is one of the main subjects in some vocational schools, has a complex material that demands conceptual understanding as well as practical skills. Therefore, teachers are required to design learning activities that not only correspond with basic competency targets but are also able to cover all types of students' learning styles to ensure the effectiveness and significance of the learning process (Adawiyah, 2021).

However, the reality in the field shows that the application of differentiated learning in vocational schools still faces various obstacles. Some teachers still have difficulties in understanding and applying differentiated learning strategies consistently. In addition, the limited supporting infrastructure, lack of training, and administrative issues also hinder teachers from implementing a learning approach that adapts to students' needs. To create effective and sustainable learning, components such as teachers' readiness, flexible curriculum, adequate infrastructure, and supportive learning environment are necessary.



Research on differentiated learning based on the VAK learning styles has been carried out, but most of it still focuses on the general/non-vocational primary and secondary schools. Research specifically examining the readiness of vocational schools in applying differentiated learning in accounting subject is still scarce, despite the fact that school readiness plays an important role in determining the successful implementation of differentiated learning in the classroom. Therefore, this study aims to thoroughly examine the readiness of a vocational high school in applying differentiated learning based on the VAK learning style in accounting subject, which is reviewed from several important aspects such as teachers, curriculum, infrastructure, and learning environment.

RESEARCH METHODS

This study used a qualitative descriptive approach to thoroughly describe the school's readiness in implementing differentiated learning based on VAK (Visual, Auditory, Kinesthetic) learning styles in accounting subject. This approach was chosen for its relevance in deeply examining complex phenomena related to education policies, teaching methods, and students' responses in the practice of Merdeka Curriculum (Leksono, 2013).

Participants in this study included the principal, vice principals in charge of curriculum and infrastructure, accounting teachers, and students in grades X, XI, and XII at one of the vocational schools in Madiun Regency. The selection of informants was carried out purposively by considering the position of those directly involved in the practice of differentiated learning.

Data collection techniques were done through semi-structured interviews, direct observation, and document collection. The interview's purpose was to explore the understanding, views, and steps applied in designing learning that matches the students' learning styles. Observations were conducted during accounting class hours to note the practice of the VAK-based differentiation strategy. Meanwhile, documentation was used to support the validity of findings through reviews of teaching tools, school internal policies, and supporting facilities.

The collected data were analyzed using techniques from Miles and Huberman, which included the stages of data reduction, data presentation, and conclusion drawing. To ensure data validity, triangulation of sources and methods was performed, as well as member checks to confirm data compatibility with factual conditions in the field.



RESULTS

This study identified a number of important points regarding the readiness of SMK Negeri 2 Jiwan in implementing differentiated learning based on VAK (Visual, Auditory, and Kinesthetic) learning styles in accounting subject. Information was obtained through interviews with school principals, accounting teachers, and students, supported by classroom observations and review of learning documents.

1. Teacher Readiness

In general, accounting teachers at SMK Negeri 2 Jiwan have understood the essence of differentiated learning, especially the significance of adjusting the teaching approach to students' characteristics. However, the identification of students' learning styles had not been done through systematic procedures. Most teachers still relied on daily observation to determine students' learning tendencies without using special measuring tools such as questionnaires or other assessment instruments.

In addition, not all teachers were well-trained on the application of VAK-based differentiation. Consequently, there is less variation in the learning methods used, such as the use of presentation media, lectures, and exercises, without prior planning based on students' learning profiles.

2. Curriculum and Learning Tools

The Merdeka Curriculum implemented in the school actually allowed teachers to adapt teaching methods to the needs of students. However, analysis of documents such as teaching modules and lesson plans showed that the practice of VAK-based strategies had not been explicitly explained. Some attempts at learning media variation had been made, but their use had not been done evenly and structurally throughout the entire learning process. Teachers agreed that limited time and administrative issues are barriers to designing teaching tools that are responsive to students' learning styles.

3. Infrastructure

The facilities available at SMK Negeri 2 Jiwan were generally adequate for conventional learning, with the availability of projectors and sound systems in classrooms. Yet, to support specific learning styles (visual, auditory, and kinesthetic), improvements are still needed.

For students with visual affinity, media such as interactive charts and learning videos were still limited and not yet available in an integrated form. For auditory types, there were no facilities such as voice recordings or podcasts that can be used by students independently. Meanwhile, for



kinesthetic students, the school did not have many direct practice facilities such as props or simulative media, so experience-based learning activities were still minimal.

4. School Environment and Culture

The school's culture supports the renewal of teaching methods. The principal provided space for teachers to innovate and choose learning methods according to students' needs. Collaboration between teachers also went quite well.

However, there was no supervisory mechanism that specifically assessed the quality of differentiated learning's application. Teacher evaluation tended to focus on administrative aspects, not on teaching strategies. In addition, there was no regular mentoring program that assisted teachers in consistently implementing the differentiated learning approach.

Some students revealed that they understood the materials better through certain approaches, such as graphics or direct practice. However, they also realized that the methods dominantly used so far are still in the form of lectures and exercises, so learning became less varied and not fully in accord with their respective learning styles.

DISCUSSION

This study found that SMK Negeri 2 Jiwan is still at an early stage concerning the readiness to apply differentiated learning based on VAK (Visual Auditory, Kinesthetic) learning styles in accounting subject. Although teachers have generally understood the concept of differentiation, its application is still limited and unstructured. This is in line with the research conducted by Rahmawati & Nurachadija (2023) which affirmed that understanding of theories is not automatically directly proportional to successful practice, because effective implementation requires skills, experience, and systemic support.

1. Teacher Readiness

Teachers' understanding of differentiated learning concepts is a crucial first step. However, the implementation is not optimal, for it is not supported by a formal mapping of students' learning styles. Teachers tend to use various methods instinctively without specific adjustments to individual needs. This shows the existence of a gap between theory and practice, which is largely due to the lack of training and professional support. This echoes the research from Sugiyana et al., (2024), which stated that teachers need technical assistance that enables them to design learning activities that suit students' varied learning styles. The lack of systematic mapping of learning styles impacts the accuracy in identifying students' needs. In accounting learning, learning styles greatly affect the way students understand abstract materials such as journals,



balance sheets, and financial statements. (Ratna et al., 2025). Students with a visual learning style will find pictures and diagrams more helpful, as auditory students with verbal explanations and discussions, and kinesthetic students with physical activities or actual practice.

2. Curriculum and Learning Tools

The Merdeka Curriculum should provide space for teachers to apply a more individualized and flexible learning approach, which is the principle of differentiated learning. Though in reality, the teaching tools used have not been specifically designed to support the VAK approach. This shows that the flexibility of the curriculum has not been fully balanced with the readiness of teachers in developing appropriate teaching materials. This view is supported by Fahrunnisa et al. (2024) which stated the importance of alignment between objectives, processes, and assessments in the implementation of competency-based curricula.. Without supportive teaching tools, teachers will face difficulties in designing targeted learning. As a result, the learning process becomes less effective and does not reflect the learning characteristics of students. Therefore, the development of lesson plans and teaching modules should be equipped with strategies adjusted to each learning style so that all students can be supported optimally (Gustiansyah et al., 2021).

3. Infrastructure

The learning infrastructure available at SMK Negeri 2 Jiwan is not fully adequate to support differentiated learning based on learning styles. The limited amount of media such as video, audio, and practice tools have a direct impact on the variety of methods that teachers can apply (Yuspita & Monia, 2023). Risal (2024) argued that proper learning media is necessary in assisting students to understand materials according to their individual characteristics. In the context of accounting learning, which is often considered abstract, the use of media based on the VAK learning style is imperative. For example, kinesthetic students will have difficulties learning about the accounting cycle only from oral and written explanations, as they need simulations or practice tools for better understanding. Therefore, the provision of diverse learning media needs to be prioritized, so that teachers can adjust teaching methods to students' needs.

4. School Environment and Culture

School culture that welcomes innovation is an important capital in the implementation of differentiated learning. Yet, the limited technical assistance and evaluation system for its application are barriers. Anita, (2024) wrote that learning changes in the classroom require systemic support from school management in the form of academic supervision that places an emphasis on the quality of teaching practices. The school needs to design a sustainable training program for teachers that includes learning style mapping, differentiated learning tools



development, and learning outcome evaluation. Collaboration between teachers is also necessary as a forum to share teaching experiences and strategies based on students' learning styles. With that, differentiated learning can then be integrated as part of the school's academic culture.

CONCLUSION AND SUGGESTIONS

Based on the results mentioned before, it can be concluded that the readiness of SMK Negeri 2 Jiwan in implementing differentiated learning based on the VAK learning styles in accounting subject is still in the early stages of development. Although the teachers already have an understanding of the concept of differentiated learning, the implementation has not been maximized because there has been no formal and comprehensive identification of students' learning styles. In addition, existing learning tools have not been specifically designed for the VAK approach, and the availability of learning media (visual, auditory, and practical/kinesthetic) is still limited. The school environment is supportive of innovation, but has not been backed by continuous supervision and mentoring mechanisms. On the other hand, students show interest in learning methods that accommodate their learning styles, despite the fact that the application is not yet consistent.

From the conclusion, it is recommended for the school to conduct a training program for teachers related to the implementation strategies of differentiated learning based on the VAK learning style. Mapping of students' learning styles also needs to be done regularly using proper instruments. Teachers should start designing and adjusting teaching tools to accommodate the diversity of students' learning styles. Additionally, there is a need for improvement of learning facilities and media, such as the provision of infographics, learning audio, and accounting practice tools. Support from local government and educational institutions is integral in providing relevant learning resources and in building an adequate evaluation system to ensure the application of differentiated learning runs in a sustainable manner. With that, accounting learning is expected to function more effectively and be able to suit the learning needs of students.

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