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ENHANCING TEACHING COMPETENCIES OF TVET INSTRUCTORS: A CASE STUDY AT KOLEJ KOMUNITI ARAU

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Abstract

This study investigates the teaching competencies of Technical and Vocational Education and Training (TVET) instructors at Kolej Komuniti Arau, Malaysia. Employing a qualitative case study design, the research explores instructors' knowledge, skills, and personal attributes essential for effective teaching. Data were collected through semi-structured interviews, document analysis, and thematic coding. Findings reveal the significant role of pedagogical knowledge, technical expertise, and personal professionalism in enhancing the quality of TVET graduates. Recommendations include professional development initiatives and closer collaboration between educators and industries to meet the demands of Industrial Revolution 4.0.

Keywords: *TVET education, teaching competencies, pedagogical knowledge, technical skills, personal attributes, professional development*

Introduction

The transition to a developed nation status necessitates the cultivation of a highly skilled workforce. In Malaysia, the Malaysia Education Blueprint 2013–2025 underscores the enhancement of TVET systems as a critical agenda to align with industrial demands. TVET education combines technical and vocational skills to produce graduates with the competencies required by an evolving economy (Jalil et al., 2015). According to Zinn et al. (2019), competent instructors—those equipped with advanced skills, knowledge, and practical expertise—are pivotal for institutional success. However, studies (e.g., Omar et al., 2020) indicate that TVET graduates often lack industry-aligned quality, with instructor competencies identified as a key contributor to this gap. The rapid technological advancements and the demands of Industrial Revolution 4.0 require a highly skilled workforce, which underscores the critical role of Technical and Vocational Education and Training (TVET) systems. However, the quality of TVET graduates in Malaysia often falls short of industry expectations. Studies have highlighted that one of the major contributing factors is the lack of competencies among TVET instructors. Many instructors lack updated technical skills, practical industrial experience, and effective pedagogical strategies, creating a gap between institutional training and real-world industry demands. Additionally, while the Malaysia Education Blueprint 2013–2025 emphasizes the importance of enhancing TVET systems, the absence of a structured competency framework for instructors further exacerbates this issue. Addressing these gaps is crucial to ensuring that TVET instructors can effectively equip students with the necessary skills and knowledge to thrive in a competitive workforce.

The Iceberg Model, proposed by Spencer and Spencer (1993), highlights that competencies encompass both observable skills and knowledge and underlying traits such as self-concept and motives. Effective TVET instructors must balance technical skills, pedagogical proficiency, and personal professionalism. These components are critical in adapting to the demands of Industry 4.0 and producing employable graduates. Globally, TVET educators face

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challenges such as insufficient training resources, limited industry exposure, and inadequate teaching materials (Chinyere et al., 2019). Locally, Malaysian TVET instructors often lack industry certification and practical experience (Paryono, 2015). Addressing these gaps requires targeted training programs, such as Train-the-Trainer initiatives and industry attachment schemes (Rosly et al., 2019).

Method

This study employed a qualitative case study approach to explore teaching competencies among TVET instructors at Kolej Komuniti Arau. The focus was on three domains of competency: pedagogical knowledge, technical skills, and personal attributes.Data were gathered through semi-structured interviews with three respondents—two program heads and one lecturer—and document analysis. The interviews, conducted via Google Forms, allowed respondents to reflect on their experiences and challenges.Thematic coding was applied to transcribe interview responses and analyze relevant documents. Triangulation of methods enhanced the credibility of findings, ensuring a comprehensive understanding of the phenomenon. To offer a comprehensive view of the research process in addressing the research questions concerning the teaching competencies of TVET instructors—which include skill competencies (knowledge and skills), knowledge competencies (pedagogical content knowledge), and personal attributes the researcher elaborates on the methods of data collection through semi-structured interviews conducted online via Google Forms and document analysis. The processes of data analysis, reliability, and validity are also discussed.

Research Paradigm

A researcher must have a clear understanding of the research paradigm that will influence the purpose, nature of knowledge, and methodological approach (Lincoln & Guba, 1985). Creswell (2014) asserts that understanding the research paradigm helps researchers set objectives that guide their actions and understanding throughout each phase of the study. This study adopts a non-positivist perspective, consistent with Patton's (1990) argument that the selection of a paradigm should align with the suitability of the research methodology. According to Lincoln and Guba (1985) and Creswell (2013), non-positivists argue that humans cannot be studied in the same way as the natural sciences because humans have emotions, thoughts, and dynamic perspectives on issues. Hence, no hypothesis was established before the research, and qualitative methods were preferred to foster a comfortable interaction with respondents.

This approach aligns with the study's objective of exploring the teaching competencies of TVET instructors, encompassing knowledge, skills, and personal attributes. The researcher seeks to uncover the experiences, perspectives, and challenges faced by TVET instructors at the studied institution. This necessitated close interaction with the sample to establish a comfortable interview environment. Additionally, the study aims to understand internal and external factors influencing the teaching competencies of TVET instructors, as well as challenges and issues within the institution. Consequently, a non-positivist perspective was deemed appropriate, as the phenomenon under study could only be understood through fieldwork.

Reasoning Approach

The researcher employed an inductive approach as the study involved answering "what" and "how" questions specifically to explore the teaching competencies of TVET instructors. Inductive reasoning entails generalizing data

from specific instances to broader conclusions, as noted by Trochim (2006). The researcher used interview data to develop themes and draw conclusions based on these themes.

Using the inductive reasoning process outlined in Figure 3.1, the researcher collected data based on respondents' experiences, identified patterns in the findings, formulated tentative hypotheses, and ultimately developed general conclusions about the teaching competencies of TVET instructors. As suggested by Trochim (2006) and Creswell (2014), qualitative methods are necessary to address the research questions. This is because qualitative research aims to construct concepts or theories rather than test existing ones.

Justification for Choosing the Qualitative Approach

When determining the research method, one crucial consideration is the suitability of the approach for addressing the research questions (Creswell, 2014). This consideration reinforces the researcher's decision to use a qualitative approach, as it provides a holistic perspective on a given situation (Creswell, 2013; Patton, 1990). The qualitative approach allows for an in-depth exploration to answer questions such as "how" teaching competencies are demonstrated by TVET instructors, "what" factors influence these competencies, and "what" challenges and issues exist within the institution.

Additionally, this study does not aim to collect statistical data. Instead of random sampling methods, the researcher employed purposive sampling, as the selected respondents needed to possess specific characteristics relevant to addressing the research questions. Furthermore, quantitative methods do not allow for the sharing of experiences, viewpoints, and perceptions, which are critical for this study.

Accordingly, the researcher utilized a qualitative case study approach to examine in detail the teaching competencies of TVET instructors at the studied institution. This decision aligns with prior research suggesting that qualitative methods enable a deeper and more detailed exploration (Creswell, 2014; Patton, 1990). The findings from qualitative research often provide clearer and more meaningful insights as they are based on respondents' experiences (Lincoln & Guba, 1985) and conducted in natural settings (Creswell, 2014; Lincoln & Guba, 1985). Thus, a qualitative approach was deemed appropriate and effective in answering the research questions. Moreover, this method is expected to offer practical recommendations for improving TVET teaching practices.

Research Design

Research design is a plan for conducting the study (Creswell, 2014), guided by the research paradigm and questions (Patton, 1990). In this study, the researcher employed a qualitative case study design through semi-structured interviews and document analysis. The study was conducted in the respondents' natural settings to collect in-depth information (Yin, 2014) and enhance understanding (Merriam, 2001). The use of a qualitative case study design facilitated a focused and detailed exploration of the teaching competencies of TVET instructors, which are crucial for advancing TVET education in Malaysia.

The researcher employed a case study approach within the context of the research. Data were collected at a TVET institution using a triangulation method involving interviews and document analysis, which helped confirm the relationships between various findings. The first stage of the research involved identifying the case, selecting the research design, and determining the data collection methods. This stage aimed to establish the direction of the

study by considering the paradigm, reasoning, and assumptions. Next, the researcher selected the sample and developed the interview protocol.

Ethical Considerations

Before conducting fieldwork for data collection and document analysis, the researcher obtained permission from the management of the studied institution. Given that this study involves educators at a TVET institution, the researcher submitted a copy of the research proposal to the institution director, acting as the gatekeeper, to seek approval to conduct the study.

The researcher also established rapport with respondents before collecting data. Respondents were contacted through WhatsApp and Telegram, where the researcher briefly explained the study. Before the interviews were conducted using Google Forms, written consent was obtained from the respondents. As Creswell (2013) emphasized, informed consent and confidentiality are critical aspects of qualitative research. Therefore, the researcher ensured ethical compliance by obtaining consent through signed forms, which served as evidence of respondents' willingness to participate and allowed their responses to be used in the study. The researcher also explained confidentiality measures to protect participants and their data.

Data Collection Methods

The study employed two primary methods of data collection: semi-structured interviews and document analysis, which complemented each other. Using diverse data collection techniques enhanced the credibility of the study's findings and strengthened validity. Following Lincoln and Guba's (1985) recommendations, data collection and analysis were conducted concurrently throughout the study.

The data collection process began with gathering written responses from respondents via Google Forms. These responses were used as interview transcripts. The researcher analyzed the documents shared by educators through Telegram, including the institution's action plans, risk management plans, and departmental activity reports. Additionally, the researcher observed teaching processes, such as classroom management, student assessment, lesson planning, and the need for further training and skills development programs.

Data Analysis

Data collected through interviews and documents were analyzed using thematic analysis. The researcher employed Berg's (2007) Model for Content Analysis as a guideline for analyzing interview data. Data collection and analysis were conducted simultaneously, allowing for continuous refinement of the research findings.

The interview responses from Google Forms were transcribed into Microsoft Word, and the transcriptions were sent back to respondents for verification and corrections. Open coding was used to identify themes and subthemes from the data. To ensure credibility and reliability, themes were reviewed and validated by the respondents and the researcher's supervisor. The coding and thematic analysis process facilitated the identification of patterns and insights related to the teaching competencies of TVET instructors.

Findings and Discussion

Pedagogical Competence

Respondents emphasized the importance of mastering subject content and adopting student-centered teaching strategies. Effective pedagogical knowledge involves aligning teaching methods with students' learning styles and incorporating hands-on training to enhance comprehension. The findings reveal that pedagogical competence plays a central role in the teaching effectiveness of TVET instructors. Respondents emphasized the importance of mastering subject content and adopting student-centered teaching strategies. The ability to tailor teaching methods to accommodate diverse learning styles was identified as a significant factor in promoting student engagement and comprehension. This aligns with Diep and Hartmann (2016), who highlighted the importance of content knowledge and pedagogical skills in maximizing student understanding. Effective pedagogical competence also involves integrating practical training into theoretical instruction. Respondents stressed the need to incorporate hands-on activities to enhance students' understanding of technical concepts. This finding supports Omar et al. (2020), who argue that practical exposure is critical for the success of TVET programs.

Technical Competence

Technical expertise emerged as a critical factor for TVET instructors. Respondents highlighted the need for continuous upskilling and industry engagement to keep pace with technological advancements and industrial demands. Technical expertise emerged as another critical factor for TVET instructors. Respondents highlighted the need for continuous upskilling and industry engagement to keep pace with technological advancements and industrial demands. The findings indicate that many instructors lack updated technical skills and practical industrial experience, creating a disconnect between the skills taught in classrooms and the competencies required in the workforce. This gap is consistent with findings by Paryono (2015), who reported similar challenges among TVET instructors globally. Addressing this issue requires targeted professional development programs, such as Train-the-Trainer initiatives and industry attachment schemes. The importance of technical competence is further underscored by the Malaysia Education Blueprint 2013–2025, which emphasizes the need for TVET instructors to possess industry-relevant skills.

Personal Attributes

Professionalism, adaptability, and communication skills were identified as essential personal attributes. Respondents stressed the importance of being role models for students and fostering a conducive learning environment. Professionalism, adaptability, and communication skills were identified as essential personal attributes for TVET instructors. Respondents stressed the importance of being role models for students and fostering a conducive learning environment. Attributes such as empathy, patience, and the ability to inspire students were deemed crucial for effective teaching. These findings align with the work of Wagiran et al. (2019), who emphasized the role of personal attributes in shaping effective educators. Instructors who demonstrate strong interpersonal skills and a commitment to continuous learning are better equipped to adapt to the evolving demands of the education sector.

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