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The Impact of Outcome-Based Education on Lecturers' Professional Growth in Vocational Programs

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Abstract

This study aims to investigate lecturers' professional learning after implementing the Outcome-Based Education (OBE) approach for diploma programs in Malaysian Vocational Colleges. Utilising a cross-sectional survey design, data was collected from a sample of 338 lecturers out of a population of 9,623 nationwide, all of whom had implemented OBE practices under the Malaysian Ministry of Education. Descriptive analysis was employed to organise and present frequency, percentage, mean, and standard deviation data. The reliability of the instrument used to measure the study variables was high, with an alpha coefficient of 0.990 for 100 items, surpassing the commonly accepted threshold of 0.800. The findings revealed positive results across three key areas: lecturers' knowledge (mean scores between 3.72 and 4.14), skills (mean scores between 3.74 and 3.91), and attitudes (mean scores between 3.75 and 4.29). These results suggest that the OBE approach has a significant positive impact on the development of lecturers in vocational colleges, supporting its potential to enhance educational practices in this context. The successful implementation of OBE can also improve curriculum design and teaching practices in vocational programs. Educational policymakers should consider expanding OBE training for lecturers to ensure the curriculum aligns with industry needs and learning outcomes.

Keywords: Outcome Based Education, Lecturer Learning, Vocational College

Introduction

The demands of 21st-century education call for innovative approaches to teaching and learning that can meet the evolving needs of modern societies. One such approach

emphasises strengthening Technical and Vocational Education and Training (TVET), pivotal in developing a skilled workforce. This priority is underscored in the National Education Development Plan 2013-2025, which positions TVET as a key driver for producing competent workers capable of contributing to national development. In response, the Department of Technical and Vocational Education (DTVE), under the Ministry of Education Malaysia (MOE), adopted a new curriculum model based on the Outcome-Based Education (OBE) approach.

As conceptualized by Spady (1994), OBE focuses on achieving predefined learning outcomes by the end of the educational experience. This approach aims to ensure that students acquire knowledge and develop the skills and competencies necessary for success in their careers and personal lives (Premalatha, 2019). Unlike traditional education systems that rely heavily on quantitative assessments, OBE integrates qualitative and quantitative evaluation methods, offering a more holistic approach to assessing student performance. It prioritises achieving specific outcomes and objectives in teaching and learning processes, thereby enhancing the overall quality of education.

OBE is recognised for its potential to raise educational standards and align with international accreditation requirements (Akramy, 2021). However, despite its benefits, the implementation of OBE continues to face significant challenges. Many institutions, especially in developing countries, still rely on conventional educational methods (Asim et al., 2021; Azhary et al., 2020). Several factors contribute to this slow transition, including insufficient lecturer training, misalignment between instructional activities and learning outcomes, and challenges in accurately assessing comprehensive learning achievements (Maleki, 2021).

Another critical factor affecting the successful implementation of OBE is the duration of courses. Centralised training courses lasting only three days and internal courses running for a single day limit the time available for lecturers to grasp the concepts and methodologies required for OBE fully. This short timeframe leads to varying interpretations among lecturers about appropriate teaching strategies, assessment tools, and assignment types, creating inconsistencies in OBE implementation across institutions. Furthermore, the varied understanding of OBE principles among lecturers presents an additional challenge, as their role is crucial in delivering effective teaching and ensuring that learning outcomes are met (Masaha et al., 2023; Pradhan, 2021; Rao, 2020).

Given the pivotal role of lecturers in facilitating successful OBE practices, this study aims to assess the extent to which lecturers have adapted their teaching and learning strategies after implementing the OBE approach for diploma programs in vocational colleges. By investigating the learning outcomes of lecturers, this study seeks to provide insights into how well the OBE framework has been integrated into vocational education and to identify potential areas for improvement in its implementation. Therefore, the objectives of this study were to determine the level of knowledge, skills and attitudes among lecturers after the implementation of OBE.

Literature Review

The studies reviewed demonstrate that OBE offers significant advantages over traditional content-based educational models. The study by Saha et al. (2023), which analysed research published between 2009 and 2016 from predominantly Asian and Middle Eastern countries, demonstrated that the OBE approach significantly enhances students' proficiency in

knowledge acquisition. This was evident in improved final course grades and enhanced cognitive skills. OBE also improved clinical skills, core nursing competencies, and behavioural performance during clinical tasks.

Furthermore, one of the studies reported high levels of student satisfaction with the OBE approach. Said et al. (2018) emphasised that OBE represents a fundamental shift from traditional content-based educational models by focusing on student-centred mastery of competencies driven by clearly defined educational objectives. The study found that OBE improves academic standards and outcomes by promoting proper curriculum planning, assessment, and alignment with program objectives and desired outcomes. The flexibility of OBE was also highlighted, as it does not mandate specific teaching methods or educational strategies, allowing institutions to tailor approaches to their particular contexts. OBE enhances students' cognitive skills, clinical competencies, and overall performance in various educational contexts, particularly medical and nursing. OBE promotes higher academic standards, improved learning outcomes, and increased student satisfaction by shifting the focus from teacher-centred content delivery to student-centred mastery of outcomes.

The flexibility of OBE, allowing for diverse teaching methods and strategies, ensures its adaptability to various educational environments. Additionally, the study by Shyamalaprasanna et al. (2021) noted that OBE has recently gained significant traction in Pakistan, particularly in organising medical education around the competencies students are expected to demonstrate by the end of their training. This shift from a teacher-centred to an OBE system was crucial for Pakistan's tertiary education reform. The review also identified five critical factors influencing student learning outcomes: assessment strategies, learning objectives aligned with complexity levels, students' preferred learning styles, English language proficiency, and employer requirements. These factors underline the need for educational systems to adapt to diverse learning needs and ensure that graduates are equipped to meet professional standards. Moreover, key factors such as assessment strategies, learning objectives, student learning styles, language proficiency, and alignment with employer requirements are crucial for optimising student success in OBE frameworks. These findings emphasise the need for educational systems to embrace OBE to meet the evolving demands of both learners and the workforce.

Research Methodology

This survey-based study employs a descriptive program evaluation approach chosen to align with the study's objectives. As Ghazali Darussalam et al. (2017) described, this approach efficiently describes current educational programs, addresses stakeholder needs, plans program implementation, identifies target groups, and evaluates intended program benefits. The study population consisted of lecturers who have implemented OBE practices in vocational colleges under the Malaysian Ministry of Education (MOE). A sample of 338 lecturers was selected from a total population of 9,623, following the sample size guidelines provided by Krejcie and Morgan (1970).

In this quantitative study, questionnaires were chosen as the research instrument due to their efficiency in data collection (Creswell, 2005). The questionnaire was meticulously designed to collect information about OBE implementation. After receiving approvals from BPPDP, KPM, and BPLTV, a pilot study involved 40 lecturers from vocational colleges in Selangor, Sepang

Vocational College, as Emory and Cooper (2003) recommended. The questionnaire was validated by three TVET lecturers from a Malaysian university, and its reliability was assessed using Cronbach's Alpha based on responses from the pilot study. The reliability test yielded an alpha coefficient of 0.990 for the 100 items used to measure the study variables, far surpassing the commonly accepted benchmark of 0.800 (Hair et al., 2010), indicating that the instrument is highly reliable.

Descriptive analysis was used to organise and present the data, including frequencies, percentages, means, and standard deviations, providing valuable insights into the learning outcomes of lecturers implementing OBE practices. This study interpreted mean scores based on predefined scale ranges: 1.00 to 2.33 was categorised as low, 2.34 to 3.66 as moderate, and 3.67 to 5.00 as high. These categorisations allowed for precise evaluation of the lecturers' learning outcomes across various measured variables.

Findings

This study divides the learning acquired by lecturers after implementing OBE practices in vocational colleges into knowledge, skills, and attitude.

Table 1
Mean Scores for Lecturer Learning After Implementing OBE Practices

Variable	Min	SD
Lecturers Learning	**3.99**	**0.49**
• Knowledge Aspect	4.02	0.52
• Skills Aspect	3.79	0.61
• Attitude Aspect	4.14	0.50

As shown in Table 1, the analysis results found that overall lecturer learning is at a high level, with an overall mean score of 3.99. Similarly, the mean scores obtained for each aspect of learning also indicate a high level. The mean score for the knowledge aspect is 4.02, while the scores for skills and attitude are 3.79 and 4.14, respectively. Comparatively, the attitude aspect is at the highest level, followed by knowledge and skills. The analysis for each item statement measuring the level of learning acquired by lecturers after implementing OBE practices was also conducted.

Lectures Knowledge Level

The analysis of respondents' feedback on ten items (C1 – C10) assessing their knowledge level in the learning aspect revealed that mean scores ranged from 3.72 to 4.14, indicating a generally high level of knowledge across all items. C1 item, "Know the definition of OBE practices," 59.5% of respondents rated their knowledge as high, 23.1% as very high, 16.3% as moderate, and only 1.2% as low, with a mean score of 4.04. Similarly, in the C2 item, "Know the concept of implementing OBE practices," 57.4% rated their knowledge as high, 23.1% as very high, and 18.9% as moderate, with a mean score of 4.02.

Regarding the C3 item, "Know the goals of OBE practices," 59.5% rated it as high, 24.6% as very high, 15.7% as moderate, and only 0.3% rated it as low. C4 item, "Know the activities under the Educational Strengthening Initiative by KPM," was rated 53.3% as high, 31.1% as moderate, and 11.8% as very high, with a small percentage rating as deficient. C5 item, "Know the concept of integrating OBE practices into the Diploma curriculum," 55.3% rated it as high,

19.5% as very high, 22.2% as moderate, and 3.0% as low. C6 item, "Know the importance of teaching integrated topics," 58.3% rated it as high, 28.1% as very high, 13.3% as moderate, and only 0.3% rated it as low.

For the C7 item, "Know the suitability of OBE methods," 57.4% rated their knowledge as high, 18.0% as very high, 20.4% as moderate, and 0.6% as low. In a C8 item, "Know the steps involved in OBE methods," 56.8% rated it as high, 18.0% as very high, 24.6% as moderate, and 0.6% as low. C9 item, "Know the necessity of OBE," 58.0% rated it as high, 28.1% as very high, and 13.6% as moderate, with only 0.3% rating it as low. Lastly, for statement, C10, "Know the importance of linking OBE with Learning Standards," 60.7% rated it as high, 24.3% as very high, 14.5% as moderate, and 0.6% as low.
Overall, the results indicate that respondents generally possess a high level of knowledge in the aspects assessed. Table 2 summarises the knowledge level among lecturers. Overall mean for Knowledge Level (m=4.02) with Standard Deviation (SD=0.52).

Table 2
Analysis of Lecturers Knowledge Level

Item Statement		1 (Very Low)	2 (Low)	3 (Moderate)	4 (High)	5 (Very High)	Mean	Standard Deviation
C1	Know the definition of OBE practices	0	4 1.2%	55 16.3%	201 59.5%	78 23.1%	4.04	0.66
C2	Know the concept of implementing OBE practices	0	2 0.6%	64 18.9%	194 57.4%	78 23.1%	4.03	0.67
C3	Know the goals of OBE practices	0	1 0.3%	53 15.7%	201 59.5%	83 24.6%	4.08	0.64
C4	Know the activities under KPM's Education Initiative	3 0.9%	10 3.0%	105 31.1%	180 53.3%	40 11.8%	3.72	0.74
C5	Know the integration of OBE concepts in the Diploma curriculum	0	10 3.0%	75 22.2%	187 55.3%	66 19.5%	3.91	0.73
C6	Know the importance of teaching integrated topics in T&L	0	1 0.3%	45 13.3%	197 58.3	95 28.1	4.14	0.64
C7	Know the suitability of OBE methods	0	2 0.6%	69 20.4%	194 57.4%	73 21.6%	4.00	0.67
C8	Know the steps involved in OBE methods	0	2 0.6%	83 24.6%	192 56.8%	62 18.0%	3.92	0.68
C9	Know the necessity of OBE in T&L	0	1 0.3%	46 13.6%	196 58.0%	95 28.1%	4.13	0.64
C10	Know the importance of linking T&L using OBE with Learning Standards	0	2 0.6%	49 14.5%	205 60.7%	82 24.3%	4.09	0.64

Lectures Skills Level

The analysis of respondents' feedback on ten items (C24 – C34) measuring the level of learning in the skills aspect was conducted, as shown in Table 3. Respondents assessed their skill levels for each item by selecting low, low, moderate, high, or very high. The results, summarised in Table 3, show that the mean scores for all items ranged from 3.74 to 3.91, indicating a generally high level of skills among respondents. For item C24, "Skilled in linking OBE with Learning Standards," 50.9% of respondents rated their skills as high, 14.5% as very high, and 33.1% as moderate, with only 1.5% rating it as low. Item C25, "Skilled in linking OBE with Assessment Standards," was similarly rated, with 50.6% of respondents selecting high, 33.7% moderate, and 13.9% very high, while 1.5% rated it as low and 0.3% as very low.

For item C26, "Skilled in implementing OBE in the courses taught," 47.9% rated it as high, 14.2% as very high, and 36.1% as moderate, with 1.8% giving it a low rating. Item C27, "Skilled in linking courses taught with real-world contexts through OBE practices," had 50.6% of respondents rating it as high, 14.2% as very high, and 33.4% as moderate, with one respondent rating it as very low and 1.5% rating it as low. In item C28, "Skilled in guiding students to implement OBE practices and conduct continuous assessment activities," 57.1% rated it as high, 17.2% as very high, and 24.9% as moderate, while only 1.5% rated it low. Item C29, "Skilled in guiding students to assess group work activities," showed that 56.8% of respondents rated their skills as high, 15.7% as very high, and 26.9% as moderate, with 0.6% rating them low. For item C30, "Skilled in guiding students through OBE practices to explore problems in real-world contexts," 50.6% of respondents rated it high, 14.8% very high, and 33.1% moderate, while 1.5% rated it as low. Item C31, "Skilled in guiding students to formulate problem statements," had 51.5% of respondents rating it high, 13.9% very high, and 33.4% moderate, with 1.2% rating it as low.

In item C32, "Skilled in guiding students to research the explored problems further," 50.9% of respondents rated it as high, 12.4% as very high, 35.2% as moderate, and 1.5% as low. In item C33, "Skilled in guiding students to find strategies for solving researched problems," 50.0% rated it high, 13.3% very high, 33.4% moderate, and 1.2% low. Lastly, for item C34, "Skilled in guiding students to acquire knowledge on specific topics through OBE practices," 53.8% rated their skills as high, 11.8% very high, 33.4% moderate, and 0.9% low. Overall, the mean score for lecturers' skill levels was 3.79, with a standard deviation of 0.61, indicating a generally high skill level among the respondents.

Table 3
Analysis of Lecturers' Skill Level

Item Statement		1 (Very Low)	2 (Low)	3 (Moderate)	4 (High)	5 (Very High)	Mean	Standard Deviation
C24	Skilled in linking OBE with Learning Standards.	0	5 1.5%	112 33.1%	172 50.9%	49 14.5%	3.78	0.70
C25	Skilled in linking OBE with Assessment Standards.	1 0.3%	5 1.5%	114 33.7%	171 50.6%	47 13.9%	3.76	0.71
C26	Skilled in implementing OBE in the courses taught.	0	6 1.8%	122 36.1%	162 47.9%	48 14.2%	3.75	0.71
C27	Skilled in linking courses taught with real-world context through OBE practices.	1 0.3%	5 1.5%	113 33.4%	171 50.6%	48 14.2%	3.77	0.71
C28	Skilled in guiding students to implement OBE practices and conduct continuous assessment activities.	0	3 0.9%	84 24.9%	193 57.1%	58 17.2%	3.91	0.67
C29	Skilled in guiding students to assess group work activities.	0	2 0.6%	91 26.9%	192 56.8%	53 15.7%	3.88	0.66
C30	Skilled in guiding students through OBE practices to explore problems in real-world contexts.	0	5 1.5%	112 33.1%	171 50.6%	50 14.8%	3.79	0.70
C31	Skilled in guiding students through OBE practices to formulate problem statements.	0	4 1.2%	113 33.4%	174 51.5%	47 13.9%	3.78	0.69
C32	Skilled in guiding students through OBE practices to further research the explored problems.	0	5 1.5%	119 35.2%	172 50.9%	42 12.4%	3.74	0.69

C33	Skilled in guiding students through OBE practices to find strategies for solving researched problems.	0	4 1.2%	120 35.5%	169 50.0%	45 13.3%	3.75	0.69
C34	Skilled in guiding students to acquire knowledge on specific topics through OBE practices.	0	3 0.9%	113 33.4%	182 53.8%	40 11.8%	3.77	0.66

Lecturers Attitude Level

An analysis of the ten items (C37 – C47) measuring lecturers' attitudes after implementing OBE practices in the diploma program at vocational colleges was conducted, with results shown in Table 4. Respondents indicated their level of agreement—strongly disagree, disagree, moderately agree, agree, or strongly agree—based on their self-assessment. The analysis revealed that the mean scores for all items ranged from 3.75 to 4.29, indicating that respondents generally exhibited highly positive attitudes toward OBE practices. For item C37, "...I believe that implementing OBE practices is realistic," 63.0% of respondents agreed, 30.5% strongly agreed, and 6.5% moderately agreed. For item C38, "...I am ready to implement OBE practices in my teaching and learning (T&L)," 61.2% of respondents agreed, 30.8% strongly agreed, and 7.7% moderately agreed, with only one respondent (0.3%) disagreeing.

Regarding item C39, "...I am ready to guide students toward meaningful learning through OBE practices," 62.1% agreed, 31.4% strongly agreed, and 6.2% moderately agreed, while 0.3% disagreed. For item C40, "...I am happy to help students better understand a specific topic through OBE practices," 58.3% agreed, 33.1% strongly agreed, and 8.6% moderately agreed, with no disagreement. For item C41, "...I do not feel burdened by implementing OBE practices in T&L," 60.1% agreed, 24.6% strongly agreed, 13.9% moderately agreed, and 1.5% disagreed. Item C42, "...I am happy to reflect on my T&L practices by implementing OBE," showed that 60.7% of respondents agreed, 26.2% strongly agreed, and 12.1% moderately agreed, with only 0.6% disagreeing.

In item C43, "...I want to continue seeking new knowledge to implement OBE practices more effectively," 59.8% agreed, 32.8% strongly agreed, 7.1% moderately agreed, and 0.3% disagreed. For item C44, "...it is my responsibility to implement OBE practices in my T&L," 57.7% of respondents agreed, 35.5% strongly agreed, and 6.8% moderately agreed. Item C45, "...I prefer teaching students using OBE concepts rather than conventional methods," saw 56.8% of respondents agreeing, 29.3% strongly agreeing, and 12.7% moderately agreeing, with 1.2% disagreeing. For item C46, "...I find it problematic to teach using OBE practices while also teaching with conventional methods," 51.5% of respondents agreed, 18.0% strongly agreed, 20.7% moderately agreed, 7.4% disagreed, and 2.4% strongly disagreed. Finally, for item C47, "...I feel excited about teaching using OBE practices," 61.8% agreed, 21.6% strongly agreed, and 15.7% moderately agreed, with 0.9% disagreeing. The mean score for lecturers' attitudes was 4.14, with a standard deviation of 0.50, indicating a generally positive attitude toward implementing OBE practices.

Table 4
Analysis of Lecturers Attitude Level

Item Statement		1 (Very Low)	2 (Low)	3 (Moderate)	4 (High)	5 (Very High)	Mean	Standard Deviation
C37	I believe that implementing OBE practices is realistic.	0	0	22 6.5%	213 63.0%	103 30.5%	4.24	0.56
C38	I am ready to implement OBE practices in teaching and learning (T&L).	0	1 0.3%	26 7.7%	207 61.2%	104 30.8%	4.22	0.59
C39	I am ready to guide students towards meaningful T&L through OBE practices.	0	1 0.3%	21 6.2%	210 62.1%	106 31.4%	4.25	0.57
C40	I am happy to help students understand a specific topic through OBE practices.	0	0	29 8.6%	197 58.3%	112 33.1%	4.25	0.60
C41	I do not feel burdened by implementing OBE practices in T&L.	0	5 1.5%	47 13.9%	203 60.1%	83 24.6%	4.08	0.66
C42	I am happy to reflect on my T&L practices by implementing OBE.	0	2 0.6%	41 12.1%	205 60.7%	90 26.6%	4.13	0.63
C43	I want to continue seeking new knowledge to implement OBE practices more effectively.	0	1 0.3%	24 7.1%	202 59.8%	111 32.8%	4.25	0.59
C44	It is my responsibility to implement OBE practices in my T&L.	0	0	23 6.8%	195 57.7%	120 35.5%	4.29	0.58
C45	I prefer teaching students using OBE concepts rather than conventional methods.	0	4 1.2%	43 12.7%	192 56.8%	99 29.3%	4.14	0.67

Item Statement		1 (Very Low)	2 (Low)	3 (Moderate)	4 (High)	5 (Very High)	Mean	Standard Deviation
C46	Teaching using OBE practices and conventional methods is a problem for me.	8 2.4%	25 7.4%	70 20.7%	174 51.5%	61 18.0%	3.75	0.92
C47	I feel excited about teaching using OBE practices.	0	3 0.9%	53 15.7%	209 61.8%	73 21.6%	4.04	0.64

Discussion

In the context of the diploma program at Vocational Colleges, significant achievements were highlighted in three main aspects: knowledge, skills, and attitude.

Lecturers Knowledge Level

The analysis of lecturers' knowledge regarding OBE practices generally indicates a high level of understanding across various dimensions, supported by the literature on educational frameworks and pedagogical practices. The study findings show a high level of knowledge among the respondents. This high level of understanding aligns with Zhang and Fan (2020), who emphasised the importance of a clear understanding of OBE's definition for effective implementation. Akramy (2021) also highlighted that familiarity with the core concepts of OBE is crucial for lecturers to use this approach effectively in their teaching.

The descriptive analysis also indicated a high level of awareness among the lecturers. This finding is consistent with Asim et al. (2021), who found that a strong understanding of the implementation concept is critical to using OBE principles effectively. This understanding helps lecturers design and implement a curriculum aligned with OBE objectives. Regarding knowledge of OBE goals, respondents believed that understanding the objectives of the educational approach is essential for practical usage. Clear goals help lecturers align their teaching strategies with the desired outcomes. Additionally, respondents had high knowledge about activities under the Education Enhancement Initiative by the Ministry of Education Malaysia (MOE). This aligns with Azhary et al. (2020), who emphasised that understanding educational initiatives and related activities is essential for lecturers to effectively integrate them into their teaching practices.

The analysis of knowledge on integrating OBE concepts into the Diploma curriculum indicated a high level of understanding, reflecting the importance of integrating OBE into curriculum design, as highlighted by Felicen (2021). Proper integration ensures that educational practices align with OBE's intended outcomes. Furthermore, knowledge about the importance of integrated topics, the appropriateness of OBE methods, and the steps involved in OBE showed that lecturers understand these aspects well. This finding is consistent with Maleki (2021), who emphasised that understanding these elements is crucial for effective OBE implementation. This knowledge helps lecturers apply OBE principles effectively in their teaching practices.

The need for OBE in teaching and learning (T&L) and the relationship between OBE and learning standards further strengthen lecturers' understanding of the relationship and application of OBE. This is consistent with Masaha et al. (2023), who emphasised that aligning educational practices with learning standards is essential to achieving academic goals. Various aspects of OBE knowledge also reflect a high level of understanding among respondents. This includes knowledge about integrating OBE with assessment standards, real-world contexts, exploration activities, and reflection in teaching. This consistently high level is supported by the literature on educational practices, highlighting the importance of these components for effective OBE implementation. For example, the study findings by Naska (2023) support the need for lecturers to be proficient in practical applications and reflections to enhance teaching effectiveness. Overall, the analysis indicates that lecturers have a high and comprehensive understanding of OBE practices. This high level of knowledge supports effective OBE implementation in vocational colleges, consistent with established educational frameworks and pedagogical theories.

Lecturers Skills Level

The analysis of OBE practice skills shows respondents' varying skill levels, with the majority demonstrating a high skill level in several key areas. These findings align with existing literature on implementing and applying OBE in education. Most respondents rated their skills as high regarding skills assessment in linking OBE with learning standards. Pradhan (2021) noted that this skill level is essential to ensure educational practices align with set standards. Rao (2020) emphasised that effectively aligning teaching with learning standards is critical for achieving desired academic outcomes.

Moreover, the assessment of skills linking OBE with Assessment Standards showed that most respondents rated their skills as high. This supports the findings of Saha et al. (2023), who asserted that a clear understanding of assessment standards is crucial for evaluating student performance and ensuring educational objectives are met. The skill to link OBE with assessment standards helps lecturers design assessments that accurately measure student learning and progress. The skills in implementing OBE in courses taught were also rated as high. This is consistent with the study by Said et al. (2018), who emphasised that effectively implementing an educational framework requires high skill and understanding. Effective OBE implementation ensures that teaching practices are aligned with learning outcomes.

For skills in linking courses with real-world contexts through OBE, most respondents rated their skills as high. This finding is supported by Shyamalaprasanna et al. (2021), who argued that connecting educational practices with real-world contexts enhances learning relevance and applicability. Relating course content to real-world situations helps students see the practical value of their education. The skills in guiding students to implement OBE practices and conduct continuous assessment activities were also rated high. This is consistent with the principles outlined by Zhang and Fan (2020), who stressed the importance of constant assessment and feedback in supporting student learning and development. Guiding students through OBE practices and assessments is crucial for improving their performance and achieving learning outcomes.

Most respondents rated their skills in guiding students to evaluate group work activities as high. This supports the findings of Bhat et al. (2022), who highlighted the importance of

practical group work and peer assessment in the learning process. Skills in guiding students through these activities enhance collaborative learning and critical thinking skills. The high skill level among lecturers in guiding students through OBE to explore real-world problems aligns with Guzachchova's (2020) research on problem-based learning. Helda and Zaim (2020) argued that engaging students with real-world issues enhances deep understanding and critical thinking. Similarly, high skills in guiding students to formulate clear problem statements support Roza's (2021) research, emphasising the importance of clear problem statements for problem-solving and effective learning outcomes. Furthermore, the high level of skills in guiding students through research activities is consistent with the findings of Wellner (2021), who emphasised the importance of research and inquiry in developing critical thinking and problem-solving skills. The analysis of the findings shows a high level of skills assessment in guiding students to find solutions to the problems studied. This is consistent with research by Nadezhda (2020), which highlighted the importance of guiding students in developing and implementing problem-solving solutions. Practical guidance in this area supports student learning and achievement.

The study findings related to guiding students in gaining knowledge on a particular topic through OBE also showed a high level. This supports research by Song et al. (2020), emphasising the importance of guiding students to acquire deep knowledge through practical engagement with educational practices. Additionally, skills in guiding students to gain a deep understanding of a topic were also rated as high. This finding is consistent with Saud et al. (2023), who stressed the importance of deep learning and understanding in achieving educational goals. Finally, the skills in guiding students to carry out projects resulting from OBE practices were also rated as high. This supports research by Shaheen (2019), which highlighted the role of project-based learning in promoting student engagement and achievement. Skills in guiding students through project implementation are crucial for achieving OBE objectives. Overall, the analysis shows that respondents demonstrate high skills in critical areas related to OBE practices, consistent with previous educational theories and research. These findings indicate that lecturers are well-equipped to implement and guide OBE practices effectively in their teaching.

Lecturers Attitude Level

The analysis of respondents' attitudes towards implementing OBE shows a positive perspective. The high mean scores across all statements indicate a positive consensus among the lecturers. Lecturers in this study view OBE as realistic to implement. This supports the findings of Syeed et al. (2022), which stated that lecturers' attitudes towards the feasibility of educational innovations are crucial for their effective implementation. When respondents expressed their readiness to implement OBE practices, the majority agreed or strongly agreed. This finding reflects the conclusion by Yen et al. (2023), who emphasised that lecturers' readiness to adopt new methods significantly influences their effective implementation.

The study findings also indicate a readiness to guide students towards meaningful learning through OBE, reflecting a positive attitude, with most respondents agreeing with this statement. This aligns with the assertion by Zhao et al. (2020) that lecturers' readiness to engage in meaningful teaching practices is critical for enhancing student learning outcomes. Additionally, many respondents expressed satisfaction in helping students understand topics

through OBE. This is consistent with Alimyar's (2020) study on the impact of teaching strategies that enhance deep understanding.

The findings show that respondents do not find the implementation of OBE burdensome, which aligns with the perspective of Asim et al. (2021) that effective implementation is linked to the demands on lecturers. Reflecting on practices through OBE also supports Midraj (2018) on the importance of reflective practices in professional development. Positive perceptions towards ongoing professional development and responsibility for OBE indicate a commitment to continuous improvement and accountability, which are essential for effective teaching practices (Orfan, 2021). The preference for OBE over conventional methods and the challenges of balancing OBE with traditional approaches reveal a nuanced attitude, reflecting the complexity of integrating new methodologies into established practices, as Rao (2020) discussed.

Moreover, the high enthusiasm about teaching using OBE and the perception that OBE does not burden students reflect positive engagement with the OBE approach. These findings are consistent with the literature suggesting that adopting new methods and the perceived benefits for students are crucial for effective educational reform (Yusuf, 2020). Overall, the high level of agreement indicates a positive attitude towards OBE practices among lecturers, supporting the notion that encouraging attitudes and perceptions of feasibility are essential for the effective implementation of educational innovations.

Discussion

This research revealed that the adoption of OBE in Vocational Colleges has notably influenced the professional development of lecturers in three primary domains: knowledge, skills, and attitudes. Nevertheless, despite these favourable results, other significant concerns must be resolved to guarantee OBE's long-term and holistic efficacy in the occupational domain.

Knowledge

The research indicates that instructors profoundly understand the principles and aims of OBE. A comprehensive grasp of the concept and objectives of OBE is essential for lecturers to design teaching techniques that correspond with the desired learning results. Nonetheless, despite this extensive expertise, obstacles persist in consistently comprehending these principles across all professors. Discrepancies in comprehension may result in divergent applications of OBE, thereby impacting the attainment of student learning goals.

Skill

The abilities of lecturers have markedly enhanced after the implementation of OBE, especially in correlating instruction with real-world circumstances and evaluating students' learning advancement. The research indicates that competencies in specific domains, such as ongoing evaluation and facilitating student collaboration in group activities, are subject to enhancement. The capacity of lecturers to integrate theory with practical application is crucial for the success of OBE; nevertheless, the research indicates that the restricted training time may impede their complete understanding of this methodology. Consequently, more organised and thorough initiatives are required to provide continuous training and assistance to educators in improving these competencies.

Attitude

Instructors often favour OBE, with most demonstrating preparedness and assurance in executing this methodology. Nevertheless, the research underscores the difficulties of reconciling Outcome-Based Education with traditional pedagogical approaches. Instructors may have challenges concurrently implementing multiple methods, especially when confronted with substantial workloads and time limitations. The challenge of merging these two instructional strategies underscores the need for institutions to provide sufficient support to educators, including time, money, and pedagogical assistance.

Conclusion And Implications

While this research documents the beneficial effects of OBE on lecturers' professional development, specific concerns need consideration. Initially, enhanced and extensive instruction must be administered to guarantee that lecturers thoroughly comprehend and consistently use OBE properly. Secondly, it is essential to standardise the use of OBE among institutions to mitigate discrepancies stemming from varied interpretations. Ultimately, continuous administrative assistance and robust policies are crucial for lecturers to adapt to the pedagogical requirements of OBE, particularly in reconciling conventional and contemporary methodologies. This research demonstrates that OBE has significant potential to enhance the quality of teaching and learning in Vocational Colleges; nevertheless, its ultimate success is contingent upon effectively addressing the problems encountered by lecturers via institutional support and ongoing professional development. This study found that implementing OBE in Vocational Colleges has significantly impacted the professional growth of lecturers in three main areas: knowledge, skills, and attitudes. However, despite these positive outcomes, several critical issues must be addressed to ensure OBE's long-term and comprehensive effectiveness in the vocational context.

The study shows that lecturers have a high level of knowledge regarding the concepts and objectives of OBE. This is crucial because a deep understanding of the definition and goals of OBE helps lecturers design teaching strategies that align with the intended learning outcomes. However, despite this high level of knowledge, challenges remain in ensuring that all lecturers have a uniform understanding of these concepts. Inconsistencies in understanding may lead to variations in the implementation of OBE, which can affect the achievement of student learning outcomes.

Lecturers' skills have also significantly improved after implementing OBE, particularly in linking teaching with real-world contexts and assessing students' learning progress. However, the study suggests that skills in certain areas, such as continuous assessment and guiding students in group activities, can still be improved. The ability of lecturers to connect theory with practical application is critical to OBE's success. Still, the study shows that the limited duration of training may hinder their complete mastery of this approach. Therefore, more structured and comprehensive efforts are needed to provide ongoing training and support to lecturers in enhancing these skills.

Lecturers generally have a positive attitude towards OBE, with the majority expressing readiness and confidence in implementing this approach in their teaching. However, the study also highlights challenges balancing OBE with conventional teaching methods. Lecturers may face dilemmas in simultaneously adapting both approaches, mainly when dealing with heavy

workloads and time constraints. The difficulty in integrating these two teaching methods reflects the importance of institutions providing adequate support to lecturers, including time, resources, and pedagogical guidance.

Overall, this study shows that OBE has excellent potential to improve teaching and learning quality in Vocational Colleges. Still, its complete success depends on how well the challenges faced by lecturers can be addressed through institutional support and continuous professional development. This study contributes to existing literature by providing a specific analysis of lecturers' perceptions of OBE practices in Vocational Colleges in Malaysia. Although previous studies focused Asim et al. (2021), our study directly addresses the need for a deeper understanding of educators' views on OBE in vocational education (Bahri et al., 2024). The study results show that VCs lecturers generally have positive perceptions of OBE (Bahri et al., 2024), consistent with Midraj (2018). Additionally, our study emphasizes the importance of continuous support and training for lecturers (Bahri et al., 2024), supporting findings by El Kalai et al. (2022) and Errida & Lotfi (2021) that highlight challenges in OBE implementation.

Although this study records the positive impact of OBE on the professional growth of lecturers, several issues require attention. First, more comprehensive and extended training should ensure lecturers fully understand and consistently implement OBE effectively. Second, efforts must be made to standardise OBE implementation across institutions to reduce inconsistencies arising from differing interpretations. Finally, ongoing support from the administration and firm policies are essential to help lecturers adapt to the pedagogical demands of OBE, especially in balancing traditional and innovative approaches.

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