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Factors influencing Outcome Based Education (OBE) Engagement among Lecturers in Universiti Teknologi MARA (UiTM)

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Abstract

This study was conducted to determine the significant factors influencing OBE engagement among lecturers in the Faculty of Plantation and Agrotechnology. A closed-ended questionnaire was distributed to 51 respondents. The results revealed that knowledge is the most crucial factor influencing OBE engagement among lecturers, with a beta value of 0.780. Correlation analysis showed that the lecturer's knowledge, lecturer's implementation and the faculty's involvement have a linear positive relationship with the OBE engagement (p=0.001). Consistent faculty involvement in training also significantly influences the knowledge and implementation of OBE in the teaching and learning process since the value is less than 0.05.

Keywords: Implementation; Knowledge; Learning Outcomes; Outcome Based Education (OBE)

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1.0 Introduction

Outcome-based education (OBE) is an educational approach that focuses on achieving specific learning outcomes and aligning appropriate teaching deliveries and assessment methods to achieve those outcomes (Tam, 2014). This approach is founded on the fundamental concept of starting with a clear understanding of what is crucial for students to achieve. It involves meticulously organizing the curriculum, instructional methods, and assessments to ensure students attain these essential learning objectives (Spady, 1994). In

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OBE, learning outcomes take center stage; they are concise statements describing what students can do as a direct result of their learning experiences. It is vital to emphasize that these outcomes are not confined to what students believe, feel, remember, know, or understand. Instead, they encompass what students can actively demonstrate and apply with the knowledge and understanding that they have acquired. Thus, this educational approach has gained worldwide attention, particularly in higher education institutions, as it focuses more on student learning activities than teaching-oriented ones, emphasizing active learning, critical thinking, and the acquisition of practical skills (Youhasan et al., 2019). This mechanism has also shifted the educational landscape from a traditional input system into an education system with effective and measurable outcomes.

The implementation of OBE in Malaysia has not been without challenges that hinder the effective adoption and execution of this outcome. Certain lecturers may resist transitioning from traditional, content-centered teaching to OBE and view this outcome as burdensome compared to their familiar practices. This resistance could arise from concerns about increasing workload, unfamiliarity with OBE principles, and skepticism about its effectiveness in improving student learning outcomes. Besides, the hesitancy might also be due to the institutions' lack of adequate training and professional development opportunities. Some lecturers were struggle to understand and implement the OBE principles without proper guidance and support. In this particular study, the main objectives were to determine the influence of knowledge and implementation factors on OBE engagements. The study also determine the influence of faculty/institutions involvement on OBE engagements. Ultimately, the findings are important to enhance the adoption of OBE among educators, particularly UiTM lecturers through a multifaceted approach that addresses the various aspects of OBE engagements and its impact on teaching and learning.

2.0 Literature Review

In Malaysia, the Malaysian Qualification Framework (MQF), which was established in 2007, has played a significant role in promoting and guiding the implementation of OBE. According to Raof et al. (2022), the integration of MQF and OBE has tremendously improved the quality of Malaysian Education as the MQF provides clear guidelines for developing and recognizing educational programs. This combination of a well-defined framework and an outcomes-based approach successfully produced compatible graduates who were well-equipped with the necessary knowledge, skills, and attributes to succeed in their chosen fields. Despite the clear evidence of OBE's influence on the development of graduate positive attributes, this approach still becomes a topic of debate, particularly among lecturers in higher education. Some consider this approach rather ineffective and administratively burdensome as they must prepare specific documentation and assessment requirements associated with OBE (Drape et al., 2016). The shift from traditional teaching methods to outcome-based education also requires changing mindsets and pedagogical practices. Lecturers might be reluctant to adopt new teaching strategies and assessment methods as they may be unfamiliar with or uncomfortable with the change (Mogashoa, 2013). Similarly, students may resist shifting from a passive learning environment to a more active and self-directed learning process (Macayan, 2017).

According to Cayot (2019), educators must have a solid understanding of the desired learning outcomes and how to align their teaching practices and assessments. However, a study conducted by Katawazai (2021) found that many lecturers still do not fully understand this approach even though they have a very strong and positive attitude toward the implementation of OBE. In one case study conducted among educators of vocational colleges in Malaysia also revealed that most of the lecturers do not understand the Course Learning Outcomes (CLO) and their relationship with the Program Learning Outcomes (PLO). Furthermore, the assessments are more on achieving the course content and student grades rather than the intended learning outcomes. The report also highlighted that most of the lecturers for vocational programs had moderate level of awareness and understanding of the OBE curriculum indicating a need for improved training and comprehension of OBE principles (Damit et al., 2021). In another study conducted by Aramy (2021) had identified two significant barriers of OBE implementation in developing countries. Firstly, the majority of educators are unfamiliar with the principles of OBE and the need to effectively integrate OBE into the education system. Secondly, the presence of small, noisy, and crowded classes with a large number of students poses another barrier for them to to apply the modern teaching approaches in their classrooms and limited chances to create active learning process.They definitely require more resources, such as curriculum materials, assessment tools, and professional development opportunities to effectively implement outcome-based education. A study suggests that involving lecturers in developing and implementing outcome-based education can lead to a greater sense of ownership and commitment, which in turn enhances the approach's effectiveness. When lecturers are actively engaged, they can provide valuable input, contribute to decision-making processes, and help ensure that the outcomes align with the needs and aspirations of the learners and the community (Durlak and DuPre,2008).

Ongoing support and guidance from educational leaders and policymakers are crucial for sustaining the implementation process. This includes providing educators with training and professional development opportunities and creating a supportive environment that encourages collaboration and continuous improvement. Most country particularly Malaysia has specific accreditation bodies that monitor the delivery programs in every institutions are up to the standard and adhering to appropriate quality assurance procedures (Amirtharaj et al., 2022). Program accreditation not only enhances the value and reputation of the institutions offering these programs but also benefits the graduates who complete them by boosting their credentials.Moreover, accreditation has evolved into a mandatory process that must be undertaken periodically. This requirement is essential to maintain high standards of quality and professionalism over time. Institutions are thereby compelled to continuously improve and align their practices with evolving industry benchmarks and regulatory requirements.

3.0 Methodology

Quantitative research was used in this study to collect all the data and information from the respondents. Using quantitative methods, a researcher can get accurate data from the respondents, ensure quick data collection, provide a wide scope, and eliminate bias. The quantitative research method can be used by constructing a questionnaire for the lecturer to determine the crucial factors influencing OBE engagement. This research was conducted among lecturers from the Faculty of Plantation and Agrotechnology, and the location of the study was at Malacca Branch, Jasin Campus, 77300 Merlimau, Melaka, Malaysia. The location was selected because the Malacca campus was just established in 2015, and most of the lecturers are junior lecturers, which is the right respondent to examine outcome-based Based Education (OBE) knowledge, implementation, and involvement in the teaching and learning process. Simple random sampling was used as a sampling technique for this study, and based on the Raosoft calculator, about 51 were selected as a sample size from a 65 population.

3.1 Data collection

The questionnaire session was distributed among the lecturers using a closed-ended questionnaire. The questionnaires were distributed to the respondents through an online platform called Google Form to make it easier for them to fill in anytime and anywhere. In addition, this study will reach out to the participants with less time-consuming and faster results. The questionnaires consist of sections A and B. Section A focuses on the demographic profile of respondents, including age, occupation level, working experience, work position, and others. Meanwhile, Section B in the questionnaires comprises five-point Likert scale measurement questions ranging from strongly disagree (1) to strongly agree (5) in measuring the significance of understanding, implementation, and involvement of faculty towards the engagement of Outcome-Based Education (OBE).

3.2 Research design

The data have been gathered from questionnaires and tested in the Statistical Package for Social Science (SPSS) version 27. The data analysis summary aligns with the research objectives, measurement, scale, and statistics. The analysis used for this study was a reliability test, descriptive analysis, multiple regression analysis, and correlation analysis in SPSS. Multiple regression analysis was used to determine the crucial factors influencing OBE engagement. In contrast, descriptive analysis was used for the demographic profile, and Correlation analysis was used to identify the relationship between factors that influence OBE engagement. By using correlation analysis, it can show the relationship between independent variables and dependent variables. The conceptual framework shows the dependent variable and independent variable used in this study. The dependent variable was OBE engagement, and the independent variables were knowledge, implementation, and involvement of the institution or faculty, as stated in Figure 1.

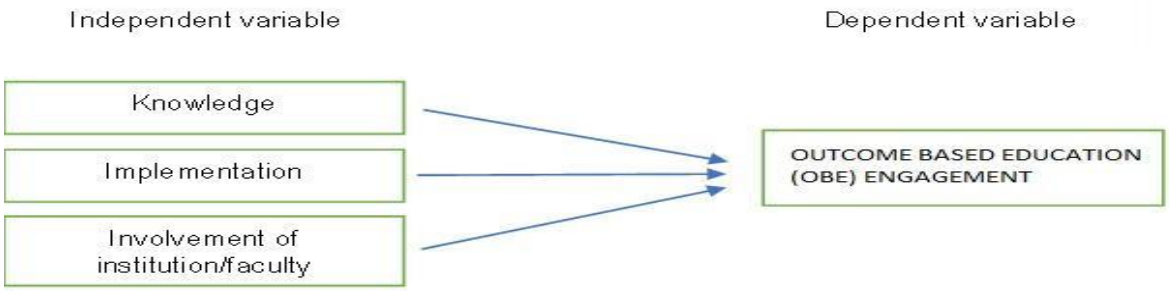

Fig. 1: The conceptual framework

4.0 Findings and Discussion

4.1 Demographic profile of respondents

Table 1 below summarizes the demographic composition of the 51 total respondents of lecturers who have been analyzed in this study. The participants of this study are predominantly female (68.6%), and the majority of the respondents were aged between 35-39 years old (56.9%). Most respondents are lecturers who are not involved in the faculty management team, contributing about 92.2%. According to the years of experience, most of the time was spent in the range of 1–10 years as a lecturer, about 66.6%. In addition, most of the lecturers are not PhD. holders, which is about 56.9%.

Table 1. Respondent's information

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	16	31.4	31.4	31.4
	Female	35	68.6	68.6	100.0
	Total	51	100.0	100.0	
Age	25-29	1	2.0	2.0	2.0
	30-34	8	15.7	15.7	17.6
	35-39	29	56.9	56.9	74.5

	40-44	8	15.7	15.7	90.2
	45-49	2	3.9	3.9	94.1
	Above 50	3	5.9	5.9	100.0
	Total	51	100.0	100.0	
Position	Lecturer	47	92.2	92.2	92.2
	Coordinator	2	3.9	3.9	96.1
	Head of Study Centre	1	2.0	2.0	98.0
	Deputy Dean	1	2.0	2.0	100.0
	Total	51	100.0	100.0	
Designation	Mr./Mrs	29	56.9	56.9	56.9
	Dr.	17	33.3	33.3	90.2
	Associate Prof.	5	9.8	9.8	100.0
	Total	51	100.0	100.0	
Years	1-5	17	33.3	33.3	33.3
	6-10	17	33.3	33.3	66.7
	11-15	14	27.5	27.5	94.1
	16-20	1	2.0	2.0	96.1
	More than 20 years	2	3.9	3.9	100.0
	Total	51	100.0	100.0	

4.2 Outcome-Based Education (OBE) Engagement

The descriptive analysis was based on the five (5) items in the OBE engagement scale. The frequency was shown in Figure 2, where respondents (49%) chose to strongly agree (scale 5) with the statements in the survey that supporting the OBE engagement among lecturers.

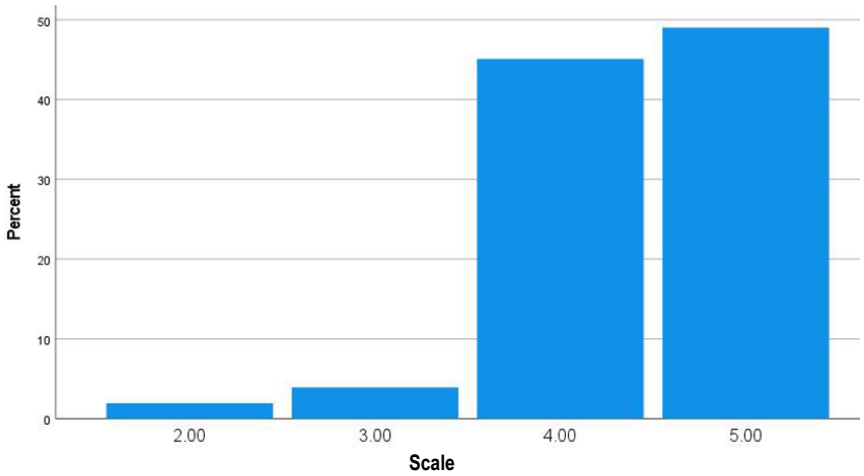

Fig. 2: Outcome-Based Education (OBE) Engagement

4.3 The influence of knowledge factor on OBE engagements

Figure 3 shows the respondents fall in the categories of strongly agree (scale 5) and agree (scale 4) with the statement under the knowledge factor, with 43.1% for both scales. Only 13.7% of the respondents were in the neutral category for the knowledge factor.

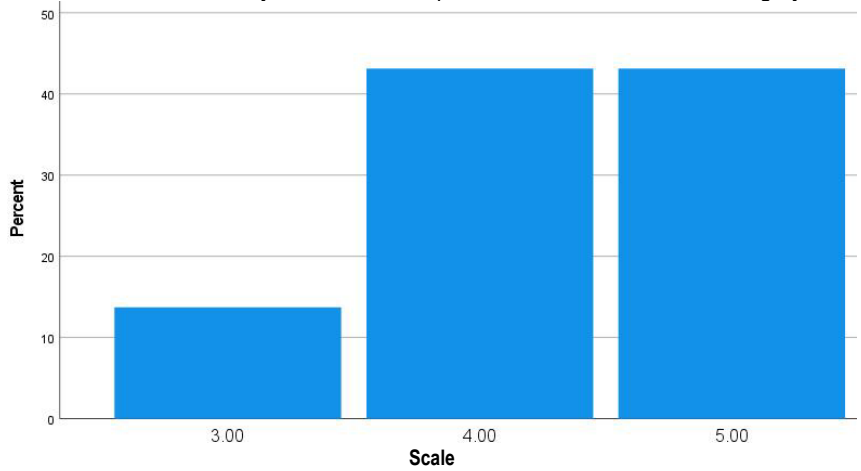

Fig. 3: Knowledge factor on OBE engagement

The finding verifies that lecturers with a strong understanding of OBE principles will better engage with the OBE approach as they could effectively create clear and measurable learning outcomes, align course content with these outcomes, and develop suitable assessment strategies to measure student achievement. Conversely, educators who lack OBE knowledge may struggle to define meaningful outcomes and align them with their teaching practices, resulting in less engagement with the approach. One study by Laguador and Dotong (2014) investigated the extent of knowledge and practice of lecturers on OBE implementation in an engineering college. The results showed that the lecturers with a high level of knowledge and understanding of OBE were more likely to contribute to realizing OBE objectives through their practice. In a different study, Rahate et al. (2020) identified that lecturers who lack an understanding of OBE will have monotonous teaching and less teaching effectiveness, which hinders the proper application of OBE concepts in the education system.

4.4 The influence of implementation factor on OBE engagements

From Figure 4, descriptive analysis shows that 74.5% strongly agree (scale 5) that the implementation factor can influence good OBE engagement in curriculum delivery. They agreed that regularly reviewing and revising course assessments can ensure students remain aligned with the desired learning outcomes.

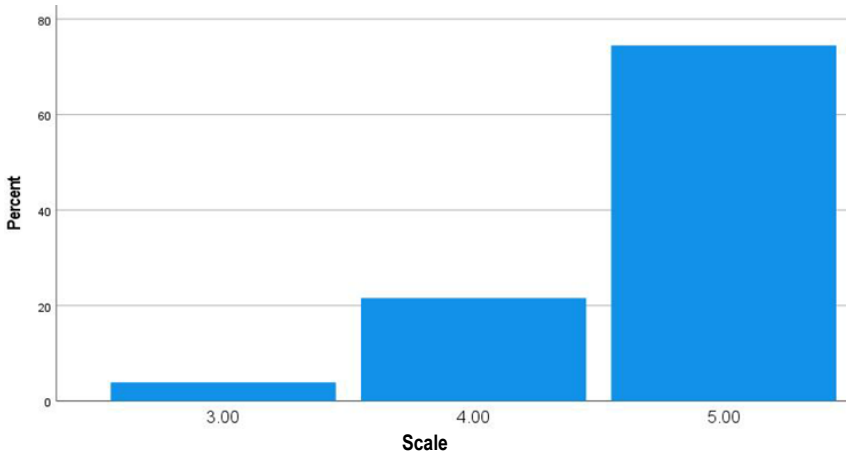

Fig. 4: Implementation factor on OBE engagement

This finding has been supported by a study conducted by Kennedy and Birch (2020) on the impact of outcome-based education (OBE) towards students studying human services degrees in the Western Sydney , University.According to them, the degree programs always received negative feedback from the students pertaining the teaching methodologies and types of assessments . As the OBE was implemented, the programs start to receive positive feedback and the students were more engaged with the learning process. The educators also have gained a better understanding on the needs to conduct more meaningful teaching sessions in order to achieve the desired learning outcomes.

4.5 The Influence of faculty/institutions involvement on OBE engagements

The involvement of faculty and institutions in providing training and information about OBE is important to ensure lecturers understand and have a good alignment between curriculum, instruction, and assessment. Based on Figure 5, most of the respondents in the category agree with the statement under faculty involvement (56.9%). Respondents agreed that consistent and regular training sessions conducted by faculty will help improve OBE engagement among lecturers, especially young lecturers.

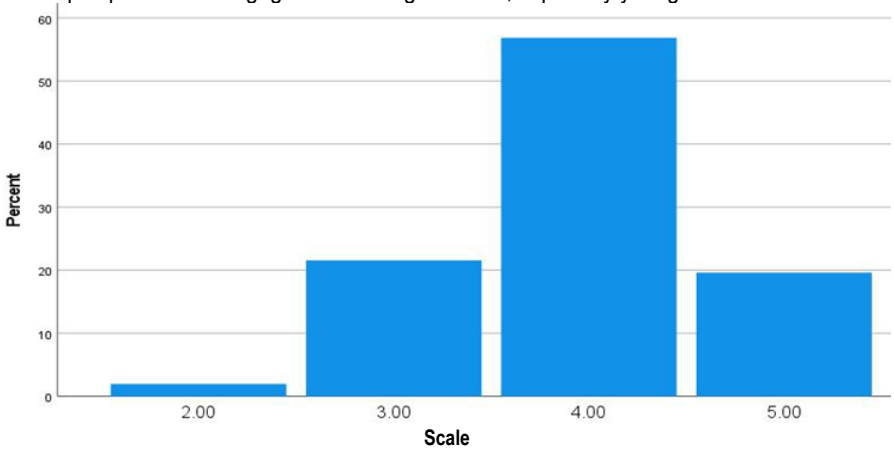

Fig. 5: Involvement of the faculty/institution

The finding highlights that continuous training and professional development play a crucial role in the engagement level of outcome-based education (OBE) among lecturers. For instance, lecturers require training on designing assessments that align with the specified outcomes, the mechanism to provide meaningful feedback to students, and the techniques to continuously improve student achievements. Training is also important to foster collaboration and effective communication among lecturers to achieve common goals. Similarly, Choi and Chang (2009) also found that institutional support is important in promoting OBE implementation in organizations. It identifies various institutional enablers such as management support, resource availability, and continuous training that could facilitate the implementation of innovative practices like OBE. Biswas et al., (2022) also agreed that faculty support plays a crucial role in implementing Outcome-Based Education (OBE) successfully. According to their study, faculty members who received sufficient institutional resources are more likely to implement these evidence-based practices than faculty members who lack institutional support. Therefore, to increase the level of OBE engagements among lecturers, they must be provided with comprehensive training, resources, and support structures that reflect the value of effective instructional practices.

4.6 Multiple Linear Regression Analysis

Based on the regression analysis, this study was able to determine the relationship and identify the most significant factors that can contribute to the relationship between independent and dependent variables. From Table 2 below, the result from R^2 shows only 79.4% of the total variation in OBE engagement can be explained by the independent variables of knowledge, implementation, and involvement of faculty or institutions. In contrast, the independent variables cannot explain the other value of 20.6%. This is due to the variables that were not included in this study. The value of R shows that the value of R is 0.891, which indicates the strong variance between the multiple correlations of all factors for this study.

Table 2. Multiple regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891[a]	.794	.781	.30309

A. Predictors: (Constant), Involvement_OBE, Implementation_OBE, Knowledge_OBE

Table 3 shows that one independent variable is significant in this study since the p-value is 0.000, less than 0.05. The crucial factors that influence OBE engagement are knowledge, with the highest beta (β) value of 0.780. It indicates that high knowledge of OBE gives an advantage in OBE engagement and indirectly can improve the teaching and learning process compared to other factors. Implementation and involvement of faculty are insignificant, indicating no relationship between those factors and OBE engagement among lecturers.

Table 3. Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-.022	.367		-.061	.952
Knowledge_OBE		.822	.095	.780	8.617	.000
Implementation_OBE		.133	.100	.112	1.331	.190
Involvement_OBE		.065	.068	.073	.958	.343

a. Dependent Variable: OBE Engagement

4.7 Correlation Analysis

Based on the results in Table 4, the correlation coefficient (r) between all factors and OBE engagement was found to have a linear positive relationship since the p-value is less than 0.005. Knowledge shows a strong correlation with OBE engagement, with a Pearson correlation value of 0.718, while implementation and faculty involvement have a weak positive relationship with values of 0.397 and 0.392, respectively.

Table 4. Correlations

		INV	IMP	KN	EG
INV	Pearson Correlation	1	.216	.440**	.392**
	Sig. (2-tailed)		.127	.001	.004
	N	51	51	51	51
IMP	Pearson Correlation	.216	1	.339*	.397**
	Sig. (2-tailed)	.127		.015	.004
	N	51	51	51	51
UND	Pearson Correlation	.440**	.339*	1	.718**
	Sig. (2-tailed)	.001	.015		.000
	N	51	51	51	51

EG	Pearson Correlation	.392**	.397**	.718**	1
	Sig. (2-tailed)	.004	.004	.000	
	N	51	51	51	51

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Overall, all of the findings are important as OBE emphasized the development of curriculum that are in line with industry and society demands which may result in more pertinent and useful education program.The emphasis on outcome will spur creative teaching strategies and the integration of technology to accommodate a range of learning outcomes.The utilization of educational technology such as interactive simulations, digital assessments and online collaboration tools can make learning sessions more dynamic and accessible.It is also important for educational institutions to provide feedback towards the effectiveness of OBE implemented by the educators for continuous improvement purposes. For example, they could apply for additional certifications and advanced courses in education to deepen their knowledge and pedagogical skills.

5.0 Conclusion

The engagement level of Outcome-Based Education among lecturers in universities is intrinsically linked to their knowledge levels, which positively relates to the implementation level. Lecturers with a deep understanding of OBE principles, curriculum design, assessment strategies, and the specific learning outcomes expected could effectively tailor their teaching methods to align with these objectives. Therefore, a high level of knowledge among lecturers is essential to ensure that OBE is implemented effectively, fostering holistic student development and improved learning outcomes. Furthermore, administrators and policymakers with a strong grasp of OBE principles can create a supportive environment for successful implementation. They can allocate resources, develop policies, and provide professional development opportunities that align with the OBE philosophy. In doing so, they facilitate a culture of continuous improvement and accountability in education.Conducting an OBE study within a single faculty can provide valuable insights specific to that context but comes with significant limitations. The results may lack generalization and diverse perspectives that influenced by faculty-specific variables. In future, further studies should be conducted by including majority of the faculties to obtain more comprehensive data towards OBE's engagements among Universiti Teknologi MARA lecturers. Besides, every higher institutions also should compare the student's performance between OBE programs and conventional education programs. The finding will become an added value for educators as they would found that OBE could fosters student critical thinking, problem-solving and other essential skills.

Acknowledgments

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Paper Contribution to Related Field of Study

Outcome-Based Education plays a crucial role in shaping modern education systems by promoting student-centered learning and clarifying the learning objectives. The outcome of this study is useful for all education institutions to maximize the OBE engagements among lecturers and students, particularly in the higher education system.

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