

Programme Educational Objectives (PEO) Achievement and Continuous Quality Improvement in TVET Accounting Education: Implications for SDG-Oriented Graduate Outcomes

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ABSTRACT

The implementation of Outcome-Based Education (OBE) across Malaysia higher education institutions, particularly in Technical and Vocational Education and Training (TVET) programmes underscores the importance of assessing long-term graduates' performance. One of the key components of the OBE framework is the evaluation of Programme Educational Objectives (PEOs), which describes the anticipated achievements of graduates in their careers and professional lives in three to five years after graduation. This study focuses on assessing PEO achievement for the Diploma in Accountancy (DAT) programme at Politeknik Sultan Azlan Shah (PSAS), as part of the institution's commitment to continuously improve quality of the programme. A structured survey was administered among 52 alumni from June 2014 and December 2014 cohorts to gather feedback on the relevance and attainment of the programme's PEOs. Descriptive analysis, including level percentage and mean scores was used to interpret alumni responses. The results indicated that most graduates perceived the PEOs as both important and successfully achieved, particularly in areas related to the technical competence, communication, problem-solving, and lifelong learning. These findings were not only validating the programme's alignment with industry expectations but also reinforce its contribution to broader educational and societal goals. In doing so, the study supports the national and global agenda for sustainable development, particularly about SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth), through the development of competence, employability, and future-ready graduates.

Keywords: Programme Educational Objectives (PEO), Outcome-Based Education (OBE), TVET, Graduate Outcomes, Continuous Quality Improvement (CQI) and Sustainable Development

INTRODUCTION

Higher education institutions are expected to produce graduates who are capable, flexible, and prepared to make significant contributions to society in addition to imparting knowledge in the quickly changing economic and professional landscape of today (Ismail et al., 2024). To guarantee that academic programmes satisfy the local and international standards of quality and relevance, Malaysia has made the adoption of OBE a national mandate (Malaysian Qualifications Accreditation, 2017). PEOs, which outline the skills and values that graduates should exhibit three to five years after graduation, are the important markers of long-term graduate success within this framework (Abbadeni et al., 2013). In addition, for TVET programmes, especially in fields such as accountancy, these objectives take on a critical role. Hence, the effectiveness of the curriculum and the institution's capacity to satisfy labour demands are reflected in the performance of TVET graduates, who are frequently the first line of talent in the business and industry sectors (Malaysian Qualifications Agency, 2024). At the same time, PEO assessment offers an opportunity for institutions to listen to their graduates—gaining valuable insights into how education translated into real-world readiness and impact (Bahagian Kurikulum, 2021).

Based on Department of Polytechnic and Community Colleges Education (JPPKK), Ministry of Higher Education (MOHE), the OBE is an educational process, which is based on trying to achieve certain specified outcomes in terms of individual student learning. The OBE assessment includes three types of outcomes or objectives, and the first is the Course Learning Outcome (CLO) that is being assessed during the semester (Ministry of Education Malaysia, 2015). Secondly is the Programme Learning Outcome (PLO) that is being assessed at the end of their three-year study, and lastly, the PEOs that are being assessed after 3-5 years of a student's graduation date (Malaysian Qualifications Accreditation, 2017). Additionally, to be essential to curriculum improvement and programme accreditation, the systematic evaluation of PEOs supports the global education agenda set forth in the Sustainable Development Goals (SDGs) of the United Nations. Besides that, this study advances SDG 4 (Quality Education) by guaranteeing the delivery of inclusivity, equitable, and pertinent post-secondary education. Graduates with industry-relevant competencies for long-term employability also advances SDG 8 (Decent Work and Economic Growth) (Ministry of Economy, 2021). Furthermore, the principles of SDG 17 (Partnerships for the Goals) are reflected in the involvement of stakeholders in the PEO development and review process, including industry partners, professional associations, and alumni which promote collaborative governance in higher education.

Within the OBE framework, it is mandatory for all TVET institutions to conduct ongoing program evaluations for each cohort. These PEOs evaluations are of utmost important as they reflect the long-term impact and professional competencies designed and fostered by the academic programme (Yahya et al., 2025). Then, the outcomes will be used in developing or improving the programme curriculum, especially the accounting program. This is important because it will provide valuable evidence in determines the capabilities of TVET as higher learning institutions, while also verifying the curriculum effectively equipped graduates with the competencies required by the industry. It is also will indirectly provide systematic evidence on the achievement of PEO to ensure there is a balance between academic delivery, industry needs, and sustainable development agendas at both national and international levels. Then, a study on the extent to which graduates demonstrate mastery in technical knowledge, leadership, problem-solving, entrepreneurial ability, and lifelong learning needs to be employed. Therefore, it is important to determine whether the graduates have met the programme's long-term learning objectives and how well the programme has met stakeholder expectations within the OBE framework.

The Overview of Programme Educational Objectives (PEO)

The objective of Politeknik Sultan Azlan Shah's (PSAS) Diploma in Accountancy (DAT) programme is to prepare capable, well-rounded graduates with values, abilities, and knowledge required to meet industry and national goals. Furthermore, it is in line with the TVET framework and OBE principles whereby the programme has established four specific PEOs that graduates must meet within three to five years' programme. For that, Table 1 provides specifics on these objectives.

Table 1. Programme Educational Objectives (PEO)

PEO 1:	Knowledgeable and Technically Competent in Accounting Discipline In-Line with The Industry Requirement
PEO 2:	Effective in Communication and Demonstrate Good Leadership Quality in an Organization
PEO 3:	Capable to Solve Problems in Business Situations Innovatively, Creatively and Ethically Through Sustainable Approach
PEO 4:	Able to Demonstrate Entrepreneurship Skills and Recognize the Needs of Life-Long Learning for Successful Career Advancement

These PEOs are created in collaboration with a range of stakeholders, such as alumni, industry representatives, and academic staff. They are then reviewed on a regular basis to ensure the relevancy and always in line with both international trends and national education goals. Alumni's feedback is crucial to the programme's continuous quality improvement (CQI) efforts because it helps assess how well the educational experience was received and pinpoint the areas that need improvement. Because of this, graduates' opinions and feedback offer insightful information about the programme's advantages and disadvantages and act as a standard for future

enhancements (Suhaimi et al., 2022). What is more, the Department of Commerce and the Head of Programme oversee and verifying that graduates meet the specified PEOs to make sure DAT programme keep up its intended educational objectives. As a result, this study's two primary objectives are to evaluate the degree of alignment between graduate outcomes and PEOs. Therefore, the first objective is to measure how important DAT programme alumni think of the PEO statements. Furthermore, the second objective is to find out how much each PEO is believed to have accomplished by DAT alumni. Accordingly, in support of SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth), these goals are expected to offer data-driven evidence in support of curriculum review, graduate tracking, and strategic improvements in teaching and learning through sustainable and outcome-driven education planning. The remainder of this study is organized as follows. The next section provides a literature review followed by methodology. The next section presents the results and follows with discussion, while the final section concludes the paper.

LITERATURE REVIEW

In the Malaysian context, the adoption of OBE is mandated by the Ministry of Higher Education (MOHE) and the Malaysian Qualifications Agency (MQA) to ensure consistent quality and relevance across all academic programmes. As part of this national agenda, Higher Education Providers (HEPs) are required to embed OBE principles within programmes structures, thereby enhancing graduate readiness and employability (Malaysian Qualifications Agency, 2024). The adoption of OBE has significantly transformed curriculum development in higher education worldwide. In contrast to traditional education models that primarily emphasize content delivery, OBE places the learner at the centre of the educational process by focusing on the achievement of specific outcomes (Rahifa et al., 2023). This approach is to make sure that graduates are equipped with not only relevant knowledge and technical skills, but also with the competencies and values needed to effectively respond to the dynamic demands of industry, professional practice, and the broader society (Yusof et al., 2017). Furthermore, one part of the OBE that needs to be measured is PEO. PEO is a long-term programme statement that reassures the institution's educational objectives as well as the National Education Philosophy, Vision, and Mission (Jamaludin et al., 2021). PEO are broad statements which describe the expected achievement of graduates in their career and professional life after graduation within three to five years of graduation (Abbadeni et al., 2013; Ab-Rahman et al., 2022). All institutions in Malaysia need to measure the PEO for accreditation and CQI (Hairi et al., 2019). This is particularly relevant to TVET institutions offering accounting programmes, where graduates are expected to meet both professional standards and expectations of industry.

METHODOLOGY

Data collection for PEO

The target population comprised of 106 DAT students who admitted in June 2014, 43 students overall, and additionally of 63 students for the December 2014 cohort, totalling 106 students. Of these, there were 91 students graduated from these cohorts in total. The study aimed to collect feedback from all reachable graduates from these cohorts. In practice, the distribution process reached the entire population through alumni channels; therefore, the study employed a census approach rather than a random sample technique. A total of 52 responses graduates of Politeknik Sultan Azlan Shah's Diploma in Accountancy programme, specifically from the graduating cohorts of 2017, 2018, and 2019 were received and analysed in the data analysis, representing a response rate of approximately 57%. While this sample size provides useful insights for programme evaluation, and potential self-selection bias are acknowledged as study limitation. Data were collected through a structured online questionnaire, administered via Google Forms platform. This method was selected to facilitate ease of access for respondents, thereby enhancing the efficiency of data collection and ensuring comprehensive responses to the survey. The applications to distribute questionnaires to the graduates were obtained through the Head of the Accountancy Programme. Next, this questionnaire was distributed with the help of academic advisors and students. Academic advisors and students subsequently share web addresses through WhatsApp and Telegram groups of their respective classes. Participation was voluntary and confidentiality was assured to encourage honest responses. Respondents have answered the questionnaire and continued to send it through the link (Suhaimi et al., 2022).

Research instrument

There are three parts that are built into this questionnaire item. For Part 1 for alumni demographics (respondents), captured respondents 'background information such as graduation year, gender, employment status and income range. While for Part 2, the alumni were asked to evaluate the importance level of PEO statements according to alumni, using a five-point Likert scale, where the respondents need to state their level of importance on the PEO statements according to alumni for each item using "1 = not important", "2 = less important", "3 = moderately important", "4 = important" or "5 = very important". Whereby, in Part 3 alumni need to identify their perceived level of each of PEO used a five-point Likert scale, where the respondents need to state their level of perceived alumni achievement of PEO for each item using "1 = very weak", "2 = weak", "3 = moderate", "4 = good" or "5 = very good". The distribution number of questions was according to the section in this questionnaire as shown in Table 2.

Table 2. Questionnaire distribution part

Part	Items	No. of question
Part 1	Respondents Demography	(19 questions)
Part 2	Importance of PEO statements according to alumni	(4 questions)
Part 3	Perceived Alumni Achievement of PEO	(8 questions)

RESULTS

This PEO review analysis study was developed based on data from the results of questionnaires from the Diploma in Accountancy graduates of Politeknik Sultan Azlan Shah from batch of 2017, 2018, and 2019. This study targets the collection of data to measure the proximity of graduates to the PEO.

Profile of respondents

The PEOs instrument questionnaire was distributed to the students of June 2014 admission cohort through google form to assess the PEO for the Diploma in Accountancy (DAT). Students were given one month to complete this survey. The target respondents are students who graduated in 2017 and 2018. There were 52 respondents who respond and answered all the questions. In terms of genders, female respondents outnumbered male respondents from (84.6%) to (15.4%). From this study, 51% of respondents graduated in 2017, while 37.3% were in 2018 and 11.8% graduated in 2019. Most of the respondents are now employed in various sectors with 69.5%, while 7.5% are self-employed and 23% are unemployed. Most of the respondents are employed as accountant assistant, administrative cum finance executive, audit assistant, and other positions. The range of respondents' income less than RM1,000 is 5.8%, RM1,001- RM2,000 is 46.2%, RM2,001-RM 3,000 is 30%, more than RM3,000 (4%), and the other is not applicable (14%).

Importance level of PEO statements according to alumni

This section presents the results of perceived importance on the PEO among alumni of the Diploma in Accountancy (DAT) programme. For PEO 1, most respondents (54.9%) rated the importance of being knowledgeable and technically competent in accounting, in line with industry requirements, as 'Very Important.' Additionally, 39.2% rated it as 'Important,' and 5.9% as 'Moderately Important.' As PEO 2, which focuses on effective communication and leadership skills within an organization, 56.9% of respondents rated this as 'Very Important,' 31% as 'Important,' and 11.8% as 'Moderately Important.' For PEO 3, which emphasizes problem-solving capabilities in business situations through innovative, creative, and ethical approaches, 52.9% of respondents rated this as 'Very Important,' 35.3% as 'Important,' and 11.8% as 'Moderately Important.' Lastly, concerning PEO 4, which pertains to demonstrating entrepreneurship skills and recognizing the need for lifelong learning for career advancement, 56.9% rated it as 'Very Important,' 35.3% as 'Important,' 5.9% as 'Moderately Important,' and 2% as 'Less Important.' Hence, Table 3 below summarizes DAT alumni's perceptions of the PEOs' significance. As shown in Table 3, the mean scores of all PEOs are 4.5, indicating that respondents considered all PEOs to be highly important.

Table 3. Level of importance of PEO according to alumni of DAT programme

PEO no.	Programme Education Objective	Level of important	Mean scores	Standard deviations (SD)
PEO 1:	Knowledgeable and Technically Competent in Accounting Discipline In-Line with The Industry Requirement	Very Important = 54.9% Important = 39.2% Moderately Important = 5.9%	4.5	0.61
PEO 2:	Effective in Communication and Demonstrate Good Leadership Quality in an Organization	Very Important = 56.9% Important = 31.4% Moderately Important = 11.8%	4.5	0.68
PEO 3:	Capable to Solve Problems in Business Situations Innovatively, Creatively and Ethically Through Sustainable Approach	Very Important = 52.9% Important = 35.3% Moderately Important = 11.8%	4.5	0.66
PEO 4:	Able to Demonstrate Entrepreneurship Skills and Recognize the Needs of Life-Long Learning for Successful Career Advancement	Very Important = 56.9% Important = 35.3% Moderately Important = 5.9% Less Important = 2%	4.5	0.66

Level of perceived alumni achievement of PEO

The findings about the perceived degree of PEO achievement among DAT programme graduates are shown in this section. The PEO was assessed using eight questions. Two questions were evaluated for PEO 1. Meanwhile, PEO 2 was evaluated using three questions, and PEO 3 was evaluated using a single question. PEO 4 was assessed using two questions. Table 4 provides findings on these questions.

PEO 1 was evaluated using two questions. For the first question, 49% of alumni gave their achievement level a "Good" rating which demonstrates that they have firm grasp of the accounting field that is in line with industry standards. While for the second question, 51.9% of alumni also gave their achievement level a "Good" rating, indicating that they were able to finish tasks efficiently in a variety of accounting scenarios. As for all these findings, it points that DAT programme graduates have effectively met PEO 1's goals, which call for both thorough understanding and technical proficiency in the accounting field in accordance to the industry standards and requirements. Furthermore, three questions were evaluated to determine whether PEO 2 met. Most alumni (51.9%) assessed their achievement level for the first question as "Good," which means they were proficient at showcasing their written and verbal communication abilities. Meanwhile, referring to second statement, 53.8% of alumni rated their achievement level as "Good," indicating their capacity to persuade others to pursue organizational objectives through clear and concise communication. Additionally, 48.1% of alumni gave their achievement level a "Very Good" rating to the third question, which indicates a high level of effectiveness in teamwork and preserving good relationships. Therefore, these results show that the DAT programme graduates have successfully fulfilled the goals stated in PEO 2, which stressed the significance of effective communication and leadership skills in organizational contexts.

On the other hand, one target question was assessed in PEO 3. 48.1% of alumni gave their achievement level a "Good" rating, indicating that they could proactively solve problems using a sustainable approach. This signifies that the DAT programme's graduates have successfully met the goals outlined in PEO 3, which proves the ability to solve business problems in an original, imaginative, and morally sound manner with an emphasis on sustainable practices. Two separate questions were examined in the assessment of PEO 4. As for the first question, 44.2% of alumni gave their achievement level a "Good" rating, demonstrating their mastery of the hard and soft skills required to support business expansion. Regarding the second question, 44.2% of alumni gave their achievement level a "Very Good" rating which indicates the capacity to keep improving their tools, knowledge, and abilities. Thus, all these findings support the idea that DAT programme graduates have successfully met PEO 4 goals by exhibiting strong entrepreneurial abilities and demonstrated dedication to lifelong learning, which is necessary for successful career advancement. As shown in Table 4, the mean scores for perceived achievement ranged from 4.11 to 4.34, indicating that respondents generally rated their achievement positively across all four PEOs.

Table 4. Level of perceived alumni achievement PEO among alumni of DAT programme

PEO no.	Programme Objective	Education	Item	Level of perceived alumni achievement of PEO	Means score	Standard deviation (SD)
PEO 1:	Knowledgeable and Technically Competent in Accounting Discipline In-Line with The Industry Requirement		Q1: I can show a clear understanding of accounting discipline in-line with the industry requirements.	Very Good = 35.3% Good = 49% Moderate = 15.7%	4.19	0.70
			Q2: I'm able to complete tasks given in various accounting situations.	Very Good = 32.7% Good = 51.9% Moderate = 15.4%	4.20	0.68
PEO 2:	Effective in Communication and Demonstrate Good Leadership Quality in an Organization		Q3: I'm able to demonstrate verbal and written communication skills.	Very Good = 32.7% Good = 51.9% Moderate = 15.4%	4.19	0.70
			Q4: I'm able to make clear and understandable communication in influencing others towards achieving goals.	Very Good = 38.5% Good = 53.8% Moderate = 7.7%	4.29	0.65
			Q5: I can work collaboratively and maintain good relationships within the teams.	Very Good = 48.1% Good = 40.4% Moderate = 11.5%	4.34	0.70
PEO 3:	Capable to Solve Problems in Business Situations Innovatively, Creatively and Ethically Through Sustainable Approach		Q6: I'm capable of solving problems proactively through sustainable approach.	Very Good = 30.8% Good = 48.1% Moderate = 21.2%	4.11	0.70
PEO 4:	Able to Demonstrate Entrepreneurship Skills and Recognize the Needs of Life-Long Learning for Successful Career Advancement		Q7: I can possess both soft and hard skills to accommodate the growth of businesses.	Very Good = 32.7% Good = 44.2% Moderate = 23.1%	4.14	0.72
			Q8: I'm able to expand the ability to learn by regularly upgrading new knowledge, skills, and tools.	Very Good = 44.2% Good = 40.4% Moderate = 13.5%	4.31	0.74

DISCUSSION

The findings of this study provide important insights into the extent to which the DAT program at PSAS has achieved the PEOs within the OBE framework. The findings of this study are consistent with previous studies, where alumni generally perceived that the PEOs are highly relevant to their professional development and career advancement. This is evidenced by the strong ratings in PEO 1 (technical competence) and PEO 2 (communication and leadership), which indicate that both PEOs have been achieved in providing graduates with the basic skills required by the accounting profession. This indicates that the achievement of the PEOs of the accounting program in TVET institutions supports the national agenda in increasing the employability of graduates by producing competent graduates who meet the needs of the industry. Furthermore, the findings in the achievement of PEO 3 (problem solving ability) also show positive achievements. This indicates that graduates can solve problems by applying critical and creative thinking especially in dealing with challenges in the workplace. These findings support the argument that TVET graduates are not only trained for technical tasks but are also able to contribute to innovation in an inclusive and sustainable manner.

In comparison, the perceived achievement of PEO 4 (entrepreneurship and lifelong learning), while still rated positively. This is concerning because there is a growing demand for entrepreneurship and lifelong learning in preparing graduates who are ready to deal with digital transformation and innovation-driven entrepreneurship in

global business practices. Moreover, it is very important to prepare graduates who always want to progress in their long-term careers and self-sustainability. In addition, the findings of this study can be used by the policy level at JPPKK, MOHE in strengthening continuous quality improvement in higher education. It is not a systematic finding to confirm the achievement of a program alone, but rather empirical evidence to support the curriculum review and the involvement of stakeholders, especially supporting industries. Overall, this study confirm that the DAT program has been successful in achieving the desired PEOs, while also identifying targeted areas for future improvement.

CONCLUSION

Remarkably, this research has clearly shown the assessment of PSAS alumni's DAT PEOs portray a high degree of success in several important areas. Alumni have successfully fulfilled the programme's objectives, according to an analysis of data from 52 graduates in 2017, 2018, and 2019. The evaluation was conducted using an online survey made available through Google Forms has addressed four different PEOs and demonstrated the programme's dedication to produce technically proficient and well-rounded professionals. The findings indicate that graduates have performed exceptionally well in areas like entrepreneurial skills, sustainable approaches to problem-solving, and effective communication. As a result, alumni have demonstrated strong aptitude for both hard and soft skills for business expansion, a dedication to lifelong learning, and the capacity to solve business problems in creative and morally sound manner. Hence, these outcomes demonstrate how well the programme prepares graduates to handle the demands of their professional careers and make significant contributions to their fields.

Furthermore, DAT PEOs must be met as it has direct impact on graduates' effectiveness and success in their professional lives. By achieving these goals, graduates acquired the fundamental abilities and know-how to succeed in the accounting sector, guaranteeing they are ready for the rigors of their positions. (Mohamad Amin & Abd Rahman, 2022). Moreover, graduates who possess the effective communication and leadership skills that the PEOs has emphasized are able to lead teams, influence others, and confidently negotiate complex organizational dynamics better. In addition, the focus on ethical and creative problem-solving guarantee the graduates to approach real-world obstacles in novelty ways while upholding the highest standards of integrity. In the fast-paced business setting, this strategy aids their ability to adjust to changes and remain relevant. Nevertheless, the DAT programme contributes significantly to the development of Malaysia's TVET landscape by giving graduates real-world skills that meets with industry demands and international standards. Additionally, to satisfy the needs of the local labour force, the programme has made significant contributions to more general objectives of sustainable development, especially in the SDGs of the United Nations which are SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth). The programme embodies the spirit of SDG 4 by emphasizing inclusive, relevant, and high-quality education, equipping students with the skills and knowledge needed to thrive in the twenty-first century. At the same time, the programme actively supports SDG 8 by producing graduates who possess proficiency not only in technical aspect but also morally grounded, flexible, and enterprising. These graduates are more prepared to succeed in a job market that is constantly evolving, able to contribute to business innovation, and enter the workforce with confidence. Lastly, the emphasis on lifelong learning and entrepreneurship motivates graduates to advance in their careers. This kind of thinking encourages a proactive approach in professional and personal development which open doors to more opportunities. Therefore, achieving these PEO essentially means that DAT graduates are prepared with the abilities and mindset necessary for long-term success, enable them to advance in careers and contribute significantly to the fields.

This research offers valuable insights for continuous improvement (CQI) in TVET accounting education. However, this study is subject to several limitations that should be acknowledged. First, the sample size was relatively modest (n=52) and relied on voluntary participation which this may limit the generalisability of the result. Second, no formal validity and reliability testing of the questionnaire was undertaken, which may affect the robustness of the instrument. Future research should address these limitations by employing larger samples, integrating instrument validation and applying more advanced statistical analyses to explore factors that influencing PEO achievement more comprehensively. In conclusion, this study contributes to the growing body of literature on PEO evaluation within TVET institution. It also provides valuable evidence for curriculum review, stakeholder engagement and strategic improvement in accounting education especially for supporting the long impact of TVET programmes in Malaysia.

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