
**ANALYSIS OF COURSE LEARNING OUTCOMES ATTAINMENT
FOR BUSINESS ACCOUNTING IN DIPLOMA OF ISLAMIC
FINANCE: A CASE STUDY OF COLLEGE PROFESSIONAL MARA
BANDAR MELAKA**

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ABSTRACT

Course learning outcomes (CLOs) are statements defining what students should achieve by the end of a program, and their attainment is crucial for accreditation by the Malaysian Qualifications Agency (MQA). Thus, the objectives of this study are: (i) to investigate the trend of attainment of predetermined CLOs (ii) to identify the factors contributing to the attainment of the predetermined CLOs, and (iii) to suggest improvement measures towards the attainment of predetermined CLOs. The study used a mixed-method approach where in the quantitative approach, data were collected from CLOs reports issued by the Internal Quality Assurance (IQA) Unit to achieve the first objective. In the qualitative approach, data were obtained through interviews to achieve the second and third objectives. Descriptive analyses were used for the first objective, while thematic analyses addressed the second and third objectives. The results have shown that the attainment of CLO 3 was below 70%. The key performance index ranking is indicated as weak if a score falls below 70%. The findings identified time constraints, complexity, and instructional techniques as factors influencing CLO 3 attainment. Consequently, the study recommends evaluating the current curriculum and teaching methods to improve course learning outcomes.

Keywords: Course Learning Outcomes, Business Accounting, Key Performance Indicators, Kolej Profesional MARA Bandar Melaka

INTRODUCTION

Kolej Profesional MARA (KPM) is a college under the management of the Higher Education Division (BPT) of MARA and is an institution of higher learning that offers diploma and certificate programs. Each program offered is required to obtain accreditation from the Malaysian Qualification Agency (MQA) and the accreditation of the programs is based on the Outcome-Based Education (OBE) framework. OBE is a student-centered educational approach that emphasizes what students should be able to do in the real world after completing a course or program (Babu, Anithamol and Roy, Anumol, 2023).

One of the key components in OBE is the attainment of course learning outcomes (CLOs). CLOs outline what students are expected to understand and demonstrate by the end of the

course. These outcomes must be crafted by the course coordinator, who is an expert in the subject matter. CLOs should be expressed according to Bloom's Taxonomy, using appropriate action verbs that reflect the relevance and significance of different levels of knowledge (Lavanya and Murthy, 2022). Student performance can be evaluated by assessing the attainment of the CLOs, which are measured through tests, assignments, and examinations. If these outcomes are not met, they are re-evaluated, thereby ensuring that Continual Quality Improvement (CQI) is integrated into the education system.

Diploma in Islamic Finance offered in Kolej Profesional MARA Bandar Melaka (KPMBM) aims to prepare students for careers in the Islamic banking and finance industry. One of the core courses proposed in this program is Business Accounting (ACC1143). This course covers the fundamental of financial and management accounting (Programme Standard Muamalat and Islamic Finance, 2022). Successful completion of the course is crucial to demonstrating a learner's ability to grasp knowledge and skills in recording, processing, and reporting business transactions, as well as in making informed decisions. Therefore, the CLOs of this course should be measurable and observable through the learning domains (Malaysian Qualifications Framework, 2024). Malaysian Qualifications Framework (MQF) was serve as a national reference point for Malaysian qualifications and this framework was developed by MQA. Each learning domain should address the necessary skill development, including knowledge and understanding, cognitive skills, practical skills, interpersonal skills, communication skills, digital skills, numeracy skills, leadership skills, personal and entrepreneurial skills, as well as ethics and professionalism (Malaysian Qualifications Framework, 2024). Table 1 shows the CLOs of Business Accounting course used in KPMBM, while Table 2 indicates the mapping of CLOs with learning domains, as well as teaching and assessment methods.

Table 1

Course Learning Outcomes ACC1143

| | |
|------|--|
| CLO1 | Explain the conceptual framework of financial and management accounting. |
| CLO2 | Construct financial statements using computerised accounting system. |
| CLO3 | Compute the basic performance indicator for business decision making. |

Table 2
Mapping of CLOs-LO-TM-AM

| | Learning Outcomes (LO) | | | | | | | | | | | Teaching Methods (TM) | Assessment Methods (AM) | |
|-------|------------------------|------|------|------|------|------|------|------|------|-------|-------|-----------------------|-------------------------|---------------------------------------|
| | LO 1 | LO 2 | LO 3 | LO 4 | LO 5 | LO 6 | LO 7 | LO 8 | LO 9 | LO 10 | LO 11 | | | |
| CLO 1 | √ | | | | | | | | | | | | Lecture/ Tutorial | Written Test |
| CLO 2 | | | | | | √ | | | | | | | Lecture/ Practical | Assignment |
| CLO 3 | | | | | | | √ | | | | | | Lecture/ Tutorial | Written Test, Final Examination |

* LO1: Knowledge; LO6: Digital Skills; LO7: Numeracy Skills

PROBLEM STATEMENT

Learning outcomes are indicators of success of an academic programme. They are expected to guide the teaching and learning process, assessment, and curriculum development. On top of that, a learning outcomes approach has become fundamental in the Malaysian Higher Education. All programmes within the higher education sectors are expected to be in compliance with the MQF. Examining CLOs is part of MQF criteria and become a tool to systematically reflect on the success of teaching and learning (Aziz, Yusuf & Yatim, 2012).

Despite the importance of CLOs, very few studies had explicitly focused examining the quality of course learning outcomes within courses (Schoepp, 2019). This study is the first internal study conducted to investigate the attainment of CLOs for Business Accounting for Diploma in Islamic Finance programme. The objectives of this study are: (i) to investigate the trend of attainment of predetermined CLOs (ii) to identify the factors contributing to the attainment of the predetermined CLOs, and (iii) to suggest improvement measures towards the attainment of predetermined CLOs. The findings of this study are expected to enhance the quality of the course and improve the achievement of the stipulated learning outcomes.

LITERATURE REVIEW

This section discusses the theories and previous studies related to the Outcome-Based Educations and attainment of CLOs.

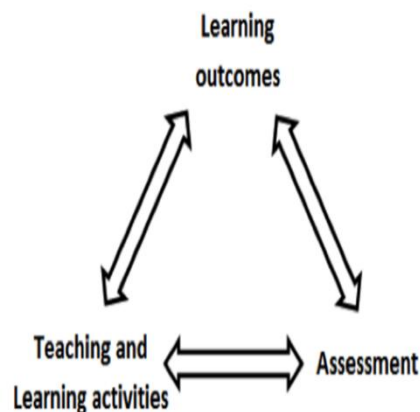
Constructive Alignment Model

Constructive alignment model is an instructional design model where the teacher's role is to create a learning environment that fosters activities aimed at achieving the intended course learning outcomes. The essence of this model lies in connecting teaching activities, assessment tasks, and learning outcomes to ensure that students reach the desired educational goals (Biggs, 1996). It's particularly useful in examining the attainment of CLOs because it creates a coherent structure that guides both teaching and assessment practices. By systematically applying constructive alignment, educators can more effectively ensure that course learning outcomes are not only well-defined but also achievable and assessable, leading to better educational outcomes (Loughin, Lygo-Baker and Lindberg-Sand, 2021).

This model aligns three components, as illustrated in Figure 1.

Figure 1

Constructive Alignment



Note: Adapted from Biggs.J, 1996

Outcome-Based Education (OBE)

OBE is a process that involves restructuring the curriculum, teaching and learning methods, assessment techniques, and reporting methods, with an emphasis on the learning outcomes that each student is expected to achieve (Macayan, 2017). Learning outcomes refer to what students can demonstrate after something has been taught. This ensures that students consistently master their learning each semester, without having to wait until the end of their studies at any institution of higher learning. Therefore, the implementation of OBE has become a crucial aspect of education, and it must be designed correctly and appropriately to meet the current academic and industry needs (Chowdhury et al., 2013).

A study involving 151 graduates from Politeknik Muadzam Shah in mechanical engineering revealed a high percentage of achievement across all Program Educational Objectives (PEOs) statements, including the ability to apply knowledge, communication skills, involvement in

community activities, and entrepreneurial skills. However, there are certain teaching and learning methods that could be enhanced to better align with market demands (Suhaimi, Juwara, and Abdullah, 2022). Similarly, a study by Min, Jackman, and Gemmel (2013) at Iowa State University to assess the achievement of PEOs in engineering program found that continuous improvements are needed, particularly in areas such as communication skills and lifelong learning.

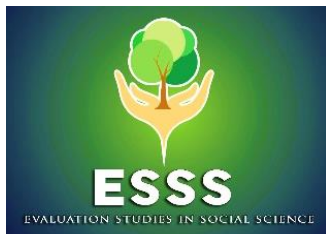
The achievement of OBE can only be assessed through the attainment of PEOs, which are reflected in the successful attainment of the CLOs of the courses that make up the program (Lavanya and Murthy, 2022). OBE requires the assessment of CLOs as detailed in each course syllabus. The evaluation of CLOs primarily depends on students' performance in tasks like quizzes, final exams, projects, and assignments, which act as indicators of their learning achievements (Osman, Jaafar, Badaruzzaman and Rahmat, 2012).

Attainment of Course Learnings Outcomes

Course learning outcomes are written statements of what the successful student is expected to be able to achieve at the end of the programme (Mahajan & Singh, 2017). Measurable course learning outcomes must be developed for each course in the curriculum once the program goals and program learning outcomes have been articulated and the curriculum has been designed (Hashim & Abd Latif, 2019). Generally, CLO are written based on Bloom's Taxonomy (Mahajan & Singh, 2017). Measuring CLOs is important to assess of how well students are achieving each course's learning outcomes.

A study by Ibrahim et al. (2021) on analysis of CLOs for Mathematics in engineering programme revealed that the value of CLOs index still need to be improved. In another study by Osman et. al. (2012) evaluated CLOs for Civil Engineering Design at University Kebangsaan Malaysia (UKM). The authors measured the achievement of eight CLOs using various assessment methods. The study highlighted the significance of continuous assessment and evaluation in improving teaching and learning methods. Boulatoff and Cyrus (2022) examined the challenges encountered in large introductory courses and proposed strategies for improving student outcomes. They noted that integrating active learning techniques, such as group discussions and activities, increased student engagement and performance. A study by Dianabasi and Ugochukwu (2020) stated that if learning outcomes have been achieved, it demonstrates the effectiveness of the lesson, which ultimately indicates that the objectives of that particular lesson have been met. According to them, effective learning depends on instructional strategies.

In a study by Lavanya and Murthy (2022) presented a methodology for calculating the attainment of both course and program outcomes. They emphasized that raising awareness and implementing assessment methods, along with systematic reviews, can significantly enhance student success. A study by Ahmad, Ali and Zainudin (2011) measures the effectiveness of the teaching and learning method by measuring the performance of the CLOs using Rasch model. The results from this study revealed that CLOs must be developed thoroughly so that it encompasses all levels from the Bloom taxonomy. They also suggested a more exact mechanism for measuring the CLOs. A study by Amoudi and AlShawwa (2023) found that teaching strategies, content complexity, and time constraints are among the top challenges



impacting the achievement of course learning outcomes during the foundational years at King Abdul Aziz University Medical School in Jeddah, Saudi Arabia.

METHODOLOGY

Research Design

This study adopts a quantitative approach to initially examine the attainment of the predetermined CLOs for ACC1143 in relation to the Key Performance Indicators (KPIs) established by the Internal Quality Assurance (IQA) unit. A CLO percentage below 70% is considered weak, prompting further investigation through qualitative methods to identify the factors contributing to this performance and to propose improvement measures. Thus, combining quantitative and qualitative methods is essential to comprehensively understand the findings and support the research conclusions.

Sampling Technique

The quantitative part involved data collection using CLO reports from the Internal Quality Assurance (IQA) Unit over a specified period to achieve the first objective. The second and third objectives of this study aim to gather independent feedback on the factors contributing to the attainment of the predetermined CLOs, as well as suggestions for improvement measures. For sampling purposes, experts were selected based on purposive sampling. Kitzinger (1995) suggested that a sample size of 6 to 12 individuals is effective and can yield valuable results. Therefore, a small sample size of six individuals with specific expertise and relevant knowledge is considered sufficient to provide information power (Malterud, Siersma & Guassora, 2016).

Data Collection

For the quantitative method, the data collection process involved retrieving the relevant CLO reports for ACC1143, and the researcher extracted pertinent information from these reports, focusing on the attainment levels of predetermined CLOs. This study also employed a semi-structured interview with six accounting lecturers involved in curriculum development to achieve the second and third objective. The researcher prepared semi-structured open-ended questions based on the Guidelines to Good Practices (2014) issued by the MQA. Five interview questions were prepared as follows:

- (i) What are the common challenges students face in achieving this CLO3?
- (ii) How do you feel about the current course design and content?
- (iii) What teaching methods do you primarily use in this course especially that related to CLO3?
- (iv) Do you find the current assessment methods to assess the CLO3 is effective?
- (v) What changes would you suggest to better achieve the CLO3 of this course?

Data Analysis

Descriptive analysis was conducted in the quantitative method to summarize attainment trends of the predetermined CLOs across different semesters, while data collected from the interviews were analyzed using thematic analysis. The researchers followed Kolb's (2012) recommendations to ensure credibility in the analysis process, where they verified the accuracy of the information with the experts and reviewed the codes with them to ensure that their interpretations were agreed upon.

RESULTS

The findings of this paper are discussed in relation to:

Quantitative Findings

Attainment of the predetermined CLOs

Tables 1 and 2 present the findings on CLO attainment for ACC1143 offered by Diploma in Islamic Finance for two consecutive years.

Table 1

CLOs Attainment: Session 2023/2024

| CLO | Description of CLO | Type of Assessment | Indeks (70%) | | |
|-----|---|--------------------|------------------------|------------------------|------------------------|
| | | | Session 1 2023/2024 | Session 2 2023/2024 | Session 3 2023/2024 |
| 1 | Explain the conceptual framework of financial and management accounting | Test | 88 | 95 | 90 |
| 2 | Construct financial statements using computerized accounting system | Assignment | 100 | 97 | 100 |
| 3 | Compute the basic performance indicator for business decision making | Test/Final Exam | 72 | 60 | 32 |

The key performance index ranking indicates as weak if a score falls below than 70%. As can be seen, for sessions 1, 2, and 3, the CLOs 1 and 2 that this course addressed had CLOs above 70%. In session 1, CLO 3 was achieved with a score of 72%. However, in sessions 2 and 3, the scores for CLO 3 were below the key performance index, with session 3 having the lowest score for CLO 3.

Table 2

CLOs Attainment: Session 2022/2023

| CLO | Description of CLO | Type of Assessment | Indeks (70%) | | |
|-----|---|--------------------|------------------------|------------------------|------------------------|
| | | | Session 1 2022/2023 | Session 2 2022/2023 | Session 3 2022/2023 |
| 1 | Explain the conceptual framework of financial and management accounting | Test | 91 | 88 | 90 |
| 2 | Construct financial statements using computerized accounting system | Assignment | 100 | 100 | 93 |
| 3 | Compute the basic performance indicator for business decision making | Test/Final Exam | 75 | 61 | 65 |

As per Table 2, it also can be seen that for sessions 1, 2, and 3, the CLOs 1 and 2 had CLOs above 70%. In session 1, CLO 3 was achieved with a score of 75%. However, in sessions 2 and 3, the scores for CLO 3 were below the key performance index, with session 2 having the lowest score for CLO 3. Overall, students in this course have demonstrated strong achievement (above 80%) for CLO 1, which involves demonstrating comprehension of the fundamental principles of financial and management accounting, and for CLO 2, which involves using appropriate computerized accounting. However, they achieved below 70% for CLO 3, which involves applying numeracy skills to solve problems related to financial and management accounting

Qualitative Findings

Factors contributing to the attainment of the predetermined CLOs

Table 1 and Table 2 show that CLO 3 demonstrated weak achievement with a score below 70%. Thus, semi-structured interviews with six accounting lecturers were systematically examined to explore the factors contributing to the under attainment of this CLO and to gather suggestions for improvement measures.

The information received from the experts was analysed thematically to identify the main themes, emerging from the experts' responses. Thus, four themes were identified from the interviews, as shown in Table 3.

Table 3

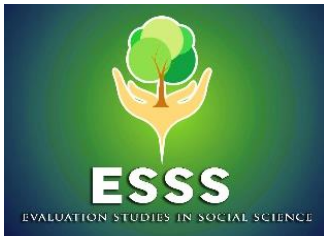
Themes and Interview Questions

| No | Themes | Interview Questions |
|----|---|--|
| 1 | Time constraint | What are the common challenges students face in achieving this CLO3? |
| 2 | Complexity (Integration of financial and management accounting) | How do you feel about the current course design and content? |
| 3 | Instructional techniques | What teaching methods do you primarily use in this course especially that related to CLO3? |
| 4 | Suitable | Do you find the current assessment methods to assess the CLO3 is effective? |
| 5 | Evaluating the current curriculum and teaching method | What changes would you suggest to better achieve the CLO3 of this course? |

In summary, the factors contributing to the poor attainment of CLO 3 are time constraints, complexity, and instructional techniques. The experts also recommended assessing the current curriculum and teaching methods as the most effective approach to enhancing the attainment of CLO 3.

DISCUSSION

This study is the first internal study conducted to investigate the attainment of CLOs for Business Accounting for Diploma in Islamic Finance programme. The objectives of this study are: (i) to investigate the trend of attainment of predetermined CLOs (ii) to identify the factors contributing to the attainment of the predetermined CLOs, and (iii) to suggest improvement



measures towards the attainment of predetermined CLOs. The results of the study shown that the attainment of CLO 3 was below 70%. The key performance index ranking indicates as weak if a score falls below than 70% (Dasar Pembangunan Pengajian Akademik, 2021). The findings identified time constraints, complexity, and instructional techniques as factors influencing CLO 3 attainment.

Time Constraint

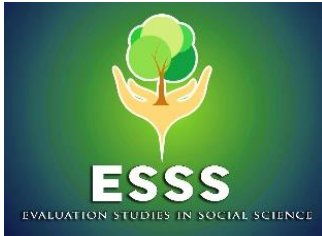
At KPMBM, they follow a three-semester system each year, with each semester lasting 12 weeks. In the Business Accounting program, there are numerous broad topics that need to be covered, but the time available is very limited. The compressed timeframe forces both lecturers and students to rush through learning material, which can result in a shallow understanding rather than a deep, meaningful grasp of key concepts. This aligns with findings from a study by Amoudi and AlShawwa (2023), which identified teaching strategies, content complexity, and time constraints as key challenges affecting the achievement of course learning outcomes.

Complexity

The complexity of the Business Accounting syllabus at KPMBM, which combines both financial and management accounting within a condensed 12-week semester, poses significant challenges. This dual focus requires students to grasp a wide range of concepts, theories, and practical applications within a very short timeframe. The dense nature of the syllabus means that students must quickly transition between different accounting disciplines, which can be overwhelming and difficult to master in depth. The results revealed in this current study are consistent with previous research by Amoudi and AlShawwa (2023). As CLO3 will be tested during final examination which cover both financial and management accounting, may lead to surface-level understanding. As a result, students may struggle to meet the expectations set by CLO 3, leading to weaker attainment levels.

Instructional Techniques

Traditional teaching methods contributing to the weak attainment of CLO3. Traditional methods, such as lectures and rote memorization, often emphasize passive learning, which may not engage students effectively or promote deep understanding of the material. In the context of KPMBM, especially for Business Accounting, where the syllabus is already complex and time is limited, these methods may not be sufficient to help students grasp complex concepts or apply their knowledge in practical ways. This finding aligns with the explanations of Dianabasi and Ugochukwu (2020), who state that effective learning depends on instructional strategies. Modern instructional strategies, such as active learning, problem-based learning, and the use of technology, could provide more interactive and student-centered approaches.



To improve course learning outcomes attainment while considering time constraints, complexity, and instructional strategies, the study recommended the importance of assessing and refining the current curriculum and teaching methods.

CONCLUSION

Overall, the analysis results clearly show the importance of course learning outcomes in enhancing the quality of teaching and learning, and consequently, the quality of students in the courses taught. It also helps lecturers monitor and control the quality of learning outcomes for each course. This practice can assist lecturers in improving the teaching and learning process more effectively. By addressing these areas, KPMBM can better align its educational approach with the goals of the Diploma of Islamic Finance program, ultimately leading to improved student performance and program success.

Future studies can be conducted by BPT MARA to examine the trends in CLOs attainment for the programs offered at KPM overall. Additionally, it is recommended that future studies should involve Diploma in Islamic Finance alumni in the feedback process to gain more diverse insights into the effectiveness of the curriculum.

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