

The Impact of Collaborative Teaching on Students' Learning Experience and Understanding of Budgeting Concepts in Management Accounting Education

Norhaslinda Daud^{1*}, Marshita Hashim², Mohd Afiq Azero³, Muhammad Ridzuan Hashim⁴

Faculty of Accountancy, Universiti Teknologi MARA, Cawangan Selangor, Kampus Puncak Alam, Selangor, Malaysia

*Corresponding Author

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ABSTRACT

Collaborative teaching has increasingly been adopted in higher education to improve student engagement, knowledge acquisition, and learning outcomes. This study investigates the impact of collaborative teaching in a Management Accounting course (MAF551) involving undergraduate accounting students. A questionnaire was distributed to 143 students from Faculty of Accountancy, UiTM Puncak Alam. Descriptive analysis revealed a strong positive change in students' understanding of budgeting concepts following the implementation of collaborative teaching. Collaborative teaching is also effective in enhancing students' learning experience, creating a supportive classroom environment, and increasing students' motivation and engagement in budgeting class sessions. Qualitative feedback further highlighted that exposure to multiple teaching perspectives enhanced conceptual understanding and classroom interaction. The findings are expected to contribute to accounting education and may assist accounting educators in designing more interactive and student-centred learning activities that support both conceptual understanding and active engagement.

Keywords: Collaborative teaching, Accounting education, Management accounting, Student engagement, Budgeting education

INTRODUCTION

The rapid transformation of higher education requires innovative teaching approaches that promote deeper learning and active student participation. Traditional lecture-based instruction often limits opportunities for students to engage with multiple perspectives and teaching styles. Collaborative teaching, also referred to as team teaching or co-teaching, involves two or more instructors jointly planning, delivering, and evaluating learning activities.

Within accounting education, budgeting topics often present conceptual and practical challenges for students because they involve both technical knowledge and managerial decision-making. Collaborative teaching enables instructors with different expertise to provide richer explanations, practical examples, and interactive learning experiences.

Although collaborative teaching has been widely discussed in education literature, empirical evidence within Malaysian accounting education remains limited. Therefore, this study investigates the impact of collaborative teaching on students' learning experience and understanding of budgeting concepts in management accounting education.

The objectives of the study are:

1. To determine the impact of students' understanding before and after the collaborative teaching.
2. To evaluate the students' learning experience towards the collaborative teaching.

LITERATURE REVIEW

The Collaborative Teaching and Students' Understanding

Collaborative teaching is grounded in social constructivist learning theory, which emphasizes that knowledge is constructed through interaction and collaboration among learners and educators. The effectiveness of collaborative teaching has been examined in accounting education. Tan (2019) investigated a structured collaborative learning approach in a case-based management accounting course. The findings indicated that students reported improvements in knowledge, critical thinking and teamwork skills following participation in the collaborative learning approach. Students also perceived the learning experience as engaging and satisfying.

Similarly, Nsor-Ambala (2022) examined collaborative learning approaches in an Accounting course and found that collaborative-based learning and assessment significantly improved students' qualitative and problem-solving examination performance. The study also reported enhanced knowledge retention, suggesting that collaborative learning may contribute not only to immediate performance but also to students' ability to retain knowledge.

More recent evidence continues to support the potential of collaborative learning in accounting education. Wu et al. (2025) found that collaborative project-based learning enhanced student engagement and academic achievement among undergraduate accounting students. Their findings suggest that structured collaboration can provide meaningful learning opportunities and contribute to improved educational attainment.

A recent study by Kelly, Hall, and Connolly (2026) further demonstrated that deliberately designed student collaboration can enhance learning and engagement in an accounting course. Students demonstrated increased learning achievement across the intervention cycles, providing further support for the use of structured collaborative activities in accounting education.

These findings suggest that collaborative teaching may be particularly useful in management accounting because students can learn from one another and increase their understanding towards the subject matter while simultaneously developing their ability to analyse and solve accounting problems.

The Collaborative Teaching and Students' Learning Experience

Students' learning experiences include engagement, interaction, support, confidence, relevance, and satisfaction. Collaborative teaching can improve these experiences by giving students different explanations, viewpoints, examples, and feedback. Rooks et al. (2022) found that students in co-taught classes valued having multiple instructor perspectives and extra support, but effective teamwork between teachers is important to avoid confusion. Awang-Hashim et al. (2023) highlighted in Malaysia that teaching quality, student-faculty engagement, and strong connections are important for collaborative and advanced learning. Similarly, Singjai (2024) reported positive student responses to active learning in strategic management accounting. Overall, cooperative teaching can boost engagement, interaction, support, and participation in accounting education.

The accounting education literature such as Tan (2019) reported that students participating in structured collaborative learning found the learning experience engaging and satisfying. The structured nature of the activities was important because students were provided with guidance on how to participate meaningfully in group discussions rather than being left to organise the collaboration independently.

Steenkamp and Brink (2024) found that peer-learning strategies promoted different forms of engagement among accounting students. Their findings showed that discussion forums, peer review and group work could facilitate social, cognitive, behavioural and collaborative engagement.

Thus, collaborative teaching may enhance students' engagement by transforming students from passive recipients of accounting knowledge into active participants in the learning process.

The Collaborative Teaching in Management Accounting in Higher Institution

Management accounting represents a suitable area for collaborative teaching because the discipline requires students to integrate technical accounting knowledge with business decision-making, strategic thinking and professional judgement. Management accountants are no longer viewed solely as providers of financial information; they increasingly act as business partners who contribute to organisational planning, decision-making and strategy.

In higher education, co-teaching has been linked to improved collaboration among instructors and greater opportunities for students to learn from diverse perspectives and receive additional support (Rooks et al., 2022). It may also increase students' confidence, satisfaction, and both cognitive and social engagement (Zach & Avugos, 2024). However, research findings on collaborative teaching are still mixed and sometimes inconsistent (De Weerd et al., 2025). Therefore, this study examines collaborative teaching in management accounting, focusing on students' learning experiences and their understanding of budgeting concepts.

Jakobsen et al. (2019) argue that management accounting education should prepare students for the contemporary role of the management accountant as a trusted business partner. Their work proposes pragmatic constructivism as a pedagogical foundation for developing students' ability to connect management accounting knowledge with practical organisational contexts.

This perspective provides a strong theoretical justification for collaborative teaching in management accounting. Different lecturers may contribute complementary expertise in areas such as costing, budgeting, performance measurement, strategic management, decision-making and professional practice. Consequently, students can be exposed to multiple perspectives rather than relying exclusively on one lecturer's interpretation of management accounting concepts.

A study by López-Pérez et al. (2019) on structured collaborative learning in an advanced management accounting course found that a structured collaborative approach improved students' knowledge, critical thinking and teamwork skills. The study is particularly relevant because it was conducted within a case-based management accounting course, where students were required to move beyond conventional lecture-based learning and engage with more complex practical problems.

Similarly, Frick et al. (2020) investigated student engagement in large management accounting lectures and found that a student-focused blended learning approach enhanced student engagement. Their findings highlight the importance of moving away from passive lecture-based learning towards approaches that actively involve students in the learning process.

Recent literature also reinforces the importance of evidence-based instructional strategies in financial and managerial accounting. Siddiqui (2026), in a structured review of two decades of accounting education research, identified experiential learning, technology, instructional design, in-class activities and educational games as important research-informed strategies for teaching financial and managerial accounting. The review highlights the need for accounting educators to continuously evaluate and redesign instructional approaches to improve learning outcomes.

METHODOLOGY

Research Design

This study employed a quantitative research approach to examine the impact of collaborative teaching on students' learning experience and understanding of budgeting concepts in management accounting education. A quantitative approach was considered appropriate because the study aimed to collect measurable data from a relatively large number of students and analyse their responses statistically.

The questionnaire was developed by the management accounting lecturer and distributed to the 143 students from the Faculty of Accountancy at Puncak Alam Campus, Universiti Teknologi MARA (UiTM) who

participated in a collaborative teaching session. A total of 143 completed questionnaires were obtained and used for the data analysis. The use of 143 respondents provides sufficient evidence to determine the impact of collaborative teaching on students' learning experience and understanding of budgeting concepts in management accounting education.

The questionnaire questions consist of students' background and academic performance, level of understanding before and after the session and learning experience and engagement towards the collaborative teaching. Responses were measured using open-ended questions and five-point Likert scales ranked from strongly disagree to strongly agree. The questionnaire was developed based on the objectives of the study and relevant literature concerning collaborative teaching.

Population and Sample

The population of this study consisted of students enrolled in the Faculty of Accountancy at Puncak Alam Campus, Universiti Teknologi MARA (UiTM). The target population was selected because accounting students are directly exposed to Management Accounting courses and are therefore able to provide relevant feedback regarding the implementation of collaborative teaching.

A total of 143 students participated in the study. The respondents were students who had experienced the collaborative teaching approach in the selected Management Accounting course. Since the study focused specifically on students who had been exposed to collaborative teaching, respondents were selected based on their participation in the teaching and learning activities under investigation.

The sampling approach can be described as purposive sampling because the respondents were required to fulfil a specific criterion, namely having experienced collaborative teaching in the Management Accounting course. This approach ensured that the responses were obtained from students who were able to evaluate the teaching approach based on their actual learning experience.

Data Analysis

A total of 143 students participated in the collaborative teaching for the Management Accounting and Control Course, and valid responses were received. The findings are presented in which are quantitative results from the Likert-scale items and qualitative insights from the open-ended responses.

Students Background and Academic Performance

The total of 143 respondents' backgrounds who participated in this study is reported in this section. The information includes their gender, level of education entering the university and CGPA. The comprehensive students background and academic performance is given in Table 4.1.

Table 4.1: Students Background and Academic Performance

Variable	Category	Frequency	Percentage (%)
Gender	Male	48	33.57%
	Female	95	66.43%
Entry Level	Matriculation	121	84.6%
	Diploma UiTM	3	2.1%
	Others	19	13.3%
CGPA	Below 2.50	0	0.0%
	2.50–2.99	9	6.3%
	3.00–3.49	40	28.0%
	3.50–4.00	94	65.7%

The gender of the respondents shows that the majority of the respondents were female. Out of 143 respondents, 95 respondents (66.43%) were female, while 48 respondents (33.57%) were male. This indicates that female students represented approximately two-thirds of the total respondents, whereas male students accounted for approximately one-third of the respondents. Therefore, the respondents were predominantly represented by female students.

The majority of respondents entered the university through the Matriculation route, comprising 121 students (84.6%) of the total respondents. This was followed by students categorised under Other entry routes, with 19 students (13.3%) which from Diploma from other universities, while only 3 students (2.1%) entered through the Diploma UiTM route. Overall, the findings indicate that the respondents were predominantly students with a Matriculation entry background.

The findings show that the largest proportion of respondents had a CGPA between 3.50 to 4.00, 94 students (65.7%). This was followed by students with a CGPA between 3.00 to 3.49, comprising 40 students (28%), and only 9 students (6.3%) had a CGPA between 2.50 to 2.99, and none of the respondents had a CGPA below 2.50. Overall, the respondents demonstrated relatively strong academic performance, with 65.7% having a CGPA of 3.50 or above.

The impact of students' understanding before and after the collaborative teaching

Table 4.2 shows a very clear improvement in students' understanding after the collaborative teaching session.

Table 4.2: Responses Before and After Collaborative Teaching

Topic / Response	Before – Unable	Before – Limited	Before – Adequate	Before – Strong	Before – Comprehensive	After – Unable	After – Limited	After – Adequate	After – Strong	After – Comprehensive
Zero-based budgeting	16	42	53	15	17	1	2	28	75	37
Incremental budgeting	14	48	52	15	14	1	2	28	73	39
Rolling budget	14	48	52	12	17	1	3	28	73	38
Activity-Based budgeting	15	41	57	16	14	1	2	23	77	40
Beyond budgeting concepts	14	44	54	15	16	1	3	26	70	43
Budget setting approach (top-down, bottom-up)	12	47	54	15	15	1	4	22	73	43
Behavioral	18	37	57	18	13	1	3	26	73	40

problems in budgeting										
Motivatio nal issues in budgeting	13	48	52	16	14	1	3	26	70	43
Budget difficulty	15	45	52	15	16	1	3	26	76	37
Budgetar y slack	13	49	52	14	15	1	4	25	71	42

Table 4.3: Summary of Strong and Comprehensive Understanding before and after the collaborative teaching

Topic	Before (%)	After (%)
Zero-based budgeting	32 (22.4%)	112 (78.3%)
Incremental budgeting	29 (20.3%)	112 (78.3%)
Rolling budget	29 (20.3%)	111 (77.6%)
Activity-Based budgeting	30 (21.0%)	117 (81.8%)
Beyond budgeting concepts	31 (21.7%)	113 (79.0%)
Budget setting approach	30 (21.0%)	116 (81.1%)
Behavioral problems in budgeting	31 (21.7%)	113 (79.0%)
Motivational issues in budgeting	30 (21.0%)	113 (79.0%)
Budget difficulty	31 (21.7%)	113 (79.0%)
Budgetary slack	29 (20.3%)	113 (79.0%)

The analysis indicates a substantial improvement in students' level of understanding following the collaborative teaching session. Before the session, only 20.3% to 22.4% of respondents reported having either strong or comprehensive understanding across the ten budgeting subtopics. However, after the session, the proportion increased considerably, ranging from 77.6% to 81.8%. The highest improvement was observed for Activity-Based Budgeting, where the proportion of students reporting strong or comprehensive understanding increased from 21.0% (30 students) before the session to 81.8% (117 students) after the session. Similarly, the understanding of the budget setting approach increased from 21.0% (30 students) to 81.1% (116 students). In addition, the proportion of students with unable or limited understanding decreased substantially across all topics. For example, students with unable or limited understanding of Zero-Based Budgeting decreased from 40.6% before the session to only 2.1% after the session. Overall, the findings demonstrate a strong positive change in students' perceived understanding of budgeting concepts following the implementation of collaborative teaching.

Students' learning experience towards the collaborative teaching

Table 4.4 Students' learning experience towards the collaborative teaching

Variable	Strongly Disagree, n (%)	Disagree, n (%)	Neutral, n (%)	Agree, n (%)	Strongly Agree, n (%)
Collaborative teaching makes the learning sessions more engaging.	0 (0.00%)	0 (0.00%)	15 (10.49%)	81 (56.64%)	47 (32.87%)
Learning from multiple instructors enhances my understanding of this	0 (0.00%)	0 (0.00%)	13 (9.09%)	83 (58.04%)	47 (32.87%)

budgeting topic.					
In my opinion, collaborative teaching creates a positive learning environment.	0 (0.00%)	0 (0.00%)	9 (6.29%)	87 (60.84%)	47 (32.87%)
In my opinion, collaborative teaching creates a supportive learning environment.	0 (0.00%)	0 (0.00%)	9 (6.29%)	86 (60.14%)	48 (33.57%)
I am more motivated to participate in collaboratively taught sessions.	0 (0.00%)	0 (0.00%)	10 (6.99%)	87 (60.84%)	46 (32.17%)

The findings indicate that collaborative teaching positively enhanced students' learning engagement. The majority of respondents (89.51%) agreed or strongly agreed that collaborative teaching made the learning sessions more engaging. This suggests that the involvement of multiple instructors may create a more dynamic and interactive learning experience, which encourages students to become more engaged during the learning process.

A total of 90.91% of respondents answered agreed or strongly agreed. This indicates that collaborative teaching with multiple instructors substantially enhances students' understanding of the budgeting topic. Only 9.09% responded neutral, while no respondents disagreed or strongly disagreed.

A total of 93.71% of respondents perceived collaborative teaching positively. This suggests that having multiple instructors contributes to a positive and conducive learning environment. Only 6.29% responded neutral, while no respondents disagreed or strongly disagreed.

A total of 93.01% of respondents answered agreed or strongly agreed. This demonstrates that students generally felt motivated during collaboratively taught sessions. This indicates that collaborative teaching has a positive effect on students' motivation and willingness to participate in learning activities.

Overall, these findings suggest that collaborative teaching is effective in enhancing students' learning experience, creating a supportive classroom environment, and increasing students' motivation and engagement in budgeting sessions.

CONCLUSION

This study proposed that collaborative teaching can play an important role in enhancing management accounting education. The adoption of collaborative teaching in Management Accounting aligns with contemporary educational goals that emphasize student-centered learning and graduate employability. Universities should encourage interdisciplinary collaboration, professional engagement, and innovative pedagogical practices to enhance student learning and academic performance.

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Universiti Teknologi MARA, Cawangan Selangor, Kampus Puncak Alam, Selangor, Malaysia

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