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United We Stand, Divided We Fall: Developing an Integrated Collaborative Teaching Model for Hospitality Online Education

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Abstract: Collaborative teaching, known as co-teaching, has garnered popularity in recent years due to its ability to enhance learning outcomes. Albeit its advantages, collaborative teaching is challenged by the complexity of management and implementation. Numerous scholars have attempted to propose co-teaching methods and strategies to resolve the issue. A conceptual framework in collaborative teaching still needs to be discovered, particularly one that connects various stakeholders from domestic and international levels. To fill the gap, this study conceptualised an Integrated Collaborative Teaching Model for hospitality education. Guided by social learning theory and constructivism, the conceptual framework proposes online teaching delivery via various methods (e.g., Blended Learning, Asynchronous Learning, Synchronous Learning, Virtual Field Trips) by academic experts, industry practitioners, and policy developers from local, regional, and international levels. The study aligns with Sustainable Development Goal 4, which is to alleviate the quality of education. The findings are expected to improve the existing curriculum, enhance the teaching and learning experience, and promote lifelong learning opportunities. The study recommends that more studies be conducted to test the integrated collaborative teaching framework empirically.

Keywords: Collaborative teaching, hospitality education, online learning, pedagogy model

Introduction

Collaborative teaching in higher learning institutions has gained significant attention in recent years due to its numerous benefits. Collaborative teaching models have also enhanced student learning outcomes and satisfaction (Lailiyah & Yustisia, 2022). These collaborative approaches involving joint instructional decisions and shared responsibility among educators have proven effective in improving student performance (Pérez & Pérez, 2022). Furthermore, collaborative teaching has been recognised as a strategy for internationalisation and networking between universities, promoting a global perspective in higher education (Borsetto & Saccon, 2023). By embracing collaborative efforts in teaching, higher learning education can equip students with the necessary knowledge and skills to face dynamic working environments.

The success of collaborative teaching lies in technological support. Technology-supported collaborative learning spaces have been recognised as innovative approaches to delivering various educational skills (Dobinson & Stokes-Thompson, 2015). For example, collaborative teaching is linked to advancements in online interactive tools such as Blackboard Collaborate Ultra, which have

increased utilisation over the past decade (Hill, 2019). Additionally, online platforms such as Google Classroom and Microsoft Teams facilitate collaborative teaching in higher education settings. These platforms offer a wide range of features supporting interactive and engaging learning experiences for educators and students. Recently, metaverse technologies have taken a step forward in advancing the teaching and learning experiences. For example, a virtual field trip simulating real-world scenarios allows students to learn hands-on skills such as communication and professional service skills (Patiar et al., 2021).

Despite its advantages in improving learning outcomes, research indicates that collaborative teaching has challenges. While it offers promising practices for teachers and students, the management and implementation of collaborative teaching can be complex (Dellicarpini, 2018). However, successful methods for incorporating collaborative teaching within hospitality classrooms have been identified (Goh & Sigala, 2020), mainly when technology is utilised to administer learning content (Børte et al., 2023). Given that technology-supported interactive learning leads to profound positive outcomes, various studies emphasised the importance of effective strategies for collaborative teaching implementation (Härkki et al., 2021). Despite continuous emphasis on the role of collaborative teaching, a conceptual framework in collaborative teaching remains scarce, precisely one that integrates academics, practitioners, and policy developers at local, regional, and international levels. Who is involved in the integrated online collaborative teaching pedagogy, what the levels of collaboration are, where to deliver collaborative teaching, and how to provide collaborative teaching remain unanswered in the existing literature. To answer these questions, the current study aims to develop an online integrated collaborative teaching framework.

Drawing on theoretical and empirical insight of social learning theory and connectivism theory, this study conceptualised a framework of collaborative teaching model for hospitality education. To achieve the objective, this conceptual paper began with a review of relevant literature pertinent to collaborative teaching in higher learning education, followed by a discussion of the theories related to the conceptualisation of the framework and a discussion on the possible implications of the integrated collaborative teaching framework for students, educators, and higher learning institutions. This study anticipates that the framework should contribute to transforming online educational experiences, making them more engaging and effective. Specifically, it should provide valuable insights into the critical components that embody a robust collaborative teaching framework. The study should serve as a beacon in shaping the future of online higher learning education, ensuring that it meets the needs of a diverse and dynamic student population.

Literature Review

Collaborative teaching in higher learning education

Collaborative teaching holds substantial potential in higher education. It enables the collective creation of knowledge and the development of skills associated with interactive processes, leading to more profound learning outcomes (Patiar et al., 2021). This teaching approach can enhance deep learning by encouraging students' active participation and meaningful social interactions (Wang et al., 2024), which is effective in promoting collaboration. These interactions enhance students' cognitive restructuring (Webb, 2009). Lecturers or teachers play a crucial role in collaborative teaching as they usually create and facilitate collaborative activities (Griffin, 2021). Students' willingness to engage is another critical success factor in collaborative teaching. For example, a study conducted among higher education lecturers who have experiences in collaboration teaching revealed a few positive impacts on learning outcomes and student motivation, proving that the approach was more favourable as students are willing to get involved with collaborative learning (De Hei et al., 2014). Thus, collaborative teaching depends on whether students have the necessary support.

Following the development of collaborative teaching, research indicates that the key elements that promote successful collaboration are associated with students' ability to work independently and regulate their behaviour. With a demanding, inclusive, and intricate group assignment, collaborative teaching necessitated the creation of original and distinctive teamwork. The effectiveness of collaborative teaching in promoting teamwork depends on the design elements of these courses. It cultivates a feeling of accountability and collective ownership over the collaborative process and the

outcome of the group assignment (Scager et al., 2016). However, not all teaching and learning teams can collaborate effectively, particularly those from different cultural backgrounds. Therefore, gaining insight into the qualities that enable students to collaborate is crucial for enhancing the effectiveness of collaborative teaching in higher education (Fransen et al., 2011). Here, the importance of meticulous preparation, the establishment of effective mechanisms for collaborative group formation, the significance of students' daily usage of technology, the role of instructors, and strategies fostering autonomy in learning management are emphasised. This suggests the need for the development of multiple collaborative teaching methods.

Multiple methods of collaborative teaching have been developed. Co-teaching is one of the effective approaches to enhance the quality of learning and experiences. Härkki et al. (2021) identified three distinct co-teaching profiles: highly collaborative, collaborative, and imbalanced cooperative co-teaching. These methods differ slightly but offer benefits like human resources sharing and cost efficiency. Co-teaching promotes professional growth for teachers and allows the combination of expertise for more effective instruction. However, a study found that co-teachers may surmount their lack of external support provided they are driven and proficient in adaptable time allocation (Härkki et al., 2021). Thus, successfully adopting co-teaching requires better alignment with supporting infrastructure for teaching (including cost) and professional development and learning outcome design (Børte et al., 2020). Here, the importance of mixing teachers (or instructors) from various backgrounds is highlighted. Aguinis et al. (2020) proposed a model to enhance scholarly impact through collaborations between researchers, policymakers, practitioners, and students. They suggest that a multistakeholder framework will allow scholars to build their impact on students, organisations, and society.

Other than instructors, other stakeholders are equally crucial to the success of collaborative teaching. Governments globally have shown significant interest in the quality of teaching in higher education in recent years. Aligning with the trajectory of learning development, the recognition of the significance of integrating the Sustainable Development Goals (SDGs) into higher education curricula, research, and institutional practices is gaining policymakers' attention. Within the realm of a prominent topic of discussion that revolves around the imperative inclusion of the SDGs in education, particularly in higher education, SDG 4 (Education) is the most frequently referenced (Alcántara-Rubio et al., 2022). Integrating SDG 4 into higher education represents the sector's dedication to promoting sustainable development and equipping students with the skills to address global challenges proficiently.

The quality of education currently lies not solely on teachers but on the comprehensive support of practitioners and policy developers. Nonetheless, an endless loop is established in which policy and practice remain stagnant and unproductive as they continue to focus on measuring or attempting to measure teaching and learning activities without achieving significant progress in advancing knowledge and subsequently enhancing teaching and learning (O'Leary & Cui, 2018). A crucial beginning is pinpointing gaps in this context, specifically in collaborative teaching. Integrating all-rounded supportive learning environments is a key to collaborative teaching, which aims to effectively engage the professional for new knowledge and ideas. Without government support, higher education could face significant challenges that impact institutions, instructors, and students. Hence, a comprehensive co-teaching framework supported by various stakeholders from various regions (locally and internationally) is needed to understand better how higher education institutions can effectively integrate expertise and deliver online courses.

Technology for advanced collaborative teaching

Higher education faces global challenges and uses a technology-supported collaborative learning environment to reach optimal results. One of the examples of new platforms used in collaborative teaching environments with built-in features is Wikis (Zheng et al., 2015). This platform can enhance constructivist learning and collaborative knowledge creation by allowing users to collectively build knowledge by developing connected pages. The constructivist approach is commonly employed while developing wiki activities in the classroom (Zheng et al., 2015). During the activities, allowing users to create content individually or in groups can facilitate individual reflection and collective knowledge creation (Parker & Chao, 2007; Higgs & McCarthy, 2005). Utilising technology enables the

possibility of reaching inclusivity by opening accessibility where students, regardless of their abilities, can fully participate and thrive in the digital learning world.

Technology is required in collaborative teaching. Advanced learning technologies are diverse tools and solutions specifically created to assist and improve students' learning process. These technologies include artificial intelligence (AI), smartboards, and diverse digital platforms that enable interactive and immersive learning experiences. The swift advancements in information and communication technologies (ICTs) have substantially influenced educational practices, resulting in the creation of advanced tools that facilitate more efficient and captivating collaborative teaching settings. Interactive technologies enhance the learning experience by making it more exciting and motivating students to engage in cooperative activities actively.

Matee et al. (2023) indicate that many Lesotho students found Virtual Collaborative Teaching beneficial and easy to use. Insufficient resources, ambiguous directions from teachers, lack of cooperation, internet access problems, and data expenses have been noted as obstacles that hinder students' effective participation in virtual collaborative teaching. Similar suggestions were made by Patiar et al. (2021), who found that virtual field trips can improve Australian students' operational and managerial skills. In addition, Kim (2024) found that data-driven problem-based learning can help Chinese educators improve students' capacity. They highlighted the importance of equipping AI with Technological, Pedagogical, and Content Knowledge and conflict management skills. More recently, metaverse technologies that utilise extended reality technologies have taken a step forward in online teaching. This new technology is interactive and immersive, allowing students to engage and interact in a virtual environment (Akyürek et al., 2024; Al-Adwan et al., 2023).

To ensure the effectiveness of online teaching, instructors and students must clearly understand which technical tools are suitable for specific circumstances rather than feeling overwhelmed by the multitude of available technologies. Additionally, selecting appropriate technology features to accommodate collaborative teaching is critical to avoid obstacles. Thus, this allows for building a comprehensive online collaborative teaching framework. The following section discusses theories related to conceptualising a framework.

Theoretical background

This study integrates social learning theory and constructivism as the basis for developing the collaborative teaching framework. The foundational principles of both theories are valuable in designing a holistic, collaborative teaching model. Social learning theory, as proposed by Bandura, emphasises the significance of observing and modelling the behaviours, attitudes, and emotional reactions of others (Zhong et al., 2022). On the other hand, constructivism, rooted in the works of Piaget and Vygotsky, posits that learners construct their understanding and knowledge through experiences and reflection (Chuang et al., 2021). Combining these two theories, the collaborative teaching framework can instil a dynamic learning environment that promotes collaboration, critical thinking, and social interaction among students.

Grounded on social learning theory, collaborative teaching can create a supportive and inclusive learning environment where students feel empowered to contribute, learn from each other, and construct knowledge collectively (Zhang et al., 2023). Educators can include collaborative activities that encourage active participation, peer mentoring, and cooperative problem-solving and foster belonging and mutual respect among students (Schreiber & Valle, 2013). This approach enhances academic achievement and nurtures students' social and emotional skills, preparing them for success in diverse social contexts and collaborative work environments (Zhu et al., 2023).

Constructivism, with its focus on student-centred learning and the construction of knowledge through social interactions, aligns well with the principles of collaborative teaching (Zhang et al., 2020). In a collaborative teaching approach, educators can encourage students to work in groups to solve problems, discuss concepts, and share their perspectives, fostering a deeper understanding of the material through social negotiation and cooperation (Richardson, 2003). This collaborative process mirrors the social interactions emphasised in social learning theory, where students learn from each other through observation, imitation, and modelling (Ramulumo & Mohapi, 2023).

By integrating social learning theory into collaborative teaching practices informed by constructivism, educators can create a rich learning environment that leverages the power of social

interactions to enhance learning outcomes (Saleem et al., 2021). Students can observe and learn from their peers, engage in meaningful discussions to co-construct knowledge and receive feedback and support from each other, fostering a sense of community and shared learning experience (Alenezi, 2019). This approach promotes academic achievement and develops students' social skills, communication abilities, and teamwork capabilities, which are essential for success in the 21st-century workforce (Schindler et al., 2017).

Moreover, using technology can enhance the integration of social learning theory and constructivism in collaborative teaching. Platforms like cloud computing, multimedia tools, and online resources can facilitate communication, collaboration, and knowledge sharing among students, regardless of physical location (Zhang, 2023). These technological tools can support group projects, virtual discussions, and joint problem-solving activities, allowing students to engage in collaborative learning experiences that mirror real-world interactions (Schreiber & Valle, 2013). Additionally, technology can provide opportunities for personalised learning, immediate feedback, and access to information, enriching the collaborative teaching process (Zhu et al., 2023).

Notably, integrating social learning theory and constructivism in collaborative teaching offers a holistic approach to education that prioritises student engagement, active participation, and social interaction. Guided by the theories, the framework provides a dynamic learning environment where students learn from each other, construct their knowledge through shared experiences, and develop essential skills for success in the digital age. An effective collaborative teaching framework should empower students to become lifelong learners, critical thinkers, and effective collaborators in a rapidly changing world through the thoughtful integration of theory, practice, and technology.

Conceptualising an Integrated Online Collaborative Teaching Pedagogy

Figure 1 presents the integrated online collaborative teaching framework guided by social learning theory and constructivism. It shows the main anchors, their background level, delivery platform, and mode of delivery.

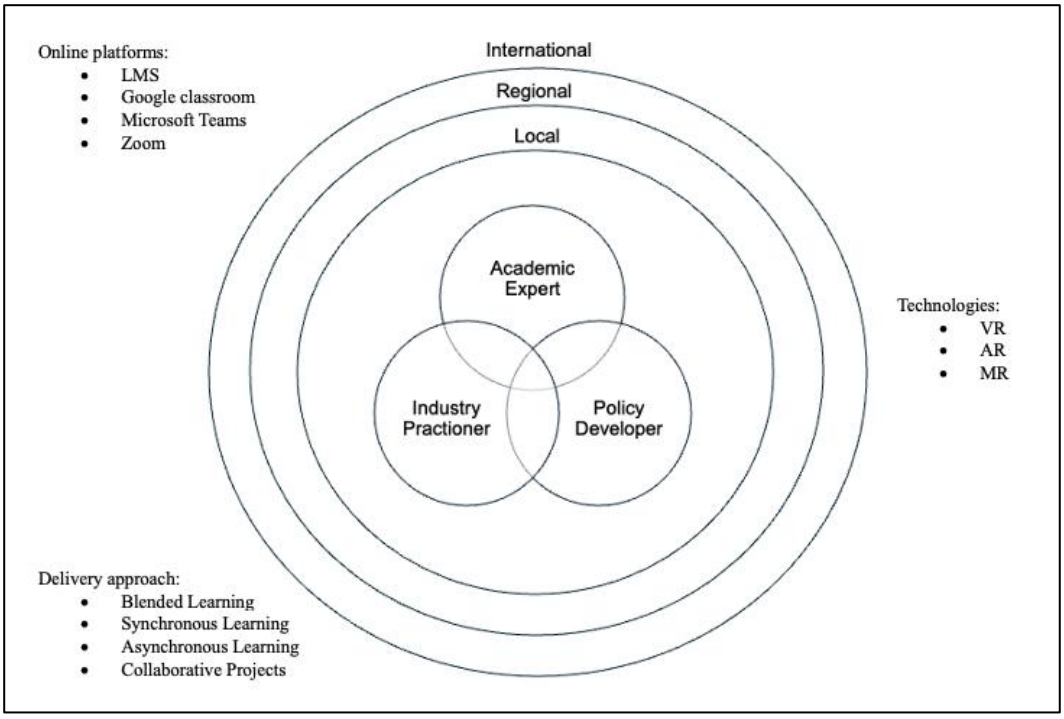

Fig. 1 The Integrated Collaborative Teaching Framework (Source: The Authors)

Who are the anchors?

The Integrated Collaborative Teaching Framework draws diverse contributors to enrich the learning experience and ensure a well-rounded education. Academic experts play a pivotal role by bringing in-depth theoretical knowledge, rigorous research methodologies, and pedagogical strategies essential for a comprehensive curriculum (Griffin, 2021). These professionals, often professors and researchers, ensure the educational content is current, relevant, and aligned with academic standards. Industry practitioners contribute practical insights and real-world experiences, bridging the gap between theory and practice (Luong et al., 2023). Their involvement ensures that students gain hands-on skills and understand industry demands and trends, which enhances their employability (Patiar et al., 2021; Ariffin et al., 2014). Meanwhile, policy developers are crucial in shaping the educational landscape by ensuring that the framework adheres to regulatory standards and meets the strategic goals of academic institutions (Tomasi et al., 2020). They facilitate the integration of innovative teaching practices while maintaining compliance with accreditation requirements and educational policies. By leveraging the strengths and expertise of these diverse sources, the framework fosters a rich, dynamic, and applicable learning environment that prepares students for academic and professional success.

What are their echelons?

The Integrated Collaborative Teaching Framework operates across multiple levels—local, regional, and international—to provide a comprehensive and adaptive educational experience. It engages nearby educational institutions and industry partners at the local level, allowing for tailored curriculum development (Griffin, 2021) that addresses specific community needs and leverages local expertise. This fosters strong community ties and ensures that education is directly relevant to the immediate job market. Moving to the regional level, the framework facilitates collaboration among institutions and industries across a broader geographic area, promoting the exchange of resources, knowledge, and best practices (Luong et al., 2023). This regional approach helps address wider educational and industry challenges, ensuring a more diverse learning experience. The framework expands to include global perspectives and practices at the international level, which is essential in today's interconnected world. It promotes intercultural competence and prepares students for the worldwide job market by exposing them to diverse educational methodologies and industry standards from around the globe (Wang et al., 2024). This multi-tiered approach ensures that the educational experience is comprehensive, inclusive, scalable, adaptable, and aligned with global trends and needs.

Where is it delivered?

The delivery of the Integrated Collaborative Teaching Framework primarily occurs through an online platform, which serves as the central hub for all educational activities. This digital environment provides a versatile and accessible medium for disseminating educational content, facilitating communication, and fostering collaboration among students, educators, and industry practitioners (Patiar et al., 2021). Online platforms, such as Learning Management Systems (LMS), virtual classrooms, and specialised educational software, offer various tools and functionalities that support interactive and immersive learning experiences. These platforms enable synchronous learning through live lectures and real-time discussions and asynchronous learning through recorded sessions, readings, and assignments that students can access at their convenience. Additionally, online platforms support collaborative projects (Griffin, 2021) by providing shared workspaces, document editing tools, and project management features. They also facilitate virtual field trips and simulations, allowing students to explore real-world scenarios and environments without geographical limitations (Patiar et al., 2021). Moreover, continuous assessment and feedback mechanisms integrated into these platforms ensure that students receive timely and constructive guidance. By leveraging the capabilities of online platforms, the framework ensures a flexible, scalable, and inclusive approach to education that can adapt to the diverse needs of learners and educators across various contexts.

How is it delivered?

The delivery process of the Integrated Collaborative Teaching Framework is designed to be multifaceted, incorporating various methods to maximise student engagement and learning outcomes. Blended Learning is a core component, combining the strengths of traditional face-to-face instruction with the flexibility of online learning (Meeprom et al., 2023). This hybrid approach allows students to benefit from direct interaction with educators and peers while also accessing course materials and participating in discussions through digital platforms at their convenience (Wang et al., 2024). Synchronous and Asynchronous Learning methods cater to different learning preferences and schedules. Synchronous learning includes live lectures, webinars, and interactive sessions, enabling real-time communication and immediate feedback. Asynchronous learning provides recorded lectures, discussion forums, and online resources that students can use at their own pace, promoting a self-directed learning environment. Evidently, students who enrolled in asynchronous learning appreciated well-organised courses and preferred highly engaged instructors and creative assignments (Deale, 2023).

Collaborative Projects play a crucial role, encouraging students to collaborate on assignments and projects (Troussas et al., 2023) using tools like shared documents, video conferencing, and project management software. These projects enhance teamwork and communication skills, as students must coordinate and integrate their efforts to achieve common goals. Additionally, Virtual Field Trips and Simulations utilise advanced technologies such as virtual reality (VR) and augmented reality (AR) to create immersive learning experiences (Akyürek et al., 2024; Al-Adwan et al., 2023; Patiar et al., 2021). These technologies allow students to explore real-world settings and scenarios in a controlled, virtual environment, providing hands-on learning opportunities that are otherwise difficult to achieve. Finally, the framework incorporates Continuous Assessment and Feedback, using formative and summative assessments to monitor student progress and provide ongoing feedback. This approach helps identify areas where students may need additional support and allows educators to adjust their teaching strategies accordingly. By integrating these diverse methods, the delivery process ensures a comprehensive, engaging, and effective educational experience.

Discussion and Implications

This study proposes an integrated collaborative teaching framework incorporating efforts of local, regional, and international academia experts, industry practitioners, and policy developers from various hospitality backgrounds. This framework, which aligns with SDG for quality education, aims to create inclusive and equitable quality education and promote lifelong learning opportunities for all. The proposed framework suggests an online delivery of quality education with a number of implications for students, educators, and higher learning institutions.

Implications for students

The framework is expected to benefit students in various ways. First, collaborative teaching should equip hospitality students with operational knowledge and skills. For hospitality students, operational knowledge and skills are essential to ensure employability. The gap between what is studied in university and how companies operate is identified during internship programs (Luong et al., 2023). Collaborative teaching is flexible and attractive (Matee et al., 2023). The flexibility of collaborative teaching allows instructors to design content and deliver courses through online platforms. For example, a virtual field trip experience will allow hospitality students to acquire the necessary knowledge and skills (i.e., personal skills, managing quality, professional skills, F&B design skills, and menu engineering skills) (Patiar et al., 2021). Through virtual field trips, students will be exposed to real-world contexts worldwide and learn a broad range of operational and managerial skills from experts in academia and industry, thus closing the gap between academic programs and actual work.

Secondly, collaborative teaching should facilitate students' perceived enjoyment of learning. Students expect an engaging and interactive learning environment (Troussas et al., 2023), and this study proposes a framework that allows students to learn from instructors and peers from various

backgrounds. According to Wang et al. (2024), a fully online or hybrid teaching approach offers highly interactive and cooperative opportunities for students to learn and share knowledge with peers from various learning experiences will facilitate learning enjoyment while increasing their intercultural awareness. Collaborative teaching focuses on interactive learning that allows idea-sharing, interaction, brainstorming, and discussion between instructors and peers from various backgrounds. Learning activities will be designed based on student's needs and preferences. Since students prefer an engaging and interactive learning environment, computer-supported collaborative teaching that involves game-based activities is a promising way to increase students' interest (Troussas et al., 2023). However, its effectiveness depends on students' willingness to cooperate (Wang et al., 2024).

As students can excel when working in a team (Che Ahmat et al., 2020), collaborative learning can help build their teamwork skills. Collaborative learning is often challenged with developing students' teamwork skills (Molintas et al., 2023). This requires educators to design a framework to mitigate the issue. A collaborative teaching framework will allow students worldwide to collaborate on projects with industry practitioners and be exposed to real-world issues and challenges (Griffin, 2021). Students must interpret the task through analysis and discussion and provide innovative solutions. In this process, students will explain their ideas and interpret other team members' ideas. Consequently, students' critical thinking and teamwork skills will be improved. Additionally, the flexibility of collaborative teaching is expected to benefit students who cannot study full-time. Online delivery of courses will make teaching time and place flexible, allowing students to tailor their learning time and balance between family, work, and study (Goh & Sigala, 2020).

Implications for educators

Collaborative teaching brings together students and educators from diverse expertise and experiences. First, this offers opportunities for improved instructional practices. Academics who are research experts may need more practical experience; conversely, industry practitioners with field experience may require more theoretical knowledge. Luong et al. (2023) highlighted the issue of underrated research-based education in vocational training colleges, proposing the need to transform the current curriculum and pedagogical approaches. In this case, collaborative teaching allows educators from various backgrounds to exchange knowledge and pedagogical approaches with industry practitioners, creating a comprehensive curriculum that benefits students. Educators from different backgrounds may share and learn diverse and innovative teaching strategies, styles, and methods, including new instructional techniques and technologies that improve current instructional practices. This will ensure continuous improvement in the academic curriculum. In the case where educators have both industry and education experiences, the importance of industry-education collaboration is still highlighted by Luong et al. (2023) to improve the curriculum and pedagogical practices.

Secondly, collaborative teaching will offer opportunities for personal and professional growth. Higher educational institutions' educators must possess various skills, particularly in teaching and research. Educators can improve personal growth through collaborative teaching by learning from each other's strengths and perspectives. Regarding professional development, collaborative teaching allows educators to exchange knowledge in their fields, teach, or collaborate in research. Thirdly, the value of collaborative teaching for educators lies in its ability to eliminate the time-consuming tasks of organising field trips (Patiar et al., 2021). Educators are essential in providing students with tools to adapt to dynamic changes (Griffin, 2021). These methods include arranging field trips, which are time- and resource-consuming. Collaborative teaching allows educators to arrange virtual field trips to hotels, restaurants, or non-domestic trips, thus saving time and resources.

Next, collaborative teaching also helps educators improve students' learning outcomes. Universities focus on theories and research, vocational colleges emphasise practical training, and industry practitioners prefer graduates with both skills. Collaboration among local, regional, and international educators and industry practitioners allows for sharing teaching plans and best practices, allowing educators to create a cohesive and effective teaching strategy to improve students' performance. This is evident in Matee et al. (2023) findings that students found virtual collaborative learning informative and convenient. The framework that focuses on teaching beyond classroom walls is expected to encourage innovative thinking among students. However, for collaborative teaching to

be effective, educators must consider students' emotional states (Hasan et al., 2024) and the particular needs of students (Md Nor & Mahzan, 2024) in crafting the innovative collaborative delivery approach.

Implications for higher learning institutions

The framework benefits higher learning institutions mainly in achieving the policy of universities to produce globally employable graduates (Matee et al., 2023). Many higher education institutions lack practical training facilities to improve students' operational knowledge and skills to ensure employability (Patiar et al., 2021). Collaborative teaching allows these institutions to gather and connect local and international experts from academia, industry practitioners, and policymakers. Those institutions with training facilities or industry players may share their resources, leading to an efficient use of institutional resources. This then allows higher education institutions to achieve economies of scale. By collaborating with other institutions, higher education institutions can share resources such as educators, facilities, and technologies.

Consequently, collaborative teaching will improve the current curriculum. Universities mainly focus on theory-based education, and hospitality education requires skill and project-based education (Griffin, 2021). Through collaborative teaching, academics and industry practitioners can introduce project-based courses across the curriculum. Through projects, students may utilise theories to work with industry practitioners to solve real-world issues and practice their knowledge (Griffin, 2021). Collaboration among local, regional, and international educators and industry practitioners may allow academic programs to focus on their strengths and use robust assessment to evaluate student performance. Thus, these institutions may attract high-quality educators and students, leading to an enhanced reputation and competitiveness.

Additionally, collaborative teaching may benefit higher learning institutions by enhancing student engagement and interaction (Goh & Sigala, 2020). A characteristic of collaborative teaching is the variety of teaching styles and methods. This may keep students engaged and promote active learning and in-class participation. Put simply, the proposed framework assumes that fostering a culture of collaboration will allow higher education institutions to leverage their resources, optimise the strengths of the faculty, and improve learning outcomes.

Conclusion

Collaborative teaching is a blend of diverse perspectives, approaches, and responsibilities that benefit students, educators, and higher education institutions. This study, guided by the SDG's goal for quality education, proposes a comprehensive, collaborative teaching framework incorporating the efforts of diverse experts worldwide. The proposed framework suggests the potential of collaborative teaching in enhancing the educational experience for students, educators, and higher education institutions. Notably, it expects to strengthen learning outcomes, improve teaching quality, create inclusive and equitable quality education, and promote lifelong learning opportunities for all. Through the implications, the framework proposes that institutions adopting collaborative teaching can optimise resources (i.e., faculty, technologies, facilities), promote professional growth and connection among faculty, and create a comprehensive curriculum.

However, the conceptual framework requires further empirical investigation. Researchers are encouraged to conduct qualitative or quantitative studies to determine the framework's viability. This study also acknowledges that the development of conceptual frameworks is limited by two theories, namely, social learning theory and constructivism. For collaborative teaching, other theories and models, such as the collaborative constructivism pedagogical models (Goh & Sigala, 2020) and the stakeholder involvement theory (Griffin, 2021), may help develop a more comprehensive co-teaching framework. Thus, future research may consider integrating relevant theories and models into the current framework. Despite the advantages of collaborative teaching, future scholars can delve further into its challenges, particularly the reluctant of academics to adopt technologies (Goh & Sigala, 2020), insufficient technological support, Internet issues, and student resistance must be carefully considered (Matee et al., 2023).

Moreover, future studies should examine whether the involvement of industry collaborators can invoke students' career interest in a highly competitive industry such as the low-cost carrier sector. Since the low-cost carrier industry tends to have a poor employment image (Islam et al., 2020), it is interesting to know whether students' perceptions changed after collaborative teaching sessions. For this purpose, a longitudinal study is proposed to examine the cause-and-effect of collaborative teaching on students' perceptions, attitudes, and behaviours. The study concludes that concerted efforts and commitment among the stakeholders are crucial to implement the proposed framework successfully.

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Co-Author Contribution

The authors confirmed that there is no conflict of interest in this research. Author 1 drafted the overall research outline and wrote the introduction and theoretical background sections. Author 2 is the correspondent author and contributed to refining the conceptual model and the discussion section. Author 3 is responsible for the literature review. Authors 4 and 5 help with the conclusion and reference sections. All authors are responsible for reading and approving the final manuscripts.

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