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USING JIGSAW TO ENHANCE COMPREHENSION OF MARKETING CONCEPTS AMONG BUSINESS EDUCATION STUDENTS

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Abstract

This empirical study explores the challenges encountered by second-year students in learning marketing within the context of business education, and examines how the jigsaw approach may enhance their learning experience. The research is underpinned by Lev Vygotsky's theory of social constructivism (1968), which posits that student development is socially situated and that knowledge is co-constructed through interaction. Adopting a qualitative methodology within a constructivist paradigm, the study involved twelve student participants. Data were collected through semi-structured interviews and analysed using a thematic approach. Participants responded to two key questions: What challenges do business education students face in learning marketing? And how can the jigsaw strategy support improvements in marketing education? The findings reveal that teaching and learning marketing remains a significant challenge. Based on these findings, the study advocates for the integration of the jigsaw technique to mitigate student underperformance. Employing the jigsaw method as a cooperative learning strategy has the potential to enhance both instructional effectiveness and students' academic achievement in marketing.

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INTRODUCTION

Marketing is a core discipline within business education at the higher education level, playing a crucial role in shaping future entrepreneurs and equipping business education students with the knowledge and skills required to teach marketing at the secondary school level. As a fundamental component of business management, marketing is typically introduced as a key module in the second year of study. According to Alao, Onah, and Alao (2020), marketing is both a specialised and practical module within business education that equips students with the competencies necessary to succeed in an increasingly dynamic business environment.

Students often struggle to comprehend and apply theoretical concepts, conduct market analysis, and engage in case study tasks during assessments. These challenges stem largely from the dynamic nature of marketing as a subject, which is influenced by the ever-evolving global market, shifting consumer behaviour, and rapid technological advancements that continuously reshape marketing strategies. Consequently, students find it difficult to keep pace with the fast-changing landscape, resulting in delays in their academic progression—sometimes extending their studies by one to two years. This is corroborated by Laverie, Humphrey, Manis, and Freberg (2020), who assert that modern technology has significantly transformed the marketing domain. Furthermore, students often lack essential entrepreneurial skills, partly due to pedagogical approaches that are not specifically tailored to the demands of marketing education (Amjad, Rani, & Sa'atar, 2020). Bryant, Riley, Turner-Henderson, and Purnell (2024, p. 13) found that marketing students frequently lack both understanding and experience in analytical methods and techniques. As a result, students may avoid pursuing marketing courses due to the perceived risk of underperformance (Dingus, Black, & Flink, 2024). This underscores the responsibility of lecturers to adopt effective teaching and learning strategies that enhance the delivery and comprehension of marketing in business education.

Numerous studies have examined the teaching and learning of marketing through cooperative learning techniques. Jainal and Shahrill (2021) investigated the use of a cooperative learning approach in marketing education and found that it enhanced students' social and collaborative skills as well as their academic performance. Similarly, Ye, Lee, Cavazos, Katrichis, and Hao (2021) explored the application of the jigsaw peer-teaching method in marketing courses. Their research identified the jigsaw technique as an effective and practical instructional tool that fosters more interactive and collaborative learning environments, while also promoting the development of meta-skills highly valued by employers. In addition, a study by Wu, Sari, and Huang (2023) revealed that the jigsaw method significantly improves students' learning attitudes and motivation, and positively impacts academic achievement among both low- and high-ability learners.

Costouros (2020) further examined the effects of jigsaw strategies on students' educational experiences and academic outcomes. The study concluded that the jigsaw approach encourages active student engagement, strengthens social connectedness, and supports deeper cognitive processing of learning content. Likewise, Okeke and Dikeocha (2024) investigated the impact of the jigsaw technique on academic performance in business education and found that its implementation contributes to improved student achievement.

Taken together, these findings suggest that the jigsaw strategy holds considerable potential for enhancing students' learning experiences and academic performance in marketing education.

However, while several studies have explored the effectiveness of jigsaw techniques across different educational settings (Rokhmah & Subroto, 2019; Vives et al., 2024; Anggrainy et al., 2022; Wu, Sari, & Huang, 2023; Ye et al., 2021), none have specifically focused on its impact on second-year business education students at a university of technology—particularly those who have struggled with or repeated the marketing module for one to two years. This study addresses that gap by investigating how the jigsaw strategy can support these students in overcoming their academic challenges.

This study is grounded in social constructivism theory, developed by Lev Vygotsky (1962), which emphasizes that learning occurs through social interaction and shared experiences. According to Vygotsky, knowledge is co-constructed through collaboration, and students develop a deeper understanding when engaged in meaningful discussions and problem-solving activities with peers (Brau, 2020). The theory introduces the Zone of Proximal Development (ZPD), which explains that students learn best when they receive guided support to bridge the gap between what they can do independently and what they can achieve with guidance (Zhang & Hu, 2024).

Following social constructivism, the jigsaw strategy promotes peer-assisted learning, enabling students to actively engage, comprehend thoroughly, and collaborate effectively. As students examine, synthesize, and apply concepts in discussions, they build critical thinking and problem-solving abilities by taking responsibility for allocated segments of the content and educating one another (Jainal & Shahrill, 2021). Furthermore, the Jigsaw cooperative learning model enhances students' ability to work in teams, fostering social skills necessary for business education (Okolie et al., 2022; Abdel-Mordy, Sabry, & Abdelrazek, 2022). Similarly, research confirms that jigsaw learning enhances engagement, teamwork, and cognitive processing, making it a valuable tool in marketing education (Jainal & Shahrill, 2021).

Social constructivism also aligns with student-centered learning, which advocates for interaction-based pedagogical approaches that encourage teamwork, inquiry, and shared knowledge construction. Research highlights that cooperative learning methods, such as jigsaw, are effective in enhancing academic performance, engagement, and retention of complex concepts (Wu, Sari, & Huang, 2023; Ye, Lee, Cavazos, Katrichis, & Hao, 2021; Costouros, 2020). Moreover, constructivism emphasises the diversity of students' backgrounds, experiences, and prior knowledge, which are fundamental in shaping meaningful learning experiences (Naidoo & Mabaso, 2023; Okeke & Dikeocha, 2024).

By applying the jigsaw model within the framework of social constructivism, this study explores how structured peer collaboration can address the learning challenges faced by second-year business education students in marketing. The approach allows students to actively participate, share resources, and support one another, ultimately improving academic performance and conceptual mastery (Amjad, Rani & Sa'atar, 2020; Anggrainy, Tresdiawan, Mubarak, Sutia & Lubi, 2022; Rokhmah & Subroto, 2019).

METHODS

This study adopts a qualitative approach, utilising an action research design to improve the learning experiences and academic performance of business education students. A purposive sampling strategy was employed to select twelve students who had been repeating the

marketing module for one to two years and exhibited persistent difficulties with the subject. The use of a small, manageable sample enabled in-depth qualitative data collection through multiple semi-structured interviews conducted over the course of a semester, with each session lasting approximately two hours. The interviews were designed to explore the specific challenges students face in learning marketing and to evaluate the effectiveness of the jigsaw teaching strategy in enhancing their educational experiences. While the limited sample size may constrain the generalisability of the findings to the wider population of business education students, the study offers valuable insights into how cooperative learning strategies can support students who struggle academically.

Ethical clearance for this study was obtained from the university (Reference: 2018/11/14/40845621/50/MC). Ethical principles, including voluntary participation, informed consent, and participant anonymity, were strictly upheld throughout the research process. A thematic analysis approach was adopted to identify recurring patterns and key themes in students' responses regarding their learning challenges and the perceived effectiveness of the jigsaw strategy.

Jigsaw cooperative learning was developed to shift the emphasis from competitive educational models to collaborative learning environments that foster social interaction and enhance academic achievement (Cochon Drouet, Margas, Cece, & Lentillon-Kaestner, 2024). In the context of this study, the jigsaw method was implemented over a series of structured classroom sessions aimed at improving students' understanding of key marketing concepts. The lecturer began each session with a brief instructional overview, after which the twelve participating students were divided into three jigsaw home groups.

Each home group was assigned a specific learning segment related to core marketing topics, including internal records, marketing intelligence, environmental scanning, and marketing research. The assignments were equitably distributed so that each student was responsible for mastering and teaching a particular portion of the topic. The facilitator (lecturer) acted as a mentor and guide throughout the process, providing instructional support and ensuring active participation.

Following the initial group discussions, students joined their respective expert groups—comprising members from different home groups working on the same subtopic. Within these expert groups, students collaborated to deepen their understanding of the assigned segment, clarify concepts, and prepare teaching materials. Once confident in their expertise, they returned to their original home groups to teach their peers and engage in feedback-driven discussions.

To enhance the reliability and credibility of the findings, several validation strategies were employed. Member checking was conducted, enabling participants to review and confirm the thematic interpretations to ensure accuracy and authentic representation of their views. Triangulation was applied by cross-referencing interview data with student performance records and peer feedback, thereby increasing consistency and robustness. Furthermore, inter-coder reliability was established by consulting an independent researcher at intervals to verify the coding process and thematic categorisation (Wu, Sari, & Huang, 2023). These measures collectively minimised researcher bias, reinforced the trustworthiness of the study, and ensured that the findings reflected genuine student experiences.

FINDINGS AND DISCUSSION

The semi-structured interviews conducted with business education students yielded six key themes that encapsulate both the challenges faced in learning marketing and the benefits gained through the implementation of the jigsaw strategy. These themes and their corresponding descriptors are presented in Table 1.

Table 1.

Emerging Themes and Description

Themes	Descriptors
Skills deficits in Marketing education	Lack of creativity, weak critical thinking, poor problem-solving skills, fear of failure, difficulty applying concepts to real-world scenarios.
Ineffective learning strategies	Cramming, passive listening, re-reading without comprehension, isolated studying, lack of engagement, inconsistent peer collaboration.
Lack of resources and financial constraints	Limited access to prescribed textbooks, outdated learning materials, inadequate library resources, lack of functional computers, financial struggles.
Improved student engagement and confidence (through Jigsaw strategy	Active participation, collaborative learning, increased motivation, enhanced confidence in marketing concepts, teamwork.
Enhancing creativity, critical thinking, and problem-solving skills	Peer discussions, case study analysis, real-world application, group problem-solving, and structured learning activities.
Deep learning, increased retention, and peer teaching	Knowledge sharing, student-led teaching, higher engagement, improved long-term retention, and concept reinforcement through teaching others.
Pooling and maximising resources and peer support	Resource sharing, group accountability, mutual academic support, optimising available resources, reliance on peer collaboration.

Skill deficits in marketing education

In a marketing classroom, creativity is coming up with fresh, original ideas for campaigns and strategies; critical thinking is assessing and analysing marketing concepts and data to make defensible decisions while problem-solving abilities refer to students' capacity to recognise

and effectively handle obstacles in the context of marketing projects. This has proven to be difficult for business education students.

The study found that students in business education struggle with creativity, critical thinking, and problem-solving, all of which are essential skills in marketing. Many students feel intimidated by marketing coursework, particularly the difficulty of integrating academic knowledge to real-world circumstances. A lack of these critical abilities perpetuates an ongoing pattern of underperformance and disengagement (Calma & Cotronei-Baird, 2021; Franklin, Iwu, & Dubihlela, 2022).

Several aspects emerged from the responses. Student 1 felt challenged and intimidated because of inadequate creative skills in marketing. Student 2 struggled with data analysis and critical thinking. Student 3 put more effort into studying marketing but failed to provide solutions to allocated work with real-life scenarios. The reality was that students lacked the necessary abilities to study and succeed, which led to fear and failure.

> *"I've come to realise that marketing theory necessitates a high level of thought and creativity. Because of this, I found marketing intimidating and challenging, and I failed my first test. (Student #1)*

> *"Activities and assignments in marketing classes emphasise critical thinking more because our lecturer requires us to think creatively and conduct research, but I struggle a lot" (Student #2)*

> *"I have been doing repeat business for the past two years. Practical activities that require us to come up with solutions for real-world problems are difficult for me" (Student #3).*

From the statements of the participants, it is clear that any education system can perform when students are equipped with proficient skills. Sutiani, Situmorang, and Silalahi (2021) contended that critical thinking skills are essential to develop students' problem-solving and discovery competencies, which are crucial to the successful learning of marketing.

Schendel, McCowan, Rolleston, Adu-Yeboah, Omingo, and Tabulawa (2023) emphasised that critical and problem-solving skills depend on the pedagogical approach and the level of challenge in assessment, among other factors. therefore, lecturers should rely upon effective teaching strategies, active learning, and setting problems or inquiry for students to understand the world around them and become innovative, (Okolie, Igwe, Mong, Nwosu, Kanu, & Ojemuyide, 2022).

In light of the discussion, the study's theory problematises skill deficiencies in the context of teaching and learning; for example, Ajani (2024) emphasised that social interaction and active involvement can improve students' ability to learn challenging topics and develop strong critical and problem-solving skills. According to social constructivism, students learn by their interactions and experiences. The observation from student 3 correlates with constructivism, which asserts that deeper learning requires real-life problem-solving learning activities that are vital for deeper learning. Social constructivism asserts that students learn from using their academic understanding in practical settings (Naidoo & Mabaso, 2023). In conclusion, I

contend that marketing students should be actively involved in the learning process and should have access to conducive environments that encourage critical, creative, and problem-solving

skills. thinking. Critical thinking is not a passive activity; rather, it is the result of active learning activities that stimulate cognitive abilities (Bean & Melzer, 2021). Franklin, Iwu, and Dubihlela (2022) proposed curriculum reforms where critical and creative and problem-solving skills are introduced in the South African educational system.

Ineffective learning strategies

The study found that ineffective learning strategies are a serious challenge for business education students when learning marketing. This observation is supported by Rinella and Putnam (2022:1), who argue that students in their programs frequently employ ineffective learning strategies. During the interviews, it was clear that ineffective learning strategies such as re-reading textbooks, cramming, passive listening, and multitasking were a serious challenge. However, Urrizola, Santiago, and Arbea (2023) discovered that the most common and least effective learning practices among undergraduate students include re-reading, highlighting, and summarising. In the view of Yüksel, Green, and Vlach (2024:1), students are left to decide on their approaches to learning and, often engage in ineffective learning strategies that lead to a long-term pattern of low performance (Siphukhanyo, & Olawale, 2024; Hui, de Bruin, Donkers, & van Merriënboer, 2021).

> *"We started classes in March because of experiential training, and we were expected to cover marketing theory, a large amount of work in a short period. So, I just sit in my own space alone in the library and memorise the work". (Student #1)*
>
> *"Sometimes we meet as peers in the library to do the work, but there is no consistency. Because I don't want to fail, I make time to make summaries of my notes and simply read through them" (Student #2).*
>
> *"There is a lot to cover in marketing, so I just listen attentively in class to grasp everything the lecturer is teaching us. And I make time to go through the work again at home but still get poor marks" (Student #3).*

Both participants, student 1 and student 2, practiced the isolated approach to learning, which involved memorising the work and making summaries of notes. Student 2 opted to study alone because of the irregular study sessions from his peers. Student 3 focused more on absorbing content taught in class rather than actively engaging with it. It was clear that all approaches adopted by participants to learn marketing had limitations, such as inactive interaction with peers and passive approach, which led to poor performance.

From the statements of the participants, it is clear that any education system can perform better when students use effective learning strategies. To buttress this, Almoslamani's (2022) study indicated that learning styles had a considerable impact on students' academic progress. Biwer, Oude Egbrink, Aalten, and de Bruin (2020) believe that informing students about effective and inefficient learning strategies can increase their motivation to employ more effective learning strategies. While effective learning tactics are vital, students who lack genuine motivation and commitment to the subject may find it challenging to connect thoroughly with the material, leading to partial understanding or disengagement from learning activities. Papageorgiou (2022) argues that to succeed, students must be motivated to employ learning methodologies

as well as deal with test and examination anxiety. Daniel, Msambwa, Antony, and Wan (2024) argue that lecturers should carefully examine their students' needs and preferences while developing courses that encourage and help students reach their full academic potential.

In light of the discussion, the theory of this study problematises the use of ineffective learning strategies in the teaching and learning environment. According to Dewey (1916) and Vygotsky (1962), students are social beings who actively construct their learning within specific historical, social, and cultural contexts (Fouché, 2024). In conclusion, I contend that resources

should be availed to enhance the learning of marketing among business education students. Failure to do so, the education system is destined for failure which affects the student's performance in higher learning.

Lack of resources

The study found that a lack of resources presents a significant obstacle for business education students studying marketing. This observation is supported by Makhoba (2024), who claims that numerous institutions of higher learning in South Africa have limited resources. According to Nyagope (2024), the lack of government assistance for the construction and maintenance of physical infrastructure at institutions puts a strain on limited resources, resulting in most students not having access to resources, negatively affecting the quality of their educational experiences. To support this, it was obvious during the interviews that resources such as specified textbooks, library resources, and computer lab resources posed a significant barrier.

> *"I am funded by NSFAS, and I get my allowance around April, which makes it difficult for me to buy prescribed books, stationery, and a laptop in the first quarter of the term. For test 1, I had to depend on the slides and the learning guide uploaded on the e-learning platform," and for assignments, I use the library to get information" (Student #1).*

> *"This is my second year repeating marketing, and because of financial constraints, I mostly use the library for studying and assignments. The challenge is when the library is packed, there are not enough computers available to use because some computers are not working, and the university is taking time to repair them" (Student #2).*

> *"I have the old second-hand marketing book since I did not qualify for the bursary. I want to pass even though I don't have the latest edition of the marketing book and a laptop. For now, I compare the summaries on the learning guide with my old book (Student #3).*

Student 1 and Student 2 could not afford to buy learning materials due to financial constraints. Student 2 highlights the problem of overcrowding and insufficient functional computers in the library. In contrast, student 3 does not mention library usage explicitly but relies on an outdated book, which suggests limited access to library resources. Both participants emphasise a reliance on inadequate resources, whether it be outdated textbooks, insufficient library facilities, or delayed financial support.

It was clear from the participants that the lack of resources affects the learning of marketing, which in turn resulted in poor academic performance. From the statements of the above

participants, it is clear that any education system can perform with the available resources. To support this, Mlambo, Masuku, and Ndebele (2022) suggested that learning materials, such as specified textbooks, facilitate self-education, translate scientific findings into knowledge, and give information and that most university instructors connect course objectives with textbooks.

Furthermore, Rill (2019) discovered that owning a prescribed book was associated with higher academic grades.

The availability and utilization of educational resources within the educational system are critical in achieving educational goals, providing a learning experience for students, and facilitating interaction between students and lecturers during the teaching and learning process (Delta & Caroline Nwaham, 2023).

Furthermore, libraries and student support centers can aid in the learning process by making learning resources readily accessible at no cost (Rahmat, Muslim, Situmorang, & Sukardjo, 2023).

While resources are important, Adebayo, Ntokozo, and Grace's (2020) study reveals that learning resources solely are not always the most efficient means to improve student performance but rather a blend of multiple variables that may contribute to better results in universities. Furthermore, Matope (2021) argues that resources are not a measure of performance in education; rather, lecturers might use instructional methods that have no bearing on resource availability.

In light of the discussion, the theory of this study posits that students have complete previous knowledge, are ready to share their partial insight with others, and are comfortable with ambiguity. However, students' lack of experience, anxiety about expressing unclear views to others, and need for approval present significant challenges in the classroom (Naidoo & Mabaso, 2023). In conclusion, I contend that resources should be availed to enhance the learning of marketing among business education students. Failure to do so, the education system is destined for failure which affects the student's performance in higher learning.

Enhancing creativity, critical thinking, and problem-solving skills

Marketing encompasses a wide range of concepts, theories, and strategies, which can perplex business education students. The jigsaw approach reduces the learning material's complexity by splitting it into smaller, more manageable portions. Each student participant becomes an expert in some aspect of marketing and helps alleviate the overwhelming nature of complex marketing theories and frameworks. This segmentation allows students to focus on understanding one specific aspect at a time, making it easier to grasp. Students' academic performance improves as they acquire new knowledge and abilities (Amelia, *et al.*, 2023; & Adeoye & Prastikawati, 2024).

Improved critical thinking and problem-solving skills: When students from various expert groups collaborate in home groups, they share their knowledge and perspectives. Through discussions in the jigsaw groups, students analyse different perspectives and apply critical thinking skills to evaluate marketing strategies and concepts. Also, students apply their combined knowledge to solve marketing problems using real-world scenarios, enhancing their problem-solving abilities. A study by Saputra, Joyoatmojo, Wardani, and Sangka, (2019) and,

Abdel-Mordy, Sabry, and Abdelrazek, (2022), proved that the implementation of jigsaw was beneficial in improving students' critical thinking and problem-solving skills while enhancing their academic performance, (Hanapi, & Kamal, 2024). Accordingly, the active instructional learning strategy used was case studies to encourage critical thinking and problem-solving skills.

> *"Each of us had work allocated in portions that weren't overwhelming. We met before sessions and shared knowledge amongst ourselves and got good marks" (Student #1).*
>
> *"The type of questions asked by the lecturer prompt us to think creatively, mostly in case studies. As a group, we had to prepare ahead of class sessions in the library" (Student #2).*
>
> *"Jigsaw deepens the understanding of the module. During the discussion, we had to share our knowledge and experiences to make every team member understand. I have now understood that no one knows everything" (Student #3).*

Student 1 in the interview noted how the jigsaw strategy involves allocating work in manageable portions, which has positively impacted their understanding of marketing. The work-sharing allowed each member to become highly knowledgeable in a specific field by fostering a deeper comprehension of marketing concepts, thus contributing to overall group performance. Student 2 mentioned that the jigsaw strategy encouraged them to prepare before lessons, think creatively, and improve their understanding.

Incorporating the Jigsaw technique as a learning strategy

In the realm of marketing education, the jigsaw strategy has emerged as a transformative method that not only enhances deep learning but also boosts retention rates and cultivates a culture of peer teaching. This observation is supported by Javed (2024), who argues that transformative learning strategies in the teaching and learning process increase student engagement and knowledge retention. By breaking down intricate marketing theories and case studies into manageable segments assigned to diverse groups, students are not only motivated to comprehend their assigned material deeply but also compelled to teach and learn from their peers.

Deep learning and increased retention: In the jigsaw groups, students are actively engaged in researching, preparing materials, and presenting their findings. This active participation helps in deeper learning as students take full responsibility for their learning. Students who actively participate in dialogues are more inclined to recall material and apply it in multiple scenarios. This is supported by Rea, Wang, Muenks, and Yan, (2022); who argue that effective learning strategies support long-term retention Moreover, students become encouraged to move away from passive strategies like cramming or re-reading.

Peer teaching: During the jigsaw phase, each student develops expertise in an assigned task by undertaking extensive research on a specific subject alongside expert group members. Upon returning to home groups, students share their newly acquired knowledge with the group members (Omar, AlQarni, Alzahrani, Eid, & Yahya, 2023; Farrag, Ahmed, & Gouda Nasr, 2022). Students teach and learn from each other. According to Aronson *et al*. (1978), teaching others leads to a deeper level of learning. This is because teaching others reinforces students'

understanding of the learning material. Consequently, students who receive enough opportunities are more likely to excel academically (Abylay, 2024).

> *"I have learned a lot this year from my peers, and I have benefitted because if you lag behind as a member, they will teach you until you understand" (Student #1).*

> *"Each one of us communicated ideas effectively. We had to learn to teach others, provide examples, respond to questions, and consult with the lecturer if needed. We made sure that no one in our group was left behind" (Student #2).*

> *"Teaching my peers about environmental scanning helped me retain the content. Knowing that I had to provide feedback encouraged me to grasp the content" (Student #3).*

Student 1 in the interview emphasised the role of peer support, where students work together to ensure that every member grasps the marketing content. In addition to Student 1's observation, Student 2 argued that in the group, they ensured that no one was left behind. Also, student 3 resonated with both student 1 and student 2 in that there was mutual support in discussions. Both participants acknowledged the importance of deep learning, retention, and peer support.

Pooling and maximising resources and Peer support

In a jigsaw activity, each student becomes an expert on a specific aspect of the topic. According to Sari & Susiani (2021), the jigsaw collaborative approach encourages collaboration and the purposeful sharing of resources and knowledge. When students work in groups, it boosts their sense of accomplishment because they exchange knowledge and solve issues together. In other words, students learn to collaborate with teammates. By pooling their knowledge and resources within their home groups, students compensate for limited access to external materials and make the most of what is available. For instance, students had access to only a few textbooks, phones, laptops, and online articles (Akpan, Igwe, Mpamah, & Okoro, 2020)

> *"We shared textbooks, articles, and any other learning material amongst ourselves. We managed with what we had because each of us had manageable segments.", (Student #1).*

> *The Jigsaw model empowered us to help one another, be accountable, and give feedback while sharing learning materials so that all the group members make it at the end of the year" (Student #2)*

> *"We relied on each other since our group established an attitude of sharing knowledge, insights, and other educational tools that would help us succeed and achieve good grades" (Student #3)*

Both participants stated their appreciation for the peer support provided by group members. Student 1 mentioned that they shared learning materials between themselves. Student 2 reflected on how the jigsaw technique enabled group members to be accountable to one another while also providing feedback on completed work for the group to prosper. Student 3 emphasized the need for various knowledge, experiences, and learning materials in jigsaw

group settings. Both participants expressed gratitude for the peer assistance and resource sharing made possible by the jigsaw technique.

The lecturer encouraged marketing students to collaborate and share resources among themselves. In that case, students extracted relevant information from the available resources and shared their findings with their peers, maximizing the utility of the limited resources. According to Akpan, Igwe, Mpamah, & Okoro (2020), the implication of social constructivism on students' learning is that students should be ready to share with their groups to improve their cognitive ability continuously. Jigsaw encourages peer support where students are embraced with a supportive classroom environment where students rely on each other for information and help each other access and utilize available resources effectively (Goolsarran, Hamo, & Lu, 2020; Jainal & Shahrill, 2021).

CONCLUSIONS

The findings of this study confirm that the jigsaw strategy is an effective pedagogical tool for improving marketing education among business management students. By breaking down complex marketing concepts into manageable segments, jigsaw enhances student comprehension and engagement while fostering an interactive and collaborative learning environment. The strategy also strengthens students' critical thinking and problem-solving abilities, equipping them with skills that are crucial in both academic and professional marketing settings. Additionally, peer collaboration and resource-sharing within the jigsaw approach help mitigate challenges associated with limited learning materials and ineffective study strategies.

Beyond its immediate academic benefits, the implementation of jigsaw learning aligns with modern industry demands, preparing students for team-based problem-solving, adaptability, and real-world marketing challenges. The study underscores the need for a shift toward more interactive, student-centered learning methods in higher education marketing programs.

Future research should examine the long-term impact of jigsaw learning on marketing students' knowledge retention, practical skill development, and overall career readiness. Additionally, further studies could explore how jigsaw learning influences student self-efficacy and motivation, particularly in diverse educational contexts.

RECOMMENDATIONS

This study proposes that universities should incorporate the jigsaw strategy into their teaching frameworks by providing systematic training for lecturers on cooperative learning methods and producing standardised lesson plans that include jigsaw-based activities. Universities should also promote blended learning by employing digital tools like learning management systems (LMS) and collaborative platforms to increase student engagement outside of the classroom. Furthermore, evaluation techniques should be aligned with the jigsaw approach, integrating peer reviews, case study applications, and competency-driven assessments to monitor student development. Future research should look at lecturers' viewpoints on the effectiveness and challenges associated with the use of the jigsaw approach, as well as quantitative studies to see how it affects student performance and how this strategy might be modified for online and hybrid learning contexts.

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