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VISUALIZING INFLUENCE, AMPLIFYING LEARNING: A PRE-POST STUDY OF ONLINE INFLUENCER MAPPING

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Abstract:

Influencer mapping is a fundamental skill in marketing education, allowing the students to be able to recognize and examine key stakeholders. Nevertheless, existing literature lacks discussions and empirical evidence on the effectiveness of online mapping methods particularly in influencer mapping in enhancing student learning. Thus, the objective of this paper is to address the gap by investigating the effects of online influencer mapping on student learning within a marketing education context. This study employs qualitative study by assessing pre and post-test open ended survey. 15 students participated in an influencer mapping task using digital platform where they are required to create and refine influencers map. The pre and post study were designed to evaluate their learning gain, skill development, self-efficacy and attitude. Thematic and descriptive analysis were conducted and the analysis discovered substantial increases in student understanding, mapping abilities, and confidence in stakeholder analysis. The findings emphasize the capability of online tools to improve experiential learning, suggesting practical understandings for educators in digital settings.

Keywords:

Influencer Mapping, Students Learning, Online Collaboration Tool, Marketing Education

Introduction

The world of education is rapidly changing with online learning continues to grow, competency-based education is getting attention, and the role of educators will no longer be as the same as before (Shabbir, 2020). Educators must embed joy and excitement are important elements in today's learning which requires educators to become innovative and resilient

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through supporting the use of technologies in teaching (Cronqvist, 2024). In addition, the current trends of digitalization in businesses steer new technologies and alter marketing mixes. For this reason, the way marketing education be taught in classrooms must also be transformed.

Previous research suggests that marketing education should be a continuous process of reinvention and disruption in line with contemporary marketing practices (Crittenden and Crittenden, 2015). This indicates that future needs and expectations of external environment are critical in shaping dynamic marketing students. Marketing education must be able to create values to the students and future employers (Kumar, Rajan & Garg, 2025). Technology aids in marketing education by providing the students with preparation and exposure to technology applications which mirrors the real-world situation. The use of technology in pedagogy such as gamification and simulation tools facilitate in students' engagement (Bechkoff, 2019; van Esch et al., 2020).

Activities using online collaborative tools such as Jamboard, Canva Whiteboard and Padlet during online sessions provide effective tool to implement active learning activities. Previous study by Ahshan (2021) reveals that students think using Jamboard create active student engagement in remote learning. The online collaboration tools promote engagement and involvement and may enhance learning gains (Balalle, 2024).

Influencer or stakeholder mapping is essential in building marketing strategies as it helps students to analytically identify, examine and prioritize many individuals and groups whose interests and power affects company's activities. Hence, by visualizing the influence of these persons/ groups, students will learn to see broader concepts in the ecosystem (Freeman, 1984), improves their decision-making skills (Mendelow, 1991), promotes deeper understanding (Novak and Canas, 2006) and bolster their confidence (Bandura, 1977). In addition, by mapping influencers in the market, students are exposed to digital ecosystems and equipped with contemporary challenges in stakeholders' engagement. Furthermore, the value of "learning by doing", whereby the students construct real-world influencer map move beyond typical memorisation learning to actively participate in problem framing, data gathering and iterative enhancement as suggested in experiential learning theory (Kolb, 1984).

While many studies in education literature discussed the effectiveness and the importance of conducting stakeholder mapping analysis in education (Steghöfer et al., 2018), however, limited knowledge has been established on the impact of collaboratively developing influencer mapping using digital platforms. Therefore, based on this, this paper is intended to examine the effects of online influencer mapping intervention towards learning gain, skills development and attitude in marketing education. This study is guided by two research questions: 1) Does an online influencer-mapping intervention improve students' conceptual knowledge and mapping skills? 2) Does it enhance students' self-efficacy and positive attitudes toward influencer analysis?

The remainder of this paper is structured in the following manners. In the next section, literature review of influencer/ stakeholder mapping as well as prior empirical studies in marketing education is discussed which followed by research design and data analysis procedures used in this study. Findings and discussion are presented to shed some lights on experiential learning theories and provide practical suggestions. The final section of this paper is to discuss the limitations of the study and avenues of future studies.

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Literature Review

Social Constructivism & Concept Mapping (Ausubel; Novak & Cañas)

The term concept map was initiated in 1972 to explain a form of knowledge representation in which individual concepts are illustrated as nodes by connecting words that denote the link between them, thereby creating significant propositions (Cañas, & Novak, 2014). The concept map is established by incorporating the concepts of meaningful learning. This principle implies that new knowledge is integrated into cognitive structure during meaningful learning and thus modify and enhance knowledge structures in a person (Ausubel, 1963). In today's educational literature, constructivist psychology and teaching is common as the theory acknowledges students' active engagement during learning. Previous studies on the use of concept maps in education can be found in the field of Mathematics (Evans & Jeong, 2023), Medicine (Sy et al., 2016), Engineering (Veiga et al., 2024) and Science and Business (Lenski et al., 2022) indicate that the tool provides advantages to education and can become effective strategy to foster meaningful learning experiences among students.

Experiential Learning (Kolb, 1984)

The theory of experiential learning underlines the cyclical process of learning that encompasses experience, reflection, rational and experimentation (Kolb, 1984). In addition, learning by experiencing provides opportunities to the learners to acquire not only knowledge or skills alone but also thoughts, feelings, perceptions and behaviours (Hoover et al., 2012). And this is in line with Kolb's 1984 that the acquisition of knowledge tenet from the combination of understanding and experience.

Experiential learning theory is firmly embedded in cognitive and humanist schools of education (Kolb, 1984), which emphasizes that learning is a holistic and integrative process of inquiry and meaning-making (e.g., Dewey, 1946; see also Taatila, 2010). This means that learning is not just about acquiring knowledge or skills in isolation but involves the entire individual, including their thoughts, feelings, perceptions, and behaviors (Hoover et al., 2012). A core tenet is that knowledge results from the combination of grasping and transforming experience (Kolb, 1984). Grasping signifies the process of obtaining information about certain matters and this may aid as a critical point or learning experience of a learner. Nonetheless, obtaining information without experience is inadequate for an effective learning to take place as it needs actions too (Politis et al., 2025). This requires transformation where the learners ponder on their experiences, gains concepts to understand and take actions to apply the learning concepts. Positive achievement of this process promotes knowledge creation.

Self-efficacy (Bandura, 1997)

Bandura's social cognitive theory highlights the role of self-efficacy in perform certain tasks. According to Bandura (1997), when a person believes that he or she has the capability to take actions, it is most likely that the person will perform the tasks. The source of this capability can be from learning or past experience which form how a person embraces difficulties and adjust their motivation and performance. In the context of education, students with high self-efficacy usually perform better in academic and show adaptability and creativity when given demanding tasks (Mielke, 2021). According to Kundu (2020), self-efficacy is the fundamental element in determining the success of online education. In self-efficacy, self-mastery is critical to strengthening self-efficacy in online education. This could be done by reinforcing learning through coaching, practice and participation. In addition, apart from attitude and digital literacy

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(Prior et al., 2016), perceived enjoyment is also stated to facilitate a person to attain self-efficacy and thus achieving the learning gains in online settings (Reychav et al., 2016).

With the increasing trends of incorporating online collaboration tools into marketing education, self-efficacy can be further strengthened by providing for opportunities to social modelling and peer encouragement. Therefore, marketing educators can employ the principle of self-efficacy not only in knowledge sharing but also in nurturing self-confidence among students.

Influencer Mapping

Influencer Mapping (or stakeholder) refers to a strategic process of identifying, visualizing and assessing individuals or groups that can affect an initiative, project or organization. The mapping includes recognizing stakeholders, their attributes, priorities and engagement planning. Prior research indicates that using the mapping to elaborate the tool to learners is effective (Bernstein, Weiss & Curry, 2020). In addition, according to Felder and Solomon (2000), visual learners able to retain their memories when they see pictures, diagrams, flowcharts, timeline etc. Customarily, marketing instructions relies heavily on verbal delivery (Eriksson & Hauer, 2004) and resulting to students to underperform in classes. Hence, by using visualization, positive learning gains can be created for marketing students (Clarke III, Flaherty & Yankey 2006). Visual contexts aids in enriching associations and providing bigger picture, thus provides opportunities in enhanced learning (Adkins & Brown-Syed, 2002).

Method

This study uses a quasi-experimental, one group pre-post design without a control group to assess the effect of online influencer mapping intervention towards marketing students' knowledge, mapping skills and self-efficacy. In marketing education, one group or non-equivalent control group quasi experimental studies are often considered when designing a pre-post study. This means that the participants need to complete the same test prior and post instructional intervention. The pre-post study is used to assess changes after a learning activity took place without including control groups (Bell, 2010). Using same measurement for pre and post-test, participants of undergraduate students enrolled in "Sustainable and Ethical Marketing" at a university in Malaysia are taken as a sample for this study. Two instruments are used in this study to measure the effectiveness of using the online influencer mapping intervention. The first instrument is an open-ended question related to influencer mapping with the aim to gauge the students' understanding of the concept. The second instrument used for this study was a survey to test the students' self-efficacy (Bandura, 2006), perceived usefulness (Ventakesh & Davis, 2000) and attitude (Ajzen & Fishbein, 1980). Likert Scale, rated from 1 (strong disagree) to 5 (strongly agree) was utilized in this research.

Procedure

Before any instruction given on influencer mapping, students were asked to complete the content test and Self-Efficacy, Perceived Usefulness and Attitude Survey. After the lecture on influencer mapping was delivered, students were asked to work collaboratively online and create influencer mapping in Padlet. Padlet (www.padtlet.com) is a free platform prominent for encouraging real time engagement among students and educators. The tool is beneficial as it is user-friendly, aids in real-time and instant collaboration, supports different types of multimedia and compatible in most various devices. After the exposure and exercise on influencer mapping, students completed the post-test.

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Data Analysis Procedure

Thematic analysis is used to assess all responses in the content test which comprises of short-answer items and open-ended questions based on Braun and Clarke's (2006) six-steps procedure (Byrne, 2022). First, researchers read and re-read the whole dataset to familiarize with the data. Next, generate initial codes for pieces of information that are significant to the research questions. In step three, themes are created after all data items are coded. Coded data then reviewed and examined as o see if there is any shared meanings which later can be formed as either themes or sub-themes. Step four allowed the researchers to apply a recursive review to the themes and coded data items and see if there are any potential themes. The relationships among the data items and codes could signify the potential themes and sub-themes and therefore need to be re-reviewed to ensure that all possibilities are considered. Defining and naming theme were conducted before the final step i.e. produce the report.

The responses for self-efficacy and attitude survey are analysed using quantitative method. Wilcoxon Signed-Rank test is employed to assess statistically significant changes pre and post intervention will be computed. However, prior to the t-test analysis, data is screened for normality test using the Shapiro-Wilk test. All quantitative analysis is performed in Statistical Package for Social Science software (SPSS v.31).

Findings and Results

The findings and results are reported and presented based on the research questions of this study.

RQ1: Does An Online Influencer-Mapping Intervention Improve Students' Conceptual Knowledge?

To answer this question, participants were asked to answer pre and post questions using the same test to assess their understanding. To measure their understanding on influencers mapping, before the intervention, common themes were discovered i.e. identification of relevant influencers and understanding audience which indicates general or surface-level of understanding only. However, after the intervention, participants can elaborate more on the content. The common themes are found after the intervention are strategic targeting and influence power, structured approach to stakeholder engagement, audience-influence alignment. After the intervention, responses became more strategic and specific. It is also noticed that there is a shift between the basic idea of "finding influencers" to recognise influence as a form of stakeholder engagement and power. When the participants were asked about selecting influencers, before the intervention, the participants gave vague and unstructured descriptions. However, the participants can show deeper understanding on influencers selection strategically by stating the importance of audience fit, engagement levels, credibility and even psychographic alignments.

Table 1: Summary of Thematic Comparison

Dimension	Before Intervention	After Intervention
Understanding of Influence	Basic awareness, vague	Strategic, stakeholder-focused
Reasoning for Mapping	To identify people or improve reach	To influence behaviour, plan campaigns, and assess power
Criteria for Choosing	Relevance or personal preference	Engagement, alignment, influence, credibility
Strategic Thinking	Minimal	Noticeable improvement

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Following the intervention, students were asked to reflect on how by implementing influencer mapping had altered their initial understanding of the mapping. Thematic analysis on this reflection found that there are four themes gathered from their responses. Initially, students thought influencer mapping was just merely selecting most popular celebrities. Nevertheless, after the intervention, their understanding altered. For instance, S1 mentioned "*I used to think influencer mapping was just about choosing popular people, but now I see it's more about finding the right ones who really connect with the audience and can influence them in a meaningful way"*. Likewise, S2 also stated that *"I realized influencer mapping isn't just about follower count it's more about finding people who genuinely connect with their audience and align with the message or cause".* Similarly, S4 noted that *"it's not just about popularity, but about finding the right to effectively reach and engage the target audience".*

Students are also able to recognize that influencer mapping is data-driven and involves strategic approaches. S3 remarked that "*how strategic and data-driven it needs to be"*. Echoing this sentiment, S11 stated that "*Initially, I viewed influencer mapping as a straightforward method for identifying popular individuals to promote a brand. However, I've come to understand that it's a comprehensive, data-driven strategy that offers deeper insights. It not only aids in selecting influencers whose audiences align with a brand's target demographics but also uncovers hidden audience segments and potential new markets".*

In addition, students also acknowledged the role of influencers in marketing campaigns as they see the impact of influencers towards audience and word-of-mouth (WOM). For instance, S6 expressed that *"i feel that even though paying influencers to advertise our product or a campaign for our company can be expensive, it is actually really crucial and beneficial for the company as these influencers have the highest "influence" power towards people that can create WOM".* This is also similar to S7 whom highlighted that "*Influencer mapping helps brands connect with the right people, making marketing more effective. It is about choosing influencers who truly engage with their audience, not just those with the most followers"*

There are also responses provided by the informants indicating that their understanding of impact of influencers towards a campaign and thus, it is important to select an influencer and in targeting audience. As an example, S14 expressed that "*influencer mapping can aware us about the impact of influencer mapping in both positive and negative, also how to target audience using influencer mapping to promote the brand".*

RQ2: Does It Enhance Students' Self-Efficacy And Positive Attitudes Toward Influencer Analysis?

Table 2: Normality Test

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SE1	.421	14	<.001	.697	14	<.001
SE2	.367	14	<.001	.762	14	.002
SE3	.388	14	<.001	.726	14	<.001
SE4	.423	14	<.001	.681	14	<.001
PU1	.319	14	<.001	.687	14	<.001
PU2	.462	14	<.001	.512	14	<.001

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PU3	.276	14	.005	.721	14	<.001
AT1	.276	14	.005	.721	14	<.001
AT2	.319	14	<.001	.687	14	<.001
AT3	.276	14	.005	.721	14	<.001
PSE1	.357	14	<.001	.735	14	<.001
PSE2	.312	14	<.001	.758	14	.002
PSE3	.369	14	<.001	.639	14	<.001
PSE4	.300	14	.001	.801	14	.005
PPU1	.332	14	<.001	.646	14	<.001
PPU2	.369	14	<.001	.639	14	<.001
PPU3	.369	14	<.001	.639	14	<.001
PAT1	.407	14	<.001	.616	14	<.001
PAT2	.389	14	<.001	.688	14	<.001
PAT3	.429	14	<.001	.616	14	<.001
a. Lilliefors Significance Correction						

Table 2 shows the normality test result using Shapiro-Wilk Test. The p-values for all the items (before and after intervention) are below 0.05 which indicates that none of the items are normally distributed. Therefore, to further examine the dataset, Wilcoxon Signed-Rank test is used for this non-parametric data.

Table 3: Wilcoxon Signed-Rank Test Results

Item	Z-Score	p-value
SE1–PSE1	3.166	0.02
SE2–PSE2	3.100	0.02
SE3–PSE3	3.402	<0.001
SE4–PSE4	3.140	0.02
PU1-PPU1	2.699	0.007
PU2–PPU2	2.588	0.010
PU3–PPU3	2.871	0.004
AT1–PAT1	2.994	0.003
AT2–PAT2	2.949	0.003
AT3–PAT3	2.942	0.003

The Wilcoxon Signed-Rank test reported that participants think there is an increase in their self-efficacy after the intervention, across all related items (for instance SE3-PSE3: Z=3.40, p < 0.001). The findings also demonstrated significant improvements were found in perceived usefulness (PU2-PPU2: Z = 2.59, p = 0.010) and attitude (AT1-PAT1: Z=2.99, p = 0.003). Nevertheless, the change in PU1-PPU1 was not significantly found (Z=2.70, p = 0.07), revealing that not all perceived usefulness were affected equally.

The second research question is intended to investigate whether the intervention has positively affected students' self-efficacy and attitudes toward influencer analysis. The test above shows that statistically significant increases in all self-efficacy items which indicates that the students the intervention successfully enhanced students' confidence in conducting influencer mapping and analysis assignments. Correspondingly, all items used to assess students' attitudes towards influencer analysis showed significant positive transformations and meaningful developments

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in students' perceptions and acceptance of influencer analysis as useful and interesting activity. These findings strongly reinforce the assumption that the intervention had a positive effect on students' self-efficacy and attitudes toward influencer analysis. Students are more confident in their ability to perform the analysis and positive toward the use of the mapping in marketing context.

Discussion and Limitations

Before the intervention, students were found to have lack of clarity in identifying influencers and possess limited understanding of influencer mapping. However, after the intervention, a noticeable change was uncovered as the students can identify strategic stakeholders and appreciate influence mapping for decision-making. The quantitative analysis confirmed the thematic analysis as it shows positive changes in their self-efficacy and attitude towards influencer analysis. This demonstrates a significant cognitive and affective change, proving the assumption that active learning and structured interventions can enhance learning gains and engagement (Prince, 2004).

In addition, the findings also in line with Bandura's (1997) Social Cognitive Theory, which highlights the role of mastery experiences and social modelling in developing self-efficacy. Students that are showed to real-world practices are more likely to gain confidence and a sense of agency (Zimmerman, 2000). Also, the incorporation of influence mapping as a visual and engaging tool may also lead to better engagement by linking concepts of marketing to actual illustrations (Kolb, 1984; Novak & Cañas, 2006).

Nonetheless, although the findings seem promising, several limitations in this study are noted. First, the sample size of this study is rather small and thus, limit its ability to be generalized in other context of studies. Second, data was gathered immediately after the intervention and therefore, long-term retention of knowledge and confidence were not measured. Third, the absence of control group may limit its ability to conclusively attribute positive changes due to the intervention. Longitudinal assessments by employing mixed-method research designs and the use of control groups can be a great avenue for future studies. Still, this current research still contributes to the literature by presenting evidence that structure and engaging learning experiences are significant in improving students' learning gain and perception of the influence mapping which leads to favourable learning attitudes.

Conclusion

This present research is aimed at investigating the use of influencer mapping via online collaboration tool i.e. Padlet could improve students' learning gain, self-efficacy as well as fostering positive attitude toward influencer analysis, specifically in marketing education. The use of both thematic and quantitative analysis in this study demonstrates clearly and statistically noteworthy changes in cognitive and affective after the intervention. Students were found to have better confidence and understanding in mapping stakeholders and the most critical part is to apply the mapping strategies in real-world marketing contexts. This technique provides evident insights to the effectiveness of active learning methods especially in experiential and visual approaches. Notably, this study fills the gap in the literature by providing evidence to support the incorporation of interactive tool in higher education particularly in the context of marketing education. This study also offers noteworthy understanding to educators to improve their teaching skills by integrating technology or digital in their pedagogies.

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