Jurnal Bisnis Digital
Universitas Muhammadiyah Muara Bungo
DOI: https://doi.org/10.52060/j-bisdig.v2i1.2093
Vol. 2, No. 1, Mei-2024, hlm. 106-114
e-ISSN: 2988-1218

Maximizing Student Learning with Semrush: A Project Based Learning Strategy for Crafting Effective Business Models

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ARTICLEINFO

Keywords: Project Based Learning, Business Model Canvas, Semrush, Market Research, Strategic Digital Business

Received : 10, Juni 2024
Revised : 14, Juni 2024
Accepted: 20, Juni 2024

ABSTRACT

This study examines the incorporation of Semrush into project-based learning to support university students in the creation of efficient business models. The project seeks to utilize Semrush for market research to improve students' critical thinking skills, boost their comprehension of business principles, and cultivate an entrepreneurial attitude. The study employs a qualitative research methodology with a case study design to compare a group of students utilizing Semrush with a control group. The results demonstrate that the integration of Semrush into project-based learning yields substantial advantages for students in the development of Business Model Canvas frameworks and the identification of business possibilities.

BACKGROUND OF THE STUDY

The field of entrepreneurship education is undergoing changes to satisfy the requirements of the 21st century. Conventional classroom lectures have challenges in providing students with the practical skills and real-world experience required to recognize and cultivate viable business initiatives [1]. Project based learning (PBL) is a very effective method that involves students in real-world projects, placing them at the forefront of their own learning [2]. Research has demonstrated that Project-based Learning (PjBL) promotes a more profound comprehension of fundamental concepts, improves critical thinking and problem-solving abilities, and stimulates collaboration and communication [3], [4]. Within the field of entrepreneurship education, PjBL has demonstrated effectiveness in cultivating students' entrepreneurial attitude, encompassing skills such as recognizing opportunities, willingness to take risks, and fostering innovation [5].

The Business Model Canvas (BMC) has gained significant popularity as a tool used by both entrepreneurs and educators. This visual framework enables users

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to systematically break down and examine a business model by considering nine essential elements, such as Customer Segments, Value Proposition, Channels, Customer Relationships, Revenue Streams, Key Resources, Key Activities, Key Partnerships and Cost Structure [6]. Research has shown that the Business Model Canvas (BMC) is useful in promoting innovative thinking and improving collaboration during the business development process [7]. The advent of the digital era has led to a significant increase in the availability of internet resources and information that may be utilized for entrepreneurial endeavours. Although traditional market research methods might provide value, online solutions provide immediate insights and easily accessible data on market trends, competitive analysis, and client needs [8]. By incorporated those tools into PjBL, there was the possibility of significantly improving the learning process.

Semrush, a prominent tool for competitive intelligence, provides a wide range of capabilities specifically tailored for market research. Students can employ Semrush to perform keyword research, scrutinize competition methods, and ascertain industry trends. The knowledge gained from these insights may be directly utilized in the BMC framework to make informed decisions on target markets, value propositions, and marketing strategies [9]. This research aims to examine the effectiveness of integrating Semrush into PjBL to enable university students to create Business Model Canvas frameworks and discover potential business opportunities, with objectives including evaluating Semrush's efficacy in BMC design, enhancing critical thinking skills through PjBL, and fostering an entrepreneurial mindset among students.

LITERATURE REVIEW

The digital era provides a wide range of online tools and datasets that are beneficial for business endeavors. Morris et al. (2017) highlight the growing significance of market research in the field of entrepreneurship education[10]. While traditional approaches can be useful, online tools such as Semrush provide immediate and up-to-date information on industry trends, competitor analysis, and client needs.

Semrush, a notable competitive intelligence tool designed for market research, offers a wide range of features that are advantageous for students. With Semrush, students can conduct keyword research to pinpoint high-volume, pertinent keywords guiding target market identification and value proposition development within the BMC framework. Additionally, Semrush enables analysis of competitor strategies, offering insights into competitor offerings,

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marketing tactics, and weaknesses, thereby aiding students in crafting distinctive business models. Moreover, Semrush facilitates the identification of industry trends, empowering students to grasp current market dynamics and potential growth areas within their chosen sector, thereby informing decisions regarding revenue streams and customer relationships within the BMC. By integrating Semrush data into the BMC design process, students are equipped to make more informed decisions about their business ventures, ultimately enhancing their chances of success [9].

METHOD

This research investigated the effectiveness of integrating Semrush within a PjBL model for university students. The focus was on how this approach influenced students' ability to design Business Model Canvas (BMC) frameworks and identify business opportunities. The study employed a qualitative research approach, utilizing a case study design. The participants were two groups of university students enrolled in a Strategic Digital Business course that incorporated PjBL. The ideal class size was between 40 students to ensure a manageable group for data collection and analysis. The writer employed two comparison classes, one utilizing Semrush software and the other not using it. The writer gained insight into students' perspectives on developing a business model by utilizing data from Semrush. It was anticipated that the business concept would become more relevant and aligned with the current demands of the market.

The PjBL model was designed around a specific industry, namely start-up technology. Students worked in teams throughout the semester to develop a business concept and design a corresponding BMC framework. The intervention class (experimental group) lay in integrating Semrush into the PjBL process. Students received training on using Semrush functionalities relevant to market research, such as Keyword Research, Competitor Analysis, Site Audit, Backlink Analysis, Content Analysis, Advertising Research, Social Media Tracker, Projects and Position Tracking, and Industry trend identification. Furthermore, the other class did not utilize Semrush to create a Business Model Canvas (BMC).

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RESULT

The writer presents Semrush analysis data to the experimental group, while the control group does not receive any data. Below is an illustration of a semrush analysis.

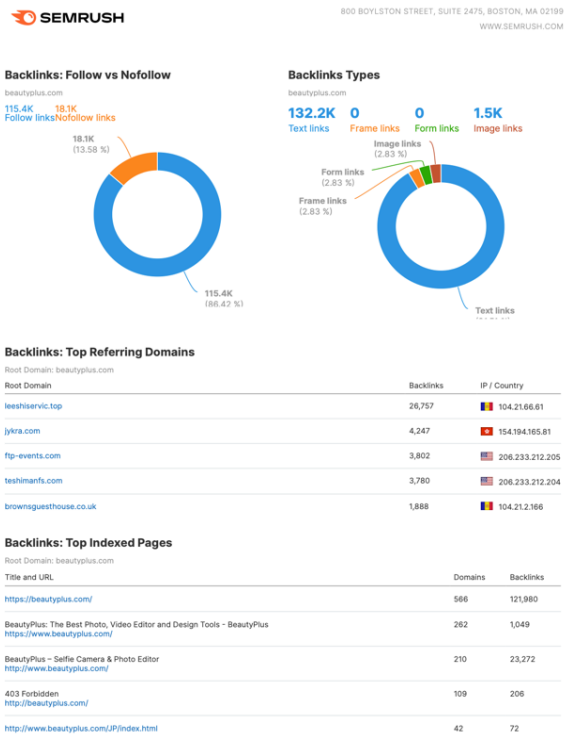

Figure 1. The Example of Semrush Analysis on Beauty Industry

Based on the provided citations, the following data can be used for creating a business canvas model for a business:

1. Customer Segments: Organic search traffic and top keywords can help identify the target audience and their interests. Competitor analysis provides insights into the market and potential customer segments.
2. Value Propositions: The top keywords and their positions indicate what customers are searching for and what value the business can offer.
3. Channels: Organic and paid search traffic data show the effectiveness of different marketing channels.
4. Customer Relationships: The backlink data, including follow vs. nofollow links, can indicate the level of engagement and trust from other websites.
5. Revenue Streams: Traffic cost data can provide insights into potential revenue from organic search traffic.
6. Key Resources: The number and type of backlinks can be considered key resources for SEO and online presence.

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7. Key Activities: SEO activities, as indicated by the organic search traffic and keyword positions, are crucial for maintaining visibility.
8. Key Partnerships: Backlink sources can be potential partners or affiliates.
9. Cost Structure: The cost associated with traffic and SEO efforts can be inferred from the traffic cost data.

These elements can be directly linked to the data provided in the citations to help create a comprehensive business canvas model.

Afterwards, the author develops a rating rubric to evaluate the students' BMC outcomes.

Table 1. Rating Rubric

BMC's Category
Competitor Analysis (14 points) • Mentioning specific competitor strengths or weaknesses analysis. • Highlighting market gaps or opportunities based on competitor analysis. • Does the competitor analysis provide valuable insights that inform value proposition differentiation, marketing strategies?
Industry Trends (14 points) • Mentioning a specific industry trend discovered (e.g., growing market segment, emerging technology). • Integration of Trends into BMC. Are the identified industry trends integrated into the BMC framework (e.g., influencing revenue streams, marketing channels, value propositions)?
Customer Segments (14 points) • Clarity and Definition: Are the target customer segments clearly defined and differentiated within the BMC? • Market Research Integration: Does the customer segmentation demonstrate a connection to the market research conducted (e.g., targeting specific keyword groups)?
Value Propositions (14 points) • Addressing Customer Needs: Do the value propositions clearly address the needs and pain points of the target customer segments? • Competitive Advantage: Do the value propositions leverage the competitor analysis to offer a differentiated advantage (e.g., addressing competitor weaknesses)?
Channels (14 points) • Alignment with Customers: Are the chosen channels appropriate for reaching and engaging the target customer segments? • Industry Trend Integration: Do the marketing channels consider any relevant industry trends (e.g., leveraging a growing online platform)?
Revenue Streams (14 points) • Financial Model Clarity: Is the revenue model clearly defined within the BMC, outlining how the business will generate income? • Market Opportunity: Does the revenue model demonstrate an understanding of the market size and potential for profitability based on industry trends discovered?
Customer Relationships (14 points) • Customer Acquisition and Retention Strategies: Does the BMC outline strategies for acquiring and retaining customers, considering insights from the target market and competitor analysis? • Channel Integration: Do the customer relationship strategies connect with the chosen channels for reaching and engaging customers?

The following example presents the outcomes of BMC's research conducted by control variable dan experimental variable. It is demonstrated that both groups are proficient at producing BMC accurately and effectively.

- The BMC focusing on healthy food (Control Variable) has a broader target market and a variety of channels and partnerships, it aligns with consumer trends and has multiple revenue streams.

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- The BMC focused on makeup tutorials (Experimental Variable) has a niche market, it can create a loyal customer base and leverage influencer partnerships.

Figure 2. BMC's analysis on Control Variable

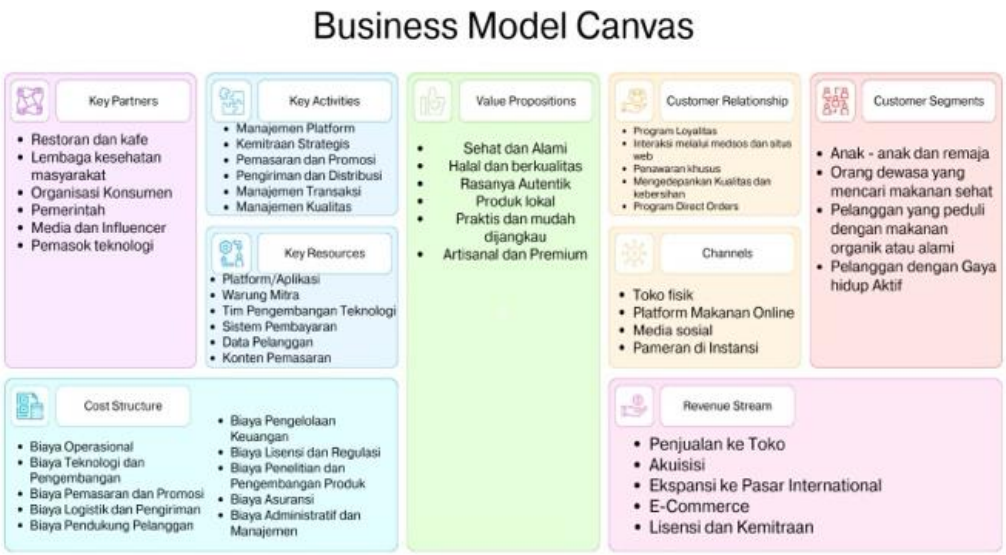
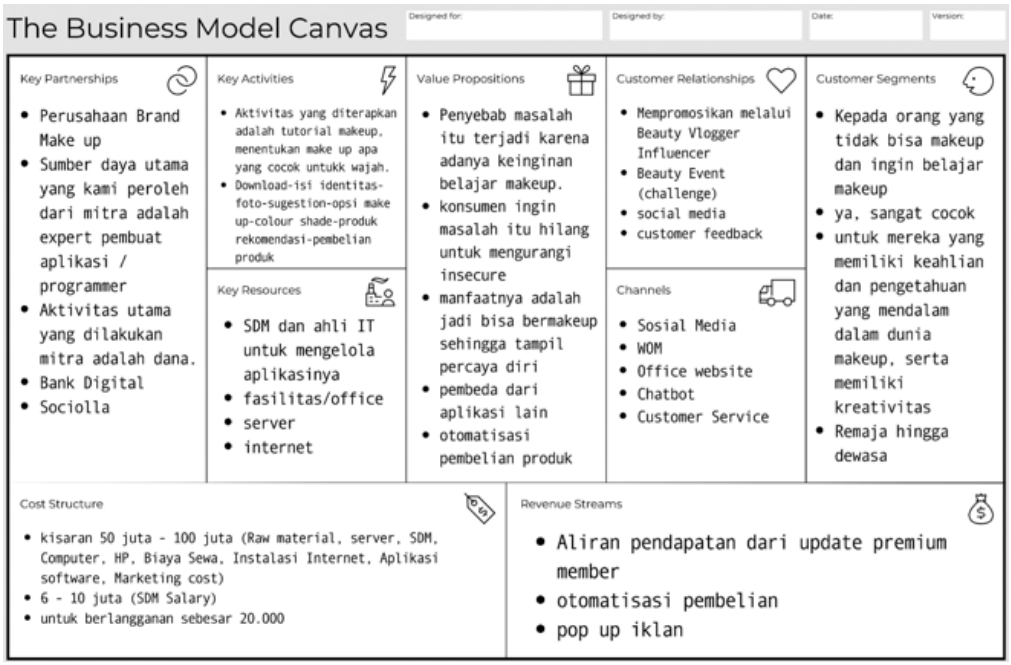


Figure 3. BMC's analysis on Experimental Variable



DISCUSSION

Based on the BMC's analysis from both groups, The Business Model Canvas (BMC) is a crucial tool for businesses targeting niche markets, as it helps in clearly defining and understanding the specific needs, preferences, and pain points of their target customer segments. The experimental variable whose

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targets Niche market is credible. Niche market has limited competition. The increasing variety in consumer preferences and evolving corporate requirements make it more lucrative. Companies throughout have effectively utilized specialty marketing to get success. Organizations are compelled to possess competitive advantages due to the heightened complexity and competitiveness resulting from the economic environment. Niche marketing endeavours to allure and maintain the allegiance of a specific target group by generating exceptional value [11].

By Incorporating data from Semrush into the BMC, it ensures that these insights are accurate and reflective of the actual market conditions. This allows business to tailor their value propositions more effectively, identify key resources and activities necessary for service delivery, and determine the most efficient channels and customer relationship strategies for their niche audience. Additionally, using real data aids in managing costs associated with niche marketing and identifies optimal revenue streams, ensuring financial sustainability. Ultimately, the BMC, informed by real data, provides a structured approach for niche businesses to develop focused strategies, build competitive advantages, and achieve long-term success.

SUMMARY

The research project explores the integration of Semrush into PjBL to aid university students in developing effective business models. By leveraging Semrush for market research, students can enhance their critical thinking, deepen their understanding of business concepts, and cultivate an entrepreneurial mindset. The findings of this research indicate that incorporating Semrush into PjBL significantly benefits students in creating Business Model Canvas (BMC) frameworks and identifying business opportunities. The study found that the group using data from Semrush showed improved outcomes in designing BMCs and recognizing market opportunities.

ADVANCED RESEARCH

The research has several limitations that should be acknowledged. Firstly, the study's sample size was limited to two groups of university students, which may not be representative of the broader student population. This restricts the generalizability of the findings. Additionally, the research was conducted within a specific course and industry context, namely the Strategic Digital Business

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course focusing on start-up technology, which may limit the applicability of the results to other courses or industries. Furthermore, the study employed a qualitative case study design, which, while providing in-depth insights, may not capture the full range of potential outcomes that could be observed with a more diverse methodological approach.

For future research, it is recommended to expand the sample size and include a more diverse range of courses and industries to enhance the generalizability of the findings. Moreover, employing a mixed-methods approach could provide a more comprehensive understanding of the impact of integrating Semrush into project-based learning.

ACKNOWLEDGMENTS

We would like to extend our deepest gratitude to our colleagues and mentors who provided invaluable support and guidance throughout this research. Their insights and encouragement were instrumental in shaping the direction and outcomes of this study. We are particularly grateful to the faculty and staff of Digital Business for their unwavering support and for providing a conducive environment for our research. Special thanks to the students who participated in the study; their enthusiasm and engagement were crucial to the success of this project.

Finally, we wish to acknowledge the contributions of the experts and practitioners who shared their knowledge and experiences with us, enriching our understanding of the integration of Semrush into project-based learning. Their input was vital in helping us explore the practical applications of our research.

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