

Optimization of Business Opportunities Using Google Trends for Students

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ABSTRACT

This community service program aimed to enhance entrepreneurial literacy among Generation Z students by optimizing business opportunities through the use of Google Trends. Conducted at SMA Bintara 1 Depok, the activity involved 30 students from grade 11 and was carried out through a descriptive and participatory approach. The methodology included a combination of pre-test, lecture-based training, interactive discussions, post-test, and satisfaction surveys. Data were analyzed descriptively to measure improvements in students' knowledge. Results showed a significant increase in understanding, with pre-test scores at 6.1% and 3% for Google Trends knowledge and usage respectively, rising to 97% and 93.9% after the intervention. The training successfully introduced students to the practical application of digital tools for market research and business strategy development. The program proved effective in fostering critical thinking, creativity, and systematic decision-making, thus contributing to the preparation of digitally competent young entrepreneurs for the evolving market landscape.

Keywords: Google Trends, Digital Entrepreneurship, Generation Z, Business Opportunities, Market Research.

I. Introduction

In today's increasingly globalized and digitalized world, the ability to innovate and respond to rapidly changing market demands has become essential, particularly for the younger generation. Generation Z, born into the era of technology and digital connectivity, possesses a distinct advantage as digital natives. Their proficiency in using digital tools daily positions them uniquely to harness technological advancements for entrepreneurial ventures. However, despite their familiarity with technology, many young individuals still require guidance to effectively translate digital trends into viable business opportunities.

The Indonesian government, through its educational reforms such as the Merdeka Curriculum and the Project to Strengthen the Profile of Pancasila Students (P5), has recognized the need to embed entrepreneurial competencies in students from an early age. P5 encourages interdisciplinary collaboration, real-world problem-solving, and project-based learning aimed at developing critical competencies, including creativity, innovation, and independence. These efforts align with the national agenda to prepare the younger generation for the opportunities and challenges of the 21st century, including the anticipated demographic

bonus. Within this context, fostering an entrepreneurial mindset among high school students is not merely an option but a necessity. Entrepreneurship is no longer limited to establishing businesses; it now encompasses the ability to identify market gaps, create innovative solutions, and adapt to evolving consumer behaviors. Digital entrepreneurship, in particular, is seen as a powerful driver of economic growth and employment creation in Indonesia's emerging economy. Hence, integrating digital literacy into entrepreneurship education becomes crucial.

One effective tool to support digital entrepreneurship is Google Trends, a free platform that provides real-time insights into consumer search behavior across different regions and periods. By understanding what consumers are currently interested in, young entrepreneurs can better tailor their products, services, and marketing strategies. Google Trends not only offers data visualization but also allows users to analyze market dynamics systematically, making it an ideal tool for aspiring entrepreneurs who are just beginning their journey. Despite the potential of digital tools like Google Trends, many students remain unfamiliar with their practical applications. Traditional entrepreneurship education often emphasizes business plans and operational management without adequately addressing the critical role of data-driven decision-making. This gap highlights the need for initiatives that bridge theoretical knowledge with practical digital tools, ensuring that students are better equipped to navigate the competitive business landscape. In response to these challenges, the Faculty of Economics and Business at Universitas Pancasila organized a community service program titled "Optimization of Business Opportunities Using Google Trends for Students at SMA Bintara Depok." The program aimed to introduce students to digital entrepreneurship concepts and equip them with practical skills to conduct market research using Google Trends. It was carefully designed to provide both theoretical foundations and hands-on experience in utilizing digital data for business development. SMA Bintara Depok was selected as the site for this initiative due to its strong academic standing and commitment to holistic student development. As a highly accredited private high school in Depok, SMA Bintara fosters an environment conducive to innovation and creativity. Collaborating with such institutions ensures that the outreach efforts effectively reach students who are capable of applying new knowledge and skills in meaningful ways. Through this program, students were encouraged to explore real-world business opportunities by leveraging digital tools. They learned to recognize trends, analyze market behavior, and ideate creative business concepts based on empirical data. These activities not only enhanced their entrepreneurial skills but also fostered critical thinking, data literacy, and a deeper understanding of the interconnectedness between technology and business success. Moreover, the program aligns with broader national goals, including the realization of the Sustainable Development Goals (SDGs), particularly in promoting quality education, decent work, and economic growth. By cultivating a generation of digitally literate entrepreneurs, the initiative contributes to building a resilient economy and addressing future workforce challenges.

II. Literature Review and Hypothesis Development

2.1. Digital Entrepreneurship and Generation Z

The emergence of digital entrepreneurship has transformed traditional business models, driven largely by advances in technology and internet accessibility. Digital entrepreneurship refers to the creation and management of new ventures through the use of digital technologies (Karim et al., 2020). For Generation Z, individuals born into an environment of instant digital connectivity, the potential to exploit digital platforms for business development is exceptionally high. As digital natives, Generation Z is naturally adept at integrating technology into everyday activities, including business operations (Stillman & Stillman, 2018). However, this potential requires proper guidance and tools to be fully realized, particularly in the context of entrepreneurship education at the high school level.

2.2. The Importance of Entrepreneurial Literacy

Entrepreneurial literacy encompasses a comprehensive understanding of how to identify opportunities, develop innovative solutions, and execute business strategies effectively. It is essential to instill entrepreneurial literacy among students early, enabling them to adapt to the rapidly evolving market landscape. The Indonesian Ministry of Education and Culture emphasizes the role of entrepreneurship education through initiatives such as the Project to Strengthen the Profile of Pancasila Students (P5) (Kementerian Pendidikan dan Kebudayaan, 2024). P5 encourages students to work collaboratively, think critically, and solve real-world problems—competencies that align with entrepreneurial skillsets required in the digital era.

2.3. Google Trends as a Market Research Tool

Google Trends is an innovative and accessible tool that allows users to explore the popularity of search queries over time and across regions. It provides valuable insights into consumer behavior, emerging trends, and market interests, which are crucial for data-driven decision-making in business. According to Karim et al. (2020), the integration of technological tools into entrepreneurial practices enables businesses to better anticipate market needs and innovate accordingly. Google Trends serves as a real-time research instrument, offering graphical and geographic data that helps entrepreneurs design more relevant and effective marketing strategies.

2.4. The Relationship between Data-Driven Decision Making and Business Success

The ability to analyze data and derive actionable insights is a significant determinant of success in today's competitive business environment. Data-driven decision-making enables entrepreneurs to minimize risks, identify emerging opportunities, and align business strategies with market demands. Google Trends supports this process by highlighting search patterns and consumer interests, making it an essential tool for entrepreneurs aiming to develop customer-centric businesses. Sujatmiko (2018) underscores the need for Generation Z to cultivate critical thinking and creative problem-solving skills, particularly in using real-time data to innovate business ideas.

2.5. Integrating Digital Tools into Entrepreneurship Education

Effective entrepreneurship education must integrate both theoretical knowledge and practical digital tools. Traditional approaches that focus solely on business planning without addressing the digital landscape are insufficient for preparing students for modern entrepreneurial challenges. Programs like the community service initiative at SMA Bintara Depok aim to bridge this gap by providing students with practical exposure to digital research tools, enhancing their entrepreneurial competencies, and fostering a culture of innovation and systematic thinking. This approach not only empowers students but also supports national goals related to quality education, economic growth, and sustainable development (Bappenas, 2021).

III. Research Method

This community service program employed a descriptive and participatory approach aimed at enhancing entrepreneurial literacy among high school students. The activity was conducted through a training session that focused on introducing Google Trends as a digital tool for business opportunity analysis. The target participants were 30 students from grade 11 of SMA Bintara 1 Depok, a well-accredited private high school located in Depok, West Java, Indonesia. The selection of participants was based on their active

involvement in entrepreneurship-related activities and their interest in developing business competencies, in line with the objectives of the Project to Strengthen the Profile of Pancasila Students (P5).

The community service activity took place at the school's auditorium on January 23, 2025, spanning three hours from morning to noon. Preparations for the event included coordination with school authorities to identify student needs, preparation of training materials, and development of pre-test and post-test instruments using Google Forms. An initial briefing among the academic team was also conducted to ensure readiness in terms of content delivery, logistics, and technical requirements. On the day of implementation, students were first asked to complete a pre-test to assess their baseline knowledge related to digital entrepreneurship and the use of Google Trends. Following this, a lecture session was delivered, discussing the role of Google Trends in identifying market trends and creating business strategies. The session was designed to be interactive, incorporating discussions, case examples, and ice-breaking activities to sustain engagement and encourage participation. After the training, a post-test was administered to measure improvements in students' understanding of the subject matter.

Data collection relied on the responses from the pre-test and post-test as well as a satisfaction survey distributed at the end of the session. Descriptive analysis was performed to compare the students' performance before and after the intervention, focusing on the percentage increase in correct responses as an indicator of the training's effectiveness. Additionally, feedback from the satisfaction survey provided qualitative insights into participants' perceptions of the training's relevance, clarity, and delivery. Throughout the process, ethical considerations were upheld by ensuring that participants were informed about the voluntary nature of their involvement, and all data collected were kept confidential. The community service activity adhered to the ethical standards established by the Faculty of Economics and Business, Universitas Pancasila, ensuring that the program maintained respect for the participants' rights and educational development.

IV. Results and Discussion

The results of the community service program demonstrate a significant improvement in students' understanding and awareness of the use of Google Trends as a digital tool for business development. Based on the analysis of the pre-test and post-test results, there was a substantial increase in the participants' knowledge. Before the training, only 6.1% of students demonstrated an understanding of Google Trends, and a mere 3% were aware of its benefits and applications for business purposes. After the completion of the training, post-test results showed a dramatic increase, with 97% of students demonstrating a clear understanding of Google Trends and 93.9% recognizing its practical uses for business and marketing strategy.

This sharp improvement indicates that the intervention successfully addressed the students' initial knowledge gaps. By integrating theoretical concepts with real-time digital applications, the program enabled students to see how data trends can influence business decision-making processes. The interactive nature of the session, which included discussions, practical examples, and ice-breaking activities, contributed significantly to maintaining engagement and reinforcing the learning outcomes.

The discussion with students during the session revealed that many of them had previously relied on intuition rather than data when attempting to identify business opportunities. Through the exposure to Google Trends, students gained an understanding of how real-time consumer interest data can serve as a foundation for product development, marketing strategies, and market segmentation. They realized that using data-driven insights allows entrepreneurs to adapt quickly to market changes, anticipate consumer needs, and develop competitive advantages. Moreover, the satisfaction survey conducted at the end of the session showed positive responses from the participants. Students appreciated the relevance of the topic, the clarity of the explanations, and the opportunity to engage actively during the training. Many students expressed interest in further learning about other digital tools such as Google Ads, suggesting that the program not only enhanced their immediate knowledge but also sparked their curiosity for continued digital entrepreneurship education.

The success of this program aligns with previous studies emphasizing the importance of integrating digital tools into entrepreneurship education. According to Karim et al. (2020), the ability to leverage technological resources significantly increases entrepreneurial success rates, especially among younger generations. Similarly, Stillman and Stillman (2018) highlight that Generation Z's adaptability to technology must be complemented with critical thinking and strategic application skills to fully realize their entrepreneurial potential.



Figure 1. Documentation of activities

The findings of this program suggest that practical, tool-based entrepreneurship training is effective in fostering the digital competencies necessary for young entrepreneurs. Programs like this also contribute to broader national goals of enhancing youth employability and promoting sustainable economic growth. In the future, it is recommended that similar initiatives include more advanced applications such as the integration of Google Trends with digital advertising tools to deepen students' skills in digital marketing and business analytics.

V. Conclusion

This community service program successfully enhanced the entrepreneurial literacy of Generation Z students by introducing them to the strategic use of Google Trends for business development. The significant increase in post-test scores compared to pre-test results clearly demonstrates the effectiveness of combining theoretical knowledge with practical digital tools. Prior to the program, most students lacked familiarity with using real-time data in business decision-making; however, the training effectively bridged this gap by equipping them with essential skills in digital market research and trend analysis. The program not only raised

students' awareness of the critical role of data-driven decision-making but also cultivated their ability to think systematically, creatively, and strategically. Participants became more aware of how digital trends can serve as valuable insights for identifying market opportunities, developing products, and designing marketing strategies that are aligned with consumer behavior. This aligns with the broader educational objective of fostering critical and innovative thinking in preparing students to thrive in a competitive digital economy.

The positive feedback gathered through the satisfaction survey suggests that the approach used, integrating interactive discussions, case studies, and gamified learning, was effective in maintaining student engagement and enthusiasm. The program also sparked students' interest in exploring more advanced digital marketing tools, indicating a strong foundation for future digital entrepreneurship education initiatives. This program underscores the importance of practical, technology-based entrepreneurship education at the high school level. Future community service programs should continue to build upon this foundation by offering more advanced training sessions, such as integrating Google Trends with digital advertising platforms, to further deepen students' digital competencies and entrepreneurial potential.

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