

Research Article

Marketing Strategy Analysis for Polytechnic Innovation Products: A Case Study of Flagship Products in Indonesian Polytechnics

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ORCIDTaufik Akbar: <https://orcid.org/0000-0003-0962-5544>**Abstract.**

This research aims to analyze effective marketing strategies for innovative products from five state polytechnics in Indonesia. The research method employed a qualitative approach with data collection techniques involving in-depth interviews and document analysis, involving 20 respondents from various backgrounds, including polytechnic employees, students, business practitioners, and alumni. The data analysis was conducted using descriptive analysis and content analysis methods. The research findings indicate that the current marketing strategies for polytechnic innovation products are primarily limited to promotion through social media and polytechnic websites. The recommendations from this study include steps to enhance more effective marketing strategies. The first recommendation is to conduct market research to identify potential target markets. Subsequently, develop products that align with market needs, establish competitive pricing, and select appropriate distribution channels. Furthermore, the study suggests that successful marketing strategies require support from polytechnic management and trained human resources in marketing. Polytechnics should also build partnerships with industry and government agencies to expand their market reach and enhance the branding of their innovative products. Lastly, the research recommendations underscore the importance of using social media for innovative product promotion, strengthening collaboration with the industry, and optimizing available funds to expand the reach of polytechnic innovation product promotion. By implementing these recommendations, polytechnics can enhance the effectiveness of their marketing strategies and contribute to the success of marketing their flagship products from the five state polytechnics in Indonesia.

Keywords: strategy, marketing, product, innovation, polytechnic

1. Introduction

Polytechnics are specialized higher education institutions focused on practical education, preparing graduates for the workforce [1]. They also play a crucial role in developing innovative products to address societal and industrial challenges. However, introducing and effectively marketing these innovations is often challenging due to a lack of marketing experience and knowledge.

Corresponding Author: Taufik Akbar; email: taufik.akbar@bisnis.pnj.com**Published:** 29 August 2024

Publishing services provided by Knowledge E

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Selection and Peer-review under the responsibility of the ASABEC 2023 Conference Committee.



Marketing strategies are essential to address these challenges. Patel defines marketing strategy as a customer-centered approach involving market research, brand development, search engine optimization, content marketing, social media, and retargeting to achieve business objectives [2–4]. This aligns with the goals set by the Directorate General of Higher Education and Putri, E., which aim to promote vocational education in Indonesia by enhancing the quality and competitiveness of vocational graduates [5, 6].

The objectives of this policy include encouraging innovative product development within polytechnics, strengthening their capacity, fostering collaboration with industries and the government, improving vocational education accessibility and quality, and raising public awareness about vocational education and polytechnic innovations.

Effective marketing strategies are crucial in promoting these innovative products as they are often unfamiliar to the market [7]. These strategies increase product awareness, provide clear information about product benefits, enhance customer satisfaction, boost sales, and strengthen the polytechnic brand [8, 9].

In addition, marketing strategy analysis is vital to understand how to effectively promote polytechnic innovation products, making them known to the public and meeting industry needs. A case study will assess flagship products from polytechnics in Indonesia to identify opportunities for improving marketing strategies [10, 11].

The objective of the study, “Marketing Strategy Analysis for Polytechnic Innovation Products: A Case Study of Flagship Polytechnic Products in Indonesia,” is to provide appropriate marketing strategy recommendations for polytechnics to promote their innovative products. The research also aims to help polytechnics understand their target market, improve coordination among relevant departments, utilize information technology as a marketing tool, comprehend consumer behavior towards innovative products, and determine suitable market needs [12–16]. The ultimate goal of the research is to enhance the efficiency and effectiveness of marketing innovative products for polytechnics in Indonesia.

2. Literature Review

2.1. Product

Product is a crucial element in the marketing mix, representing the outcome of production activities that provide benefits or satisfaction to consumers. According to Kotler

and Armstrong, a product is defined as everything that can be offered to the market for attention, purchase, use, or consumption that satisfies consumers' needs or desires [17–19]. Armstrong and Kotler have identified five levels of a product, which encompass various aspects [20]. The first level is the Core Product, representing the fundamental benefit consumers expect from the product. The second level is the Actual Product, encompassing what consumers can visibly or tangibly perceive, including the brand, features, quality, and design. Moving on to the third level, we have the Augmented Product, introducing additional elements that enhance the product's value, such as after-sales services, warranties, and repair options. The fourth level involves the Potential Product, which represents products planned for future development, designed to cater to evolving consumer needs and desires. Lastly, the Expected Product, which represents what consumers anticipate and aligns with their expectations.

2.2. Polytechnic innovation products

Innovation products are solutions that provide added value to customers through the development of new technologies or the innovative use of existing technologies [21, 22]. Innovation products create new markets or expand existing ones by meeting previously unmet needs, satisfying customers with better, faster, or more cost-effective solutions, and involving a systematic innovation process. Innovation products can be discovered and developed by various parties, including companies, universities, governments, and communities, by integrating technology, product design, and collaboration. Innovation products play a vital role in improving the quality of education in polytechnics, especially in curriculum development, teaching and learning enhancements, and providing opportunities for students to participate in research and product development. Support from management and faculty is essential to drive product innovation in polytechnics.

The stages of innovation product development in polytechnics [23–25] include:

- a. Ideation: A creative team forms ideas for solutions.
- b. Idea validation: Ideas are evaluated by gathering feedback from users and other stakeholders.
- c. Prototyping: Creating a simple initial prototype for testing.
- d. Testing: Further testing and evaluation to ensure the product meets needs and adds value.

e. Commercialization: Marketing the innovation product involves the marketing, business development, and human resources teams.

2.3. Basic concepts of marketing

Marketing strategy is a working plan that helps a company achieve long-term goals by effectively and efficiently meeting customer needs and desires [26]. Marketing strategy is based on a thorough analysis of the market, competition, as well as customer needs and desires. The basic concepts of marketing strategy include market segmentation, target market determination, product positioning, and marketing mix. Market segmentation involves dividing the market into groups with similar characteristics, while target market determination selects the most promising segment. Product positioning creates consumer perceptions of the product, differentiates it from competitors, and meets customer needs. The marketing mix comprises product, price, promotion, and distribution, with a focus on digital marketing strategies in the current era [27–29].

2.4. Types of marketing strategies for innovation products

For innovation products in polytechnics, several types of marketing strategies can be applied, involving collaboration with networks, the use of the internet, the development of customer networks, partnerships with other companies or organizations, and the use of traditional media. Network collaboration involves partners and stakeholders in related industries [30]. Internet marketing includes using websites, social media, and online platforms [31]. Developing customer networks builds relationships with existing and potential customers through training programs and seminars. Partnerships with large companies can increase product visibility. While digital strategies dominate, traditional media such as print, radio, television, or outdoor advertising remain options in some cases. All marketing strategies should be integrated and coordinated to achieve the marketing goals of innovation products.

3. Research Methodology

This research utilizes a qualitative approach to gain an in-depth understanding of the perceptions and subjective experiences of individuals or groups regarding the marketing strategies of innovation products at Polytechnics [32–35]. The selection of

informants is carried out through purposive sampling techniques [36, 37] based on criteria relevant to the research objectives. This study includes five polytechnics in Indonesia: Batam State Polytechnic, Jakarta State Polytechnic, Surabaya State Polytechnic of Electronics, Malang State Polytechnic, and Bandung State Polytechnic of Manufacturing.

The data collection technique used involves in-depth interviews and document analysis [37]. Data obtained from interviews and document analysis will be analyzed using descriptive analysis and content analysis methods. Descriptive analysis is used to analyze interview data and identify emerging patterns in the data. Data validity in this study will be ensured by conducting data triangulation.

4. Research Findings

4.1. Descriptive analysis

The descriptive analysis of this research highlights the diversity of respondents within the context of Polytechnics. Majority of Polytechnic staff, aged 36 to 55, bring varied experiences in higher education, particularly from experienced lecturers. These educators play a significant role in the development and marketing of innovative Polytechnic products. Meanwhile, the predominantly young age group (18 to 20) among Polytechnic students indicates their interest and unique perspectives regarding innovation products. Diverse study programs among students provide insights into marketing strategies across different fields. The involvement of more business representatives compared to alumni reveals strong external interest in innovation products, and balanced gender representation ensures a comprehensive view. Positive perceptions about innovation and marketing underscore their importance, enriching the research with diverse insights.

4.2. Content analysis

This content analysis focuses on research regarding “Marketing Strategies for Polytechnic Innovation Products” conducted at five State Polytechnics in Indonesia. The aim is to delve deeper into and comprehend the issues, findings, and perspectives that emerge in the context of marketing strategies for innovative products in the higher education environment.

The research methodology employed includes interviews and document analysis. The data analyzed encompass interview results from various stakeholders, such as Polytechnic employees, students, business practitioners, and alumni. Additionally, document analysis encompasses promotional materials for innovative products, activity reports, and marketing-related documents. The primary theme that consistently emerges is the importance of developing effective marketing strategies for Polytechnic innovation products. This is acknowledged as the key to enhancing the visibility and acceptance of innovative products in a highly competitive market. Key issues that arise include the complexity of marketing innovative products, the importance of visibility and acceptance, and consensus among diverse stakeholders.

Furthermore, positive acceptance of Polytechnic innovation products is reflected in the views of the majority of respondents, especially students and alumni. They perceive these innovative products as a significant advancement in higher education, a contribution to global competitiveness, and a relevant solution to challenges in the educational and industrial sectors. Challenges in marketing innovative products include intense competition in the higher education market, financing issues, and a lack of public awareness about Polytechnic innovation products. The efficient and effective management of resources in addressing these challenges is highlighted. The role of external parties, particularly business practitioners, in the development and marketing of innovative products is vital, including aspects such as funding, distribution, and industry insights.

Collaboration among Polytechnics is identified as a crucial factor in the development of innovative products. This encompasses the merging of ideas, financial resources, experiences, and the creation of strong synergy. Key factors in marketing Polytechnic innovation products include product excellence, a strong branding strategy, and active engagement of students and faculty in marketing efforts. An effective communication approach involves the use of social media, seminars, and collaboration with the media. This aids in promoting innovative products and engaging with the target market.

Future expectations include increased visibility of products, contributions to higher education and the industry, and the sustainability and growth of Polytechnic innovation products. These expectations reflect the belief that with the right marketing strategies, innovative products can become valuable contributors to higher education and national development.

5. Implication of Results

The study on “Marketing Strategy Analysis for Polytechnic Innovation Products: A Case Study of Leading Polytechnics in Indonesia” has significant implications for Polytechnics in Indonesia. It highlights the importance of utilizing social media, seminars, and media collaborations for effective marketing. In addition, it emphasizes student and faculty involvement, strong branding, inter-Polytechnic cooperation, ongoing innovation product development, and long-term commitment. Implementing these findings requires detailed marketing plans, adequate budget allocation, and continuous performance evaluation to enhance education and industry in Indonesia.

6. Recommendations

This research provides strategic recommendations for Polytechnics in Indonesia to enhance the marketing of innovative products. The recommendations include market research and target market identification, development of relevant products, competitive pricing determination, selection of appropriate distribution channels, and optimization of social media usage. Support from management and training for human resources in marketing are considered crucial. Additionally, the research suggests increasing collaboration with the industry, building networks with relevant institutions, and optimizing budget allocation for promotions. By implementing these recommendations, it is expected that Polytechnics can strengthen the position of their innovative products in the market more effectively.

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