Development of Competitive Strategies in the "Clarinet" (Clustering and Networking) Model in Private Schools to Increase Student Interest

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Abstract: This research aims to describe the framework for developing competitive strategies for schools using “Clarinet” (clustering and networking) models, as well as to assess the feasibility of the development guide for competitive strategies in “Clarinet” models. This research uses a qualitative approach with the Research and Development (R&D) method by Borg and Gall. Data collection is conducted through questionnaires, documentation studies, in-depth interviews, and Focus Group Discussions (FGD). Data collection is done through documentation studies, interviews, questionnaires, and focus group discussions. The data analysis is conducted through the triangulation of techniques and sources. The results show that the validation test for the feasibility of the model and competitive strategies by education management experts yielded 88%, and marketing management experts yielded 96%. The research results indicate that the trial of the competitive strategy product using clustering and networking models is approximately 94% (very good/very valid). It is concluded that the competitive strategy within clustering and networking models is worthy of implementation to enhance the interest of students.


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Introduction

Education services become the product of achieving the vision, mission, objectives, and target audience of each educational institution (school). The school's outputs take the form of learning services, laboratories, libraries, workshops, quality assurance, extracurricular activities, and other relevant activities for shaping the profile of graduates. Schools need to provide information to the community and/or prospective students about the specifications of the education services they offer (Lay et al., 2023). Information needed by the community includes the profile and reputation of graduates, alumni, educators, and educational staff, facilities, information technology applications, quality assurance, extracurricular activities, management and leadership, and collaboration networks. This information can be disseminated through the school's website, brochures, social or public media, student admissions events, parent meetings, open days, School Committee meetings, Educational Foundation, and the Education Office (Prathigna et al., 2023).

The issues currently arising involve private schools, as government partners in achieving national educational goals, having to face challenges and dynamics of societal life, school developments, and policies strengthening public schools. Many private schools are being abandoned by their clients due to their inability to compete with public schools or other superior schools. Basic Education Data or Dapodik, a national-scale integrated data collection system and is the primary data source for national education, and data collected from several mass media, such as Cahyadi, Rofii (2023), and Irawan (2024), shows that between 2019 and
2023, many private schools experienced a significant decrease in the number of students. Factors causing this decline include insufficient school promotion, lack of flagship programs in schools, free public-school policies, and the new student admission system (PPDB) zoning policy. Although private schools do not use zoning systems, the zoning policy of the PPDB still affects them. Negative impacts include a decrease in the number of new students because the distance between public schools and private schools is not too far, so the zoning coverage area of students still falls within public schools.

However, for private schools, students are the main assets that determine the sustainability of a school. If the number of students decreases, the smooth operation and sustainability of the school will be hindered. Private school operations, which mostly rely on financial support from the community (parents), will be hindered if the number of students does not reach the target. Moreover, the quality of schools may decrease due to the limited number of students that can be utilized for school branding, through competitions, achievements, or other flagship programs.

Therefore, private schools need to implement appropriate strategies and approaches in marketing their education services (Ramadhan et al, 2023). Theoretically, there are three components in education marketing implementation: integrated marketing, creating customer satisfaction, and profit (Inayati & Pratiwi, 2023). In addition, institutions must manage customer-impacting resources, policies, activities, and market segmentation. These four factors will provide references for the choices of service product users. In its implementation, marketing includes four stages: Planning, Organizing, Actuating, and Controlling (Machali & Hidayat, 2016). Specifically, private schools need to perform potential management functions in marketing their schools.

Marketing education services are social activities or processes conducted managerially, either individually or collectively, to achieve the desired results needed and desired by educational institutions through offering to other interested parties (Kotler & Keller, 2006). In educational marketing management, there are marketing mix tools for educational services, namely product, price, location, promotion, human resources, physical evidence, and the education service process (Kartini et al., 2023). Educational marketing management is an important and strategic component for the sustainability of an educational institution, including private educational institutions. Educational marketing management must focus on consumer needs and expectations. Institutions must be able to determine, produce, and predict the needs and expectations and satisfying services effectively and efficiently. This requires educational institutions to be able to compete in the educational marketing process (Mahmudah & Putra, 2021).

Determining marketing strategies for educational services is done by considering segmentation, targeting, and positioning. Specifically, market segmentation is a strategic element in marketing management. Customer segmentation is the process of grouping customers into several groups with similar characteristics. This approach will help schools understand the product needs and preferences of each customer group well. Clustering is a suitable technique used to determine customer segmentation. This is because clustering groups data into several clusters based on similarities. Homogeneous groups or clusters can be used as the basis for segmentation (Baihaqi et al., 2019). Through customer segmentation, schools can determine the most potential segments and adjust the marketing strategies that must be implemented to achieve maximum results because the target consumers become clearer.

Clustering is a suitable technique used to determine customer segmentation. This is because clustering groups data into several clusters based on the similarity of characteristics.
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In line with the research by Durga et al., (2023), in marketing strategy, customer segmentation analysis becomes an important component. The segmentation process allows business managers to adjust marketing efforts, create personal experiences, and ultimately improve sales performance. This research emphasizes the practical application of clustering in identifying customer segments, allocating resources efficiently, fostering customer loyalty, and driving new customer growth. The findings in this study emphasize the importance of data-based customer segmentation as a strategic tool in businesses aiming to grow in competitive markets, which ultimately leads to increased sales. This technique is considered relevant to be used because schools are currently entering a more competitive education services market or industry.

In addition to determining consumer segmentation, schools must also establish good networking with various parties as a component of the school's competitive strategy. School flagship programs and activities must be known to the wider community. Schools must have a strong commitment to explaining and realizing the vision, mission, and school programs. The needs, expectations, and demands of the community must be met by the school through various service programs. Networking, referring to tactics and methods for building and maintaining professional connections or relationships with others to achieve specific goals, can support the effectiveness of clustering strategies (Isfadilah, 2020).

Networking is very strategic in marketing private schools both vertically and horizontally. Vertically, collaboration with management levels below it as inputs (supplier of students) for the school. Horizontally, collaboration with other schools, parents, alumni, or other institutions to access information about the existence and development of education as a reference in determining marketing strategies. Such collaboration also plays a role in educational marketing efforts as one of the important components in the existence and development of schools. The findings from Triwiyanto (2023) state that collaboration between schools and the community is part of the education management system originating from parents to improve the quality of schools.

Previous research has not developed strategies with segmentation mix and school networking utilization, so this research aims to produce a competitive strategy design in the "Clarinet" model (clustering and networking) of schools to increase student interest. With this mix of development models, the need for a new model strategy to increase school competitiveness will be able to help increase the number of students and the quality of schools which is absolutely necessary at this time.

Research Method

This study is a qualitative research, using the R&D method for product development in the form of a guide for developing competitive strategies for private schools in the clustering and networking model. The development model used is the Borg & Gall development model (1983) up to the fifth stage, which includes Research and Initial Information Collection, Planning, Initial Product Development, Product Validation, and Product Revision. The subjects in this study are product validation involving experts, namely experts in educational management and marketing management. This is aimed at obtaining assessments, input, and comments that will be used as references in refining the developed product. Data collection techniques consist of documentation studies, observation,
questionnaires, in-depth interviews, and FGDs with school principals, vice principals, teachers, educational staff, school supervisors, students, parents, prospective students, and parents of prospective students in Salatiga and surrounding areas who will be involved as informants and participants. Meanwhile, the sampling technique used is purposive sampling. Qualitative data obtained will be analyzed using Milles and Huberman's technique (2014), namely data collection, data reduction, data display, and verification/conclusion. While quantitative data, such as the results of validation by experts in educational management and marketing management, as well as the results of small-scale trials (by school principals or school promotion teams), will be analyzed using quantitative descriptive techniques. Data obtained from expert validation sheets and trial questionnaires will be formulated in the form of descriptive percentages. Data validation will be carried out using triangulation of techniques and sources, as well as expert and practitioner testing. After the product in the form of a guide for developing competitive school strategies has been validated by experts, the analysis of the validation results is conducted using quality qualifications and conclusions based on the conversion determination of achievement levels with the 5-point scale by Tegeh et al. (2014) as shown in the following table:

<table>
<thead>
<tr>
<th>Achievement Level</th>
<th>Qualification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% - 100%</td>
<td>Very good/very valid</td>
<td>No need to revise</td>
</tr>
<tr>
<td>75% - 89 %</td>
<td>good / valid</td>
<td>Revised as necessary</td>
</tr>
<tr>
<td>65% - 74%</td>
<td>Pretty good / quite valid</td>
<td>Quite a lot of revisions</td>
</tr>
<tr>
<td>55% - 64%</td>
<td>Not good / less valid</td>
<td>Much revised</td>
</tr>
<tr>
<td>0% - 54 %</td>
<td>Very bad / very invalid</td>
<td>Total revision</td>
</tr>
</tbody>
</table>

Results and Discussion

The development of school competitive strategies in the clustering and networking model is carried out using the Borg & Gall development model (1983). The first stage is the research and information-gathering stage. In this stage, the problems underlying the weakness of school competitive strategies that have been applied are identified through in-depth interviews and documentation studies. The results obtained are: (1) the formulation of competitive strategies is not based on validly analyzed data sources, (2) the competitive strategies used do not fully consider school segmentation and involve school networking optimally, and (3) the lack of school personnel with the ability to formulate competitive strategies. These conditions are the basis for developing competitive strategy development in the clustering and networking model in private schools to help schools formulate competitive strategies that can increase student interest.

The second stage is planning. The planning stage is the stage of developing the design of school competitive strategies in the clustering and networking model based on the strategic management theories by Fred R. David (2009) and Robert G. Terry (1958). The stages involved include planning, organizing, actuating, and controlling. In the data analysis as the basis for development, the clustering theory by Canestrino (2021) and the networking theory by Huggins (2018) are used. In developing the strategic framework, Porter's competitive strategy theory (2008) is used, which includes low-cost strategy, product differentiation, innovation, growth, and collaboration.

Based on the analysis results, a design is prepared, which includes (a) a diagram of developing competitive strategies in the clustering and networking model, and (b) a guide for developing competitive strategies in the clustering and networking model. This diagram of competitive strategy development can be seen in Figure 1 below.
In the third stage, which is the stage of initial product development, the development of school competitive strategies in the clustering and networking model is carried out. These competitive strategies are part of school management efforts to maintain the school's existence and capture the school market. With the clustering and networking model, schools can easily identify school market segments, and networking can support school management. At this stage, models and guides are developed which will be validated by expert validators. This guidebook for developing competitive strategies in the clustering and networking model consists of five chapters. The first chapter covers background, objectives, targets, and benefits of developing competitive strategies in the clustering and networking model. The second chapter contains a review of the theories used in designing competitive strategies in the clustering and networking model. Chapter three presents the school profile, and chapter four explains the guide for developing competitive strategies in the clustering and networking model. The last chapter, or the fifth chapter in this guidebook, contains conclusions and closing remarks aimed at school managers or school foundation organizers.
The fourth stage is the validation stage. Product validation is conducted by experts in educational management and marketing management. In this stage, the product is validated by experts to obtain assessments, feedback, and recommendations that will be used as references for improving the developed product. The results of the validation test conducted on the product of developing school competitive strategies in the clustering and networking model can be seen in Table 4.

**Table 2. Percentage of Validation Results of School Competitive Strategy Development in the Clarinet Model**

<table>
<thead>
<tr>
<th>Test Subjects</th>
<th>Validation Results</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Management Expert Test</td>
<td>88%</td>
<td>Good</td>
</tr>
<tr>
<td>Marketing Management Expert Test</td>
<td>96%</td>
<td>Very good</td>
</tr>
</tbody>
</table>

**Average** 92% Very Good

Based on the data in the table, the validity of developing school competitive strategies in the clustering and networking model obtained an average percentage of 92% with a qualification of very good/very valid. The recommendation based on the results obtained is that some revisions are needed for product refinement before conducting limited initial product testing.

The last stage of this research is the stage of testing the initial product. In this stage, the revised product is tested on a limited basis in several private schools in Salatiga. The target schools for product testing are private junior high schools, senior high schools, and vocational schools in Salatiga. Product testing is carried out through assessment rubrics by the school principals and several teachers involved in school promotion. The average result obtained from respondents filling out the assessment rubric based on Table 5 is 94% with a qualification of very good/very valid.

**Table 5. Percentage of Initial Product Test Rubric Assessment Results for School Competitive Strategy Development in the Clarinet Model**

<table>
<thead>
<tr>
<th>Test Subject</th>
<th>Validation Results</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior School Principal</td>
<td>93 %</td>
<td>Very good</td>
</tr>
<tr>
<td>Junior School Teacher</td>
<td>95 %</td>
<td>Very good</td>
</tr>
<tr>
<td>Junior School Teacher</td>
<td>93 %</td>
<td>Very good</td>
</tr>
<tr>
<td>Junior School Promotion Team</td>
<td>92 %</td>
<td>Very good</td>
</tr>
<tr>
<td>High School Principal</td>
<td>94 %</td>
<td>Very good</td>
</tr>
<tr>
<td>High School Teacher</td>
<td>95 %</td>
<td>Very good</td>
</tr>
<tr>
<td>High School Teacher</td>
<td>94 %</td>
<td>Very good</td>
</tr>
<tr>
<td>High School Promotion Team</td>
<td>96 %</td>
<td>Very good</td>
</tr>
<tr>
<td>Vocational School Principal</td>
<td>94 %</td>
<td>Very good</td>
</tr>
<tr>
<td>Vocational School Teacher</td>
<td>93 %</td>
<td>Very good</td>
</tr>
<tr>
<td>Vocational School Teacher</td>
<td>93 %</td>
<td>Very good</td>
</tr>
<tr>
<td>Vocational School Team Promotion</td>
<td>95 %</td>
<td>Very good</td>
</tr>
</tbody>
</table>

**Average** 94% Very Good

The development research has yielded a product in the form of a model and guide for developing competitive strategies in schools using the clustering and networking model. These school competitive strategies were developed to address the need for a new model that could enhance the competitiveness of schools and attract students. In business management, clustering and networking strategies have proven to be effective marketing models because they tailor marketing to the needs of specific groups (Ningsih, 2020). The principle of clustering strategy involves grouping similar objects into clusters based on observed values from various variables for each individual (Ishizaka et al., 2021). This is supported by
research indicating that homogeneous customer behavior within a cluster can serve as the basis for segmentation (Purnomo et al., 2020).

The problem-solving approach employed in developing competitive strategies using the clustering and networking model is beneficial for improving the quality of private schools for several reasons: (1) clustering and networking have been deemed effective in business management studies and research, (2) with this model, the analysis of the market, opportunities, and positioning of private schools become clearer, (3) product design becomes more responsive to market needs, and (4) it helps determine effective and efficient communication strategies. This strategic model design will assist schools in obtaining competitive strategies that can enhance customer interest according to market segments and contemporary developments. With market segmentation, marketing activities can be more targeted, and available resources can be utilized more effectively and efficiently (Suyatno et al., 2023). Therefore, clustering can be utilized to facilitate the distribution of information, identify connections or patterns between various facts and statements through discussion and analysis, and seek consensus. Networking strategies, referring to methods of building and maintaining professional connections or relationships to achieve specific goals, can support the effectiveness of clustering strategies (Isfadilah, 2020). Strategic decisions related to the developed model should be based on a proper understanding of the systematic analysis results to form sustainable competitive advantages (Tatiana & Mikhail, 2020).

Based on the validation results obtained from both experts and users (school administrators), the development of competitive strategies in schools using the clustering and networking model is deemed suitable for enhancing student interest. This can be seen from the systematic development of strategies, which demonstrates the collaboration of clustering and networking models with easily understandable diagrams. Competitive strategies are developed with clear market segmentation and involve all school support elements in a networking scheme. This is consistent with the research by SDIT Luqman Al Hakim Timoho, which involved relevant parties in planning the formulation of school flagship programs (Zulifah et al., 2023).

The compiled guide also includes SWOT analysis techniques, cluster analysis, networking analysis, development diagrams, and detailed development action plans. The selection of appropriate strategies will enhance institutional productivity (Devi et al., 2022). Competitive strategies developed using Porter’s Competitive Strategy theory (low-cost strategy, differentiation, innovation, expansion, and collaboration) are a priority for achieving competitive advantages and ultimately improving performance (Sabihaini & Prasetio, 2020). This concept aligns with the statement that competitive strategies should be the hallmark of a school and continuously developed to make the school a leader in the market or a specific sector (Hasanah et al., 2021). Clarinet model will facilitate schools in developing competitive strategies using clustering and networking. This is because by using this model, schools will be able to find out market segmentation and school networks, such as alumni, parents, institutions, and other stakeholders to determine the right competitive strategy according to the potential and allocation of school human resources. Therefore, schools will be able to develop competitive strategies in the form of low-cost strategy, differentiation, innovation, expansion, and collaboration in various school programs. Through appropriate marketing strategies, schools can increase customer interest (including student enrollment). Schools that are in demand and have quality personnel will remain viable and able to enhance the quality of education (Margareta et al., 2018).
Conclusion
The validation test for the feasibility of the model and competitive strategies by education management experts yielded 88%, and marketing management experts yielded 96%. The research results indicate that the trial of the competitive strategy product using clustering and networking models is approximately 94% (very good/very valid). It is concluded that the competitive strategy within clustering and networking models is worthy of implementation to enhance the interest of students. The design of this strategy model will assist schools in acquiring competitive strategies that align with market segments, school networks, and current trends. Practically, private school administrators will gain insights into their competitive position based on market mapping. Additionally, they will have the capability to set target markets and take realistic actions in line with clusters and networks involving alumni, teachers, educational staff, religious institutions, companies/industries, and inter-school collaborations.

Recommendation
Recommendations for foundations or schools can use this model to establish target markets and realistic actions according to clusters and school networks in promoting and maintaining the popularity of the school to increase student interest. For further researchers, this research is still possible to be developed for educational services marketing research in other models, with a broader scope.

Acknowledgment
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References


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