

Development Strategy of Education Tourism Teaching Factory as a Tourist Destination at Politeknik Negeri Jember

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Abstract. A Teaching Factory (Tefa) is a concept of learning in actual circumstances to display the potential between the knowledge provided by a campus and industry needs. This study aims at identifying driving and inhibiting factors in the development of the Education Tourism Teaching Factory and to find out the development strategies that need to be implemented to increase its visits. This study deployed a quantitative descriptive design. The subject of the study is Educational Tourism Tefa at Politeknik Negeri Jember which will be developed in several academic support units, such as Food Processing and Packaging, Livestock, and Agricultural Production. The data obtained were identified as related to internal factors and external factors using analysis ranging from Internal Factor Evaluation (IFE), External Factor Evaluation (EFE), Internal External (IE), and Strengths Weaknesses Opportunities Threats (SWOT) matrix. The findings of this study based on the SWOT diagram show that Educational Tourism Tefa is in cell V, meaning that it is in the Growth stage. Thus, the growth strategy is designed to pursue growth, in sales, assets, profits, or a combination of the three aspects.

Keywords: Education tourism, Strategy, SWOT, Teaching factory

1 Introduction

The success rate of the national new era is closely related to human resource quality. The state has tried to maximize the capacity building of human resources in Indonesia through the education sector that can perform its potential that be useful in everyday life. One of the national strategic issues is Indonesia's relatively low labour productivity (1.37 percent) when compared to neighbouring countries such as Thailand (5.28 percent), and Vietnam (4.39 percent) [1]. This is because the process of connecting and matching the world of education and industry has not been carried out properly and can be comprehensive. Therefore, one of the objectives of the Directorate General of Vocational Education of the Ministry of Culture and Education of the Republic of Indonesia is to bring farms to schools, and its practical implementation is the development of a Teaching Factory (Tefa) on campus.

Tefa is a learning concept in an industrial setting that is developed to bridge the competence gap between industry needs and school knowledge [2]. It is a combination of Competency-Based Learning (CBT) and Product-Based Training (PBT) which means that expertise or skill processes are designed to be deployed according to real work procedures and product standards that meet the consumer market requirements. In other words, its basic conception is to perform production environment transfer in industry into the classroom [3]. An experience related to real production is required to enhance competence that can be obtained from industry practices every day [4]. In other words, the existence of Tefa is expected to be used as a realization of services, express ideas in the world of education in the form of services, and combine the learning process with production.

Tourism refers to tourist activities that are supported by different facilities and services. Those facilities are mostly provided by the community, entrepreneurs, central government, and local government [5]. Tourism activities are multidimensional and multi-disciplinary. It occurs as a manifestation of people's needs and interactions among many different parties [6]. It aims to increase the growth of the economy, eliminate poverty, improve people's welfare, overcome unemployment, promote culture, preserve nature, environment, and resources, elevate the image of the nation, strengthen national identity and unity, foster love for the motherland, and strengthen the friendship between nations [7].

According to [9], tourism management ought to pay attention to principles including tourism development. It needs to be based on local wisdom and a specific local sense reflecting the cultural heritage and environment uniqueness, preservation, protection, and resource quality improvement that become the basis for tourism area development, of additional tourist attraction development taken from treasures of local culture, etc. [10].

According to [11], that strategy is structured basically to form a 'response' to external changes that are relevant to an organization. The changes can be answered by considering the internal capabilities owned by an organization. The inability or indifference to predict changes in the external environment will create a 'shock', so strategies are useful for maintaining, maintaining, and improving the performance and competitive advantage of an organization.

According to [12], strategy is how an organization achieves its goals. It implies the management concept of business scope, mission, purpose, and objectives. Meanwhile, strategy formulation is a way of developing a continuous plan for management to achieve goals. The first is to perform a mapping of potential areas that can become tourist attractions. Increasing human resource capacity is one of the strategies carried out to promote tourism, and develop the tourism sector by utilizing technology systems. Tourism development strategies have the aim of developing quality products and services, gradually.

There are many stages in the tourism sector development strategy. In the short term, optimization is focused on optimization, especially strengthening the image of tourism, improving labour and management quality, and utilizing available products. In the medium term, it focuses on consolidation, especially in strengthening how the tourism sector attracts interest and develops the quality and number of workers. In the long term, it focuses on the development of the ability to manage and the development of services.

Tourism is one sector that has an important role in the development of the country, where tourism can directly contribute to the income of certain regions. These attractions can be used as one of the leading sectors of foreign exchange earnings, and job creation, and as one of the tourism education to visitors. Development carried out on objects in several departments at the

Politeknik Negeri Jember are animal husbandry rides, coffee cultivation rides, fish canning rides, coffee production rides, and highland rides.

Formulating strategies that need to be done to develop the tourism sector so that it can support the mapping of potential areas that can become tourist attractions [8]. Community capacity building is one of the strategies carried out by the government to increase tourism and develop the tourism sector by utilizing technological systems.

Politeknik Negeri Jember is a pioneering vocational college that has owned and developed Tefa with industry standards. It will be developed in several academic supporting units (*Unit Pelaksana Akademik/UPA*) including Food Processing and Packaging, Livestock, and Agricultural Production. The existence of Food Processing and Packaging UPA will be realized in the form of Fish Canning Rides and Bread Production Vehicles, Livestock UPA will be realized in the form of *Wahana Peternakan* (Livestock Vehicles), and Agricultural Production UPA will be realized in the form of Coffee Cultivation Vehicles and Highland Rides.

This study aims to identify the driving and inhibiting factors in the development of tourism education TEFA and to find out development strategies that must and need to be implemented to increase visits to the rides provided in the tourism education Tefa at Politeknik Negeri Jember. The implementation of the right strategy provides good opportunities and will also help in the development of the tourism sector to achieve its goals.

2 Research Method

The research used is a quantitative descriptive method to explain a certain condition in the object of research that uses numbers in real situations. This study aims to determine internal and external factors determining the right strategy for the development of Tefa Tourism Education. This research was conducted through surveys and interviews directly to obtain the data needed.

The population was Tourism Education Tefa at Politeknik Negeri Jember which will be developed in several UPAs (Food Processing and Packaging, Animal Husbandry, and Agricultural Production). The samples used in this study were the existence of UPAs. In this study, the sampling technique used was the purpose sampling method, which is a sampling technique with certain considerations or criteria.

The research instruments were questionnaires, interviews, and direct observations. The research instruments were carried out to obtain information related to internal and external conditions and development strategies that are the top priority in the implementation of Tefa Tourism Education development and the components that become strengths, weaknesses, opportunities, and threats in the development process of Tefa. The data obtained were identified as related to internal factors and external factors using analysis ranging from IFE, EFE, IE, and SWOT matrices.

3 Results

3.1 Analysis of internal and external factors

The conditions of the identified driving and inhibiting factors can be used as a strategy formulation with a SWOT analysis. Furthermore, preparing the right development planning strategy to be used in the development of Tourism Education Tefa as a tourist destination at Politeknik Negeri Jember. This is to increase the number of visits. The preparation of development strategies in this study used SWOT analysis first by identifying strengths, weaknesses, opportunities, and threats as described in Table 1.

Table 1. Internal and external factors

Internal Factors	External Factors
Strength	Opportunity
Tefa-oriented management	Advancement of information and communication technology
Availability of land footprint	Regional potential
As a tourism potential (5 rides)	The contribution of the tourism sector
As an educational tour	Increase travelers
Weakness	Threat
The promotion has not been done well	Lack of visitor interest
Cost reduction	Competition with other tourist destinations
HR Limitations	Lack of awareness among residents
Facilities and infrastructure	Climate change
Lack of priority for tourism development	Lack of cooperation with industry partners
There is no clear tour program agenda	Lack of support

Identification and analysis of the internal and external factors were carried out to identify weaknesses, strengths, opportunities, and threats to the company. Based on the identified internal and external factors, an Internal Factor Evaluation (IFE) matrix and an External Factor Evaluation (EFE) matrix can be prepared.

The IFE matrix contains the strengths and weaknesses of the company, while the EFE matrix contains opportunities and threats. The Internal Factor Evaluation (IFE) matrix was used to evaluate internal factors to see the key strengths and weaknesses of the company against its business functions. Rating and weighting each variable produce a score that shows the level of strength and weakness of internal company factors so that results are obtained as shown in Table 2.

Table 2. IFE Matrix

Internal Factors	Weight	Level	Score
Strength			
TEFA-oriented management	0.103	4	0.410
Availability of land footprint	0.100	3	0.300
As a tourism potential (5 rides)	0.093	4	0.370
As an educational tour	0.103	4	0.410
Weakness			
The promotion has not been done well	0.098	1	0.098
Cost reduction	0.108	1	0.108
HR Limitations	0.108	1	0.108

Facilities and infrastructure	0.095	1	0.095
Lack of priority for tourism development	0.093	2	0.185
There is no clear tour program agenda	0.103	2	0.205
Total	1.000		2.288

Based on the calculations in Table 2, internal strategy factors, the main strength variables are management-oriented to Tefa and educational tourism with the highest score of 0.410. The main weakness variables are facilities and infrastructure with a total score of 0.095. In the analysis of the total value on the Internal Factor Evaluation (IFE) matrix, a value of 2.288 is obtained, which is higher than 2.5, and indicates that strengths are more influential than weaknesses. It means that they can respond well by utilizing their strengths.

The External Factor Evaluation (EFE) matrix is the key factor related to the opportunities and threats faced by Tefa in actual conditions. Rating and weighting each variable produce a score that shows the level of opportunity and threat from external factors of the company so that results are obtained as stated in Table 3.

Table 3. EFE Matrix

External Factors	Weight	Level	Score
Opportunity			
Advancement of information and communication technology	0.096	4	0.382
Regional potential	0.109	2	0.218
The contribution of the tourism sector	0.098	2	0.196
Increase travellers	0.096	3	0.287
Threat			
Lack of visitor interest	0.106	2	0.212
Competition with other tourist destinations	0.093	3	0.279
Lack of awareness among residents	0.109	2	0.218
Climate change	0.098	3	0.294
Lack of cooperation with industry partners	0.094	4	0.374
Lack of support	0.101	4	0.404
Total	1.000		2.864

Based on the calculations in Table 3, external strategy factors, the variable that becomes the main opportunity is the advancement of information and communication technology with a score of 0.382. The variable that poses the main threat is the lack of support with a total score of 0.404. Based on the analysis of the total value in the External Factor Evaluation (EFE) matrix, a value of 2.864 is obtained which is higher than 2.5, indicating that opportunities are more influential than threats, which means that they can respond well by taking advantage of opportunities. Based on the results obtained from the IFE and EFE matrices, what was done then was to compile the IE matrix. The IE matrix was used to analyze the position of the company in more detail and analyze what strategies are fixed for later implementation. Figure 1 is the company's position on the IE matrix.

		IFE Score		
		2,288		
		Strength 3.0-4.0	Average 2.0-2.99	Weak 1.0-1.99
EFE Score 2,864	High 3.0-4.0	I Growth	II Growth	III Retrenchment
	Medium 2.0-2.99	IV Stability	V Growth	VI Retrenchment
	Low 1.0-1.99	VII Growth	VIII Growth	IX Retrenchment

Fig. 1. IE Matrix

The positioning of the marketing strategy on the IE matrix was based on the total score obtained from the IFE and EFE matrices. The IFE score obtained is 2.288, while the EVE score is 2.864. The results of strategy discovery using the IE matrix in the previous matrix, namely the IFE and EFE matrices show that its position is in cell V, (Growth stage). It states that growth strategies are designed to achieve growth in sales, assets, profits, and a combination of all three. This can be done by improving the quality of services and increasing wider access.

This strength, weakness, opportunity, and threat (SWOT) analysis was used to obtain alternative strategies that can be applied by utilizing opportunities and strengths as well as avoiding threats and overcoming company weaknesses. There are 4 main strategies contained in the SWOT analysis, namely: SO, ST, WO, and WT strategies using data that has been obtained from the EFE and IFE matrices. The results of the SWOT analysis are shown in Fig. 2.

Internal	Strength	Weakness
	<ol style="list-style-type: none"> TEFA-oriented management Availability of land footprint As a tourism potential (5 rides) As an educational tour 	<ol style="list-style-type: none"> The promotion has not been done well Cost reduction HR Limitations Facilities and infrastructure Lack of priority for tourism development There is no clear tour program agenda
Eksternal	Opportunity	W-O Strategy
	<ol style="list-style-type: none"> Advancement of information & communication technology Regional potential The contribution of the tourism sector Increase travellers 	<ol style="list-style-type: none"> Optimizing facilities and infrastructure (W4, O3) Optimize promotions (W1, O1)
Threat	S-T Strategy	W-T Strategy
<ol style="list-style-type: none"> Lack of visitor interest Competition with other tourist destinations Lack of awareness among residents Climate change Lack of cooperation with industry partners Lack of support 	<ol style="list-style-type: none"> Take advantage of educational tours (S3, T1, T2) Utilizing land footprint (S2, T5, T6) 	<ol style="list-style-type: none"> Creating a sustainable tourism program (W5, W6, T2) Apply for cooperation in financing (W2, T5, T6)

Fig. 2. Analysis of SWOT

4 Discussion

The SWOT analysis results are grouped into several kinds of strategies (into 4 cells). The analysis of these strategies is outlined below as follows.

1. SO Strategy (Strength – Opportunity) The strategy is made by using all of the existing strengths to increase opportunities. Strategies that can be used include:
 - a. Making use of advances in information and communication technology
This strategy is conducted by using advances in information and communication technology as a learning medium that can be done through the use of computer devices as innovative learning media. This utilization is by exchanging information and communicating effectively and efficiently. The development of technology and procedures or production processes and services is very rapid. The application of teaching factories in learning will encourage the establishment of a mechanism of cooperation between the Politeknik Negeri Jember and the business world that is mutually beneficial so that the Polytechnic will always follow the development of industry or services automatically in technology transfer, managerial, curriculum development, and others.
 - b. Utilizing tourism potential as a contribution to the tourism sector
This strategy is carried out by utilizing tourism potential as a contribution to the tourism sector because tourism can increase foreign exchange income, create jobs, and stimulate the tourism industry growth. Thus, it can trigger economic growth, especially motivating several parties to develop the tourism sector. The tourism sector has high economic value, tourism potential (5 rides) owned including UPA Food Processing and Packaging will be realized in the form of TEFA Fish Canning Rides and Bread Production Vehicles, UPA Animal Husbandry will be realized in the form of TEFA Wahana Peternakan (Livestock Rides), and UPA Agricultural Production will be realized in the form of TEFA Coffee Cultivation Rides and Highland Rides.
2. ST Strategy (Strength – Threats). It is a strategy that uses strength to overcome threats. Strategies that can be used include:
 - a. Taking advantage of educational tours
This strategy is carried out by utilizing tourism consisting of 5 rides as sustainable education which is a TEFA educational tourism pilot of the Department of Language, Communication and Tourism. Utilization as an educational tour aims to facilitate Polytechnic residents and the community in safe tourism and also provide education related to tourism which is intended to provide an overview, study, or knowledge about the field of work they visit.
 - b. Utilizing land footprint
This strategy is carried out by utilizing the available land footprint within the scope of the Politeknik Negeri Jember in the Food Processing and Packaging UPA, Livestock UPA, and Agricultural Production UPA. The land stage is a piece of land or a piece of land that has clear territorial boundaries including the characteristics and physical conditions in it.

3. WO Strategy (Weakness – Opportunity). It is a strategy that takes advantage of existing opportunities by minimizing weaknesses. Strategies that can be used are:
 - a. Optimizing facilities and infrastructure
This strategy is carried out by maximizing the facilities and infrastructure available within the scope of the Politeknik Negeri Jember including buildings, road access, and UPA services in each department that have contributed to running the Tefa Tourism Education program. Facilities and infrastructure aim to facilitate the process of activities to achieve common goals can be achieved. In addition, the existence of facilities and infrastructure will also help speed up the work process of an organization or institution. So the productivity of activities can increase because it is helped by the existence of facilities and infrastructure.
 - b. Optimize promotions
This strategy is carried out by optimizing social media as a means of promotion related to Tefa Tourism Education. Promotion must be done consistently. It is a way to introduce this service to consumers as part of the right strategy. Optimizing social media as a means of promotion is not easy, but it will provide results that will greatly help promotion to the maximum. Social media is not always connected to direct buying and selling. In this strategy of using social media, content can be made in the form of web posts, images, or videos. In addition to the marketing content, this technique is also adopted to explain services in the form of what it means to introduce to the community in general and as a whole, or what is often called brand awareness.
4. WT Strategy (Weakness – Threats). It is a strategy that aims to minimize existing weaknesses and avoid existing threats. The strategies that can be done include:
 - a. Creating a sustainable tourism program
This strategy is conducted by creating a sustainable tourism program which can be called sustainable tourism. It is the development of the travel concept possessing a long-term impact on the present and future environment, society, culture, and economy. The Ministry of Tourism and Creative Economy or the Tourism and Creative Economy Agency (Kemenparekraf or Baparekraf) launched the development of tourism, especially villages, referring to the concept of sustainable tourism. Kemenparekraf or Baparekraf applies guidelines for sustainable tourist destination development consisting of four categories. They include management of sustainable tourism destinations, economic utilization for local communities, cultural preservation for the community and visitors, and conservation of the environment.
 - b. Apply for cooperation in financing
This strategy is carried out by proposing cooperation with parties involved in financing TEFA Education Tours. The cooperation proposal discusses technically the scope of cooperation, rights and obligations, financing, and reporting. In the tourism program, it should have a cooperative relationship between local managers, government, and business partners. However, it should be noted that the form of cooperation should not be unequal and even harm one or all parties. The chosen business partner must be able to brand regional tourism well.

Identifying the needs for the tourism sector development strategy conducted in this study is also supported by the research conducted by [15]. In addition, the identification of internal and external factors was also conducted by [4] using qualitative SWOT developed quantitatively

through SWOT Analysis calculations by Pearce & Robinson [16] to know the real position of the organization. The findings of this study are also supported by those of [17], [18], and [19] in relation to the planning strategy and development of a tourism destination.

5 Conclusion

It can be concluded that internal and external factors in the research strategy for the development of Tourism Education Tefa as one of the tourist destinations at Politeknik Negeri Jember are strengths: management-oriented to Tefa, availability of land stalls, as educational tourism, and tourism potential (5 rides). Weakness: Promotion has not been carried out well, limited costs, limited human resources, facilities, and infrastructure, lack of priorities for tourism development, and there is no clear tourism program agenda. Opportunities: advances in information and communication technology, regional potential, contribution of the tourism sector, and increasing tourists. Threats: lack of visitor interest, competition from other tourist destinations, lack of awareness of residents, climate change, lack of cooperation with industry partners, and lack of support. The SWOT diagram shows in cell V which is the Growth stage which means the growth strategy is designed to pursue growth, both in sales, assets, profits, and a combination of the three. It can be done by improving and increasing the quality of service and wider access. The positioning of marketing strategies on the IE matrix is based on the total score obtained from the IFE and EFE matrices. The score obtained from the IFE matrix is 2.288, while the score obtained from the EFE matrix is 2.864.

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