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## CASE STUDY ON THE APPLICATION OF THE “LIVING STUDY” METHOD IN THE DEVELOPMENT AND FEASIBILITY RESEARCH OF TOURISM PRODUCTS TO INCREASE THE INCOME OF A RURAL ENTREPRENEUR IN SALESÓPOLIS

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**Abstract:** The evolution of new generations and the heterogeneity of individuals require educators to be willing to constantly improve the method they use with a versatile attitude. This is why the Live Study method, proposed by the teacher, involves applied research by students with the job market. She therefore proposed to present a study carried out in the Agrotourism subject in partnership with a rural entrepreneur from Salesópolis and students from the Agribusiness course at Fatec Mogi das Cruzes, which was later improved for presentation as a graduation paper. The methodology proposed throughout the semester included workshops, classroom dynamics and individual delivery stages, corresponding to the construction of the final work so that all members participated in the process, were guided and evaluated by the stages carried out. At the end of the semester, they presented their work as a group, handing in a printed file to the teacher and a copy to the producer who was the subject of the study. Every end of semester the students are invited to give their opinions on the method used in the subject and over the years their suggestions have been implemented so that the subject has increasingly achieved its fundamental role in developing students' skills. In this way, the students' research proposed carrying out a financial feasibility study into setting up rural tourism at Sítio Chácara das Flores in Salesópolis. The methodology used included a literature review, Swot analysis, the development of tourism products, target audience research and cost analysis. Based on this study, the results obtained determined that it is feasible to implement the tourism product on the property studied, with a return on investment from the first month of operation, with a break-even point of 13 days. This interaction between the students and the job market has borne fruit over the years.

**Keywords:** Active methodologies; Live study; Agro-tourism; Target public research; Tourism product

## INTRODUCTION

The Living Study method has been under development by lecturer Fernanda Silveira Bueno since 2009, with the first practice of interaction between SENAC students and the institution's Engineering department, promoting a competition to choose the best Landscaping project developed by students at the Osasco unit, which was chosen and implemented. Later, at Fatec, the teacher used a methodology that promoted the construction of knowledge throughout the semester with the Feasibility Study for the implementation of projects with the subject's theme in rural properties. Inspired by Mokiti Okada's teaching "Inadequacy of Study", in which he mentions that learning for the sake of learning is dead study, while learning something to be used in society is living study (OKADA, 1949). The desire to put knowledge into practice by bringing students into contact with the job market through public-private partnerships and the constant improvement of the subject according to the students' opinions gave rise to the name of the Method: "Living Study".

Brazil is a country with enormous tourist potential due to its cultural biodiversity and natural beauty, but this potential is not fully exploited and there is much to develop in terms of tourism. Agro-tourism is of great importance as it allows rural producers to increase their income. As a way of reducing the rural exodus, one of the main social problems, it is covered by the Ministries and Secretariats that represent Tourism and Agriculture in both the São Paulo State Government and the Federal Government.

According to (CAMPANHOLA E SILVA, 2000) tourism is an activity that brings together economic exploitation, appreciation

of the environment and local culture through leisure activities such as ecological tourism, adventure tourism, business tourism and sports tourism.

However, understanding the needs and desires of the target audience, how and with whom they travel, and how much they are willing to pay for the tourism product is essential to meeting their demands and making the venture a success. This is why a questionnaire was used to collect information and identify the target audience. According to Maconi & Lakatos, 1991, the application of a form is one of the instruments used to collect relevant data directly from the interviewees.

The city of Salesópolis, where this study was carried out, is located 105 km from São Paulo, is designated a tourist resort and has important environmental preservation areas, where the source of the River Tietê is located. As such, the region has great potential for rural tourism. However, the rural entrepreneur who is the subject of the study has no experience in this activity, which is why the proposal is to develop a tourism product and carry out a feasibility study to implement it on the property studied.

## **MATERIALS AND METHODS**

This work was developed by students Ronaldo Rosa and Rute Azevedo, as part of the Agrotourism course at Fatec Mogi das Cruzes, taught by Professor Fernanda Silveira Bueno. The study was carried out at Sitio Chácara das Flores, a rural property in the city of Salesópolis. During the course, the tourist product was required to offer breakfast or an afternoon snack, as well as courses on products produced by the property. Exploratory methodology was used, with qualitative and quantitative techniques for analyzing the data collected. The statistical analysis was guided by Professor Pedro Frare.

The methodology proposed throughout the semester included workshops, classroom dynamics and individual delivery stages, corresponding to the construction of the final work so that all members participated in the process, were guided and evaluated by the stages carried out. At the end of the semester, they presented their work as a group and handed in a printed file. Subsequently, the teacher signaled to the students the necessary corrections, which made it possible to increase the grade. The students handed it in to the teacher in the next class and gave a copy to the producer they had studied. Every end of semester, the students are invited to give their opinions on the method used in the subject and over the years their suggestions have been implemented so that the subject has increasingly achieved its fundamental role in developing students' skills.

For this study, a literature review, Swot Analysis for the development of Tourism Products and a Target Audience Study were carried out. After a visit to the property, the positive points and skills of the location were identified, and the Tourist Products were developed in Formatting Workshops, which also included an assessment of the local infrastructure for the proposed receptive service and the development of a Standard Operating Procedure (SOP) for the receptive service. Subsequently, the proposed tourism products were evaluated by a survey of the target public, using a questionnaire with a sample of 120 interviewees who use rural tourism as a leisure alternative. With the results of the Target Audience survey, a cost study was carried out and price information collected to calculate the financial viability of implementing the tourism product.

## RESULTS AND DISCUSSION

An on-site technical visit and Swot analysis was carried out at the Sitio Chácara das Flores property used for this study to identify Strengths and Weaknesses, as well as Opportunities and Threats. The property has agricultural activities such as planting vegetables and orchards, as well as growing orchids and raising laying hens, which could be great tourist attractions. It is easily accessible by rural road for cars and even minibuses for excursions of around 25 people.

The infrastructure assessment identified the need to build a veranda for welcoming tourists. There was also a need to build a sewage system and an evapotranspiration basin was suggested. This type of pit is a sustainable solution for the treatment of toilet water in rural areas, as it has a permeable bottom, anaerobic decomposition of organic matter, mineralization and absorption of nutrients and water by plant roots, and is returned to the environment through evapotranspiration without any waste to the environment. This system is biodegradation by biofilter, formed by a tire chamber, hand stone, layers of rubble, gravel, sand, or ceramic bricks (PAULO and BERNARDES, 2009). This model of cesspit promotes ecological sanitation by not discharging sewage into watercourses, recycling nutrients and avoiding soil contamination.

Through the Tourism Product Formatting Workshops, the tourism product “Chácara das Flores, seus segredos e sabores” was developed, which includes a trail, orchid, vegetable and fruit management courses, Café da Roça and a bazaar selling local products.

## TARGET AUDIENCE RESEARCH

For this study, we will present the results of a survey of the target audience, carried out with 120 people who use rural tourism as a leisure activity.

Firstly, the questions characterized the public interviewed. 58.33% of those interviewed were aged between 31 and 50, followed by 27.50% aged between 18 and 30. It was observed that 76.67% of those interviewed were female and 22.50% male.

When asked about means of transportation, 73.33% prefer to use their own car to get to the tourist circuit, followed by 20.83% who prefer to travel by van or minibus. For both the first and second groups, the property where this research was carried out has comfortable accommodation for both groups.

They were then asked who they usually travel with, and it was clear that 64.17% travel with between 2 and 5 people, while 17.50% of the public travel with friends of between 5 and 7 people.

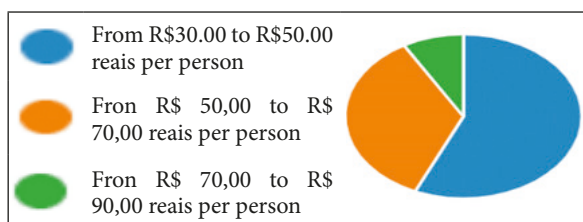


Figure 1 - What price are you willing to pay for a 3-hour rural tourism tour called: “Chácara das Flores, its secrets and flavors”, which includes: a trail on a beautiful property in Salesópolis, a break for a delicious breakfast or afternoon snack, and ends with a course in orchid management and a bazaar selling products from the property.

Figure 1 shows that 76.67% of respondents are willing to pay between 30 and 50 reais per person, which is why this range will be used in the financial feasibility study.

## RESULT OF THE FINANCIAL FEASIBILITY STUDY

The financial feasibility study for this research took into account the need to accommodate 25 people for a 3-hour period. It was identified on site that the property needs to make some investments in order to serve its target audience. It was therefore necessary to identify the value of the initial investment and how long the return on this investment would take. The tables below show the analysis of investments, costs, return on capital invested, estimated customers receivable, contribution margin and the break-even point for the investment.

According to the analysis in Table 1, the proposed initial investment is R\$16,485.98. For this investment, only the construction of a 20m<sup>2</sup> veranda, a 4m<sup>2</sup> bathroom for accessibility and a 14.4m<sup>3</sup> evapotranspiration basin, the purchase of 30 chairs, 7 tables, 24 sets of plates and 1 set of 96 pieces of cutlery were proposed, as well as signposts. These purchases are the minimum resources suggested for the Rural Entrepreneur to start the tourist receptive activity and, as and when he earns income, he can make new investments and improvements.

The following figure simulates an estimate of customers, taking into account the physical limitations of the infrastructure and the unit value that the majority of the public interviewed would be willing to pay.

MONTHS	NO.	UNIT VALUE	TOTAL VALUE
JANUARY	200	R\$ 50,00	R\$ 10.000,00
FEBRUARY	200	R\$ 50,00	R\$ 10.000,00
MARCH	400	R\$ 50,00	R\$ 20.000,00
APRIL	400	R\$ 50,00	R\$ 20.000,00
MAY	400	R\$ 50,00	R\$ 20.000,00
JUNE	400	R\$ 50,00	R\$ 20.000,00
JULY	400	R\$ 50,00	R\$ 20.000,00
AUGUST	400	R\$ 50,00	R\$ 20.000,00
SEPTEMBER	400	R\$ 50,00	R\$ 20.000,00
OCTOBER	400	R\$ 50,00	R\$ 20.000,00
NOVEMBER	400	R\$ 50,00	R\$ 20.000,00
DECEMBER	200	R\$ 50,00	R\$ 10.000,00
TOTAL	4.200		R\$ 210.000,00
AVERAGE PER MONTH (f)	350		R\$ 17.500,00

Table 2 - ESTIMATED CUSTOMERS (SALES)

Source: Prepared by the authors

The estimated number of people was 25 per 3-hour period. This estimate was based on the size of the property's existing infrastructures, and especially in relation to access, which does not allow a bus, but at most a minibus that can hold 25 people, or thinking about groups that could come by car. The calculation for the total number of visits per month was as follows: Days of service x number of visits per period: estimating that if the month does not have a holiday, the estimated number of visitors is 150 people per month. The unit value of the tourist product was defined according to the public survey, which resulted in a price of R\$50.00 per person. The tables below show the cost calculations.

## COST ANALYSIS RESULTS

For this study, costs were divided into variable costs and fixed costs, as shown in the tables below.

DESCRIPTIONS	QUANTITY	VLR. UNT	TOTAL VALUE
<b>1.1 BUILDINGS AND OTHERS</b>			
BUILDINGS BATHROOMS m <sup>2</sup>	4	1.567,76	R\$ 6.271,04
INTERNAL SIGNS KIT	1	18,00	R\$ 18,00
EVAPOTRANSPIRATION BASIN -BET	1		R\$ 6.938,09
BUILDINGS ROOF ROOF m <sup>2</sup>	20	45,00	R\$ 900,00
<b>GET UP TO HERE (a)</b>			R\$ 14.127,13
general printing kit	1	118,05	R\$ 118,05
<b>SUB-TOTAL (b)</b>			R\$ 14.245,18
<b>1.2 FURNITURE AND EQUIPMENT</b>			
PLASTIC CHAIRS	30	45,90	R\$ 1.377,00
PLASTIC TABLE	7	78,00	R\$ 546,00
<b>SUB-TOTAL ©</b>			R\$ 1.923,00
<b>1.3 UTENSILS</b>			
PLATES SET OF 24	1	120,00	R\$ 120,00
CUTLERY SET 96 PIECES	2	98,90	R\$ 197,80
<b>SUB-TOTAL (d)</b>			R\$ 317,80
<b>1.4 SUMMARY OF INVESTMENTS</b>			
BUILDINGS AND OTHER (b)			R\$ 14.245,18
FURNITURE AND EQUIPMENT ©			R\$ 1.923,00
UTENSILS (d)			R\$ 317,80
<b>TOTAL INVESTMENTS (e)</b>			<b>R\$ 16.485,98</b>

Table 1 - INITIAL INVESTMENTS

Source: Prepared by the authors

FIXED COSTS	R\$
FIXED TAXES AND FEES (ITR, PERMITS)	R\$ 100,00
COMMUNICATION (telephone subscription, internet)	R\$ 90,00
DEPRECIATION	R\$ 81,84
OTHER	R\$ 118,05
<b>TOTAL FIXED COSTS (monthly)</b>	<b>R\$ 389,89</b>
RATIO OF FIXED COSTS = previous/(f)	R\$ 1,11
TOTAL UNIT COST (g)+(ii)	R\$ 20,15
TAXES _8_% ON (j)	R\$ -
EXPECTED PROFIT 20% on (j)+(k)	R\$ 4,03
<b>estimated SELLING PRICE = (j)+(k)+(l)</b>	<b>R\$ 24,18</b>

VARIABLE COSTS	R\$
VARIABLE LABOR	R\$ 2.632,00
FOOD SUPPLIES	R\$ 3.200,00
ELECTRICITY	R\$ 230,00
CLEANING MATERIALS	R\$ 200,00
GAS/FIRE	R\$ 120,00

DISPOSABLE MATERIALS	R\$ 50,00
FUEL	R\$ 150,00
MAINTENANCE (+ or - 0.5% of assets)	R\$ 81,84
<b>TOTAL VARIABLE COSTS (monthly)</b>	<b>R\$ 6.663,84</b>
RATIO OF VARIABLE COSTS= previous/(f)	R\$ 19,04
*Cost of 1kg of food → R\$ 8,00	

Source: Prepared by the authors

RETURN = TOTAL INVESTED (e) / MONTHLY PROFIT (6)	
CALCULATE: (e)=	R\$ 16.485,98
(6)=	R\$ 10.446,27
<b>RESULTED .....</b>	<b>2</b>

Table 4 - RETURN TIME CAPITAL INVESTED

Source: Prepared by the authors

To define the variable costs, the necessary labor was surveyed and calculated using the POP (Standard Operating Procedure) method, making it possible to analyze and identify how much each family member will spend during the period of the tourism product. As for fixed costs, an on-site survey of the property's expenses was carried out.

PREPARATION FOR PE CALCULATION	
UNITARY SELLING PRICE	R\$ 50,00
UNITARY VARIABLE COSTS (g)	R\$ 19,96
<b>UNIT GROSS PROFIT</b>	<b>R\$ 30,96</b>
TOTAL FIXED COST (h) =	R\$ 389,89
UNIT GROSS PROFIT	R\$ 30,96
<b>PE is equal to the division above.....</b>	<b>13</b>

Table 5 - BALANCE POINT (SP)

Source: Prepared by the authors

To find the value of the return on investment, the following calculation was made: average monthly sales, subtracting all the monthly costs and then dividing by the value of the initial investment, giving the number of months needed for the return on investment. In this situation, the initial investment will pay for itself after 2 months of operating the tourism product. In the table below we will analyze the break-even point of the investment.

The break-even point is the project indicator that shows how much needs to be sold in order for the revenue to equal the expenses and costs. In this project, it was possible to find the break-even point in 13 days. Table 6 below shows the project's contribution margin.

MC= Unit Gross Profit (III)	R\$ 30,96
Unit Sales Price (I)	R\$ 50,00
<b>MULTIPLIED BY 100</b>	<b>62%</b>

Table 6 - CONTRIBUTION MARGIN - M C

Source: Prepared by the authors

Understanding the project's contribution margin means understanding how much its gross profit represents. In this situation, the margin is equivalent to 62%. This margin is fundamental for decision-making and understanding whether sales are covering expenses.

This section should present the results obtained, in a clear and standardized way, with enough detail to endorse the conclusions. They can take the form of tables, figures or graphs. The discussion of the results should be based on and compared with the literature used in the research work, indicating its relevance, advantages and possible limitations.

## CONCLUSIONS

The Live Study method achieved its pedagogical objectives, which promoted the development of various skills throughout the learning process for the students involved. The students successfully achieved the proposed objectives and the course work was improved and presented as a graduation assignment for the Agribusiness course at Fatec Mogi das Cruzes.

The Method was also successful in allowing students to solve real demands of the job market throughout the learning process, as well as fulfilling their social role as students of a public institution, giving back to society knowledge that allows this rural entrepreneur to have a source of income on the property and allow his family to remain in the countryside.

The research carried out by the students in the Agrotourism subject taught by the lecturer on the Agribusiness course at Fatec Mogi das Cruzes demonstrated the feasibility of implementing the tourism product developed: "Chácara das Flores, its secrets and flavors", with receptions for groups of 25 people for a period of 3 hours per tour with an initial investment cost of R\$16,485.98. The return on investment will be 2 months and the break-even point will be 13 days.

The project also responded to environmental demands by suggesting that a sewage treatment system be built so as not to pollute the environment with the tourist attraction at the Sítio Chácara das Flores property, which is located in the important tourist resort of Salesópolis, where the Tietê river rises.

## THANKS

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