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THE CASE STUDY METHOD IN ENTREPRENEURIAL EDUCATION AND THE FURTHER DEVELOPMENT OF FINANCIAL INSIGHTS ARISING OUT OF IT

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Abstract: *The usual definition of learning is self-consistent, but it frequently involves an assumption that cannot be tested experimentally, viz., that the most complete possible learning outcome is in terms of a particular learning theory that determines only probable results of actual learning and teaching processes. The only way of exploring the truth of this assumption is by trying to find some other interpretation of entrepreneurial education in terms of at present "multiple" situational methods, which in principle determine the actual approaches toward learning, which are in practice averaged over as instructional methods rather than theories. In this paper, an alternative interpretation of the case study method in terms of just such entrepreneurial education is suggested. It is shown how students of entrepreneurship can effectively observe, analyze, record, implement, conclude, summarize, or recommend approaches and solutions for business problems. Indeed, the suggested approach of the author provides a broader conceptual framework than the usual learning theories, because it makes possible a precise and continuous description of all major business processes, even at the start up level of the firm. We show that it is not necessary for us to abandon precise, rational, and objective description of individual learning theories. Furthermore, we find that in principle, the case study method works best in combination with 'ex cathedra' lectures. After a brief historical review of the case study method we give a simple illustration of hypothetical cases that are consistent with our approach toward planning entrepreneurial finance.*

Keywords: *case study method, entrepreneurial education, planning entrepreneurial finance, SME Case, payback period, breakeven sales*

1. INTRODUCTION

This article discusses some ideas aimed at pointing out the significance and benefits of the case study method in entrepreneurial education. It is concerned mainly with giving the general outlines of practical implementation of this method in top business schools followed by our interpretation of how to comparatively elaborate business cases among different SMEs. The practical examples we provide focus on planning entrepreneurial finance. We have chosen as the title of our paper “The Case Study Method in Entrepreneurial Education and the Further Development of Financial Insights Arising out of It” because it gives the clearest and most accurate description of what this work is about. The original papers in which the ideas were first proposed were published in another journal [Vemić 2003; Vemić 2005; Vemić 2006; Vemić & Ivanović, 2009] and later they were expanded with new practical examples [Vemić & Urošević 2009; Vemić, Urošević & Stamatović, 2010; Vemić & Ljutić 2017]. Therefore this article aims at further development of our existing approaches to this question. Moreover, though those qualities of case studies have been established at the fundamental level of business economics, we shall indicate in a later section how it may be possible for them to become operative at university levels of education.

It will be shown throughout this paper that there exists great potential by using the vast experience with case studies gained from top business schools and universities around the world.

Although our next main objective in this paper is to illustrate the development of detailed financial forecasts various other aspects of a business plan are also discussed to illustrate the depth of a potential broader case study.

However, we now feel that before going into further detail it is useful to explain what we mean by a case study. Let us first present the ontology of the subject matter [Feagin, Orum, & Sjoberg (Eds.), 1991], in entrepreneurial education in a more systematic way. Although there may be other important issues, its main points are [Lalancette, 2014, pp.12] the following three:

1. The Case.
2. The Case Study.
3. The Case Method.

A case is a description of a situation, which usually involves making a decision, a challenge, a chance, a problem, or another issue faced by a person (or persons) within an organization. Similarly, in a case method this teaching method uses prepared case studies as an approach through which students need to develop their own intelligence, improve their reasoning, discussion ability and analytical skills in order to solve problems within a given course of study. This subject is not only of considerable interest in business study but it also has a great deal of bearing in overall social sciences.

In fact, initial use of the case method of research originates from France where Pierre Guillaume Frédéric Le Play first introduced the case-study method into social science in 1829 to support statistics in his studies of family budgets [Le Play, 1855; Le Play 1879; Healy, 1947]. Moreover, Christopher Columbus Langdell, Dean of Harvard Law School from 1870 to 1895, was the first to give the case study notion a systematic and extensive development [Langdell, 1871]. He developed the first text-book used in the law case study system which then led to extensive application of this approach in Harvard Business School [Harvard Business School, 2020], and also in other universities [Copeland, 1954].

Since then many other groups and organizations develop and also publish cases for educational use. Sources for cases for business schools include the following key institutions:

- The Aspen Institute Business and Society Program [The Aspen Institute Business and Society Program, 2020].
- The Batten Institute, Darden Graduate School of Business, University of Virginia [The Batten Institute, Darden Graduate School of Business, University of Virginia, 2020].
- Ivey School of Business, University of Western Ontario [Ivey School of Business, University of Western Ontario, 2020].
- Stanford Graduate School of Business. [Stanford Graduate School of Business, 2020].
- Yugoslav Federal Center for Management Education in the Economy [Bazala, Kvasnička, & Razum1962].

We complete this introductory section by giving a brief summary of the next contents of this work which is divided in roughly four parts. The second part is concerned with the basic formulation of our interpretation of the case study method. We will then continue by discussing the significance and method of elaborating business cases in entrepreneurial education. In the fourth section we apply these ideas in summaries of specific cases focusing on planning entrepreneurial finance.

2. WHAT IS A BUSINESS SCHOOL CASE STUDY?

There are several leaders in the field of publishing and selling case studies, especially among the major schools that initiated the case management learning practice [Erskine & Leenders, 1997]. The method cases are developed and used as teaching material at top business schools which makes them uniquely positioned to developing the thinking skills necessary to succeed in the global entrepreneurial and knowledge economy of the 21st century. Case studies are written by thousands of consultants and professors from all over the world, and many lecturers use them in interaction with students. What sets apart the top business schools from other major developers of case studies is that their writing and teaching style motivates and leads students to learn how to think, manage, develop and learn entrepreneurially.

During their master's degree studies post-graduates develop their entrepreneurial skills almost entirely from hundreds of different cases. It is well known, for example, that

professors choose cases that cover major subjects and approaches that are usually taught in semester courses (finance, marketing, leadership, HR). And while students do receive all required literature and scripts from the curricula, they are expected to learn about these techniques not only from reading but by applying from practical case studies. In this teaching approach, students learn when and in what way to use the analytical method, and try to implement learning outcomes of their research in practice. This derives from the necessity of the modern working environment of the 21st century, where human resources need to be cognizant of what they learn, find literature and elaborate new entrepreneurial concepts. Some of the suggested methods were already discussed effectively earlier [Hamel, Dufour, & Fortin 1993]. This is followed by the need to learn independently and to apply the related methods and approaches. Indeed, new entrepreneurs and business leaders need to recognize the problems of the new global economy flexibly and set their own priorities for solving business problems. In so doing, they need to discuss alternatives with their colleagues and management teams, and they must gain relevant support for their concepts. Top business schools use relevant case studies and the hidden value of teaching techniques such as gaming and role play because these are methods which assist students to develop entrepreneurial skills. Likewise, these techniques are then flexibly adapted and implemented for practical entrepreneurship programs for top-level executives. Indeed, one may fairly readily use business case studies in a variety of other major subjects such as law, media, design and education, public administration and governance, sociology.

Top business schools develop many cases each year, usually in close proximity of their research and consulting projects. Basically, these are "real world cases", written on the basis of direct business experience. However, it should also be emphasized that some good case studies emerge from already published business and market information, sometimes accompanied by raw survey data collected directly from the companies being studied. These cases are often referred to as "library cases".

Some case studies are developed as part of the course textbooks or training scripts, but many are published and sold commercially. This approach is useful for professors and trainers who need to select those cases which are best fits for their subjects and take into consideration differences among students. Cases are often printed for use during student exams. Typical best business cases are approximately 20-25 pages long and include several comments on financial, marketing or other quantitative information that needs to be analyzed in order to fully understand the specific business or entrepreneurial context.

Indeed, quantitative data is often widely spread in case studies, just as in real business and entrepreneurial life. The main characteristic of cases developed and used as teaching material at top business schools is that their data, problems, and solutions offer broad reflection on a real-world context. In order to be useful for students of entrepreneurship case studies need to be easy to read. Indeed, objectives of any case study should be to present objective data so that students can identify underlying problems, hints and potential solutions for real life situations.

2.1 Developing a case study in the style of top business schools

The disadvantages of using case studies of top business schools relate to the fact that they are sometimes more expensive than the usual teaching material used in underdeveloped and less developed countries. Earlier in the 20th century cases were most frequently written from a North American perspective but nowadays there are many cases developed in Asia and other places of the world as well. In transition economies where the entrepreneurial setting is quite less developed, it may be an alternative for professors to develop their own studies to share with students. For example a rapidly developing management school could easily compile a case study book if each professor wrote his or her own study.

Successful business cases usually reflect on one organization or company, while some relate to the whole economic sector of a particular country or region. It is recommended to write about situations reflecting local entrepreneurial context. Any confidential business or commercial information can be left out and focus should be on students studying relevant SME relationships and contexts. As will be seen in later sections, more often than not examples used in cases may contain a combination of two enterprises for making comparisons. This can be effectively done with fictitious firms where all data and properties have been adapted only to the extent necessary to ensure learning outcomes without affecting any confidentiality issues.

Many business schools try to improve student educational outcomes through internships which are meant to use industry contacts in order to access required data necessary for analysis and case study development. This can often be achieved with a little help from professors who refer students to companies as a part of their colloquia obligations. Another solution is to access data already made public (on the internet or in publications) to develop relevant cases. Any missing company data can be statistically evaluated, or indeed students may be required to learn from a case study by filling in the blanks.

A successful case study should be long enough to reflect on a complicated business situation worth analyzing and discussing. A suggested approach is to plan interactive case discussions lasting between 90 and 180 minutes. Students should focus attention to specific points, in places where there is no time to cover everything in detail. For 45 minutes, 6-10 pages (A4 size), the length is sufficient. An extensive study, covering various entrepreneurial fields (for example planning marketing, finance, HR), can be divided among several different groups of students. The next option is then to have different groups elaborate the various aspects in the discussion.

A well-written case can be used several times and help with learning from different fields. For example, a successful writer can cover in Finance, Globalization, Entrepreneurship, Organization and Reengineering Decision Making. Cases can be then be used in the final exam or for competition. The first step is to identify groups by topic and technique: This way, one can further develop a case to use it in different ways. Successful cases almost always start with

an introductory story that introduce the reader to a major decision-maker, with at least one major problem, the firm's core business, location, and timeline. [Similarly, in the cases discussed in this paper the focus is on planning entrepreneurial finance.

A good case usually starts with basic historical information about the business, and when useful about the internal and external environment. This section includes a brief evolutionary presentation describing the case from the time an owner or entrepreneur was initiating the start-up, and then business developments which affected his professional development career and start-up decision making. This introduction elaborates how and why the business started, if and why partners were used and in which area of business. Details of financing the start-up are usually included here.

Top business schools usually work with cases requiring specific problem solution and with active and also interactive participation of students in the discussion. In contrast to classical examinations cases should not include multiple choice or direct theoretical questions for students. In this way students are in a position to learn how to identify entrepreneurial questions and answers, each for themselves, so that they can practically benefit from what they discover. In fact one similarity exists with multiple choice questions in the sense that that there is usually more than one business solution, but the difference is that and students are required to discover a solution, which is an intrinsic value in itself much more significant than the actual answers and solutions themselves.

This approach in fact reveals the significance of writing a useful and relevant case study: company information is presented partly explicitly and partly implicitly, such as a business problem the pieces of which students need to assemble in order to understand the whole business context of a particular company. This concept confronts the students with the necessity to experiment and to think creatively, innovatively and strategically.

In preparing this kind of a case, the writer needs attention to detail. Making a list of all the business problems that will be addressed, the types of tasks and competences students will be required to develop, and the identification of some main alternative solutions for students to consider while leaving enough room for their own innovation. In this approach students will need to identify the problems and solutions through their own analysis. Particular attention is required with financial and other quantitative information on the company as the interpretation may be misleading for students. Writers should explain to students what definitions and technical explanations are available in literature and 'ex cathedra' lectures in order to understand the particular case. All these issues should be clarified in the case study.

Introduction is followed by major sections of the study with relevant business information that students should review, analyze, and learn about. This section of the case study elaborates in detail pertinent information on company's suppliers, consumers, new and potential market entrants, market segments and product substitutes, leadership traits,

corporate culture and strategy, organizational structure and development, as well as key information on company strengths, weaknesses, opportunities, threats and competitiveness. Quantitative and financial information is used throughout the case and presented in the form of tables and otherwise. Technologic concept, required equipment, and marketing material are usually supported with drawings and photographs.

Top business schools provide relevant business information throughout their cases, as in the real world, so that students can review, discuss, make pertinent conclusions and decisions about the business context. Even if developed as fiction, cases include important educational material related to the lectures which students attend on an 'ex cathedra' basis. Every section of the case shares relevant information for students and readers, as our entrepreneurial finance cases hereinafter illustrate. Even the introductory dialogue between potential start-up partners can reveal future business leaders and how they might or might not cooperate in the concrete business context when the company starts developing. As provided in our cases hereinafter financial and other quantitative information diffused through the case allows students to discover important facts: whether or not a firm is profitable, what cost elements require attention, and how fast a business might break even if all goes well. Similarly a sales history shows the impact of the market conditions faced by the business. Many other pertinent details then become apparent only when connected to one another or to a specific market context. For example financial information is closely tied to market positioning and value chains.

After completing the case study, it is usually recommendable to review it as if one was a student, to make sure that all the necessary data were included, and that the analyses will lead to the main conclusions of students allowing at the same time their experimentation, creativity and innovation. Before sharing it with students, it is a good idea to test the case study in order to identify potential learning difficulties and required corrections ion the study. Besides a hard copy a soft version will encourage students to practice their learning, thinking and technical skills.

2.2 Significance of case studies for teaching entrepreneurship

As mentioned earlier in our methodology 'ex cathedra' lectures fit nicely with the planned cases and this approach should be clearly shared with the students beforehand. The introduction of a case should contain a brief overview of the relevant lecture and what students should focus on. After explaining the objectives of the lecture in more detail the case should be described followed by main issues at stake. The questions that students need to consider should be clearly stated. These questions should also lead to their analysis aimed at discussing the most important business issues.

The next key issue is choosing an effective teaching strategy. The lecture strategy is usually elaborated in a couple of paragraphs, guiding the students through methodology, discussion points, issues from the lectures and in the cases, and how this whole approach

should lead to a solid understanding of business problems. This section sometimes also contains a schedule for how long each lecture and case study session requires time. A good teaching approach should include lecture notes and case study notes.

3. ELABORATION OF SME CASES WITH STUDENTS

In this section we develop the basic principles of our method of elaborating business cases in entrepreneurial education. Let us begin with the Venn diagrams which are not really a teaching method, but rather an effective tool for structuring and benchmarking business ideas. As such, they can be used effectively to compare companies. The description below demonstrates how to use the Venn diagram to compare SMEs from case studies used in entrepreneurial education:

- Ask students to describe SME case A.
- Write students' responses on the board.
- Repeat these steps with SME case B and SME case C.
- Draw a Venn diagram as illustrated in Figure.

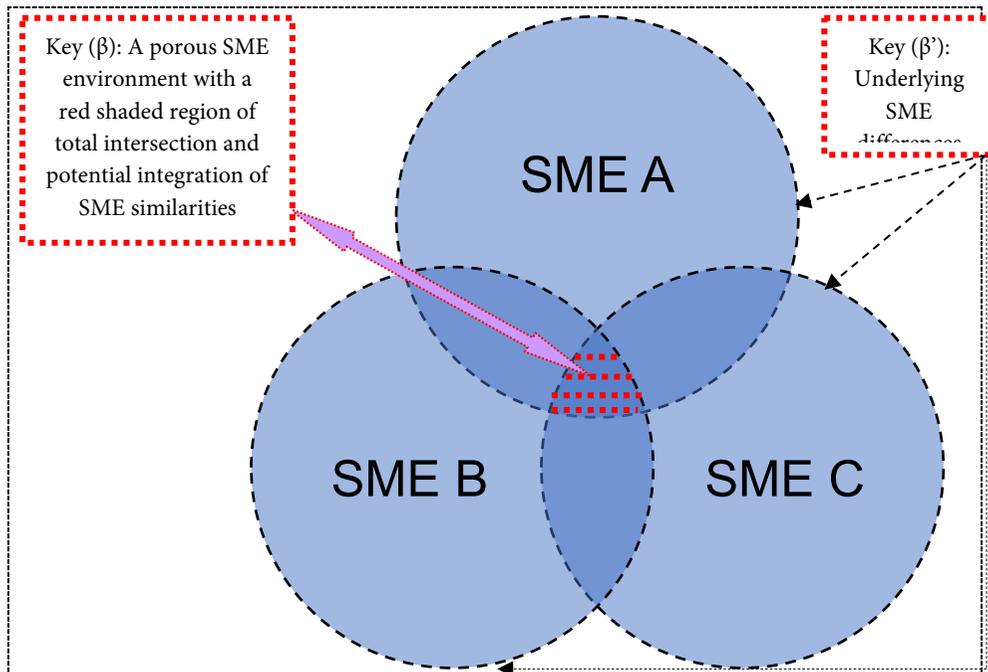


Fig. 1 Presentation of similarities and differences between SMEs

Indeed, if we write the intersection between 3 analyzed SMEs (similarities) as

$$A \cap B \cap C \tag{1}$$

Then the similarities for pairs of two SMEs we can write as

$$A \cap B; A \cap C; B \cap C \quad (2)$$

In the same fashion differences can be analyzed. For example the basic differences of individual pairs of SMEs, between SME B and SME A, SME C and SME B, SME C and SME A can be written as

$$B \setminus A = \{x \in B \wedge x \notin A\}; C \setminus B = \{x \in C \wedge x \notin B\}; C \setminus A = \{x \in C \wedge x \notin A\} \quad (3)$$

One the example of SME C, with the difference between SME C and similarities between SME A and SME B we then make the further key assumption that the following identities illustrate important properties of relative complements:

$$C \setminus A \cap B = (C \setminus A) \cup (C \setminus B) \quad (4)$$

and the difference between SME C and union of SME A and SME B (whereas the same can be formulated for the other two SMEs):

$$C \setminus A \cup B = (C \setminus A) \cap (C \setminus B) \quad (5)$$

Now, the teacher should at this stage explain to the students that in the above diagram, we write in the intersection area what the SMEs have in common. We will write in the other areas what each SME has different from the others. Explain here the students the last formula and how to obtain the differences. Then invite students to place each of the answers written earlier on the board in the appropriate area of the diagram; compare the number of items in each area and provide a rank. Then, the teacher should highlight how a diagram like this helps to visualize the amount of traits or qualities that the SMEs have in common (to see if they are very different or very similar). Students can participate optimally through the so-called Pigor discussion groups [Pigors & Pigors, 1961] introduced in our earlier work [Vemić & Ljutić 2017].

3.1 Adaptations of the teaching model

The work of Yin [Yin, 1993; Yin 1994; Yin, 2008] has revealed many other different applications. We suggest then to make several demonstrations with the whole class before asking students to make comparisons on their own. Venn diagrams are a great way to visually represent the similarities and differences between SMEs. The downside is that they do not provide much space for placing the answers, which must be very concise. A similar exercise, but which poses less problem for placing the answers consists of drawing a table of three columns, one to describe the SME A and two other for SME B and SME C, and to make highlight or underline what the companies have in common and what the inherent differences are.

3.2 Some SME applications of the teaching model

Considering the theoretical, analytical and presentational aspects of cases invite students to use Venn diagrams to compare SMEs in terms of:

- Sources of finance.
- Marketing strategies.
- Supply chains.
- HR strategies.

Furthermore Venn diagrams are also useful for demonstrating that:

- not all students react in the same way to a business situation or problem;
- SMEs are really all quite unique, but they also have a lot in common.

Clearly, in terms of this outline it derives that our attempt to understand aspects of similarities and differences of SMEs from case studies can work at best in some limited way (depending on to what extent the students actively participate in the exchange). Parallel other studying techniques are also required.

4. SPECIFIC EXAMPLES OF ABBREVIATED CASE STUDIES USED IN ENTREPRENEURIAL EDUCATION

Two case studies are presented in the following section. Each of them illustrates in a specific way the relevance and utility of a financial planning perspective. Both studies were undertaken during the period 2009–2010. Although the data have not been updated, the fundamental questions remain unaltered over the years. Using different data would not significantly change the key financial approaches in the cases presented here.

The studies were designed and directed by the author for entrepreneurial education at a Serbian university where he taught at the time. Presented are only summaries [Stake, 1995] and the focus of both case studies is on basic financial ratios used in operational planning acknowledging other approaches and industries.

4.1 Summary of Case Study of a Small English Language School

4.1.1 Selection of the business idea

All major metropolitan areas have numerous English language schools, and this provided an idea that one could start some such business, for example, in own neighborhood. Initially, it would be a school where only English would be taught, and later the plan is to develop the business and provide an opportunity to teach Business English as well as other leading languages. Given the size of the leased office space, 25 participants are initially planned. There

would be two or three groups. The first group would attend courses in the morning hours, the second one in the afternoon and the third (eventually) in the evening. The plan is to develop the business and to introduce a third group on Saturdays and Sundays, in which case the number of students would be higher, between 30 and 35 students. The amount and size of the market would be evaluated through a survey that a newly established school would conduct from its first income or the investor would finance it before opening the school. This business idea is good compared to others because the method of teaching would be interactive and students would be able to work through the internet and with video materials.

4.1.2 Operational business planning and planned volume of services

The summary financial plan consists of a 12-month profit and loss projection, a four-year profit and loss projection (this is optional and to simplify it will not be used in the approach here), a cash-flow projection, a projected balance sheet, and a break-even calculation. Together they should represent a reasonable estimate of future English Language School's financial future. More important, the process of thinking through the financial plan is expected to improve understanding of internal financial developments of this business. English Language School sales projections will come from a sales forecast, costs, expenses, and profit month-by-month for one year.

Considering that the three-month training is planned for 25 students, the total revenues would be as follows:

25 participants x 300 € per participant = 7500 € for 3 months

Therefore, the total annual revenue based on this business would therefore be:

TR = € 30000 or € 2500 per month.

Considering that a quarterly training of 25 trainees is planned, simplified total expenses would consist of a salary for the owner, a salary for 2 teachers, the cost of rent, utilities and maintenance.

Planned gross profit is expressed formulaically as follows:

$$GP = TR - TC \tag{6}$$

In the given example this is 30000 € - 26040 € = 3960 €

The owner intends to invest profit in new computers, software as well as advertising. The students come to school on their own which is a saving on costs while promotion will be organized through the Internet and television.

4.1.3 Technological and logistical concepts of the business

Since it is a language school, the leased space would include an adequate conference room and modern textbooks for the students, while planned future investments relate to language learning through computers and the Internet. The business owner plans to open a language school on his own, with the possibility of attracting another founder or connecting with a recognized language learning school such as the Oxford Center or the British Council Center. Replicating for some other language would be similar.

For ease of access the language school would be located in the ground floor of a busy shopping mall, with which a cooperation agreement would be concluded. The business owner would at the same time act as the school principal. The school would employ 2 English teachers. The director would also hire other language teachers as needed. The housekeeper and the computer maintenance assistant, the accountant, would work part-time.

The business idea owner will consult with an attorney whether to open an entrepreneurial agency or a limited liability company but it is certainly going to be a smaller business. The owner will approach the selection of partners, employees and other associates in the same way.

4.1.4 Initial investments in the business

- Establishing an agency
- Cost of the training certificate
- 1 computer for the owner
- 1 video beam
- 1 printer
- 1 smart phone
- 11 tables and chairs
- 5 sets of textbooks and dictionary
- Initial amount of stationery
- Sufficient funds for three salaries

4.1.5 Projected Cash Flow

The point of the following summarized worksheets is to plan how much the language school needs before startup, for preliminary expenses, operating expenses, and reserves. For each item, we determine what is actually expected to be received in cash (for sales) or when the business will actually have to make a payment (for expense items). The appropriate roughly summarized investments then are shown in table 1.

Table 1. Individual Investments Required and Estimated Total Investment

Expense item	Total amount in €
Establishment of an agency for foreign languages	300
Price of the certificate	300
1 computer for the owner	500
1 video beam	500
1 printer	150
1 smart phone	300
11 tables and chairs	550
5 sets of textbooks and vocabulary	400
Initial amount of stationery	100
Enough funds for three salaries	5610
ESTIMATED INITIAL INVESTMENT	EII=8710

Calculation of revenues can be seen in table 2.

Table 2. Total annual revenue

25 students x 300 € per students = 7500 € for 3 months
Total annual revenue: TR = 30000 € or monthly 2500 €.
TR = 30000 annually

Calculation of annual costs can be seen in table 3.

Table 3. Total annual costs

Expense item	Calculation			Annual amt.
Salary for owner	500 €	500x1.7	850x12	10200
2 teacher salaries	2x300=600 €	600x1.7	1020x12	12240
Insurance, interest, maintenance, Rent,	150 €/month	-	150x12	1800
Materials, utilities, cost of services	150 €/month	-	150x12	1800
				TC=26040

Let us see how the appraisal is done. Proceeding formally, we may write the net operating profit after tax equation as

$$NOPAT = GP \times p \quad (7)$$

where p is the corporate tax (in example 15%), and annual net profit is expressed as

$$ANP = \frac{NOPAT}{EIV} \quad (8)$$

The payback period may be expressed as

$$PP = \frac{EII}{ANP} \quad (9)$$

And the breakeven sales may be expressed as

$$BS = \frac{FC}{TR-VC} \quad (10)$$

Table 4. Appraisal of Case 1

ITEM OF ANALYSIS	CALCULATION
TOTAL REVENUE	30000
TOTAL COST	26040
GROSS PROFIT	3960
NET OPERATING PROFIT AFTER TAX	3960 X 0.85= 3366
ANNUAL NET PROFIT	3366/8710 = 38.6%
PAYBACK PERIOD	8710/3366=2.59
BREAKEVEN SALES	24240/30000-1800=0.86X100=86%

Note: Payback period of two and a half years is considered decent and rational timing. Depending on industry and context, for most investments any period less than five years is considered a reasonable payback period. A break-even analysis predicts the sales volume, at a given price, required to recover total costs. Therefore, it's the sales level that is the dividing line between operating at a loss and operating at a profit. In this example break even analysis shows that the business will be profitable with a service volume that is 86% greater than planned.

4.1.6 Social usefulness of the business, risk assessment and final case evaluation

The investor estimates that a language school is a socially justified investment because it is about educating young people who want to further their college education in companies that need language skills. The investor estimates that this business cannot be undermined by a potential low purchasing power of the population, that is, low salaries (here only roughly estimated as an example), as well as the existence (competition) of other language schools. Indeed, he believes that the quality of the planned services will be sufficient to attract clients, which implies that the overall risk to perform the business is small. The author estimates that the feasibility prospects will not be disturbed. For simplicity reasons, no loan repayments or net present value concepts were planned at this stage. Gross revenues, net profit, as well as the payback period on investment, social justification of the business, prove that the investment is profitable and therefore the author of the concept can plan to work on a detailed business plan.

4.2 Summary of Case Study of Production of Children's Beds

4.2.1 Selection of the business idea

My cousins are also traditionally producing furniture and this gave me an idea that I could start a similar business and open a small workshop for the production of children's beds in the family home. Initially, it would be a daily production of 6 oak beds, and later the plan is to develop the business with opportunity to produce more beds and other wood items. The plan is also to export furniture to other Balkan countries and possibly beyond. The quantity of the market would be evaluated through a survey conducted by the manufacturer in Serbia and beyond. This business idea is good compared to others because these beds would be of full natural wood specially designed for children and others who do not have large space for furniture or large funds for an exclusive bed.

4.2.2 Operational business planning and planned volume of services

Considering that daily business planning involves production of 6 beds per day, the total revenues would be as follows:

$$6 \text{ beds} \times 120 \text{ € per bed} = 720 \text{ € for 1 day}$$

The total monthly revenue based on 22 business days per month would be:
per month $TR = 22 \times 720 = 15840 \text{ €}$

The total annual revenue would therefore be:

$$TR = 15840 \times 12 = 190080 \text{ €}$$

Considering that the annual production is based on 6 beds \times 264 working days, a total of 1584 beds are planned. The total expenses would consist of a minimum salary for the owner, a salary for 2 wood technicians, material costs, rental costs, utilities and maintenance.

Considering that daily business planning involves production of 6 beds per day, the total revenues would be as follows:

$$TR = 15840 \times 12 = 190080 \text{ €}$$

Planned gross profit is :

Total revenues - total expenses = gross profit

$$GP = TR - TC = 190080 \text{ €} - 140640 \text{ €} = 49440 \text{ €}$$

The owner intends to invest the profit in new production programs, new designs, computers and software for furniture design, as well as advertising in various markets. Promotion would be organized through large hypermarkets dealing with furniture and in other shopping malls.

4.2.3 Technological and logistical concepts of the business

Given that the business is production of beds, the leased space would include an adequate production facility and modern woodworking tools and machines, while in the future investment is planned for new wood production programs. The business owner plans to open a wood processing plant on his own, with the possibility of attracting another founder or connecting with a recognized furniture industry in Serbia, such as *Forma Ideale* from Kragujevac or *Numanović* from Novi Pazar.

The wood processing shop would be located in the family home, with a cooperation agreement concluded. The owner of the business would at the same time act as the director of the wood processing business. The wood processing plant would employ 2 wood technicians. If necessary, the director would also work on wood processing. The maid and the maintenance assistant for the machines and the bookkeeper would work part-time. The business idea owner will consult with a lawyer about whether to open a *company* or *another form of business*, but it is certainly planned to *open a smaller business, a wood working facility*. The owner will approach the selection of partners, employees and other associates in the same way.

4.2.4 Initial investments include at least the following investments

- Establishing a wood processing plant
- Cost of production quality certificate
- 1 computer for the owner
- 1 smart phone or tablet
- 2 universal woodworking machines
- Initial amount of bed materials: wood, glue, nails, moldings, packaging, and other materials
- Sufficient funds for three salaries

4.2.5 Projected Cash Flow

The point of the following worksheets is to summarize and plan how much the wood working plant needs before startup, for preliminary expenses, operating expenses, and reserves. For each item, we determine what is actually expected to be received in cash (for sales) or when the business will actually have to make a payment (for expense items). As in the first case investments are illustrated in table 5.

Table 5. Individual Investments Required and Estimated Total Investment

Expense item	Total amount in €
The cost of the certificate for the quality of production of beds	800
1 computer for owner	500
Initial quantity of timber for 15 days of production (30% of sale price = 40 € x15daysx6 beds = 3600)	21600
Initial amount of other material (adhesive, nails, etc.)	2160
3 tables and 3 chairs	150
1 smart phone or tablet	300
2 new universal CNC wood, plastic/metal processing machines	11200
Enough funds for an accountant, maid and service	1870
Initial Office Supplies	400
Enough funds for three salaries	5610
ESTIMATED INITIAL INVESTMENT	EII=€44590

Table 6 shows total revenue, table 7 total costs and table 8 summarizes our appraisal.

Table 6. Total annual revenue

6 beds x 120€ per bed x 264days =190080 € for 1 year
The total annual revenue would be 190080 € or monthly 15840 €
TR = € 190080 annually

Table 7. Total annual costs

Expense item	Calculation			Annual
Salary for owner	500 €	500x1.7	850x12	10200
Salary for 2 wood technicians	2x300=600 €	600x1.7	1020x12	12240
Rent, insurance, interest, maintenance	450 €/month	-	450x12	5400
Cost of timber (7200 €), maintenance & utilities (350 €), electricity (350 €)	7900 €/monthly	-	7900x12	94800
Other material (glue, nails)	1000 €/month		1000x12	12000
Other costs	500 /month		500x12	6000
				TC=140640

Table 8. Appraisal of Case 2

ITEM OF ANALYSIS	CALCULATION
TOTAL REVENUE	190080
TOTAL COST	140640
GROSS PROFIT	49440

NET OPERATING PROFIT AFTER	$49440 \times 0.85 = 42024$
ANNUAL NET PROFIT	$42024/44590 = 94\%$
PAYBACK PERIOD	$44590/42024 = 1.06$
BREAKEVEN SALES	$33840/190080 - 106800 = 1 \times 100 = 0.41\%$

Note: Payback period of little over one year is considered very fast, for most investments any period less than five years is considered a reasonable payback period. A break-even analysis predicts the sales volume, at a given price, required to recover total costs. In this example break even analysis shows that the business will be profitable with a service volume that is 41% greater than planned.

4.2.6 Social usefulness of the business, risk assessment and final evaluation

The investor estimates that the timber processing facility is a socially justified investment because it is about making beds for children and those who do not have the resources for expensive furniture. The investor estimates that this business cannot be undermined by potential low purchasing power of the population, that is, low salaries, as well as the appearance (competition) of other manufacturers, as he (hypothetically) believes that the quality of the planned beds will be sufficient to attract clients, which implies that the overall risk to perform the production is low. The author estimates that the prospects of the business will not be disturbed. Gross revenues, net profit, as well as the payback period on investment, social justification of the business, prove that the investment is profitable and therefore the author of the concept plans to work on a detailed business plan.

4.2.6 Summary of the two cases

With the two presented two cases we are able to arrive at a complete and consistent illustration in proposed full business plans which would also allow relevant comparisons as shown in figure 1. In view of the purpose and limitations of this article we do not wish to enter further into these two case studies which can be compared in suggested ways later and elsewhere.

5. CONCLUSION

In conclusion, a consistent conception of what we mean by entrepreneurial education can be obtained if we start integrating 'ex cathedra' method of teaching with the 'case study method'. Bringing the approach online would further advance the method [Datar & Kenny, 2020]. This educational totality is then a step forward in the sense that it includes both theoretical and practical aspects of business study. Each of these approaches has in it a certain content that is useful, but this content must, as we have seen, be adapted to the student needs, with the aid of broader concepts and theories, that take into account more and more of the factors on which entrepreneurial education depends. Hence, even though entrepreneurial finance can come very handy relative to other business aspects, we are not led to the point of view that everything is in finance. For such a point of view would imply that other objective content of entrepreneurial knowledge is neglected. In our point of view, we admit that all the above things do actually play an important role and influence our knowledge of entrepreneurial education; but we admit also that nevertheless there still exists a unique value in the portrayed case study method both theoretically and comparatively for SMEs. To understand this

potential better, and thus to supplement other very useful teaching methods that are inevitably in our knowledge at any particular time, we must continue our scientific research of entrepreneurial education, with the goal of discovering more and more of the factors which matter in the process of teaching, of studying SMEs in a better and better way and of discovering in greater and greater detail what are the limitations on the practical application of each concrete set of teaching aids and methods. The fundamental character of scientific research of entrepreneurial education is, then, that it moves towards the optimum by studying SMEs, in their abundant experiences and learning opportunities for both teachers and students.

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