

Prospective Scenarios as a Management Tool for Higher Education Institutions

Cenários Prospectivos como Ferramenta de Gestão para as Instituições de Ensino Superior

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Abstract

The present study aims to analyze the application of prospective scenarios in a Municipal Higher Education Institution (MHEI) over a five-year period (2018-2022) and to compare it to a similar study developed for the previous five years (2014-2018) in order to identify probable threats and opportunities in the studied segment. The research was grounded on studies on prospective scenarios. The Delphi Method was used for preparing the prospective scenarios. Data were collected by using a questionnaire applied to professionals who work in Higher Education Institutions. A longitudinal and comparative case study was carried out by using data quali-quantitative approach. As a result, it was possible to build three scenarios: optimistic, pessimistic and realistic ones, which will serve as the basis for the MHEI strategic planning. The comparison to the study accomplished in 2014 showed that some of the present variables in that prospection also appear in the current one. The research contributed to the studies on the strategic administration of Higher Education Institutions and offers a practical contribution to the planning of these organizations: the construction of scenarios and the analysis of the probabilities of future scenarios for the educational organizations. It also offers a practical contribution to other Higher Education Institutions in the researched region.

Keywords: Organizational strategy. Scenario prospection. Strategic management. Higher Education Institutions.

Resumo

O presente estudo tem por objetivo analisar a aplicação de cenários prospectivos em uma Instituição Municipal de Ensino Superior (IMES), em um espaço temporal de cinco anos (2018-2022), e comparar ao estudo similar desenvolvido para os cinco anos anteriores (2014-2018) a fim de

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identificar prováveis ameaças e oportunidades no segmento estudado. A pesquisa foi fundamentada em estudos sobre cenários prospectivos. Para a elaboração de cenários prospectivos foi utilizado o método Delphi. A coleta de dados foi realizada com o uso de questionário aplicado a profissionais que atuam em Instituição de Ensino Superior. Foi realizado um estudo de caso longitudinal e comparativo com uma abordagem quali-quantitativa dos dados. Como resultado, foi possível construir três cenários: otimista, pessimista e realista, que servirão de base para o planejamento estratégico da IMES. A comparação ao estudo realizado em 2014 mostrou que algumas das variáveis presentes naquela prospecção também aparecem na atual. A pesquisa contribui para os estudos sobre administração estratégica das Instituições de Ensino Superior e oferece uma contribuição prática para o planejamento dessas organizações: a construção de cenários e a análise de probabilidades de cenários futuros para as organizações de ensino. Também oferece uma contribuição prática para outras Instituições de Ensino Superior da região pesquisada.

Palavras-chave: Estratégia organizacional. Prospecção de cenários. Administração estratégica. Instituições do Ensino Superior.

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1 Introduction

Environmental changes are a source of concern for managers and decision makers in general, specially in a context of great technological development. Economic, political, social, cultural changes, among so many others, have caused changes in the population profile, thus launching new challenges for problem solving and opportunity assimilation.

The relation between organizational action and the macro environment has always been marked by events capable of influencing and, at times, putting at stake carefully formulated strategies for the medium and long-term organizational development. By considering all this, managers seek to establish plans so that external forces do not undermine the previously accomplished work.

The technological evolution provided organizations and managers with new useful tools for the organizational management; however, it brought an unknown and at times unidentified instability to this environment up to that point, but still existing anyway (Kotler & Caslione, 2009). Lastres (1999) describes this new moment as the Knowledge Era,

responsible not only for the appearance of environmental uncertainty, but also for the reformulation in the way of life of persons.

The managers understanding of the opportunities for the organizations can generate actions in pursuit of competitive advantages. Such knowledge enables the organizations to be able to prepare themselves in order to face possible problems and/or to seize potential opportunities. As it is proposed by Marcial and Grumbach (2002, p. 33), “the accelerated pace of political, economic, social and technological changes in the world has frequent trend breaks as a consequence. Such breaks increase the uncertainty concerning the future . . .”. The breaks pointed out by the authors cause uncertainties, alter the pace of changes and make managers face difficulties to deal with tomorrow.

The objective of the present article is to analyse Prospective Scenarios for a Municipal Higher Education Institution (MHEI) from the São Paulo State countryside, Brazil, in a five year timeline (2018-2022), and to compare to the similar study developed for the five previous years (2014-2018). In addition to the general objective, this research aimed to reach the following specific objectives: (1) to identify breaking points in the business environment of the higher education sector of the studied region; and, (2) to provide subsidies so that the researched HEI can ground its strategic planning.

The study is justified by the need for practical contributions for the research target segment, with information on future probabilities for educational organizations. As the other sectors of economy, the educational sector companies are in an environment of highly competitive businesses, with a trend concentration from mergers and acquisitions of smaller institutions by large educational groups. Furthermore, the growth of the DL (Distance Learning) modality and of the semi-distance-learning scheme, with the inclusion of a percentage of classes taught outside the classroom, are factors, which tend to stir up this sector competitiveness.

The research was carried out by using qualitative and quantitative methodological approaches. The theoretical framework was based on studies about prospective scenarios and about higher education. Then, three Prospective Scenarios for the *Uni-FACEF – Centro Universitário Municipal de Franca* (Municipal University Center of Franca) were built and analysed, based on Blanning and Reinig method (1998). These scenarios were compared to the ones built in a similar study carried out in 2014. In conclusion, some strategic actions were suggested for the HEI, for the 2018/2022 horizon.

2 Organizational Action and the Macro Environment Factors

Decision making is seen as a process which requires accuracy and analysis of specific environmental circumstances of each organization throughout history, specially if it is considered that the managers have faced an organizational environment marked by instabilities. Such uncertainties make the organizational environment vulnerable, specially when the constant technological innovations and their impact on the information generation and dissemination are considered.

If it took certain news some days to reach the end user in the past, a human being entirely connected, and free from that isolation condition, which limited his/her immediate contact networks to short distances, came into existence since the late 20th century. Such picture became even more intense after the rising social networks, specially from the first decade of the current century on. Kotler and Caslione (2009, p. 3) affirm, “the speed of change and the magnitude of shocks are greater than ever”; unlike the past, “this the new normality. It goes beyond the disruptive innovations and it includes new shocks”.

As consequence, the business environment started presenting trend breaks and *breakpoints*, which, for Strebel (1993, p. 24), are factors which provide “quantitative changes in the industry or company game rules . . .”

In Brazil, such situation started being observed mainly in the late 20th century, an occasion in which the country was still undergoing the reflexes of the *Economic Miracle* decadence of the 1970s. At that time, the opening of the Brazilian economy was experienced and followed closely by the economic restructuring, inflationary control and exchange rate derived from the Real Plan. The general unpreparedness of the national enterprises (Mancuso & Oliveira, 2006) became clear. The country went through periods of economic stability in the late 1990s and at the beginning of the 21st century, mainly caused by the development of the measures adopted during the Real Plan, added to the inclusion policies of part of the population in the consumption cycles, from the credit expansion and the Income Distribution Program (Gremaud, Vasconcelos, & Toneto Júnior, 2007).

Nonetheless, the Brazilian economic picture presented a sharp decline from 2014 on, with increasing investment falls and unemployment increasing rate, in addition to the GDP contraction since 2015 (Pinto et al, 2016). The authors also discuss the fact that there is no division between the economic crisis faced by the country and the political one which occurs around the Government.

Finally, it is considered that, with the occurrence of an electoral process in the country in 2018, political instability was generated, which linked itself to the economic instability, causing more uncertainty for the investors and consequently a worsening of the political-economic crisis. Therefore, studies which make the business environment mapping possible, as well as their perspectives for the following years, become of great value as they enable the organizational practice on the understanding of micro and macro environmental variables.

3 Prospective Scenarios

Among the analysis techniques of future odds, the study on *Prospective Scenarios* arises, aiming to remedy the present gaps in the

competitive strategy formulation of organizations and to minimize the environmental uncertainty. In this field, Porter (1989, pp. 411-412) affirms:

. . . every company somehow deals with uncertainty. However, it is not normally addressed properly in the competitive strategy formulation. Strategies are often based on the assumption that the past will repeat itself or on the implicit predictions of the managers concerning the most probable future. . . With greater need for an explicit approach of uncertainty in planning, some enterprises started using scenarios as tools so that they could more fully understand the strategic implications of uncertainty.

The scenario study is grounded on the event or variable prospectation, which may influence an enterprise in a certain length of time (Schwartz, 2003). In summary, it is a systematic procedure, which leads to the identification of possible trends, which the organizational environment may assume within a certain length of time, as well as the forces, which can cause changes in this environment. This also allows to think about the strategic action planning for each developed scenario (Ratter, 1979).

Porter (2004, p. 243) synthesizes the concept by enunciating it as "partial and internally consistent visions of how the world will be in the future and which can be chosen in order to limit the set of circumstances which may occur". Such argument shows the importance of the study and its application in the business environment as well.

When one considers the prospective scenario work, a tool which allows the understanding of an uncertain environment, in which the organizations exist in times of high technological development and competitiveness globalization is used. The prospective scenario construction mitigates the degree of uncertainties due to the fact that this methodology considers current events with future implications with incidence in the medium and long terms (Schwartz, 2006).

The organizations studied are going through profound shifts, with a sector concentration trend and with new Higher Education Institutions entering the market, with special emphasis on those which offer Distance

Learning (DL), a segment which has been highlighted both due to the ease of access and to the more affordable prices in the last years.

4 Higher Education Institution in Brazil: Uni-FACEF

The focus of the present study is on Higher Education, a segment which has experienced a strong growth in the last years, specially motivated by the more and more intense technological development. As it is a growing sector, it is possible to notice the incidence of breakpoints, i.e., events which interfere in the strategic plans of the institutions, such as: mergers or partnerships among HEIs, the acquisition of an institution by another one or by educational groups, higher education conglomerate going public, international institution entry with equity investment of the existing HEI or even with the direct entry in the national market (Silva; Machado Neto, 2014). Hence, one can perceive that the environment, in which the organizations under this study are included, has undergone changes which directly impacted on its management.

Another aspect to be highlighted is regarding the regulation by the Ministry of Education in order to ensure higher quality in the courses offered to the population. In this sense, one can observe that with the sanction of Law nº 10.861/2004, which creates and regulates the National System of Higher Education Evaluation (SINAES/NSHEE), there is the new device installing of course performance control, based mainly on ENADE/PNEHES (Performance National Exam of Higher Education Students), generating indicators such as: the ENADE/PNEHES Concept, the Difference Indicator between the Observed Performance and the Expected One (IDD/DDI), the Course Preliminary Concept (CPC), the Course Concept (CC), the Course Overall Index (COI /IGC) and the Institutional Concept (IC). In general, this fact has caused turmoil concerning how to establish the planning guidelines.

Finally, the study object, *Centro Universitário Municipal de Franca* (Municipal University Center of Franca – Uni-FACEF), founded

in 1951 as a private institution, which was initially linked to the *Instituto Francano de Ensino* (Francano Educational Institute), is highlighted. Its takeover by the local public authority happened by a law bill by the councilor Bernardino Pucci in 1966, and enforced by Law n°. 1452/66. The first principal was the teacher Alfredo Palermo who contemplated the first group of students, an Economics graduation in 1954 (Oliveira et.al., 2011).

In 2004, after undergoing the evaluation process of the *Conselho Estadual de Educação de São Paulo* (State Council of Education of São Paulo (CCE/SP)), it was included in the category of University Center, thus enlarging its portfolio from 4 courses (in force at that time) to 16 (in 2019). In 2019, the Uni-FACEF has three units used for the development of its activities, so that the HEI started considering its planning “in the pursuit of an inclusion in the local community, in order to produce knowledge which ensures support to the population by offering teaching, research and quality extension services” (Silva, 2013).

5 Methodological Procedures

The present research aims at knowing the object scope environment discussed here, so that the results express the studied reality. Therefore, a mixed approach for the method definition was chosen: qualitative and quantitative, which Duarte (2009) calls triangulation, i.e., the use of two research techniques to reach a third point. It is an applied research, i.e., a study which aims “to generate knowledge for practical application, aimed at specific problem solving. It involves local truth and interests” (Moresi, 2003, p. 8). A comparative and longitudinal case study.

For the prospection of future scenarios, the current study will use a model proposed by Blanning and Reinig (1998).

. . . a structured method of variable evaluation in the outlined scenarios and discuss its implementation through a case. The authors suggest that a list of events indicating the occurrence probability of these events is made, obtained from

the voting by a group of the process participants. Afterwards, an event matrix in which the event probability (P) is found on the horizontal axis is built and how favorable or unfavorable the event is (F) for the organization or company which is developing the analysis is found on the vertical axis (Almeida, Onusic & Machado Neto, 2005, p. 5).

As to the data collection, the researched public was made up by professors and Higher Education Institution managers by using forms. The data collection was conducted by the Delphi Method. This method is a group communication process, with anonymity protection, based on successive rounds of questionnaires, which ensures balance and stability in the answers (Linstone & Turoff, 2011). As a result, the method allows the preparation of three distinct scenarios, which are classified as: optimistic, pessimistic and realistic ones.

6 Research Presentation and Result Analysis

The objective of the present study was to analyse prospective scenarios for a Municipal Higher Education Institution in a period of five years (2018-2022), besides comparing it to the similar study carried out for the previous five years (2014-2018) in order to identify threats and opportunities in the studied segment.

6.1 Scenario Prospection for Uni-Facef – 2018/2022

Table 1 presents the Probability and Favorability Matrix, with the events surveyed in the research, by applying questionnaires.

Blanning and Reinig model (1998) assumes the elaboration of three Scenarios, by considering that each of them shelters a quantity of events according to its Probability and Favorability. The Scenarios are placed on a Cartesian plan, made up by the X (Probability indicator) and the Y (Favorability indicator) axes.

Table 1. Probability and Favorability Matrix: Uni-FACEF 2018-2022 Scenarios

	Description	Prob.	Fav.
Event 01	Increase in competitiveness between HEI in Franca and in the region	7,3	3,8
Event 02	Offer and competitiveness increase of DL courses	8,1	2,7
Event 03	Decrease of PROUNI (University for All Program) scholarship offer	5,6	5,5
Event 04	Decrease of FIES (Scholarship Loan) financing offer	7,6	1,8
Event 05	Increase of private Student Loans	7,5	4,8
Event 06	Increase in requirement for a quality higher education	7,3	7,2
Event 07	New international academic agreements	7,7	7,9
Event 08	Low quality in high school graduation	9,1	1,8
Event 09	Adequate infrastructure and technologies	8,8	7,7
Event 10	New course offer	8,3	6,6
Event 11	Low demand for HEI traditional courses	7,7	1,9
Event 12	Age pyramid change	8,5	4,0
Event 13	Focused chains and partnerships	7,6	8,4
Event 14	Municipality intervention in the municipal HEI management	4,3	1,5
Event 15	Creation of a technological center in the town	5,7	7,9
Event 16	Diversification of the local economy	5,2	8,2
Event 17	National political instability	7,5	2,3
Event 18	Unemployment fall	5,3	5,7
Event 19	Reduction of the Brazilian citizen per capita income	5,5	1,8
Event 20	On-line data and information platforms	8,6	6,3

The optimistic scenario is made up of events which present high occurrence probability and which are favorable to the HEI. The pessimistic scenario is made up of events with high occurrence probability and which are unfavorable to the HEI. The realistic scenario brings together the events, which present a higher probability of occurring, as favorable or unfavorable ones to the HEI.

Figure 1 presents the study results, with the construction of three scenarios (optimistic, pessimistic and realistic), for the Uni-FACEF – *Centro Universitário Municipal de Franca* (Municipal University Center of Franca) from 2018 to 2022.

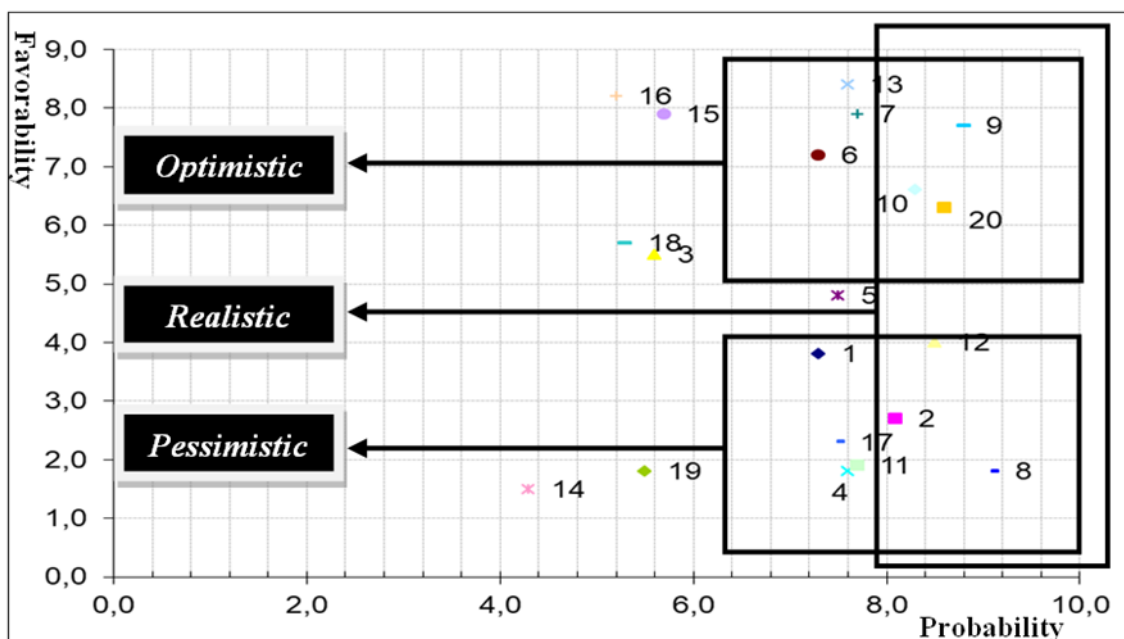


Figure 1. Prospective Scenarios for the 2018/2022 Uni-FACEF

The **optimistic scenario** is made up of events which present high probability of occurring (above 70%) and which are favorable to the HEI: Event Six (6) – Increase in the requirement for a quality higher education; Event Seven (7) – New international academic agreements; Event Nine (9) – Adequate infrastructure and technologies; Event Ten (10) – New course offer; Event Thirteen (13) – Focused chains and partnerships; and Event Twenty (20) – On-line data and information platforms .

The **pessimistic scenario** recorded seven events which present great probability of occurring (above 70%) and which are unfavorable to the HEI: Event One (1) – Increase in the competitiveness between HEI in Franca and in the region; Event Two (2) – Increase in the DL course offer and competitiveness; Event Four (4) – Reduction in the FIES (Scholarship Loan) financing offer; Event Eight (8) – Low quality of high school; Event Eleven (11) – Low demand for HEI traditional courses; Event Twelve (12) – Age pyramid change; and Event Seventeen (17) – National political instability

In turn, the **realistic scenario** is made up of six events with higher degrees of occurrence probability (above 80%), with three events favorable to

the HEI (Event Nine (9) – Adequate infrastructure and technologies; Event Ten (10) – New course offer; and Event Twenty (20) – On-line data and information platforms), and three events unfavorable to the HEI (Event Two (2) – Offer and competitiveness increase of DL courses; Event Eight (8) – Low quality of high school graduation; and Event Twelve (12) – Age pyramid change).

6.2 Scenario Comparative Analysis for 2014/2018 and 2018/2022

Tables 2, 3 e 4 allow to compare the events which made up the three current prospection scenarios to the ones included in the study carried out in 2014, as follows.

Table 2. Uni-FACEF – Optimistic Scenarios in 2014/2018 and in 2018/2022

Optimistic scenario events – 2014/2018	Optimistic scenario events - 2018/2022
<ul style="list-style-type: none"> • Increase in public and private resources for technological researches. • Shortage of higher education professionals in certain market areas. • Government investment in scholarships abroad, student and researcher exchange increase. • Establishment of regional incentive partnerships and regional tourism development. • Improvement in FIES (Scholarship Loan) conditions. 	<ul style="list-style-type: none"> • On-line data and information platform • New course offer • New international academic agreements • New international academic agreements • Focused chains and partnerships • Adequate infrastructure and technologies • Demand increase for a quality higher education

As it can be verified in Table 2 above, several events, which made up the optimistic scenario from 2014 to 2018, were repeated in the optimistic scenario from 2018 to 2022, perhaps with a somewhat slightly different focus .

Thus, the possibility of a resource increase for technological researches, present in the first one, reflects in the investments made by the HEI itself, which allowed the occurrence and the highlight of two events in

the current scenario: On-line data and information platforms and Adequate infrastructure and technologies.

The finding “Shortage of higher education professionals in certain market areas” in 2014, reflects in the current scenario, in “New course offer”, which has been performed by the HEI, specially in Health areas (Medicine and Nursing), Engineering (Civil and Production) and Technology (Software Engineering and Computer Science).

The expectation regarding the increase of government resources for scholarships abroad did not materialize; however, the HEI has invested in the cooperation agreement formatting with foreign universities, by having intensified the exchange of students and teaching staff with the universities of Valladolid and Málaga (Spain) and the University of Porto (Portugal), in addition to an effective participation in the IFBAE - Instituto Franco-Brasileiro de Administração de Empresas (French-Brazilian Institute of Business Administration). The aforesaid institute is made up of five French universities (Grenoble, Aix-em-Provence, Tours, Poitiers and Rennes) and five Brazilian HEIs (USP, UFRGS, UFMG, UFU and Uni-FACEF) and holds biennial congresses, in addition to student, teaching staff and researcher exchange.

The two last events of the 2014 optimistic scenario, “Establishment of regional incentive partnerships and regional tourism development” and “Improvement in FIES (Scholarship Loan) conditions”, have not materialized, and it was precisely the opposite in the FIES (Scholarship Loan) case; the financing conditions and the Government requirement of the HEI joint and several liability in case of default, made Uni-FACEF cease signing new agreements of such student loan.

Concerning the “Focused chains and partnerships” event in the current prospection, the HEI has actively participated in the AIMES – Association of Municipal Institutions of Higher Education of São Paulo State and it helped to found ANIMES – National Association of the Municipal Institutions of Higher Education, entities created to support the

claims of the Municipal HEI at the government agencies and to promote joint effort for its members. Uni-FACEF is also an ABRUEM – Brazilian Dean Association of Municipal and State University associate.

As to the “Quality higher education requirement” event, the institution has encouraged the professor and employee qualification and has strongly invested in its physical infrastructure, by acquiring high tech equipment for the labs as a way to continuously improve the quality of the services provided to its users.

Table 3. Uni-FACEF – Pessimistic Scenarios in 2014/2018 and in 2018/2022

Pessimistic scenario events for 2014/2018	Pessimistic scenario events for 2018/2022
<ul style="list-style-type: none"> • Unifran sale to a Larger Educational Group • Increase in the DL Course Demand • Reduction in the educational level of higher education newcomers • Low Growth of the National Economy • Increase in Cost of Living 	<ul style="list-style-type: none"> • Competitiveness increase between HEI in Franca and in the region • Offer and competitiveness increase of DL courses • Low quality in high school graduation • National political instability • Low demand for HEI traditional courses • Age pyramid change • Reduction of FIES (Scholarship Loan) financing offer

The first event of the 2014 scenario prospection became effective with Unifran – University of Franca sale, our largest competitor in town, to the Cruzeiro do Sul educational group, which has injected a more aggressive sales policy than the previous owners. This behavior reflects in the first event of the current scenario prospection, i.e., the “Increase of competitiveness between HEI in Franca and in the region”.

The two following events are present in the two scenarios and they refer to the offer increase of DL courses and to the high school education low quality, which has led the HEI to implement back up classes of subjects such as Portuguese and Mathematics for the newcomers in its courses.

The “Low growth of the national economy” and the “Increase of cost of living”, present in the 2014 prospection, are reflexes of “National political turmoil”, which is included in the current prospection; such scenario is expected to revert itself with the end of the 2018 electoral process.

The mentioned “Increase of cost of living” (2014), associated to “Age pyramid change” (population ageing) and to the “Reduction of the FIES (Scholarship Loan) financing offer” (2018), are probably the causes of the “Low demand for HEI traditional courses”, an event which is included in the current prospection.

Table 4. Uni-FACEF – Realistic Scenarios in 2014/2018 and in 2018/2022

Realistic scenario events for 2014/2018	Realistic scenario events for 2018/2022
<ul style="list-style-type: none"> • Demand increase for DL courses² • Reduction in the Educational Level of the Higher Education Newcomers² . • Higher Education Professional Shortage in Certain Market Areas¹ • Elderly Population Growth • Change in the Student Profile (Y Generation) • Government Investment in Scholarships Abroad, Increase of Student and Researcher Exchange¹ • Unifran sale to a Larger Educational Group² 	<ul style="list-style-type: none"> • Offer and competitiveness increase of DL courses² • High school education low quality² • New course offer¹. • Age pyramid change² • Adequate infrastructure and technologies¹ • On-line data and information platforms¹

¹ Events belonging to the optimistic scenario

² Events belonging to the pessimistic scenario

As Table 4 shows, some events which made up the realistic scenario, in the prospection performed in 2014, are also present in the current study and they have already been discussed in the previous analyses.

In the 2014 prospection, the realistic scenario was made up of three unfavorable events to HEI (highlighted in yellow), two events were considered as favorable to the institution (highlighted in blue) and two events took part only in this scenario: “Elderly Population Growth” and

“Change in the student profile (Y Generation)”. It was considered at the time that they were neutral events, situations which required only an adaptation by the HEI.

In the current prospection, the realistic scenario is made up of three events which also make up the optimistic scenario (highlighted in blue) and three events also make up the pessimistic scenario (highlighted in yellow) and they have already been analysed.

7 Research Implications and Final Considerations

The present study general objective was to analyse prospective scenarios for a Municipal Higher Education Institution in a timeline of five years (2018-2022), besides comparing it to a similar study carried out for the five previous years (2014-2018) in order to identify threats and opportunities in the studied segment.

The research allowed the building of the three proposed Scenarios, in the same criteria of those prepared in 2014, which made comparisons possible. Regarding the Scenarios prepared in the current research, it can be considered that 30% of the events are seen as optimistic ones, due to their favorability, as well as 35% are analysed as pessimistic ones. The realistic scenario gathered 70% of the events surveyed, as only the “Increase of private student loan” one was not considered as favorable or unfavorable.

The 2014 survey showed 25% of the events classified as optimistic ones, the same quantity which had been observed in the pessimistic scenario. The realistic scenario included 35% of the surveyed events, with two of them absent from the other two scenarios.

It should also be considered that among the seven events which belong to the realistic scenario in the 2014 research, four appear again in the current research; three of them still with high probability of incidence: demand increase for DL courses, elderly population growth (Age pyramid change) and High school education low quality.

The UNIFRAN sale event to a larger educational group has materialized, which confirms the reason for being the highest probability event at that time (9,60). Furthermore, Student Profile Change and Shortage of Higher Education Professionals in Certain Market Areas were not recalled by most of the respondents in the current research.

It is important to emphasize that the survey provided the studied HEI with important subsidies for its strategic planning. The HEI shall observe a set of actions in order to foresee the occurrence of more favorable events and to prevent itself from possible damage from those which appear as unfavorable, as follows:

- 1) Offer and competitiveness increase of the DL courses:
 - a) to strengthen the identity of "single local HEI" and to enhance the feeling of "belonging";
 - b) to disseminate the face to face and full-time education differential in a massive way;
 - c) to reduce the costs and to stabilize the monthly fees (solar energy, e.g.).
- 2) Increase of private student loan:
 - a) to perform management together with MEC (Ministry of Education and Culture), via AIMES (Association of Municipal Institutions of Higher Education), to improve FIES (Scholarship Loans) conditions;
 - b) to renew AIMES (Association of Municipal Institutions of Higher Education) performance in order to obtain scholarships from PROUNI (University for All Program) for the municipal HEI;
 - c) to study different payment terms of monthly fees (e.g. to pay 4 years within 6 years).
- 3) Low demand for HEI traditional courses:
 - a) to seek continuous improvement of the teaching staff qualification and of the teaching-learning processes;

- b) to implement, as far as possible, active methodologies in the HEI traditional courses;
 - c) to include free "back up classes" with alternative schedules and on the weekends.
- 4) New international academic agreements:
- a) to take advantage of the ABRUEM (Brazilian Dean Association of Municipal and State University) trips in order to set agreements with HEI in the visited countries;
 - b) to join university associations of South America (USCS agreements);
 - c) to expand relations with HEI affiliated to IFBAE (Business Administration French-Brazilian Institute) (post-doctorate, student and professor exchange) .
- 5) On-line data and information platforms:
- a) to encourage students in the IT area to develop "solutions" for our HEI;
 - b) to invest in dissemination "virtual channels" of our courses, novelties and accomplishments.
- 6) Age pyramid change:
- a) to offer extension courses for the "best age" and differentiated prices for graduation;
 - b) to offer courses of the Business Training School in other areas (for example: agribusiness).
- 7) Focused chains and partnerships:
- a) to strengthen links with AIMES (Association of Municipal Institutions of Higher Education), ABRUEM (Brazilian Dean Association of Municipal and State University), IFBAE (Business Administration French-Brazilian Institute) and Santander Universities;
 - b) to set agreements with other entrepreneurial entities (Unimed, Hospital Regional etc.)

8) National political instability:

- a) to follow the unfolding of the national political crisis and its reflexes for the HEI closely;
- b) to study preventive measures of eventual threats from the "national political crisis".

Finally, it is understood that the present study managed to prospect scenarios for the 2018-2022 period and to compare it to the previous survey (2014-2018) as well, by fulfilling its main goal.

The prospection of future scenarios, with the identification of possible breakpoints of the business environment of local higher education, as well as of probable opportunities, was able to provide subsidies for the HEI strategic planning, object of the present study, besides offering some parameters to the other local and national institutions.

References

Almeida, F. C., Onusic, L. M., & Machado Neto, A. J. (outubro, 2005) Proposições e experimentos sobre o método de análise de cenários no varejo brasileiro. *Anais do Consejo Latinoamericano de Escuelas de Administration –CLADEA*. Santiago, Chile, 5.

Blanning, R. W., & Reining, B. A. (1998) *Building Scenários for Hong Kong Using EMS. Long Rang Planning*, 31(6), 900-910. [https://doi.org/10.1016/S0024-6301\(98\)80027-7](https://doi.org/10.1016/S0024-6301(98)80027-7)

Brasil, Republica Federativa do (1996a). *Lei n.º. 10861 de 20 de dezembro de 1996*. Recuperado de http://www.planalto.gov.br/ccivil_03/leis/19394.htm.

Brasil, Republica Federativa do (1996b). *Lei n.º. 9394 de 20 de dezembro de 1996*. Recuperado de http://www.planalto.gov.br/ccivil_03/leis/19394.htm.

Duarte, T. (2009) A possibilidade da investigação a 3: reflexões sobre triangulação (metodológica). *CIES e-Working Papers* n. 60, Centro de Investigações e Estudos em Sociologia, Lisboa, Portugal. Recuperado de http://www.cies.iscte.pt/destaques/documents/CIES-WP60_Duarte_003.pdf.

Dutra, T. N. A., & Carvalho, A. V. (2006) Profissional da informação e as habilidades exigidas pelo mercado de trabalho. *Encontros Bibli: Revista Eletrônica de biblioteconomia e Ciências da Informação, Universidade*

Federal de Santa Catarina, 22, 174-194. Recuperado de <http://redalyc.uaemex.mx/redalyc/pdf/147/14702213.pdf>.

Kotler, P., & Caslione, J. A. (2009) *Vencer no caos*. Rio de Janeiro, Elsevier.

Gremaud, A. P., Vasconcellos, M. A. S, & Toneto Júnior, R. (2007) *Economia Brasileira Contemporânea*. Ribeirão Preto: Atlas.

Lastres, H. M. M., & Albagli, S. (1999) *Informação e globalização na era do conhecimento*. Rio de Janeiro: Campos.

Mancuso, W. P., & Oliveira, A. J. (2006) Abertura econômica, empresariado e política: os planos doméstico e internacional. *Lua Nova [online]*, 69, 147-172. <https://doi.org/10.1590/S0102-64452006000400007>

Marcial, E. C., & Grumbach, R. J. S. (2002) *Cenários prospectivos: como construir um futuro melhor*. Rio de Janeiro: Editora FGV.

Oliveira, S. F. P., Machado Neto, A. J., Fadel, B., Durigan, R. H. A., Nogueira, A. T., & Campanhol, (2011) E. M. *Livro dos 60 anos: tessituras de razão e emoção*. São Paulo: Uni-FACEF.

Pinto, M. J. A. (2011) *Investimentos diretos estrangeiros no setor sucroenergético* (Dissertação de Mestrado). Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, Ribeirão Preto, SP, Brasil.

Porter, M. E. (2004) *Estratégia competitiva: técnicas para análise da indústria e da concorrência*. Rio de Janeiro: Elsevier.

Porter, M. E. (1989) *Vantagem competitiva: Criando e sustentando um desempenho superior*. Rio de Janeiro: Campus.

Ratter, H. (1979) *Estudos do futuro: introdução à antecipação tecnológica*. São Paulo: FGV.

Schwartz, P. (2006) *A arte da visão de longo prazo: planejando o futuro em um mundo de incertezas*. Rio de Janeiro: BestSeller.

Schwartz, P. (2003). *Cenários: as surpresas inevitáveis*. Rio de Janeiro: Campus.

Silva, W. R., & Machado Neto, A. J. M. (maio, 2015). *Elaboração de Cenários Prospectivos como fomento às estratégias organizacionais no Ensino Superior*. Anais do Congresso do Instituto Franco Brasileiro de Administração de Empresas – IFBAE. Porto Alegre, RS, Brasil, 8.

Silva, W. R. (2013) *Um modelo de cenários prospectivos para o setor de prestação de serviços no ensino superior: o caso do Uni-FACEF* (Dissertação de Mestrado). Centro Universitário de Franca – Uni-FACEF, Franca, SP, Brasil.

Silveira, R. M. C. F., & Bazzo, W. A. (novembro, 2006). *Transformando a relação do ser humano com o mundo*. Anais Simpósio Internacional de Processo Civilizados: tecnologia e civilização. Ponta Grossa, PR, Brasil, 9.

Strebel, P. (1993). *Breakpoints: como as empresas exploram mudanças radicais nos negócios*. São Paulo: Atlas.

Toaldo, A. M. M. (2006). Formação da estratégia de marketing: aplicação teórica na gestão de instituições educativas. R. Penna, A. M. M. Toaldo, & S. Sabedot (orgs.). *Conhecimento, sustentabilidade e desenvolvimento regional* (pp. 43-58). Canoas: Unilasalle.

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