Students self-assessment in private education: the influence of the perceived quality in distance education courses for the sustained advantage of the institution

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Abstract
This paper investigates the relationship between the competitive aspects of the resources offered to the students and the self-assessment they do about themselves. For this purpose, a survey counting 4,671 valid learners’ entries from a private Brazilian educational institution was done. The survey involved constructs made by the institution related to the resource-based view theory. To test the scale’s reliability, the Cronbach’s alpha was used; the Kolmogorov-Smirnov test was done to evaluate the normality; and the Spearman’s coefficient was also used to see the correlation between the indicators and the constructs; the Wilcoxon test was done to assess the balance among the constructs. It is suggested that the student’s self-assessment may influence the course’s quality assessment and the institution’s competitive advantage.

Keywords: competitive advantage; distance education; resource based view; strategic management; students self-assessment.

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Autoevaluation discente no ensino privado: influência da qualidade percebida de cursos EAD na vantagem competitiva sustentável da instituição

Resumo
O artigo teve como objetivo investigar a relação entre os aspectos competitivos dos recursos ofertados aos discentes e a autoavaliação que esses fazem de si. Para tanto foi realizada uma survey com 4.671 inserções válidas de discentes de uma instituição de ensino particular brasileira. A pesquisa envolveu constructos elaborados pela instituição e que tinham relação com a teoria da visão baseada em recursos. Os parâmetros utilizados foram o alfa de Cronbach para testar a confiabilidade da escala; o teste Kolmogorov-Smirnov para avaliar a normalidade; o coeficiente de Spearman para constatar a correlação entre os indicadores e constructos; e o teste de Wilcoxon para avaliar o equilíbrio entre os constructos. Sugere-se que a autoavaliação dos discentes pode influenciar a avaliação da qualidade do curso e a vantagem competitiva da instituição.

Palavras-chave: autoavaliação discente; educação a distância; gestão estratégica; vantagem competitiva; visão baseada em recursos.

Autoevaluación discente en la educación privada: influencia de la calidad observada en los cursos EAD en la ventaja competitiva sostenible de la institución

Resumen
El artículo tuvo como objetivo investigar la relación entre los aspectos competitivos de los recursos ofrecidos a los discentes y la autoevaluación que estos hacen de sí mismos. Para esto fue realizado un estudio, con 4.671 entradas válidas de discentes en una institución de educación privada brasileña. La investigación envolvió constructos elaborados por la institución y que tenían relación con la teoría de la visión basada en recursos. Los parámetros utilizados fueron el alfa de Cronbach para comprobar la fiabilidad de la escala; la prueba de Kolmogorov-Smirnov para contrastar la normalidad; el coeficiente de Spearman para verificar la correlación entre los indicadores y los constructos; y la prueba de Wilcoxon para valorar el equilibrio entre los constructos. Se sugiere que la autoevaluación de los discentes puede influenciar la valoración de la calidad del curso y la ventaja competitiva de la Institución.

Palabras-clave: autoevaluación discente; educación a distancia; gestión estratégica; ventaja competitiva; visión basada en recursos.
Introduction

In a context of changes caused by the Digital Information and Communication Technologies (DICTs), distance education (DE) became an important educational modality, showing exponential global growth over the past decades. Distance education has as its main characteristics the use of technology as a means in teaching and learning, physically dissociating learners and teachers. The physical distance entails the weakness of the entire teaching and learning process, which becomes dependent on the technology; it is possible to be subdued by a restrictive interactivity or even a non-existent one.

As said by Silva, Melo and Muylder (2015), this distance may be a critical factor in the teaching and learning process, making it necessary for the institutions to identify successful key factors, considering the problems distance education overcomes and development monitoring. However, we state that even though the physical distance is a critical point, if the interactions and the physical distance are well outlined as a differential strategy, using exclusive resources offered to the students by the institution, they may become a source of competitive advantage.

The distance education is the educational modality that grows the most in Brazil, the number of enrollments increased from 332,469 in 2009 - corresponding to 16.1% of the total enrollments in higher education - to 1,592,184 in 2019 – representing 43.8% of the total. During these ten years – from 2009 to 2019 - the in-person higher education courses decreased from 83.9% to 56.2% from the total of enrollments in higher education courses. For the past five years, the number of enrollments on in-person higher education courses has lessened by 14.3% (INEP, 2020).

Given these numbers and the changes caused by the DICTs, it is possible to perceive that nowadays, the private distance education institutions’ environment is marked by market competition, turmoil, and high levels of uncertainty, comprising a complex and peculiar space. Mill (2015) indicates that the strategic management in the distance education modality keeps many specificities and particularities, which demand and promote a type of management quite different from other activities – in both business and educational contexts. This whole scenario imposes constant challenges on private distance education institutions to keep themselves competitive in the market because the strategies used may not be long term (MINTZBERG; LAMPEL; QUINN; GHOSHAL, 2006; MORRIS; KURATKO; COVIN, 2008).
Aiming to assure competitive advantages already achieved; for the past decade, authors who have devoted themselves to the business strategy theme suggest that the particularities of each organization – resources, knowledge, and abilities\(^V\) (BARNEY, 1991; PETERAF, 1993; TEECE; PISANO; SHUEN, 1997) influence the company’s performance, being able to provide a competitive advantage. Therefore, according to this line of thought, the competitive advantage may be achieved as a company succeeds in implementing strategies that add value to the consumer (IRELAND; HOSKISSON; HITT, 2014; LUKOVSZKI; RIDEG; SIPOS; 2020; ZAHRA, 2021).

In this way, the creation of competitive strategies, made to reach competitive advantage, must benefit from the company’s inner strengths, answering to the environmental opportunities while they neutralize the external threats and avoid the inner weaknesses (BARNEY, 1991). The positioning and reasoning from the competitive advantage’s perspective consider the organization’s competencies\(^VI\), which are the ground for the resource-based view (RBV).

The RBV theory directs its effort to the corporate knowledge and abilities, both unite to compose the resources, understood as competencies, which guarantee the inner company’s adaptation in an unstable and changing environment, reducing risks, and assuring the opportunities (HAMEL; PRAHALAD, 1990). When the organization understands and identifies its essential competencies, this group of resources previously identified at some moment inside the organization, it becomes an opportunity to enhance these competencies, either at the technological/physical, personal, or organizational level.

The RBV exposes two basic assumptions which demonstrate the organization’s differential. The first one is that the origin of the competitive advantage is the way the resources and competencies are used and managed (WERNERFELT, 1984). The second one is that both, the resources, and competencies, as well as organizations are made by parts of different and variable origin among the organizations. In this case, it is understood that, from the distinct resources and competencies, the

\(^{V}\) The word ability, in this paper, is understood as a management ability, which aims to achieve the implementation of cooperative technologies, production abilities and service provision (HAMEL; PRAHALAD, 1990).

\(^{VI}\) The word competence refers to business knowledge and abilities. In other words, the competencies guarantee the company’s adaptation in a changing environment, reducing the risks and assuring opportunities (HAMEL; PRAHALAD, 1990).
organization displays unique characteristics, and this differential ensures the competitive advantage in the market (BARNEY, 1991).

Once identified which are the resources and competencies that an organization possesses, the ones responsible for outlining the corporate strategies must analyze these resources and competencies under the scope of four aspects: value, rareness, imitability, and substitutability. These aspects, when coordinated, may provide a sustained competitive advantage.

As the topic of the present study, within the value aspect, it is important to analyze if the company’s resources and competencies add value to the consumer, making it possible for the company to explore opportunities and neutralize threats (MINTZBERG; LAMPEL; QUINN; GHOSHAL, 2006).

Based on what has just been presented and understanding the distance education scenario as an increasingly competitive environment – given the DICTs constant changes that interfere in the way we work, communicate, relate and learn, as well as the course offers and institutions which have had an exponential growth for the past years, we understand that RBV theory may be relevant to consider the educational institutions as an administrative unit operating in an environment that is increasingly competitive.

As they learn about the successful critical factors seen by the students, the institutions may adapt themselves to the technologies and change without neglecting important factors, such as the content and their self-assessment system, keeping their quality. Analyzing the students’ perception regarding the resources available at the institution is relevant to evaluate the perceived value and, therefore, assure competitive advantage.

The student’s perception about the active or non-active participation in the learning process and the relation with the products offered by the educational institution, which generate value to it, allow the managers to act to add value and assure the competitive advantage. This view is different from the ones regarding school management, which directs their efforts towards developing a more democratic type of learning management (GRACINDO, 2012; BASTOS; LUZ; ARTUSO, 2021) and not towards the strategic and competitive environment of the educational companies and institutions, as it is analyzed in this paper.
In this competitive scenario, looking at the institution’s self-assessment process from the students’ view becomes fundamental. Therefore, institutional evaluation should be considered as an indispensable instrument, whose main contribution is that there is a constant process of improvement, given the institution’s performance (ROSSÉS; MACHADO; BARROS; ANDRADE, 2017) and the quality of university management (KREUTZ; VIEIRA; COSTA, 2019), as it brings the materiality of the intended quality (SOUSA, 2018) with crucial implications in the daily material and mental reality of individuals (ARRUDA, 2020).

As for its strategic nature, the institution’s evaluation may be considered a diagnosis of the HEI’s inner teaching quality to make it possible for the ones involved in the process to understand the perceived conditions by the school community. According to Leite and Costa (2007), this diagnostic, allows the institution to identify its flaws, opportunities, strengths, and weaknesses, making it possible for the managers to act and improve the quality, both at management and teaching (KREUTZ; VIEIRA; COSTA, 2019).

It is worth mentioning that the course’s quality assessment implies the evaluation of its content, the professors, the online learning environment, and the discipline’s evaluation system, considering these resources are distinct among institutions and they may or not assure competitive advantage (resulting in occasional dropouts or not). The resources available to the students by a private educational institution are the objects of this study since they are the targets of the distance education institutions, and using a market’s perspective, the students are also seen as consumers.

The exposed aspects, which focus on the Distance Education’s HEI competitiveness, and the importance of identifying the relevant resources from the students’ perception, this paper concentrates on the students’ self-assessment and its relationship with available resources, therefore, the paper aims to answer the question: What’s the relation between the students’ self-assessment and the course’s quality evaluation?

Therefore, considering the need for improvement in the teaching and learning process of students and the management of Distance Learning Institutions in a competitive context, the present study aims to investigate - based on the institutional evaluation of a University of Curitiba/PR - the relationship between the competitive aspects of the resources offered to students and the self-assessment they make of
themselves. Thus, based on the RBV and the work by Karpinski, Mouro, Castro and Lara (2017) we seek to assess critical success factors for the institution to remain competitive in the market.

Theoretical Framework

Private distance education and competitiveness

Distance education is described as an educational modality that physically distances students and teachers and in which technology is fundamental to mediate the teaching-learning process. Therefore, distance education needs to be qualified and up to date professionals so the learning may happen. The decree number 9,057 from May 25th, 2017, regulates article 80 from Law number 9,394 from December 20th, 1996, which by its means, establishes the Brazilian education guidelines and bases, its first article stipulates that

> it is considered distance education a modality of education in which the didactic-pedagogical mediation in the learning-teaching process occurs using information and communication technologies, high qualified personnel, access policies, compatible follow ups and evaluations, among others, and which develop educational activities by students and education professionals in different locations and times (BRASIL, 2017, our translation).

This educational methodology allowed higher education to break barriers and regional borders common at in-person education, making it possible that the learning-teaching processes, mediated by technological and informational tools and devices, were used in several Brazilian towns. According to Karpinski, Mouro, Castro and Lara (2017), the characteristics shown by distance learning clearly contribute to the democratization of access to knowledge, amplifying the educational spaces and diversifying the learning process. However, although this methodology opens paths to knowledge, it also imposes barriers that need to be managed.

The physical distance between learners and professors and taking into consideration the interaction mediated by the DICTs, bring a critical point to this educational modality: the learning-teaching processes are subordinated to technology. As pointed out by Silva, Melo and Muylder (2015), from the institution’s strategic point of view, the physical distance may be considered as a deciding factor for learning, making it necessary for the institutions that work with DE to identify
successful critical factors to overcome the problems and follow the development of this educational modality.

The private distance education institutions’ successful critical factors may be understood as the necessary resources that make it possible for an action to be sustained over time. To Kreutz, Vieira and Costa (2019), successful critical factors are found in the abilities and resources that highlight the values perceived by clients.

According to Retamal, Behar and Maçada (2009, p. 2, our translation), “the slow pace of some institutions in their decision process, intern bureaucracy, teachers and learners’ qualities, allied to the amateurism in aspects related to management, contribute to an inefficient and ineffective performance”. In the middle of this competitive scenario, some private educational institutions have been adopting a new strategy to provide value to the students, incorporating improvements in the structure and management (KREUTZ; VIEIRA; COSTA, 2019).

For these improvements in structure and management may happen, the institutions need previously to evaluate their teaching process results. In this way, by its strategic nature, the institutional evaluation shows itself as an instrument of diagnosis, which contributes to identifying the strengths, weaknesses, opportunities, and threats, identifying the real conditions that, in the students’ perception, are the competitive advantage. To Ferreira (2014), the institutional evaluation appears as a moment of reflection for the institution and as a follow-up strategy action, control and qualification of the work done, as the university’s decision-making management must come with self-execution and evaluation. The institutional evaluation process may collaborate and indicate paths that generate value to the students.

Considering the above, and perceiving the DE scenario as a competitive environment, there is an instant effort made by this modality’s institutions to keep themselves in the market and have the potential to compete among themselves (KARPINSKI; MOURO; CASTRO; LARA, 2017).

Resource-Based View (RBV) in the context of private institutions that offer distance education modality

Regarding the necessity to create a competitive advantage and improve performance, the RBV perspective suggests that the organization must possess essential resources and competencies (WERNERFELT, 1984; BARNEY, 1991; CHAHAL;
GUPTA; BHAN; CHENG, 2020). These resources and competencies may be understood as anything that might be considered a strength or weakness of a particular organization (WERNERFELT, 1984).

When an organization comprehends and identifies the essential resources and competencies, it may maximize them, generating competitive advantage. By developing these resources and competencies – in technological/physical, personal, and organizational levels – the organization differentiates itself and obtains performance and competitive advantage. To ensure that the essential resources and competencies meet the orientation, they must possess certain qualities that make them the mainspring of competitive advantage (ZAHRA, 2021). For Chahal, Gupta, Bhan and Cheng (2020), it is indispensable for them to be valuable (resources that make it possible for an organization to outline or implement strategies to perfect its efficiency and effectivity), rare (resources that competing organizations must not possess), imperfectly imitable (resources that are not easy to be copied) and irreplaceable (resources that other replacements must not easily replace) (BARNEY, 1991; CHAHAL; GUPTA; BHAN; CHENG, 2020).

Hamel and Prahalad (1990) use a metaphor to clarify what the central competencies are, comparing the organization to a tree: the trunk and the main limbs as the main products or services; the smallest branches as the business units; the leaves and fruits as the final products or services; the root is the nutritional and stabilizing system, in other words, the essential competencies.

Identifying and maximizing the essential competencies are a business patchwork job, in which the organizations create value from “nothing”, combining old resources in new proposals, making essential services or products using anything they have at their fingertips (LEVI-STRAUSS, 1966). This is shown in an initial survey made by Baker and Nelson (2005), in which 29 organizations were analyzed. These organizations were in a scarce resources environment, and they produced combined resources in an attempt to bypass the environment’s limitations. Therefore, maximizing the competencies is about rematching available resources for the organization, making it possible for them to reconnect in different forms to reach a particular goal (BAKER; NELSON, 2005; TSILIKA; KAKOURIS; APOSTOLOPOULOS; DERMATIS, 2020).

Following the same line, the research of Berbegal-Mirabent, Gil-Domenech and Torre (2020) sought to elucidate how different patterns of production factors in Spanish
universities lead to specific profiles of Technology Transfer (TT) by analyzing differentiation at the institutional level in terms of patterns of resource consumption (inputs) and Technology Transfer (outputs). They concluded that no single formula for consuming (tangible) resources leads to a specific portfolio of TT results. Instead, these results seem to reflect the characteristics and competencies aggregated by the universities, together with the characteristics of their socio-economic context. From the RVB’s point of view, this indicates that the analyzed resources can be considered replaceable.

The work of Kyoung-Joo and Yang-Joong (2020) sought to analyze, based on a sample of 136 universities selected from a national survey by the National Research Foundation of Korea (NRFK), the relationship between two approaches, the RBV, which emphasizes the importance of the university's resource endowments and the Competency-based view (CBV), which focuses on developing students' entrepreneurial skills. The authors find a more significant impact of CBV on new venture creation than RBV factors.

Vasudevan (2021) analyzed the state of the art of research that employs RBV in higher education. For the author, with the help of the RBV, higher education institutions can obtain, mobilize and apply resources - additional or existing - more efficiently and effectively to increase resource productivity and improve the quality of educational services.

Despite the relevance of these studies, they have not looked at intangible resources. In this context, our empirical approach focuses on both intangible resources and students' perception of value that indicates critical success factors.

It is suggested that the DE expansion for the past years is directly related to the innovations, the DICTs, the implemented public policies and the society’s demands regarding more time and space flexibility (COSTA, 2020; FERREIRA; MOURÃO, 2020). This promising scenario made the private education service provider sector and higher education providers in Brazil to display a rapid growth for the past decades, especially in major institutions, which may be considered oligopoly (CORREA, 2017). These institutions need to alter and/or strengthen their positioning by using mergers and acquisitions to ensure their performance and competitive advantage (FERREIRA; MOURÃO, 2020). Therefore, the sector which has already been competitive has become even more. To adequate themselves to the new environment demands and
to benefit from their inner corporate strengths, these institutions search for ways to neutralize the external threats that enter the DE market, making it even more competitive.

In this way, the RBV theoretical foundation sustains the concern the private education institutions have about identifying which are the critical resources or factors that influence the DE courses’ performance to obtain sustained competition in the market they are at. In this way, the present study aimed to identify, through a survey made with the DE course students in a private institution from Curitiba, which are the critical factors that impact the teaching quality in this modality. For the purposes of analysis, critical success factors are considered: student self-assessment; the quality of the content made available to students; the evaluation of the teacher with regard to his/her professional performance; the virtual learning environment and the subject evaluation system.

**Methodology**

**Survey’s characterization and methodological procedures**

Considering the methodological characteristic of this paper, the Bertassi (2016) methodological flowchart was chosen. This paper is mainly a quantitative study, which, according to Richardson (1999), has as aim the application of data collection instruments structured through statistical techniques during the data collection stage until the processing of the obtained information.

The present study is also cross-sectional, in which the objective is to do the survey only once, reflecting a specific moment in time. The association of temporality in an academic survey is intimately related to the analysis unit one is intended to explore (HAIR; ANDERSON; TATHAM; BLACK, 2005). Therefore, and although we have evaluated the results of a process, which is the analysis of the students according to late periods, characterized as an ex-post-facto survey (COOPER; SCHINDLER, 2003), we have done a cut to analyze the established relationship. The justification is that the students were only able to evaluate the process results after its occurrence.

This paper is characterized as a descriptive survey, which comprises surveys that seek to describe in detail the phenomena, including the records, the analysis, the classification, the comprehensions, and the behavior from the studied subject (COOPER; SCHINDLER, 2003). Regarding the analysis method, the survey was chosen.
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We sought to directly interrogate the students involved in the study, in which we searched to comprehend their behavior, opinions and other traits from the analyzed context. This method was chosen due to the opportunity to access a greater number of students faster and cheaper, using the internet through institution research and assessment.

The studied institution elaborated the data collection instrument according to the answers provided by the 5-point Likert scale. The questionnaire was available in 2016 at the university’s online student area, called Virtual Learning Environment (Blackboard), for 30 days. The parameters were analyzed by 10,529 students at the end of the school period. Likert type questionnaires allow - to most individuals - the observation and clearance, from 5 or 7 ordered options (MANGIAFICO, 2016). The parameters (total of 14), divided into five constructs (Students’ Self-assessment, Content Quality, Professor Assessment, Virtual Learning Environment and Discipline Evaluation System), are presented in the Results and Discussion section.

Aiming to analyze the data, the statistical package SPSS® from IBM®, with the support of other software, such as Excel®, from Microsoft. In order to test the scale reliability, Cronbach’s alpha was used. To analyze the positioning and dispersion of indicators and constructs, average, standard deviation, asymmetry, and kurtosis were used. The Kolmogorov-Smirnov test was done to evaluate the normality; and Spearman’s coefficient was also used to see the correlation between the indicators and the imperatives. At last, aiming to assess the balance between the self-assessment and course evaluation, the Wilcoxon test was used.

The Kolmogorov-Smirnov test assessed if the sample values come from a particular population with a supposed or expected theoretical distribution. The criteria for the hypothesis test are guided according to Fávero and Belfiore (2017). In addition to this, Spearman’s coefficient was used to analyze the association between two ordinal qualitative variables; the values change between -1 and 1. Using the sign, it is possible to investigate the type of relationship between the two variables, as closer to the extremes it is, stronger is their correlation. Again, the parameters were guided following Fávero and Belfiore (2017).

In this paper, even though the data has shown regular distribution, the Wilcoxon test was used because this is a nonparametric test since the variables are ordinary (following the Likert scale). The relation between the self-assessment and the course
quality evaluation were analyzed. To Fávero and Belfiore (2017), the Wilcoxon test is an expansion from the sign test, although more powerful. Adding to the information about the direction of differences of each pair, the Wilcoxon test “takes into consideration the differences' magnitude within the pairs.” (FÁVERO; BELFIORE, 2017, p. 268, our translation).

Moreover, the Cronbach alpha test was used, in which the coefficient was higher than 0.70, under Hair, Black, Babin, Anderson and Tatham (2009) has proposed, indicating that the scale is consistent. In addition, to the asymmetry and the kurtosis, the Fisher asymmetry coefficient (g1) and the Fisher kurtosis coefficient (g2) were used by the SPSS and detailed in Fávero and Belfiore (2017).

The institution’s context and the data obtained for analysis

To characterize the educational institution from the sample and due to confidentiality, we will identify it as Institution Alpha. Alpha is an institution that started its activities in 1988 in Curitiba, Paraná. In 1998 it was already counting with eighteen graduation courses, becoming a University Center. Counting upon 60 education centers around Brazil, and around 57 graduations courses, three doctorate programs, four masters’ programs and dozens of specialization programs and MBAs, and continuing education and extension programs. The total of students enrolled in the Institution Alpha within the survey period was 10,529. The sample was formed based on the DE students from two licentiate degree courses (Lic), two bachelor’s degree courses (Ba and Bs) and six technical courses (TEC). The courses were: Business (Ba), Physical Education (Ba), Physical Education (Lic), Education (Ba), Gastronomy (TEC), Commercial Management (TEC), Human Resources Management (TEC), Financial Management (TEC), Logistics (TEC) and Process Management (TEC).

The questionnaire was sent to all DE students, using the sample accession, defined due to the students’ action of access or not the survey. It is important to emphasize that the entire survey process was done ethically.

After identifying the universe and determining the sample, the minimum sample was calculated, based on the 10,529 students from the DE available courses in all the institution’s education centers, assuming a 5% error. The sample calculation has shown the total of 385 students that are part of the purposeful sample, representing 8% of the sample by accession. The calculation used to assess the minimum sample was
according to Barbetta (2013). In consonance with these parameters, the study sample was non-probabilistic by accessing, limited to 4,671 students, which access the survey willingly, according to the agreement of participation in the study. This sample is 12 times the minimum one to the survey, characterizing it as representative of the population.

Results and discussion
Constructs evaluated by the students

The reliability analyses done using Cronbach’s Alpha were 0.85, which answers the minimum required recommended by literature (HAIR; BLACK; BABIN; ANDERSON; TATHAM, 2009). This value verifies the scale’s reliability, enabling the use of the average of their items as representative of each one. The analysis from the positioning and spreading of the indicators (Table 1) shows all indicators’ descriptive statistical results.

Taking into consideration the results shown in Table 1, it is observed that:

regarding the Students’ Self-assessment, about the averages and standard deviations, the average was lower than what is considered an active students’ participation, in this case, since it is a 1 to 5 scale, to be considered active, the average should be superior to 3.5, and presenting a higher standard deviation. It highlighted the indicator of students’ interaction via VLE (Virtual Learning Environment) because, in addition to the considered low average, there was a standard deviation considered high to the sample, indicating the students show little dedication to interaction. As for the asymmetry and kurtosis, the curves do not present normal distribution.

It was possible to notice that the students’ self-assessment regarding the dedication to the course did not show good results. This data corroborates the institutions’ efforts to increase active participation from distance education students in pedagogical activities. According to Karpinski, Mouro, Castro and Lara (2017), the DE is a modality of learning that happens through interaction; if this interactivity does not occur or fails, both the learning process and the institution’s competitiveness become compromised since the value is not delivered to the students.

As for the Content Quality, it was observed that the indicators content quality in the eBook, adequacy and clarity of the language used in the eBook and video classes’ contribution to the content applicability had averages between 3.5 and 4 and the standard deviations higher than 1 (1.46, 1.47 e 1.53 respectively), indicating that the students approve the content quality (high average). It is noticed that there
is room to improve the indicators, especially regarding the perception of homogeneity. The asymmetry showed a negative value to most indicators, identifying the concentration of responses in an above-average area.

Concerning the kurtosis results, the content quality in the eBook, adequacy and clarity of the language used in the eBook were observed with values of 1.30 and 1.05, respectively; they were positive and higher than 1, indicating a higher concentration of data above average. It is noticeable that the construct Content Quality had good results. The indicators content quality in the eBook, adequacy and clarity of the language used in the eBook had good results. However, the video classes’ contribution to the content applicability showed the lowest average and highest standard deviation, indicating possibilities to improve and coherence among the Content Quality indicators. This may indicate the need for greater focus on coherence between the printed material and the video classes, which may compromise the students’ perceived value.

It is observed that the factor Content Quality mainly contemplates the offered learning materials available in the VLE, in which the technology makes possible the interaction and the circumstances to make the learning process effective. Analyzing the first two factors, even though the second one was better, it is suggested that the second is not fulfilling its role and could be improved. In this regard, Retamal, Behar and Maçada (2009) consider that the properties that confer quality to a course are: effectiveness, efficiency, relevance, accessibility, opportunity, timeliness, and acceptability. When this quality is not delivered to the students, it can not only jeopardize the teaching and learning process but also the sustainability of the institution because the value is not delivered to the students.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Indicators</th>
<th>Average</th>
<th>Standard deviation</th>
<th>Asymmetry</th>
<th>Kurtosis</th>
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<tbody>
<tr>
<td>Students’ Self-assessment</td>
<td>How many hours you have studied, on average, per week.</td>
<td>2.19</td>
<td>1.05</td>
<td>0.79</td>
<td>0.06</td>
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<tr>
<td></td>
<td>Your interaction with your course colleagues through VLE (virtual area).</td>
<td>2.61</td>
<td>1.59</td>
<td>-0.13</td>
<td>-1.16</td>
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<tr>
<td></td>
<td>Your interaction with the online professor-tutor via VLE (virtual area).</td>
<td>3.01</td>
<td>1.21</td>
<td>-0.23</td>
<td>-0.80</td>
</tr>
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Students self-assessment in private education: the influence of the perceived quality in distance education courses for the sustained advantage of the institution

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<thead>
<tr>
<th>Constructs</th>
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<th>Average</th>
<th>Standard deviation</th>
<th>Asymmetry</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Quality</td>
<td>Content quality in the eBook PDF.</td>
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<td>1.46</td>
<td>-1.46</td>
<td>1.30</td>
</tr>
<tr>
<td></td>
<td>Adequacy and clarity of the language used in the eBook PDF.</td>
<td>3.78</td>
<td>1.47</td>
<td>-1.39</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>Video classes’ contribution to the content applicability.</td>
<td>3.58</td>
<td>1.53</td>
<td>-1.07</td>
<td>0.13</td>
</tr>
<tr>
<td>Professor Assessment</td>
<td>Online professor-tutor’s capacity to arouse your interest and participation.</td>
<td>3.68</td>
<td>1.63</td>
<td>-1.22</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>Mastery of content shown by the online professor-tutor.</td>
<td>3.72</td>
<td>1.70</td>
<td>-1.27</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Quality and clarity regarding clarification and feedback done by the online professor-tutor.</td>
<td>3.65</td>
<td>1.71</td>
<td>-1.17</td>
<td>0.01</td>
</tr>
<tr>
<td>Virtual Learning Environment</td>
<td>Clarity in the available orientation to the different online activities.</td>
<td>3.58</td>
<td>1.72</td>
<td>-1.09</td>
<td>-0.17</td>
</tr>
<tr>
<td></td>
<td>Clarity in the orientation given by the in-person professor-tutor to the execution of the activities.</td>
<td>3.58</td>
<td>1.72</td>
<td>-1.09</td>
<td>-0.17</td>
</tr>
<tr>
<td></td>
<td>Time adequacy for the fulfillment of the encounter workload.</td>
<td>3.66</td>
<td>1.63</td>
<td>-1.25</td>
<td>0.36</td>
</tr>
<tr>
<td>Discipline’s Evaluation System</td>
<td>Coherence between the in-person evaluation and the available content.</td>
<td>3.54</td>
<td>1.70</td>
<td>-1.08</td>
<td>-0.15</td>
</tr>
<tr>
<td></td>
<td>Coherence between the assessment activities in the VLE and the available content.</td>
<td>3.78</td>
<td>1.48</td>
<td>-1.37</td>
<td>0.10</td>
</tr>
</tbody>
</table>


Regarding the Professor Assessment, taking into consideration the averages and the standard deviations, there was: the indicators online professor-tutor’s capacity to arouse your interest and participation, mastery of content shown by the online professor-tutor and the quality and clarity regarding clarification and feedback.
done by the online professor-tutor obtained high averages (>3.5). This suggests that the students assessed the professors positively. Although the standard deviation was higher than 1, there is room for improvement in the mentioned items, mainly in the homogeneity of the respondents' perceptions. A possible explanation may be related to the student’s participation; if their participation is small, the professor’s assessment is compromised. The indicators asymmetries are negative, with the prevalence of moderate to elevated and indicating a high concentration of answers in the above-average area. As for the Kurtosis, the values vary from 0.009 to 0.270, signaling that the indicators follow a single distribution.

It is perceived that the construct Professor Assessment obtained good results. Analyzing its essence, the indicator Mastery of content shown by the online professor-tutor had the highest average; in the other hand, the indicator quality and clarity regarding clarification and feedback done by the online professor-tutor was the one to obtain the construct’s lowest average even though it represented a high average, however, it indicates the possibility of improvement due to the high standard deviation. When the student has difficulties obtaining clarification and feedback, the learning process gets compromised, and the interaction does not happen properly, jeopardizing the institution’s competitiveness and the students’ perceived value.

It is observed, in general, that the construct Professor Assessment considers the interaction among the professors, the tutors and the students, according to Karpinski, Mouro, Castro and Lara (2017) to the teaching-learning process to happen properly and it generates value to the student, the multidisciplinary team must work in conformity and in an integrated way aiming a higher interaction.

As for the VLE Evaluation, it is possible to observe that: the indicators clarity in the available orientation to the different online activities, clarity in the orientation given by the in-person professor-tutor to the execution of the activities and time adequacy for the fulfillment of the encounter workload obtained high average (>3.5). It suggests the students positively evaluate the virtual area, although the standard deviation was higher than 1, indicating room for improvement in the mentioned indicators. The asymmetry was negative for all indicators, suggesting a high concentration of answers in the above-average area. As for the Kurtosis, the indicators were distinct, signaling that they do not follow a single distribution.

It is observed that the construct VLE Evaluation contained matters related to the clarity and use of the VLE; therefore, it is possible to suggest that the teaching-
learning process in the DE modality is somewhat complex, and all the involved resources must link in order the pedagogical practice to be effective. In other words, in this learning modality in which the VLE means to deliver is the VLE tool, the institution must be attentive to each detail, always offering different possibilities to the students. This include, for example, space for clarifying the activities, space for interaction between students and students-professors, updated activities calendar, the possibility of an app so the student may do the activities even though there is no computer in hand, the possibility of watching the classes without the need of being connected to the internet, among many others. As Distance Education is a democratic modality, since it allows the students to study even in the most remote locations, or maybe even work and adjust their learning routines to their routines, these facts must be considered while developing the AVA. Karpinski, Mouro, Castro and Lara (2017) understood the existence of a necessity to frequently capacitate and update the content’s domain, the communication media and the knowledge of the pedagogical and evaluative process (KARPINSKI; MOURO; CASTRO; LARA, 2017). We propose to go beyond and consider the development of the entire student-teacher-institution interaction process, the student’s profile in the construction of VLE, being attentive to the needs of more democratic education and taking into consideration the individual needs of each student.

Lastly, regarding the Discipline’s Evaluation System, it was observed that for the indicators coherence between the in-person evaluation and the available content and coherence between the assessment activities in the VLE and the available content, the averages were considered high (>3.5). This fact suggests the students evaluate the discipline’s evaluation positively, although the standard deviation was higher than 1, indicating room for improvement in the mentioned indicators. It is still observed that the discipline’s evaluation indicator’s asymmetry were negative, prevailing the moderate to elevate, suggesting a high concentration of answers in the above-average area. As for the Kurtosis, the values variate from -0.15 to 0.10, signaling that they do not follow a single distribution. The lowest average was coherence between the assessment activities in the VLE and the available content, which may indicate failure in between what was available for the students and what is asked for them and/or the students’ absence of interest for the content and learning problems, which may collaborate to a negative perception from the students regarding the course or the institution. Considering this data, we refer to Vasudevan (2021) view that
although dropouts do occur, if the institution does not pay attention to educational resources that ensure the quality of services, abandonment and lack of motivation for individuals continue their studies may occur. As it is about the interest resource and according to the used referential in this survey, this fact may compromise the institution’s competitive advantage in the market, which might contribute to evasion of students.

**Analysis of the correlation among the constructs' indicators evaluated by the students**

All the values from the Kolmogorov-Smirnov were statistically, presenting p<0.05, suggesting the data do not show normal distribution. After verifying the data’s non-normality and seeking to obtain an association between the indicators, the Spearman coefficient was applied. Regarding the intern correlation treatment from the Students’ Self-assessment indicators, all indicators obtained correlation amongst themselves lower than 1%, which indicates a weak correlation amongst the Students’ Self-assessment indicators, making it possible to conclude that the relation is random or inexistent. This observation may be confirmed by the descriptive statistical analysis of the correlations.

Concerning Content Quality, it was observed that all indicators obtained correlation at a 1% level, enabling us to conclude that there is a significat correlation among the Content Quality indicators. Furthermore, in this case, all results were higher than 0.73, making it possible to conclude they obtained a positive association.

As for the Professor Assessment indicators, the results indicate a correlation to the 1% level, making it possible to conclude there is also a significat correlation among the Professor Assessment indicators. All results were higher than 0.82, as well as the correlations showed positive results, denoting behavior in the same direction.

Regarding the correlation treatment from the VLR indicators, it is observed that all indicators obtained correlation among themselves lower than 1%, indicating a weak correlation among the VLE indicators, making it possible to conclude that the relation is random or inexistent.

Concerning the treatment of correlation from the Discipline’s Evaluation System indicators, it is noticed that all indicators obtained correlation among themselves at 1% level, indicating there is a strong correlation among the Discipline’s Evaluation System indicators, enabling to conclude there are significant contributions among the...
indicators. This observation may be confirmed by the descriptive statistical analysis of the correlations. In this case, all the other values were higher than 0.43, and the correlations showed positive results, denoting behavior in the same direction.

The Wilcoxon test’s results to the relation among the Students’ Self-assessment constructs and the assessment of the other course quality evaluation constructs (Table 2) show that all indicators present significance level lower than 0.5, therefore, pointing to a non-existent significant difference among the constructs.

<table>
<thead>
<tr>
<th>Table 2 - Balance analysis among the evaluated constructs</th>
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</thead>
<tbody>
<tr>
<td><strong>Self-assessment</strong></td>
</tr>
<tr>
<td>Content Quality</td>
</tr>
<tr>
<td>Wilcoxon Test</td>
</tr>
<tr>
<td>Sig.</td>
</tr>
</tbody>
</table>


Through the Wilcoxon test, it is possible to notice the balance between the Students’ Self-assessment construct and the others. Also, observing these results, there is an indication that the Students’ Self-assessment is related to meeting all constructs connected to the analyzed institution’s resources and competencies in a balanced way. The self-assessment done by the students regarding their more active or not participation in the learning process influences their course quality evaluation.

**Final Considerations**

In a market where new competitors constantly emerge, and everything changes quickly, sustainably keeping the competitive advantage is fundamental and challenging. To Peteraf (1993), the RBV is a valuable look to the managers that seek to understand, preserve, and increase the company’s competitive advantage.

In order to reach a sustained competitive advantage, the private education institution must implement strategies that add superior value to the consumer. In this scenario, the course quality evaluation, which incorporates the evaluations of the: Content quality, Online professor tutor, VLE and the Discipline’s evaluation system, considering these resources are distinct among institutions, and that may or may not
guarantee competitive advantage (dropouts), it is a valid strategy to identify resources of interest to the institution.

In this way, and answering the research question that refers to analyzing the relation between the student’s self-assessment and the evaluation of the course quality, the data analysis presents five great constructs (interpreted as resources) that influence the DE courses quality and, consequently, the institution’s competitive advantage: Discipline’s evaluation, VLE, Professor assessment, Content quality and Students’ self-assessment. Furthermore, the results show that if the students are dedicated and committed to learning profile, doing their tasks and dedicating themselves to the course, they tend to evaluate all the other dimensions better. Suggesting, therefore, that the self-assessment the students make about themselves and their commitment to the course is related to their course quality evaluation. In other words, each one dedicates most to what they like.

Based on the RBV and the analyzed resources, the students’ self-assessment shows indication to be the most influential resource for the institution’s competitive advantage. This data corroborates the DE private institutions’ mobilization efforts to achieve the students’ more active participation in the pedagogical activities. Therefore, developing strategies and tools to engage students’ participation and the adequation of the content to their respective demands are appropriate actions to the institution’s permanence in the market. According to the presented results, we cite the coherence between what the professor teaches in the video classes and what is incorporated in tests, making it clear to the students which are the pedagogically relevant contents.

The content available must also be adequate to the student profile, enabling several options from the exact text, such as more interactive hypertexts, PDF files, audiobooks, among others, making it possible to meet the distinct needs of different students. In this process, the professor may act as a learning mediator. Therefore, while organizing the content and recording the classes, it is necessary to be attentive to student profiles to plan the audience adequately. On the other hand, the institution may provide improvement tools and continuing education for the professors, so they may diversify their knowledge regarding teaching methodologies and digital technologies applied to education, allowing professors to create a positive impact, even distant, in students’ learning. In addition to that, the content available in the DE
Platforms must constantly be updated since, in the digital era, the information is fast and easily found by the students.

The professor’s assessment was positive, although there is an indication for improvement. A possible explanation may be related to the students’ participation: if it is small participation, the capacity to evaluate the professor is compromised. The professor-tutor’s commitment to the students must be the link between the institution and the student. Therefore, it is understood that the institution must invest in the training of these professionals, including them in the decisions that impact the planning of a course’s disciplines.

The VLEs evaluation was positive, although there is space for improvement. The virtual area must be a facilitator for the teaching and learning processes and benefit the interaction between students and professors. Therefore, it must have a good design and provide the students with the possibility to study even though there is no internet connection. In order to keep the sustained competitive advantage, it is suggested that the institutions attract students throughout their courses, using stimulating didactic strategies, for example. This strategy is one of the ways to guarantee the institution’s performance through the resources and competencies of market interest.

In this way, for the institutions to keep their sustained competitive advantage, it is suggested that the institutions win over and stimulate the students by using resources and competencies of market interest, avoiding evasion and, consequently, guaranteeing the institution’s performance. Finally, as a suggestion for future research, it is possible to replicate the study in different contexts, with private DE institutions in different locations in Brazil. Furthermore, considering additional types of resources that influence student learning and retention in the educational institution could clarify the sources of competitive advantage.
References


