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Analytic report
of distance learning
in Brazil

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saberes

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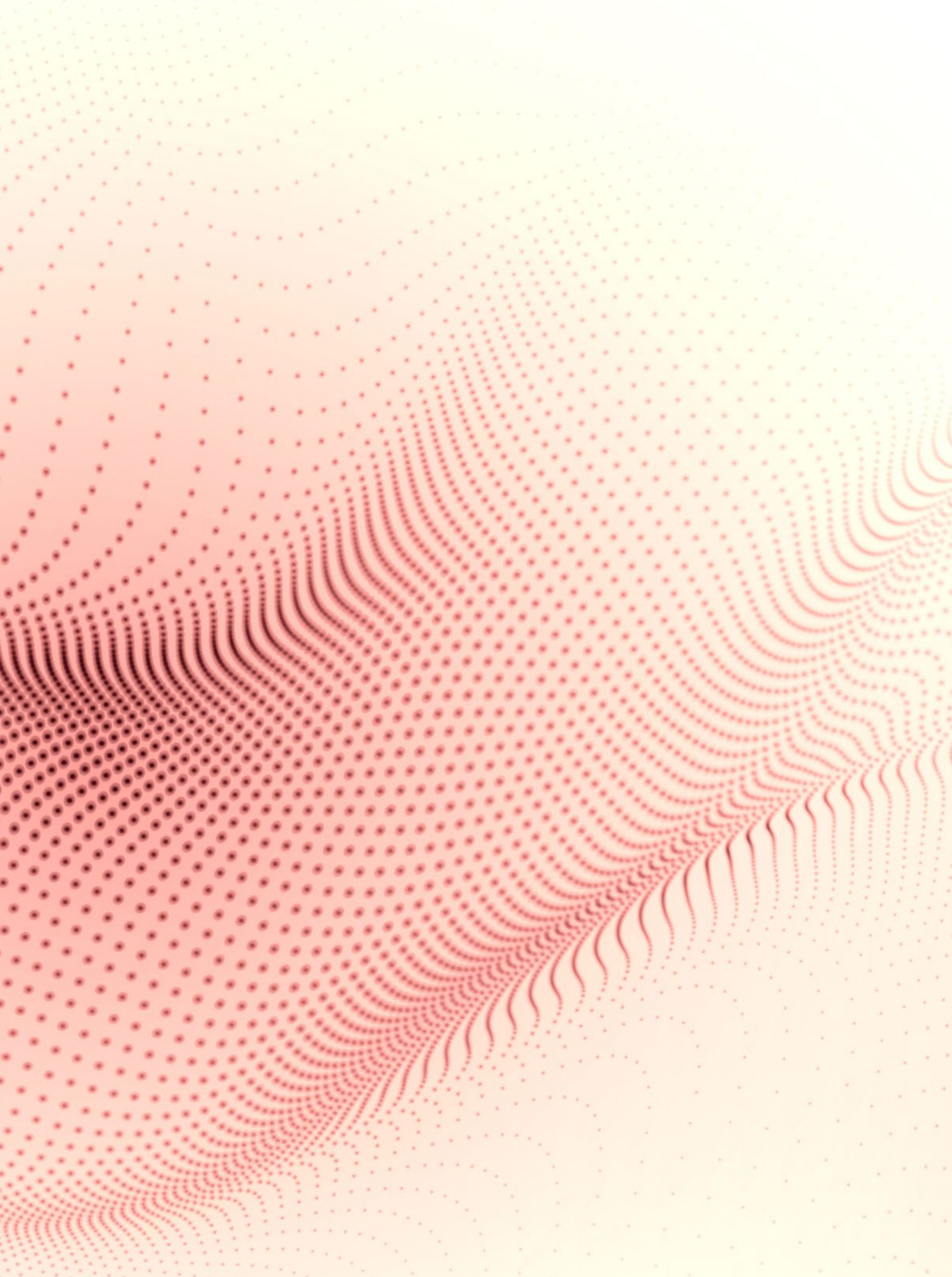

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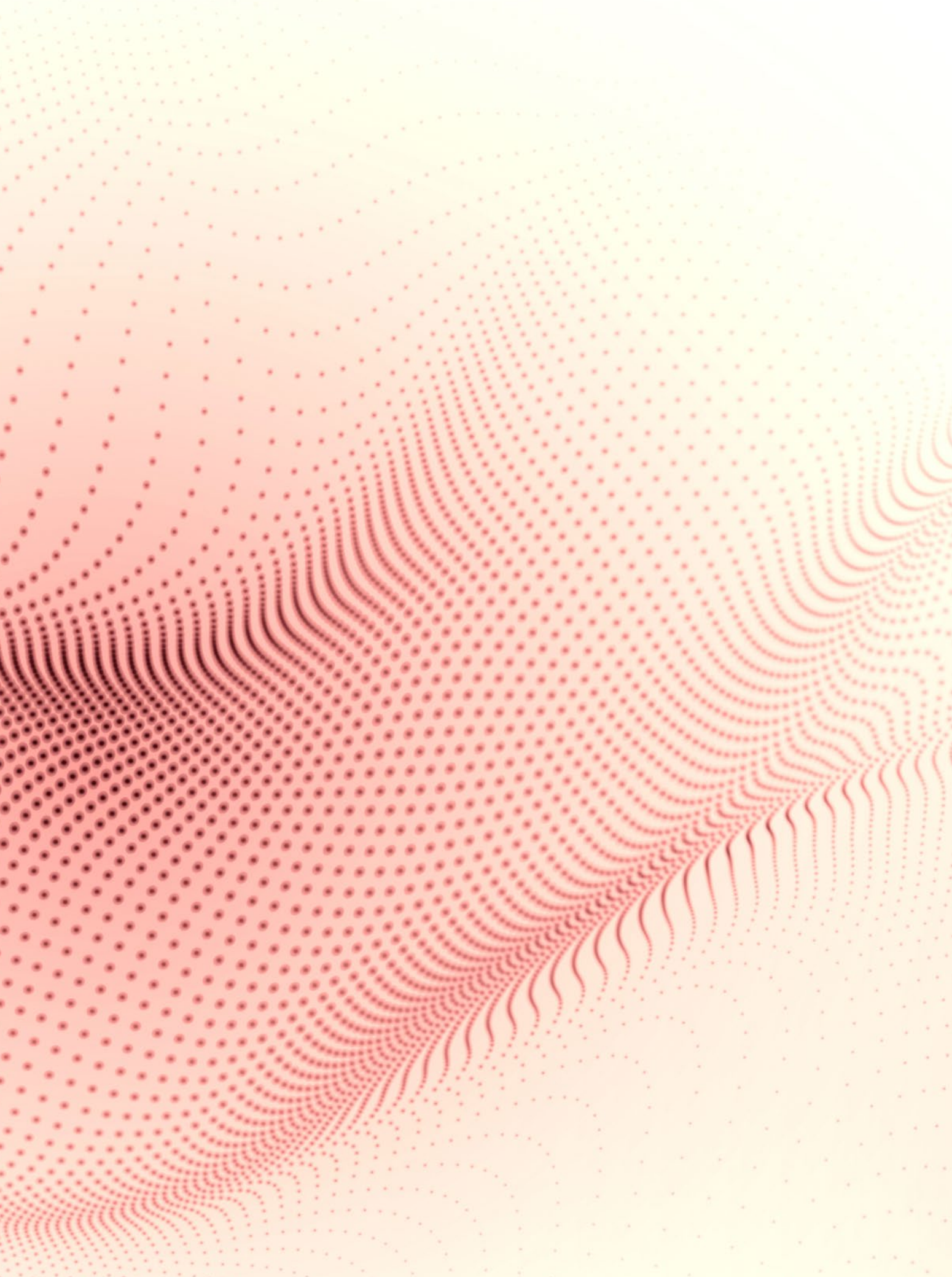

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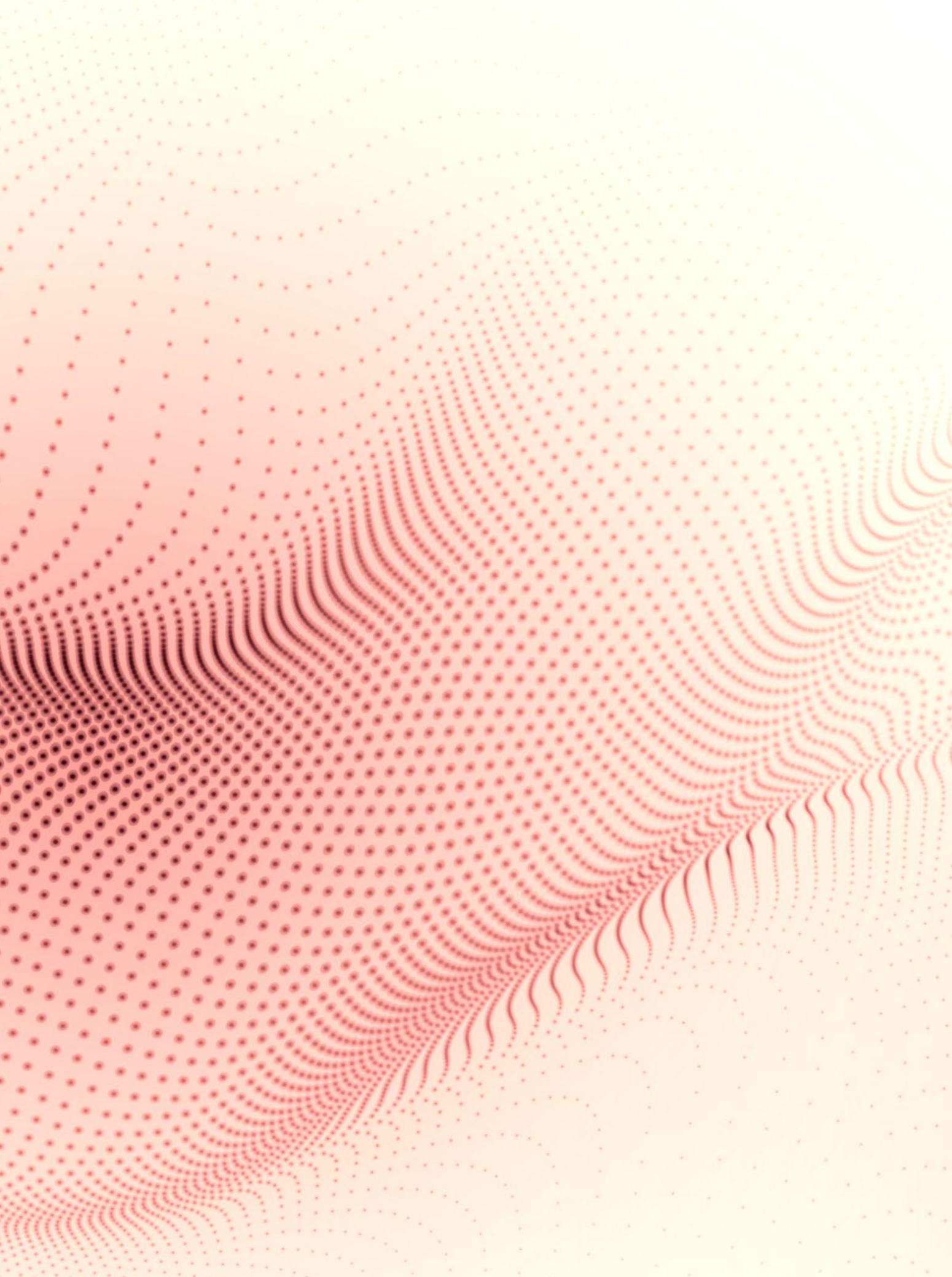

Introduction

For years, the Brazilian Census for Distance Learning has served as a fundamental reference for students, educators, researchers, educational managers, policymakers and journalists seeking to understand the development of the distance learning (DL) in Brazil. Its impact extends beyond the academic community, as it is widely regarded by multiple sectors of society as a reliable source of data on this educational modality.

The Brazilian Association for Distance Learning (Abed) extends its gratitude and congratulations to Professor Betina von Staa, PhD, for coordinating this project in the past few years, which she has led with technical rigor and institutional commitment. Her contributions have been essential in establishing the Census as a key resource for the segment.

At the start of the new Abed management, we identified the need to advance the production and analysis of DL data in Brazil, with particular emphasis on quantitative aspects. This need became even more evident considering the growing demand from the press for statistical information, especially due to the reviewing process of the regulatory framework for DL, conducted by the Brazilian Ministry of Education (MEC). It was in this context that Abed launched the EaD in Data project, in order to enhance this sector's data collection, processing and analysis.

This initiative led to a reimagining of the Brazilian Census for Distance Learning itself. We concluded that collaborating with official census agencies, drawing on ABED's accumulated knowledge of DL, would be more effective than administering questionnaires to a limited number of higher education institutions (HEIs).

During this process of reconceptualization, Abed reached out to the Anísio Teixeira National Institute for Educational Studies and Research (Inep), presenting suggestions for enhancing data collection on DL in the Brazilian Higher Education Census. Concurrently, we identified other organizations that have been actively producing studies and indicators on DL in the country, though not always with a specific focus on the modality. We invited these organizations to contribute to this edition of the Brazilian Census for Distance Learning in dedicated sections that present their methodologies and key findings.

Thus, this edition does not include unpublished research conducted by the Abed, as was the case in previous editions–although this possibility remains open for future years. Instead, the 2024 Brazilian Census for Distance Learning is organized as a curated collection of analyses and data produced by various institutions of the Brazilian educational ecosystem. Furthermore, Abed has authored an article based on Inep's data, granting this study a more census-like and comprehensive character. In this way, Abed repositions itself as a producer of critical analyses derived from public data on DL–a role that is justified by the absence of specifically structured interpretations of these data, both by public bodies and by specialized organizations involved in the production of indicators.

The article authored by Abed presents an in-depth analysis of data from the 2023 Brazilian Higher Education Census and the 2023 Brazilian National Student Performance Exam (Enade), with a focus on enrollment growth, regulatory challenges, institutional assessment and the performance of DL programs and institutions. This critical examination seeks to support a robust debate regarding public policies, quality and inclusion within this educational modality.

The team from the Union of Higher Education Institutions Supporting Entities of São Paulo (Semesp) presents the results of a survey on student engagement in DL, emphasizing the potential impacts of the new regulatory framework requirements. The study offers valuable insights into the influence of institutional and pedagogical variables on student retention and motivation.

NumbersTalk presents a predictive analysis regarding the impacts of the new regulatory framework for DL. The study examines data from the Higher Education Census and the Enade to evaluate the consequences of excluding programs such as Nursing and Pedagogy from being offered exclusively via DL. The analysis also highlights potential outcomes, including enrollment decline, increased tuition costs and exacerbation of regional and social inequalities.

With particular attention to the expansion of higher education as well as to sociodemographic profile of students, the article projects operational and regulatory scenarios of relevance for institutions, on-site support hubs and public networks.

In the next article, MercadoEdu contributes to an analysis of the Brazilian DL internationalization process. The article highlights data and trends that point to opportunities for the modality's global expansion, drawing on quantitative evidence related to student mobility, international agreements and digital presence.

The Crátilo Group contributes with an article that presents its work methodology focused on the use of information and indicators in the strategic management of educational institutions. The study describes examples of analytical products developed by the team and offers reflections on how institutional intelligence can improve decision-making in challenging contexts–including those involving DL.

Finally, the Regional Center for Studies on the Development of the Information Society (Cetic.br), from the Brazilian Network Information Center (NIC.br), presents a summary of the most recent national data on Brazilian participation in DL programs, based on the *ICT Households* and *ICT in Education* surveys. The analysis provides insights into who accesses DL in the country, under what conditions and with what levels of connectivity, offering a fundamental perspective on digital inclusion.

We hope that this edition of the 2024 Brazilian Census for Distance Learning contributes to strengthening a data-informed culture regarding DL in Brazil, grounding the development of more qualified policies, practices and investments in digital education.

João Mattar
President | Brazilian Association for Distance Learning (Abed)

Part 1

Distance learning in Brazil: an analysis based on the Higher Education Census and the National Student Performance Exam (Enade)

João Mattar
Leonardo da Silva Neves
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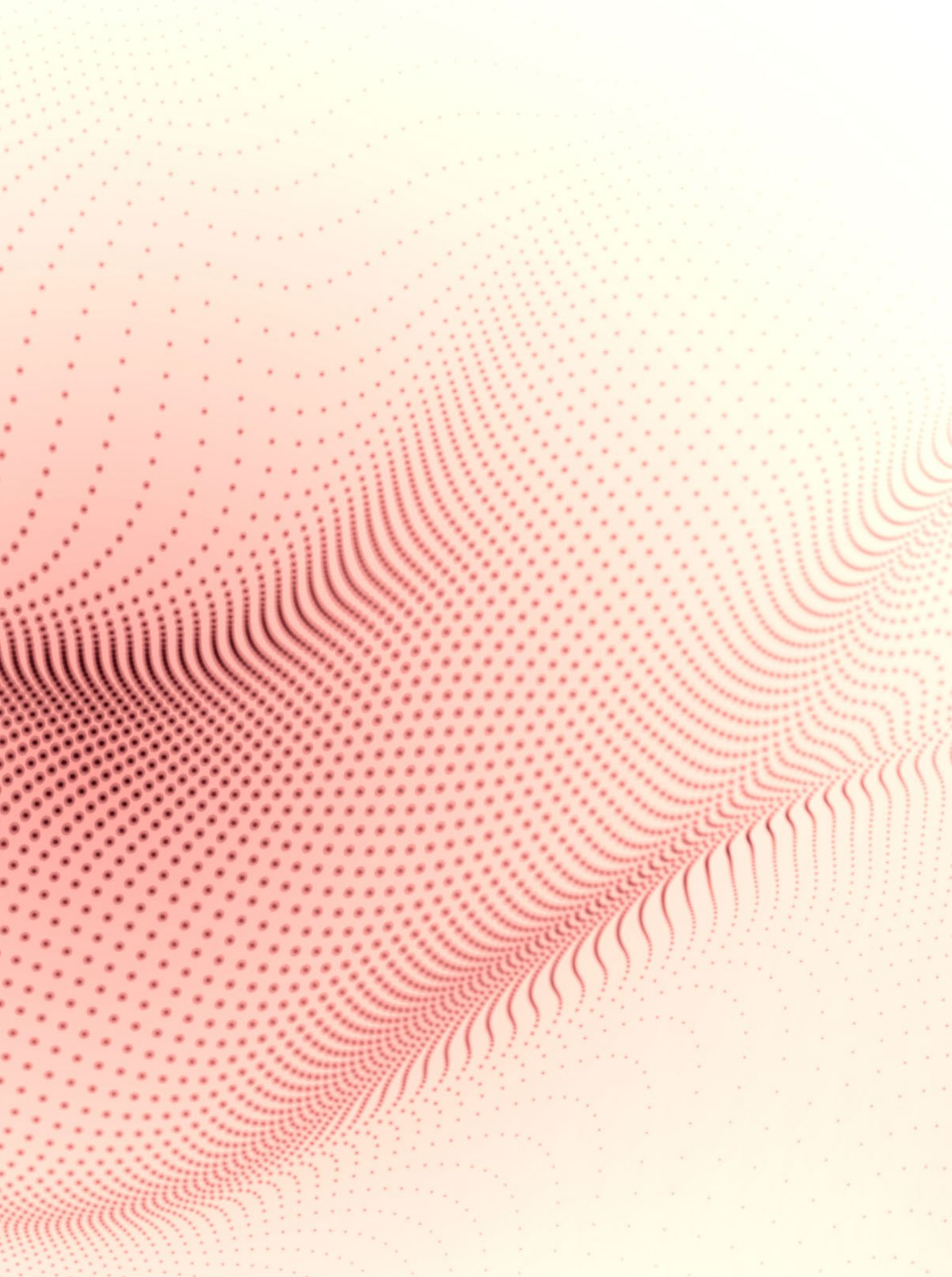


Abstract

This study examines undergraduate distance learning (DL) programs in Brazil, based on data from the Brazilian Higher Education Census and the Brazilian National Student Performance Exam (Enade), both from 2023, seeking to understand the structural patterns, academic outcomes and regulatory challenges associated with the modality. The analysis begins with the recognition that, although DL has become the primary way to higher education–accounting for two-thirds of entrants in 2023–, official data remain critically underutilized, lacking integrated and contextualized analyses. The research employs descriptive statistics and nonparametric tests to compare the average performance between on-site and DL segments. The results indicate that, while DL academic performances were below the on-site modality, the differences are moderate and vary across programs, institutional category and segments. The discussion explores the implications of these results for inclusion, quality, assessment and regulation. It underscores the importance of policies for expanding access to higher education through public offers, enhancing assessment tools and adopting indicators better aligned with the specific characteristics of DL. The survey concludes that, despite the challenges, DL demonstrates inclusive potential and consistent performance across multiple contexts. The continued development of this modality requires a more complex and evidence-based approach to guide institutional policies and practices.

Keywords: assessment; Higher Education Census; higher education; Brazilian National Student Performance Exam; inclusion; quality

Introduction

In recent decades, DL has established itself as one of the major drivers of transformation in the Brazilian higher education. With its rapid growth, territorial reach and predominance among new entrants, the modality has become central to both public policies and educational debates. This trajectory, however, has also been marked by tensions and controversies, especially concerning programs quality, regulatory frameworks, institutional concentration of offers, educators and student profiles and academic outcomes.

This study is guided by the following problem: What do the most recent official data on DL in Brazil–particularly those produced by the Anísio Teixeira National Institute for Educational Studies and Research (Inep)–reveal about its structural characteristics, trends, contradictions and obstacles? The central hypothesis is that, although these data are frequently cited in political, mediatic and institutional disputes, they remain underexplored in a critical, integrated and contextualized manner. This gap compromises the development of accurate diagnoses regarding the complexity of DL in the country and reinforces reductive narratives, often based on biased interpretations of available indicators.

The general objective of this study is to analyze the most recent data on DL in the country, based on the Brazilian Higher Education Census and the Enade, in order to understand its structural patterns, academic outcomes and regulatory challenges, aiming to support and promote qualification and inclusion policies within the modality.

The specific objectives are:

a) to examine the segment growth trends, institutional concentration and territorial distribution of DL, based on data from the Higher Education Census;
b) to analyze the modality's performance in Enade, considering differences related to administrative category and academic degree;
c) to discuss the data based on criteria such as quality and inclusion.

Given this context, an evidence-based analysis is necessary for providing more accurate diagnoses of the current state of DL in Brazil. The need for a critical and in-depth examination is justified in the face of the new regulatory framework for this modality by the Brazilian Ministry of Education (MEC). In the context of rapid expansion and growing protagonism of DL in promoting the access to higher education, it is essential to critically assess the aspects that shape its development and outcomes. In the face of polarized discourses–which at times broadly delegitimize DL, and at others promote it despite its contradictions–,

a technical and contextualized analysis of official data is crucial for supporting public policies, guiding institutional decision-making and strengthening educational practices that develop both quality and inclusion.

This study is organized into five sections. Following this introduction, the second section outlines the methodological procedures employed in the organization, processing and analysis of data obtained from 2023 Higher Education Census and the 2023 Enade. The third section presents the results, emphasizing the expansion of DL, the patterns of offering by academic degree, institutional category and performance across quality indicators. The fourth section provides a critical examination of these findings in relation to issues such as regulation, assessment, quality and inclusion. The concluding section offers concluding remarks, addresses the research limitations, and proposes directions for future studies.

Methodology

The analysis presented in this study is grounded in the most recent data available on Brazilian higher education focusing on DL. The main sources of data were the Higher Education Census and the Enade, both conducted by the Inep and published in 2023.

The Higher Education Census data were obtained from various public databases provided by the Inep, including microdata, statistical notes and panel, and disclosure tables. The Enade indicators' analysis was based on spreadsheets of programs and institutions, also provided by the Inep, with a primary focus on the continuous version of the Conceito Enade (ranging from 0 to 5). Programs without this indicator were excluded from the sample.

The databases were initially processed in Microsoft Excel and subsequently subjected to statistical analysis on Jamovi software. The procedures included:

a) descriptive statistics, including the number of valid cases by modality, mean, median, standard deviation (SD), standard error (SE), and minimum and maximum values;
b) the Mann-Whitney U test to compare results between on-site and DL programs, due to the non-normal distribution of the data, as confirmed by the Shapiro-Wilk test and skewness analysis;
c) calculation of effect size (Cohen's *d*) to measure the differences between the modalities;
d) graphical representations, such as plots and histograms, to visualize distributions and compare groups.

Comparisons were based on the Inep's original classification of on-site and DL segments.

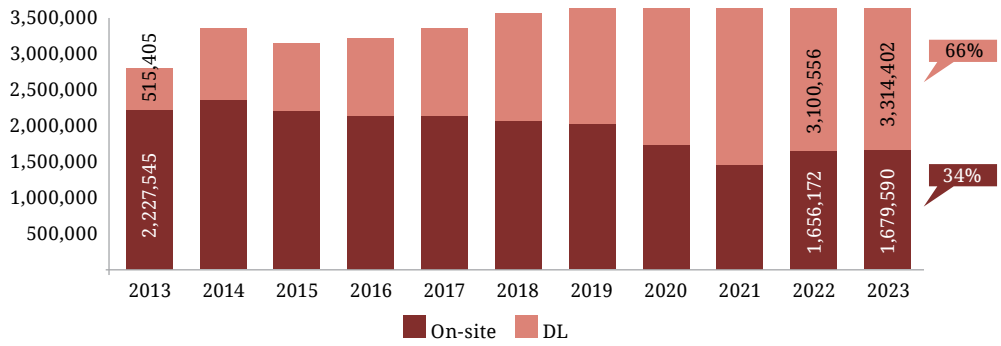
Results

The presentation and analysis of the results are organized into two parts: Higher Education Census and Enade.

Higher Education Census

In 2023, a total of 45,964 undergraduate programs were offered in Brazil, of which 35,410 were ministered on-site and 10,554 via DL. Consolidated data from the Higher Education Census confirmed the significant continued expansion of DL in the country. In that same year, this modality accounted for more than 66% of entrants to higher education (Chart 1).

Chart 1 – Total number of entrants in undergraduate programs by modality (2013-2023)



Source: Brasil, 2024, p. 14.

Chart 1 illustrates a significant transformation in the Brazilian higher education segment over the past decade. In 2013, the vast majority of entrants were enrolled in on-site programs. Since 2018–and particularly in 2020 and 2021–, a marked shift occurred, characterized by an accelerated and continuous increase in DL programs enrollments.

In 2023, DL programs registered 3,314,402 entrants (66.36%), while on-site programs had 1,679,790 (33.63%). In other words, two out of three students who entered higher education in Brazil that year opted for DL.

Entrants and enrollments by administrative category

Another relevant aspect of the analysis concerns the composition of the public and private sectors. In 2023, a total of 4,994,192 students enrolled in undergraduate programs. Of these, 4,424,983 (88.60%) entered private higher education institutions (HEI), while only 569,209 (11.40%) enrolled in public institutions. This disparity becomes even more pronounced when analyzed in relation to the modality (Table 1).

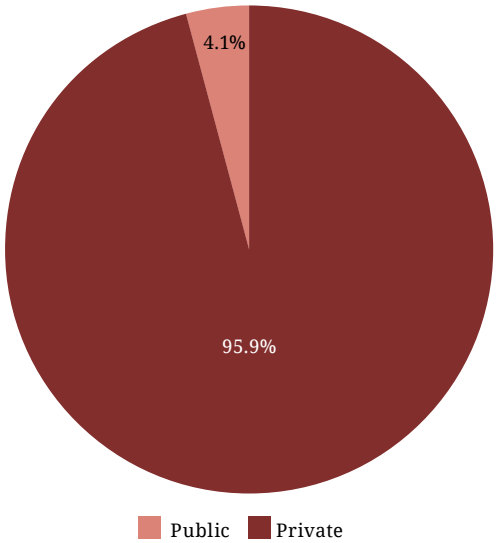
Table 1 – Total number of entrants in undergraduate programs by modality and administrative category (2023)

Entrants	Private HEIs	Public HEIs	Total
General	4,424,983	569,209	4,994,192
	88.60%	11.40%	100%
On-site programs	1,198,092	481,698	1,679,790
	71.32%	28.68%	100%
DL programs	3,226,891	87,511	3,314,402
	97.36%	2.64%	100%

Source: Based on Brasil, 2024.

The data reinforce not only the centrality of DL as the primary way to higher education in Brazil, but also the dominance of the private sector, which accounts for nearly 98% of entrants in DL programs. This concentration is similarly reflected in overall enrollment numbers: private HEIs represents approximately 96% of students enrolled in this modality (Chart 2).

Chart 2 – Total number of enrollments in DL undergraduate programs by administrative category (2023)



Source: Brasil, 2024, p. 21.

Chart 2 illustrates the strong concentration of DL enrollments in private HEIs, which accounted for 95.9% of total enrollment in this modality in 2023. In contrast, public HEIs represented only 4.1%, revealing a significant asymmetry in participation by administrative category.

Entrants in Nursing programs

Nursing programs became the focus of debates concerning the revision of the regulatory framework for DL. Its offering in both DL and blended modalities was prohibited by the Decree n. 12,456 of May 19th, 2025 (Brasil, 2025). As of that date, this program may only be offered on-site.

In 2023, a total of 1,298 Nursing programs were offered in Brazil, of which 1,264 were on-site and 34 via DL. HEIs offering these programs registered 213,853 entrants in that year. Of these, 55.54% enrolled in DL programs (118,776) and 44.46% in on-site programs (95,077). The distribution by modality and administrative category of these HEIs is presented in Table 2.

Table 2 – Entrants in Nursing programs by modality and administrative category

Entrants in Nursing programs	Private HEIs	Public HEIs	Total
General	205,346	8,507	213,853
	96.02%	3.98%	100%
On-site	86,570	8,507	95,077
	91.05%	8.95%	100%
DL	118,776	0	118,776
	100%	0%	100%

Source: Based on Brasil, 2024.

These data emphasize the predominance of the private sector in both on-site and, particularly, DL segment. In 2023, there were no enrollments in DL Nursing programs at public HEIs, as no such programs were offered. Moreover, only 8,507 entrants enrolled in on-site Nursing programs offered by public HEIs.

Entrants in licentiate's degree programs

In 2023, Brazil offered 45,959 undergraduate programs, with bachelor's degrees representing the predominant type (Table 3).

Table 3 – Total number of programs by academic degree (2023)

Academic degrees	Programs	%
Bachelor's degree	27,371	59.55%
Licentiate's degree	7,886	17.16%
Associate degree	10,702	23.29%
Total	45,959	100%

Source: Based on Brasil, 2024.

Licentiate's degree programs were also debated in the new regulatory framework for DL. The offering of these programs on full DL was prohibited, and beginning in 2025, they may only be offered in blended or on-site modalities.

According to Table 3, a total of 7,886 licentiate's degree programs were offered in Brazil in 2023, of

which 5,741 (73%) were on-site and 2,145 (27%) via DL. These programs registered 827,285 entrants, with a strong predominance of DL (more than 81%). The distribution of entrants by modality and administrative category is presented in Table 4.

Table 4 – Entrants in licentiate's degree programs by modality and administrative category

Entrants in licentiate's degree programs	Private HEIs	Public HEIs	Total
General	667,202	160,083	827,285
	80.65%	19.35%	100%
On-site	43,614	112,340	155,954
	27.97%	72.03%	100%
DL	623,588	47,743	671,331
	92.89%	7.11%	100%

Source: Based on Brasil, 2024.

The data once again highlight the strong presence of DL in the initial teacher training in Brazil, with a predominance of the private sector. Private HEIs account for the vast majority of entrants in DL programs (nearly 93%).

Entrants and enrollments in associate degree programs

According to Table 3, a total of 10,702 associate degree programs were offered in Brazil in 2023–5,739 on-site and 4,963 via DL. These programs registered 1,473,062 entrants, especially in DL modality (more than 87%), as presented in the Table 5.

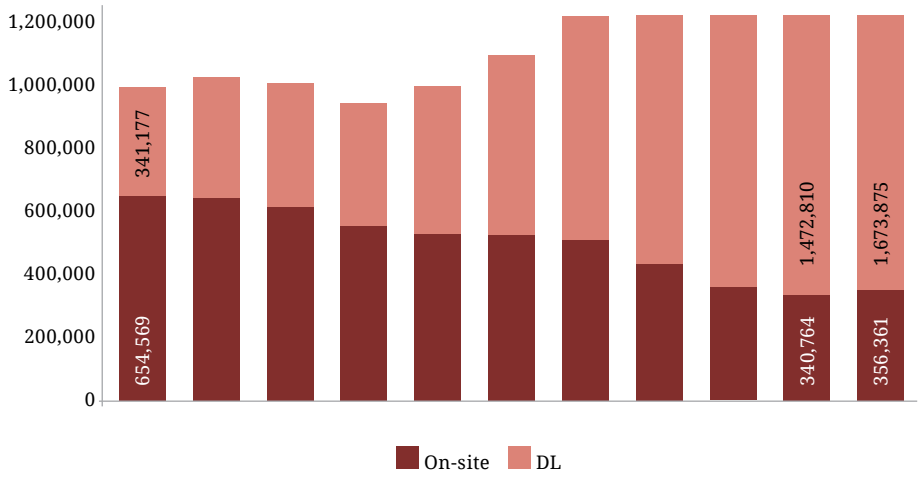
Table 5 – Entrants in associate degree programs by modality and administrative category

Entrants in associate degree programs	Private HEIs	Public HEIs	Total
General	1,392,823	80,239	1,473,062
	94.55%	5.45%	100%
On-site	125,091	63,025	188,116
	66.50%	33.50%	100%
DL	1,267,732	17,214	1,284,946
	98.66%	1.34%	100%

Source: Based on Brasil, 2024.

These numbers indicate a clear preference for DL among entrants to associate degree programs in private HEIs (nearly 99%). A similar pattern is observed in enrollment data (Chart 3).

Chart 3 – Total number of enrollments in associate degree programs by modality (2013-2023)



Source: Brasil, 2024, p. 23.

Chart 3 underscores a structural transformation in the profile of undergraduate associate degree programs in Brazil over the past decade. In 2013, on-site programs accounted for nearly twice as many enrollments as DL, which still played a secondary role in this segment. Since 2018, and especially in 2019, DL enrollments have been registering a rapid and continuous expansion. By 2023, this shift had been consolidated: DL accounted for the vast majority of enrollments in associate degree programs, with more than 1.67 million students, compared to 356,361 enrolled in on-site modality.

Enade

The application of statistical tests to the Conceito Enade results, conducted using Jamovi software, produced the data shown in Table 6.

Table 6 – Conceito Enade: comparison between on-site and DL programs

Modality	On-site	DL
N	8,757	623
Mean (arithmetic average)	2.39	1.93
Standard deviation (SD)	0.931	0.761
Standard error (SE)	0.00994	0.0305
p (Mann-Whitney U)	< 0.001	
d (Cohen)	0.50	

Source: Based on Inep, 2025, and analyses using Jamovi.

The mean for on-site programs (2.39) is higher than that for DL programs (1.93). The SD is also greater for on-site modality (0.931) in comparison with DL (0.761), indicating higher variability in on-site performance–in other words, there are both high-performing and low-performing programs. The DL segment, in contrast, tends to exhibit results that are more concentrated around the mean.

The SE is higher for DL (0.0305) than for on-site programs (0.00994), which is expected given the smaller sample size in the DL data (623 DL programs compared to 8,757 on-site programs). This result reflects a lower precision in the estimation of the mean for DL modality.

The Mann-Whitney U test indicated a statistically significant difference between the two modalities ($p < 0.001$). The value of Cohen's d (0.50) suggests a moderate effect size, indicating that the difference in mean numbers is not only statistically significant but also relevant from a practical perspective.

When the analysis is limited to for-profit private institutions (N = 4,304 on-site; N = 447 DL), the performances concerning Conceito Enade for on-site (2.03) and DL (1.88) programs are closely aligned, with a difference of only 0.15 point. SDs are also similar (0.747 for on-site and 0.700 for DL), indicating that the internal variability is comparable across modalities. While the Mann-Whitney U test indicated that the difference is statistically significant ($p < 0.001$), the Cohen's d (0,205) reveals a small effect size. These results suggest that, within this institutional segment, the performance gap between the two modalities is less pronounced, both in statistical and in practical terms.

In associate degree programs (N = 408 on-site; N = 225 DL), the difference in performance between the modalities is also statistically significant. The mean for on-site programs (2.59) exceeds that of DL (2.25) by 0.34 point. SDs are relatively similar–0.954 for on-site and 0.827 for DL–indicating comparable internal variability within both modalities.

The effect size (Cohen's d = 0.368) presents a difference of small to moderate magnitude, suggesting that even within this more technical and employment-oriented segment, on-site programs had, on average, better performance than DL programs.

Discussion

The combined analysis of the 2023 Higher Education Census data and the 2023 Enade indicators provides a comprehensive overview of DL in Brazil. The integration of multiple sources–including microdata, aggregated indicators and statistical panels–enables the mapping of structural trends in this modality without relying on reductive interpretations. Throughout this study, it was possible to identify empirical evidence that indicates the complexity of DL in the country, with significant variations depending on the type of

program, institutional segment and examined indicator. Based on these findings, the following discussion explores the implications related to the quality, inclusion, regulation and sustainability of the modality.

The expansion of DL in Brazil has been concentrated in strategic segments such as associate degree programs. These shorter skills-oriented programs attract a diverse population–including workers seeking retraining, students from remote regions and individuals balancing education with other responsibilities. In this context, this segment has played a central role in broadening access to higher education aligned with corporate demands. This expansion has been driven primarily by the private sector, which has rapidly scaled its infrastructure of on-site support hubs, platforms and recruitment strategies. The limited participation of public institutions may be attributed to budgetary constraints, legal barriers and greater institutional rigidity. This asymmetry has direct implications for equity: the scarcity of free, publicly funded DL options restricts access for low-income students and those who live in rural areas. Expanding public provision of DL through initiatives as the Open University of Brazil (UAB), the Virtual University of the State of São Paulo (Univesp) and the Capixaba Open University (UnAC) is essential to ensure that the growth of the modality occurs in a socially equitable and territorially balanced manner.

An example of this limitation is the offering of Nursing programs. In 2023, there were no public DL Nursing programs, and even in on-site modality the public offerings were scarce. The majority of entrants in this program were enrolled in private institutions, highlighting the population's reliance on the private sector for access qualification in this essential area of public health. This situation can be attributed to a combination of factors, including historical resistance of Nursing professional councils to DL, budgetary constraints and challenges in expanding public segment. At the same time, it underscores the need to reevaluate training policies in the health sector, especially given the social demands, the Brazilian Unified Health System (SUS) coverage and the care gaps in remote areas. Without a planned expansion of public offer–whether through on-site programs or innovative hybrid DL models–, there is a risk of exacerbating inequalities in access to health education and undermining efforts to universalize the right to higher education.

The expansion of DL is also evident in licentiate's degree programs, which registered more than 81% of entrants in 2023. This number has direct implications for initial teacher training in Brazil, particularly within the public basic education. The widespread of DL has enabled students from remote areas or facing urban mobility issues to access higher education, thereby enhancing its inclusive aspect. However, the predominance of DL in teacher training has been met with criticism regarding its quality, especially in relation to practical activities, pedagogical monitoring and alignment with the reality of schools. This context reinforces the need for more rigorous evaluation policies and innovative training strategies to ensure the effectiveness of the programs offered.

Although the expansion of DL has broadened the geographic reach of higher education, the 2023 Higher Education Census reveals that this growth has not resolved regional inequalities. While the territorial presence of the modality is significant, it is characterized by disparities in infrastructure, academic support and pedagogical quality. Thus, efforts to democratize access must be accompanied by measures that ensure student retention and academic success, particularly in the most vulnerable regions. The inclusive potential of DL is substantial, but its implementation depends on student support policies, digital accessibility and attention to specific conditions of its target populations.

Data from the 2023 Enade indicate that, on average, DL programs (1.93) performed worse than on-site programs (2.39)–a difference of 0.46 point, considered statistically significant and of a moderate effect size. However, these results warrant careful interpretation. A smaller deviation in DL, for example, may reflect in more standardized institutional models, with results concentrated around the mean. Moreover, there is

significant variation among institutional types, areas of knowledge and educational segments. In large private institutions, for instance, the gap between modalities is reduced: among for-profit institutions, the difference was only 0.15 point (d = 0.21). In associate degree programs, the performance gap between DL and on-site modalities was smaller than that observed in the overall sample.

These findings indicate that, although a performance gap between modalities exists, it does not justify a disqualification of DL. In fact, this modality has demonstrated good outcomes in certain programs and institutions. In the 2023 Enade, the proportion of DL programs with maximum score (5) was comparable to that of on-site programs. However, the most pronounced disparities were observed in fields such as health, where the need for intensive practical activities presents additional challenges for DL. Areas such as humanities, applied social sciences and some branches of engineering may show more balanced results between the two modalities.

A critical interpretation of the data also reveals limitations in the indicators. Many of them were designed based on parameters for on-site education and do not fully capture essential dimensions of DL, such as technological mediation, digital skills (Bates, 2022), time flexibility and asynchronous interactions. In addition, there is a lack of systematic data on dropout, employability and quality of virtual learning environments. Adequately assessing DL requires expanding the available instruments and adapting them to the specificities of each modality (Moore; Diehl, 2019; Zawacki-Richter; Jung, 2022).

In this context, initiatives such as the Abed's Quality Reference for DL and Abed's Quality Seal (Mattar, 2024) play an important role in strengthening the DL ecosystem in the country. Alongside the Brazilian National Policy on Digital Education – PNED (Brasil, 2023), these actions provide technical parameters, self-regulation and institutional transparency. To consolidate a more equitable and effective assessment culture, it is crucial to adopt a systematic approach, based on multiple evidence, accounting the diversity of DL models, profiles and contexts in Brazil.

Final considerations

This study analyzed recent data on DL in Brazil, drawing on the 2023 Higher Education Census and the 2023 Enade results to examine expansion trends, performance patterns and structural inequalities within the modality. The results indicate that DL has become the primary way to access higher education in Brazil, accounting for two-thirds of enrollments in 2023. This expansion, driven mainly by the private sector, has increased the access to higher education, especially through short-term associate degree programs. At the same time, the data suggest a more diverse and complex scenario than is often depicted in generalized public discourse, demanding more rigorous analyses concerning quality, equity and regulation of modality.

The analysis of Enade data revealed that, although DL programs exhibit lower mean numbers than on-site programs, the difference is moderate and varies substantially depending on the area of knowledge, institutional profile and educational group. In several contexts, including within large private conglomerates, DL performed as well as, or even better than, on-site programs. Moreover, the distribution of assessment scores is similar across both modalities, with DL programs represented at all performance levels, including both the highest and lowest extremities. These findings challenge reductive interpretations that associate DL with lower quality standards.

This study contributes to the debate on DL in Brazil by providing a critical and contextualized analysis of educational data, countering reductive interpretations that seek to delegitimize the modality based on isolated indicators. By highlighting the diversity of contexts, performances and institutional arrangements within DL, it underscores the importance of evidence-based approaches. In addition, the study provides support for the elaboration of public policies and institutional strategies by identifying the main challenges faced by the modality–among them, the need for regulatory improvements, adequate fundings, improved digital infrastructure and teacher training and alignment with productive sector. In this way, the

research contributes not only to diagnosing the current scenario, but also to envisioning ways for developing DL with quality, equity and social relevance.

Among the limitations of this study is the reliance on standardized means and indicators, which, while valuable for broad comparisons, constrains a deeper analysis of contextual variables, including regional differences, students' socioeconomic profiles and training strategies adopted by each institution. Additionally, the still limited number of DL programs with valid assessment scores in the 2023 Enade reduces the statistical representativeness of certain comparative analyses, especially within specific areas of knowledge. These limitations exacerbate the need for further research with qualitative and multivariate approaches to explore the determinants of quality in DL.

Further analyses using microdata from the Enade, the Higher Education Census and other instruments within the Brazilian National System for the Evaluation of Higher Education (Sinaes) are suggested as a continuation of this study. These studies should incorporate variables such as age group, income, race/color, type of school, teacher and student profiles, pedagogical strategies and technologies employed. The use of disaggregated data would allow for a more precise mapping of educational inequalities and the testing of hypothesis regarding the determinants of quality in DL. A relevant hypothesis to be explored is that student outcomes in this modality are more strongly associated with student profiles and institutional conditions than with DL itself.

In addition, qualitative studies on the experiences of students, teachers and tutors may offer deeper insights into the educational processes on virtual environments. Evaluations on the impact of recent public policies–such as the new regulatory framework for DL–also represent a strategic research agenda for identifying achievements, limitations and opportunities to improve the modality in the Brazilian context.

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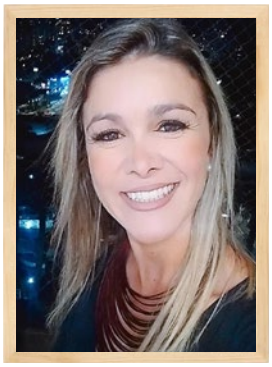

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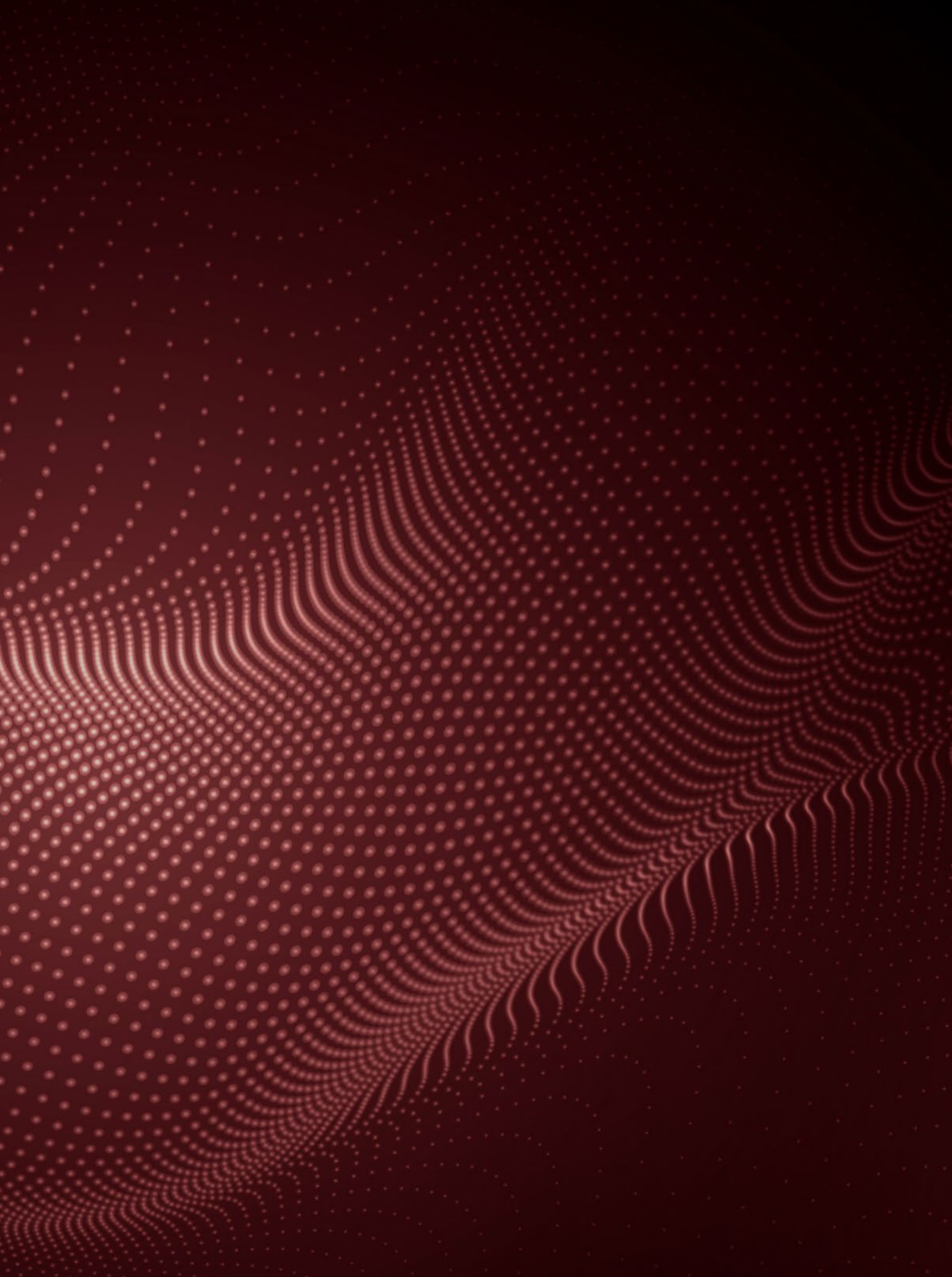
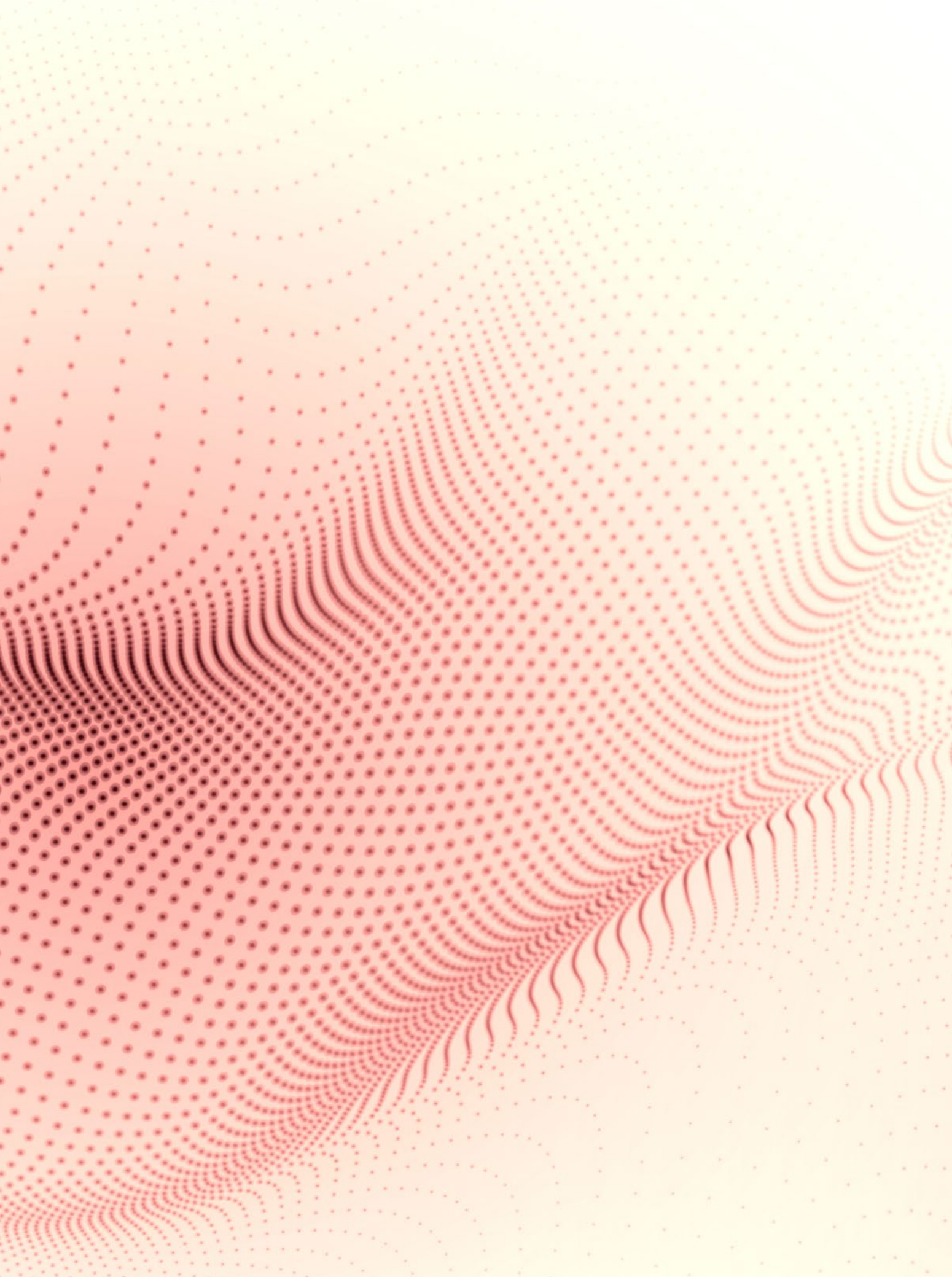


Part 2

Distance learning in transformation: an analysis of the data on engagement and the impacts of the new regulatory framework

Luciana Maia Campos Machado



Distance learning (DL) currently occupies a central position in discussions concerning higher education in Brazil. Far from being merely an alternative of access to education, DL has evolved into a consolidated modality, with its own pedagogical practices, technologies and structures. While its growth is significant, it also raises important questions: How can we promote student engagement in digital environments? And, more recently, how can these practices be aligned with the new regulatory requirements introduced by the Decree n. 11,986 of April 10th, 2025?

A recent survey conducted by the Union of Higher Education Institutions Supporting Entities of São Paulo (Semesp) DL network (rSEAD) analyzed engagement practices in DL undergraduate programs at higher education institutions (HEIs) across different regions of Brazil, gathering a sample of **127 institutions, represented by 91 funding entities**. This study provides an unprecedent overview of how HEIs organize their teaching structures, define the roles of their teachers and tutors, implement mechanisms for monitoring students, and utilize assessment instruments.

The survey aimed to gain a broad and qualified understanding of how institutions have been promoting the student engagement in DL modality. The data collected were cross-referenced with microdata from the 2023 Higher Education Census and the 2021 and 2022 Brazilian National Student Performance Exam (Enade), enabling analyses that relate institutional practices to academic performance indicators. The entire process involved rigorous validations to prevent duplicities and ensure the integrity of the database.

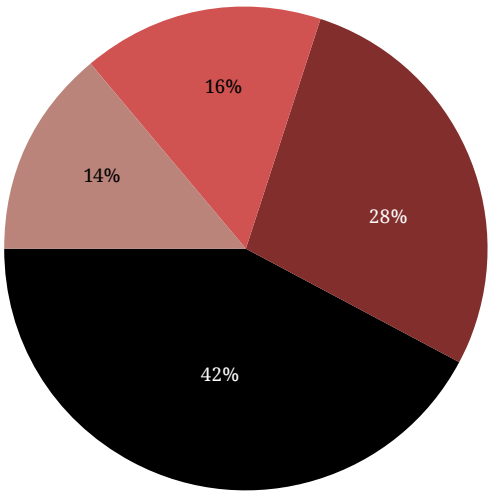
In 2023, Brazil had 9.9 million students enrolled in higher education. The institutions that participated in the survey accounted for 42% of this number, encompassing both on-site and DL programs. Within the DL segment, these institutions reported **68% of the enrollments, totaling 3,330,204 students in this modality**.

The relevance of this survey is underscored by the new regulatory framework for DL, which repositions student engagement as one of the pillars of quality education. The new legislation emphasizes the importance of active teacher involvement, qualified pedagogical mediation and continuous student monitoring–dimensions this research aimed to map. By presenting concrete data on how student monitoring is conducted in the high-performing institutions, this study contributes with valuables insights for both educational institutions and regulatory bodies, in order to enhance the offer of DL, promoting a more qualified model, committed to student retention and genuinely focused on learning outcomes.

Main considerations

Amongst the most significant data, it is noteworthy that approximately **70% of the institutions continue to operate predominantly through asynchronous models**, with on-site activities limited to those mandated by law (Chart 4).

Chart 4 – Models offered in DL: predominance of asynchronous models



Asynchronous DL, with no on-site and synchronous activities, except those mandated by law

Asynchronous DL with on-site workload and attendance control

Synchronous DL with activities that does not require attendance at on-site support hubs for mandated monitoring

Synchronous DL with on-site workload and attendance control

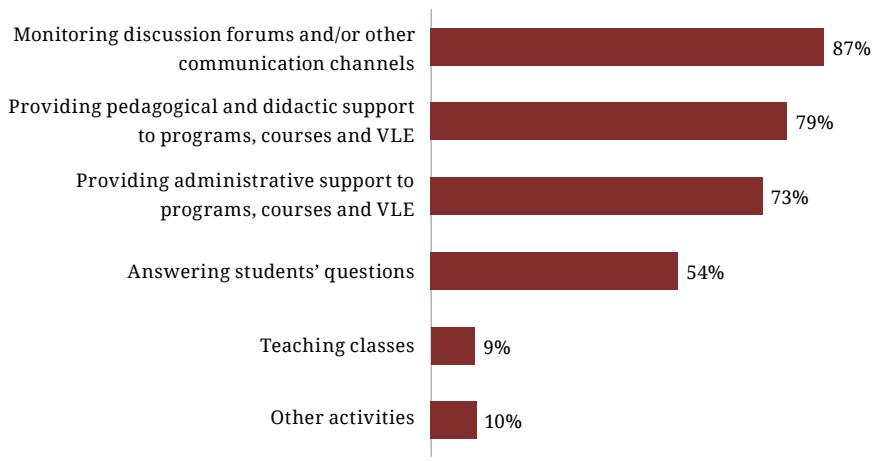
The practice previously allowed by the Decree n. 9,057 of March 25th, 2017, will need to be reassessed considering the new requirements established by the Decree n. 12,456 of May 19th, 2025, which introduces the new DL policy in Brazil. Under this new regulatory framework, no higher education program may be offered entirely remotely. For DL programs, it is now mandatory that at least 10% of the total workload be conducted on-site, and 10% through on-site or synchronous computer-mediated activities, such as live online classes featuring real-time interaction between teachers and students.

Furthermore, the decree prohibits the offer of undergraduate programs of Medical Sciences, Law, Dentistry, Nursing and Psychology through DL modality, mandating that these programs be offered exclusively on-site. Other Health-related and licentiate's degrees also cannot be offered 100% remotely–they must be offered in either on-site or blended formats.

These changes reflect a movement of revalorization of physical presence in the educational process, associating it with quality assurance and learning effectiveness. The decree also establishes a transition period of two years for HEIs to comply with the new regulations.

The analysis of the roles performed by the individuals involved in the DL teaching-learning process reveals that tutors are the main responsible for student interaction (Chart 5): 87% of HEIs report that tutors monitor discussion forums and communication channels, and 79% provide pedagogical and didactic support. In contrast, only 39% of the teachers actively participate in these spaces.

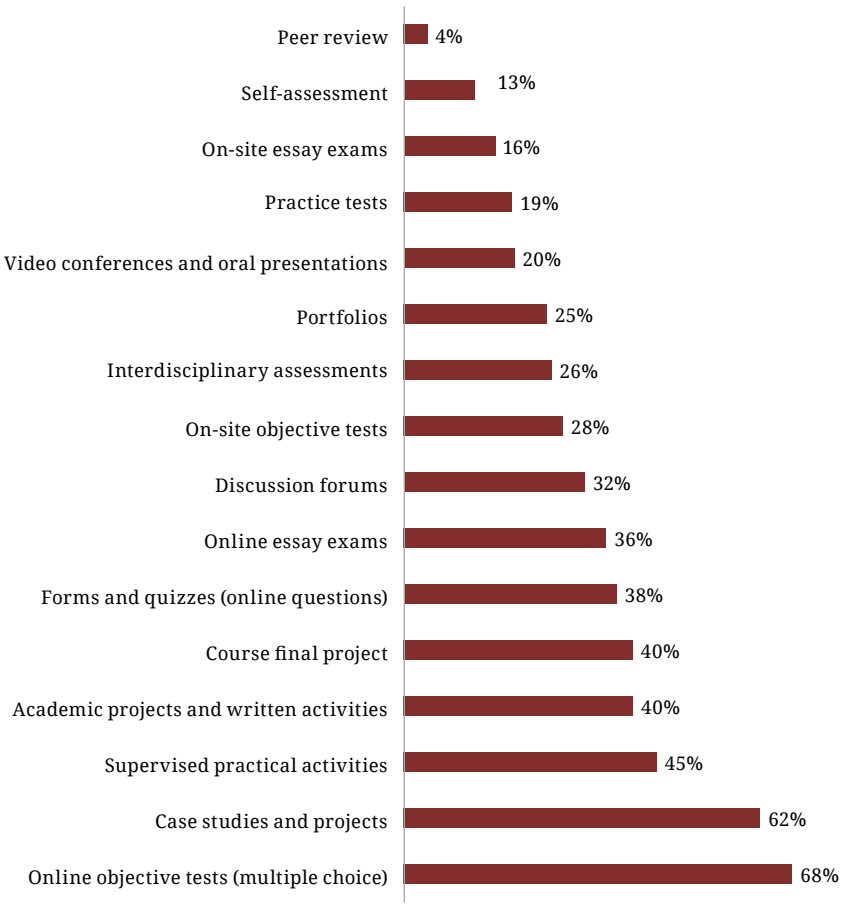
Chart 5 – Tutor's role in DL: support and interaction with students



By establishing different roles (professor, content developer and pedagogical mediator), the new regulatory framework aims to set forth these functions and ensure a more direct and responsible interaction between students and teachers.

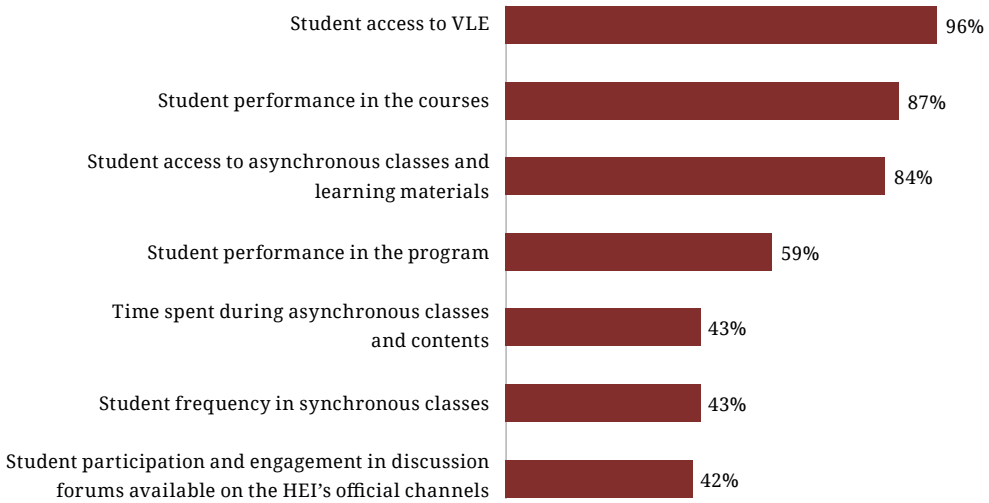
The diversity of assessment tools is also noteworthy (Chart 6). Online objective tests (68%) and case studies/projects (62%) are the most commonly used. However, on-site objective tests are reported by only 28% of institutions, which may be a regulatory challenge, as the new decree mandates not only on-site assessments but also the inclusion of discursive elements. According to the decree, each curricular unit now must include–mandatorily–at least one on-site assessment, which must have major weight in the composition of the student's final grade. Additionally, these assessments are required to incorporate discursive elements, promoting a more in-depth and critical approach on evaluating students' knowledge.

Chart 6 – Assessment tools in DL: predominance of online evaluations and challenges in the face of new regulations



The survey highlights that, while 96% of HEIs monitor student access to virtual learning environment (VLE), only 42% monitor participation in discussion forums (Chart 7). This disparity suggests that, although access to the VLE is widely monitored, active student engagement in interactive activities such forums remains under-monitored.

Chart 7 – Monitoring in DL: accessing VLE is the priority, but engagement is still under-monitored

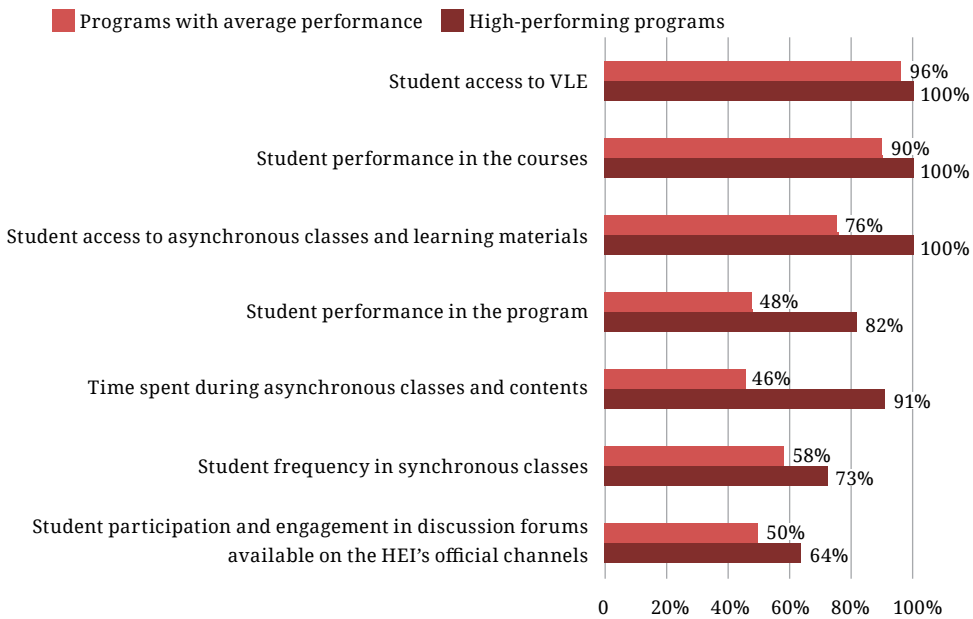


Studies indicate that both frequency and quality of interactions in discussion forums are directly associated with academic performance and student retention in DL programs. Active participation in forums promotes the collective construction of knowledge and the development of critical skills, crucial for success in DL modality. However, this raises an important question: Is it possible to correlate these practices with student performance on these institutions, in order to better understand the effectiveness of monitoring and engagement strategies?

Engagement and performance

In fact, cross-referencing the survey data with Enade microdata reveals that HEIs with outstanding performance–those that obtained scores of 4 or 5 in their program–tend to adopt more consistent monitoring and interaction practices (Chart 8). Among these HEIs, 100% conduct performance analysis by subject and monitor access to the VLE; 91% monitor the time students spend on asynchronous content; and 64% report teacher interaction as frequent or very frequent. These findings suggest that providing a good platform or offering content is not sufficient: the pivotal factor lies in the institution's ability to monitor, engage in dialogue, and promote meaningful learning throughout the student's educational journey.

Chart 8 – Monitoring students and academic performance in DL



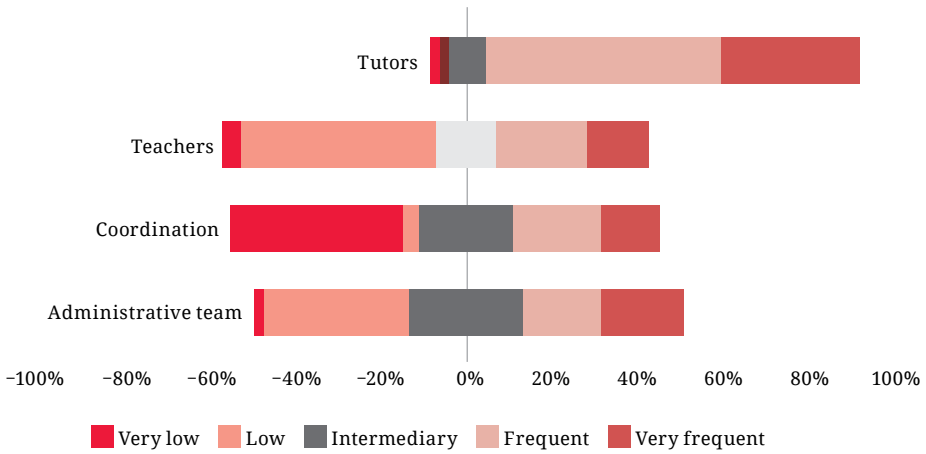
The changes introduced by the Decree n. 12.456 of May 19th, 2025, reinforce the tendency of strengthening quality, transparency and, above all, engagement in DL programs. By establishing a limit of 70 students per teacher or pedagogical mediator in synchronous activities and demanding frequency control, the decree aims to ensure a more effective interaction between students and educators. This approach supports a learning

environment that fosters students' active participation and enhances bonding, motivation and student retention throughout the program.

HEIs have been adopting different strategies to strengthen student engagement. Some invest in mentoring programs, student ambassadors, relationship management tools and use analytical dashboards for monitoring and pedagogical intervention. Others rely on aligning coordinators, teachers and tutors–who, given the new regulatory framework, can more clearly assume the role of learning mediators.

Despite these initiatives, the survey reveals that there is still room for improvement in defining and integrating the roles of each one involved (Chart 9). The interaction with the administrative team is perceived as low by 34% of institutions, whereas the interaction provided by the coordination is considered insufficient by 40%. Regarding teachers, this number is even more significant: 46% of HEIs classified teacher interaction as limited, underscoring the need for a more present and coordinated role among other agents involved in the educational process.

Chart 9 – Integration among DL professionals: institutional considerations on the interaction



Promoting quality and engagement in DL in order to meet the demands of regulatory discussions requires a comprehensive reassessment of current institutional structures. The interaction among students, teachers, tutors (mediators), coordination and administrative team cannot be treated as occasional or reactive–it must be a deliberate and integral component of the pedagogical strategy. The data highlight a clear correlation: institutions that promote continuous engagement and conduct systematic monitoring achieve superior academic outcomes.

In this context, regulation is no longer viewed solely as a bureaucratic mechanism of control but as a strategic instrument for enhancing quality, focusing on the student. While the new decree is open to improvement, it presents a concrete opportunity to reassess models, optimize practices and reorient the focus of DL in Brazil toward the student.

Within a scenario where access alone is insufficient, it is time to ensure purposeful retention. DL has both the challenge and the potential to establish itself as a mature, innovative and truly centered in significant learning educational modality.

About rSEAD

The Union of Higher Education Institutions Supporting Entities of São Paulo (Semesp) Distance Learning Network (rSEAD) is a collaborative initiative that unites HEIs dedicated to improving quality in DL. Established to promote the exchange of best practices, facilitate informed discussions, and support the development of public policies, rSEAD serves a strategic platform for institutional coordination. Through meetings, studies and technical documents, it strengthens the advocacy for innovative, responsible and learner-centered DL.

rSEAD is an evolution of the Semesp's Distance Learning Working Group–known as GT-EAD–, which was initially established as a temporary organization. Over time, GT-EAD contributed with proposals to the DL regulatory framework and promoted significant research and events. Now, as a permanent network, it broadens its scope to encompass the creation of learning materials, publications, partnerships with technology companies, mentoring programs, and digital inclusion initiatives, all with a primary focus on enhancing DL across Brazil.

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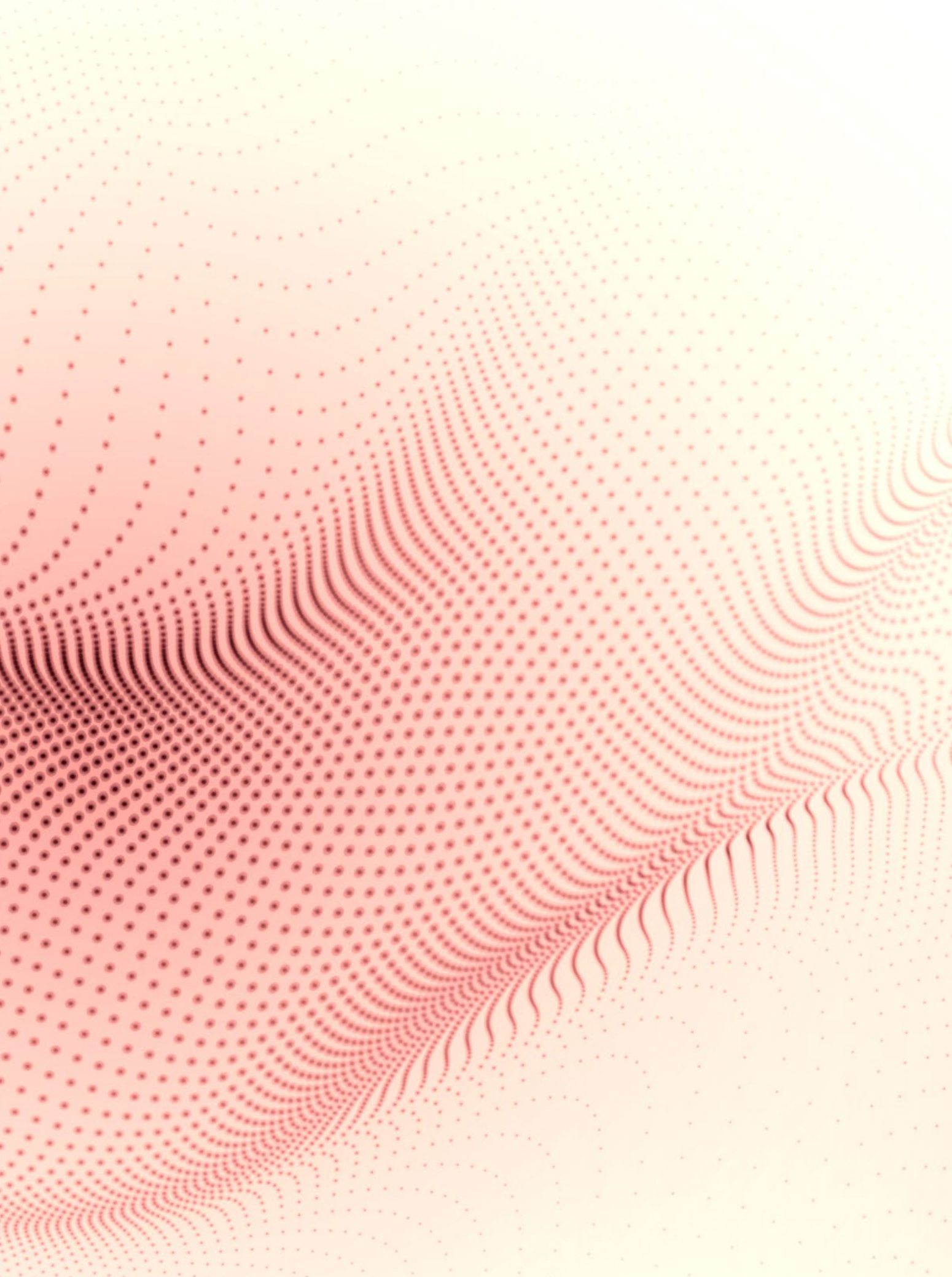
Part 3

Post-new regulatory framework outlook for distance learning

Luiz Alvares
Paulo Martins
Marina Novelli
NumbersTalk Consultoria



This article was written to examine some of the implications arising from the publication of the new regulatory framework for distance learning (DL), enacted on May 20th, 2025, through the Decree n. 12,456 of May 19th, 2025, and MEC Directive n. 278 of May 22nd, 2025. Developed amid ongoing debate, this analysis should be read within that context. We do not seek to discuss the merits or motivations behind the regulations, but rather to evaluate their potential long-term impacts.

We focus on some of the most sensitive aspects of the new regulatory framework for DL, specifically:

- the prohibition of offering Nursing programs via DL modality;
- the introduction of synchronous computer-mediated activities, limited to 70 students per class and comprising up to 20% of the total workload in the new blended programs;
- the prohibition of offering programs exclusively on DL, and the creation of a blended modality with two levels: 1) Education, Natural Sciences, Mathematics and Statistics programs with 30% of on-site attendance (blended I); and 2) Health and Wellness, Engineering, Production, Construction, Agriculture, Silviculture, Fishery, and Veterinary Medicine programs with 40% of on-site attendance (blended II).

These items were selected due to their direct impact on program format, geographic availability (as they may require frequent student travels), reduced scheduling flexibility and increasing of tuition fees–all of which constrain the potential market size. Other relevant topics–including infrastructure requirements, definition of roles for management, coordination, mediation and teaching, obligation of on-site assessments and higher education institutions (HEIs) registering and accreditation–will be discussed in the final section of this article.

Dynamic of the distance learning market until 2025

To begin, we must qualify the growth of DL in recent years, recognizing that this expansion has varied among programs, supply-and-demand dynamics of each segment, inland availability and student profile. Given that the last major legislative change occurred in 2017, our analyses extend back to 2016 to provide a more comprehensive context. Some observations allow a clearer assessment of the growth dynamics during this period, offering insights into the future.

Charts 10 and 11 demonstrate the growth of two areas that are central to the debate surrounding the new blended formats: Health and Education. The numbers reveal significantly different realities within the same sector. While Education-related programs have experienced modest expansion, with a compound annual growth rate (CAGR) of 1.9% per annum (p.a.) over the last 7 years, Health-related programs have grown 8.2% p.a., more than 4 times that the other area.

Chart 10 – Growth of Education-related programs

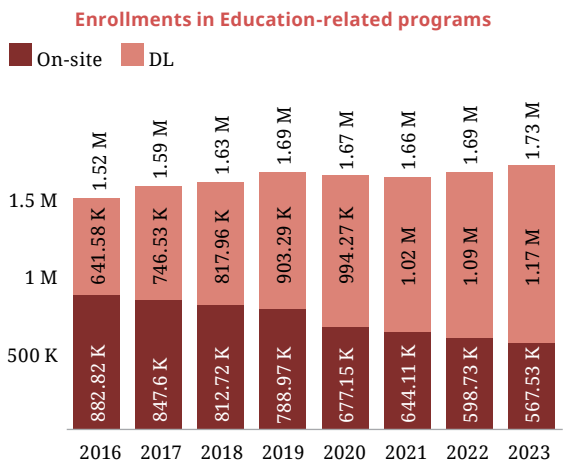
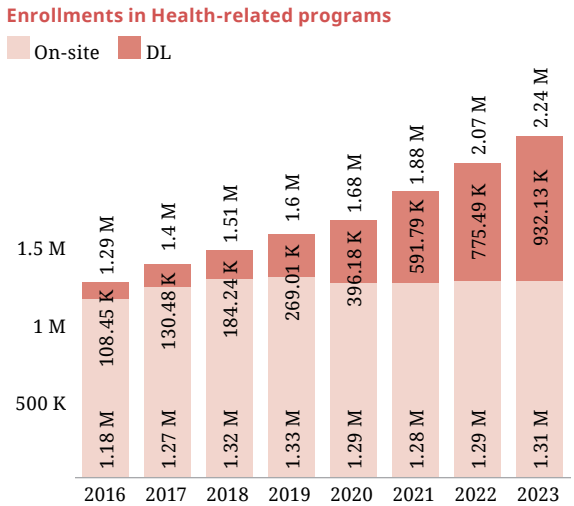


Chart 11 – Growth of Health-related programs



In DL Education-related programs, overall enrollment grew 9% p.a., driven by a decline of 6.1% p.a. in on-site modality. In Health-related programs, however, there was no decline in on-site enrollments– this modality grew 1.5% p.a. over the past 7 years); meanwhile, in DL modality, there was a significant growth of 35.7% p.a.

Different segments of higher education present varying levels of maturity and expansion. Therefore, generalizations may be misleading, as they fail to consider the specific realities of each segment, such as their geographic reach, market penetration, competency gaps and local labor market demands.

Chart 12 – Growth of Pedagogy programs (DL modality)

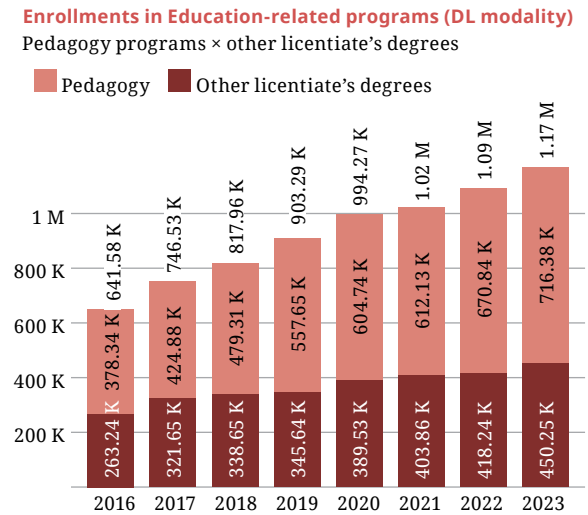
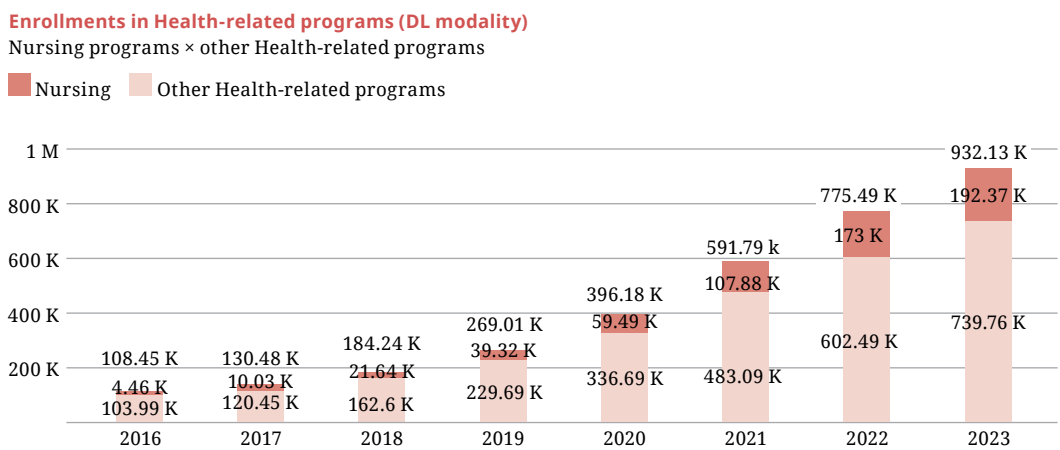


Chart 13 – Growth of Nursing programs (DL modality)



An important question concerns the "flagships", or key academic programs, capable of reflecting the dynamics of each modality during this period, in order to offer insights into the underlying factors of growth aspects. To ensure analytical clarity, we stylized the dynamics of Pedagogy programs (Chart 12), which accounts for 61.5% of enrollments in the Education-related segment, and Nursing programs (Chart 13), which represents 20.6% of enrollments within the Health-related sector.

Let us now examine more closely the student profiles in each program. Gender distribution data shows the predominance of female students in both programs–which has remained stable over time–and similar characteristics between the modalities. In Pedagogy programs, both DL and on-site, nine out of ten students are women. In Nursing programs, the proportion is slightly different, with women representing 80% of total students. Regarding racial distribution, the data suggest that Pedagogy programs have a certain uniformity between on-site and DL modalities; however, in Nursing programs, the data indicate that DL attract students from historically more vulnerable populations.

Chart 14 – Income distribution in Pedagogy programs (DL modality)

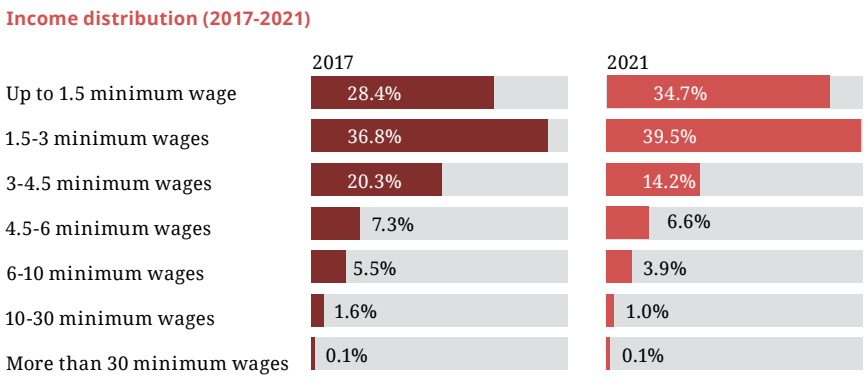


Chart 15 – Income distribution in Nursing programs (DL modality)

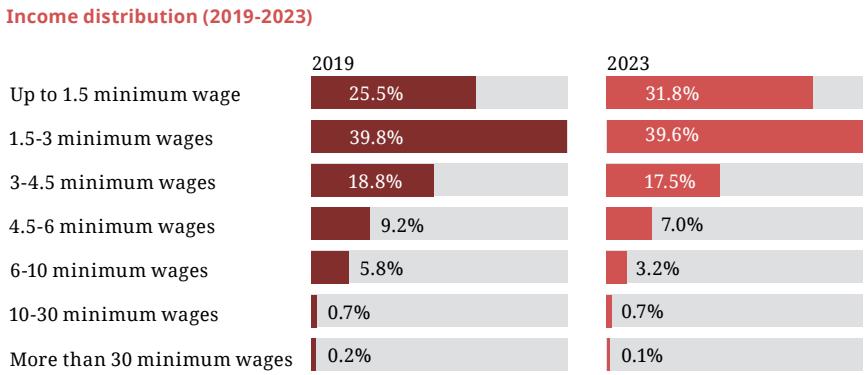


Chart 16 – Income distribution in Pedagogy programs (on-site modality)

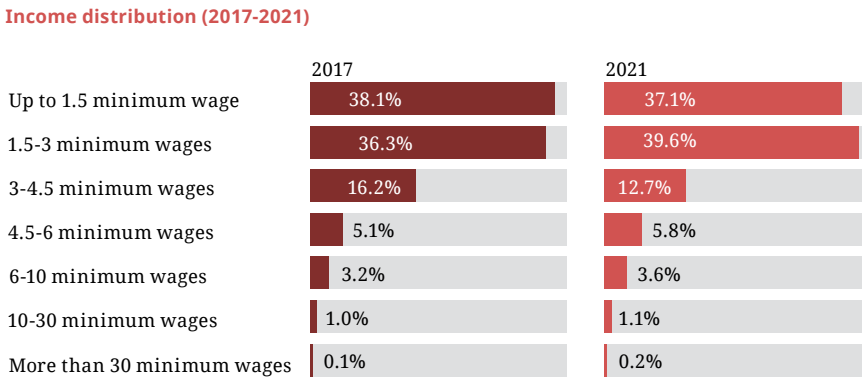
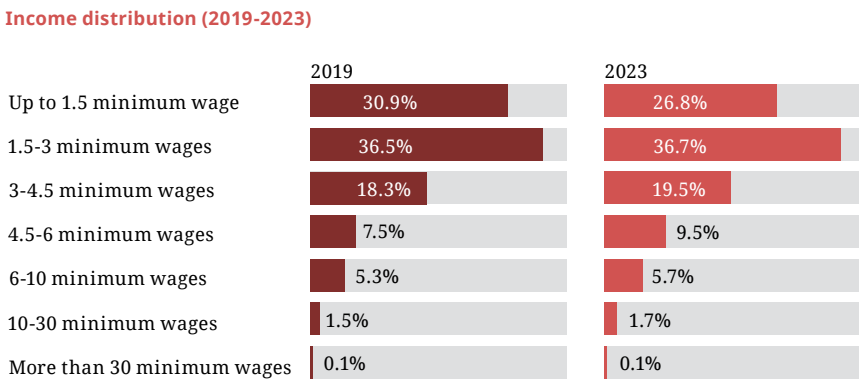


Chart 17 – Income distribution in Nursing programs (on-site modality)



Income distribution data reveals that 74% of DL Pedagogy students (Chart 14) and 71% of DL Nursing students (Chart 15) report monthly income below 3 minimum wages. These numbers exceed the national average, which is approximately 2 minimum wages, salary range of 90% of Brazilians.

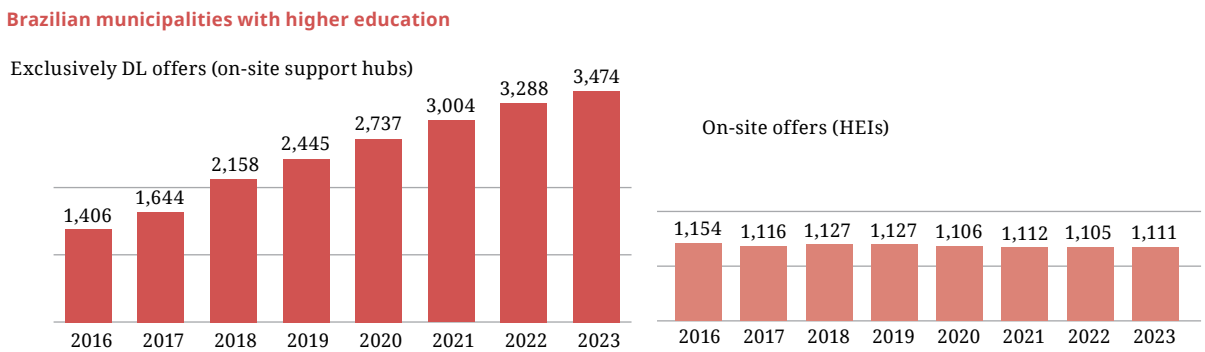
Regarding income distribution among students in on-site programs, the data shows that 76.7% of Pedagogy students (Chart 16) and 63.5% of Nursing students (Chart 17) report monthly income below 3 minimum wages. Students of on-site Nursing programs have higher income, largely due to the offer conditions, including different places with infrastructure and on-site offering. This income disparity reflects a difference of approximately 7% to 8% do contingente do total of students who lack disposable income relative to the cost of on-site programs. These numbers offer an estimate of the potential exclusion rate due to affordability, as well as an indication of low demand elasticity (inelastic demand): significant increases in tuition are less prone to cause a proportional shift in enrollment.

This phenomenon is known in the Brazilian higher education: while the overall decision to pursue education is inelastic, demand for specific programs can be highly price-elastic, especially in competitive markets. However, market competition narrows price variation within each program category, resulting in the creation of segments such as *premium*, *value*, and other related categories, aligned respectively with niche and mass-marketing positioning.

Access to higher education, inland offerings and coverage

An important question regarding educational modalities concerns the reach of DL in Brazilian municipalities through on-site support hubs in areas without on-site higher education offerings. Brazil has a total of 5,570 municipalities. According to the 2023 Higher Education Census, 3,474 of them offer higher education, but only 1,111 have institutions providing on-site modality (Chart 18). This means that in 2,363 municipalities access to higher education is available exclusively through DL. Another aspect of this question is that public HEIs only reach 864 municipalities with on-site modality, and 1,173 via DL. As a result, broad access to higher education in Brazilian inland and rural areas is largely made possible by private HEIs and DL modality.

Chart 18 – Higher education reached Brazilian inland and rural areas through DL



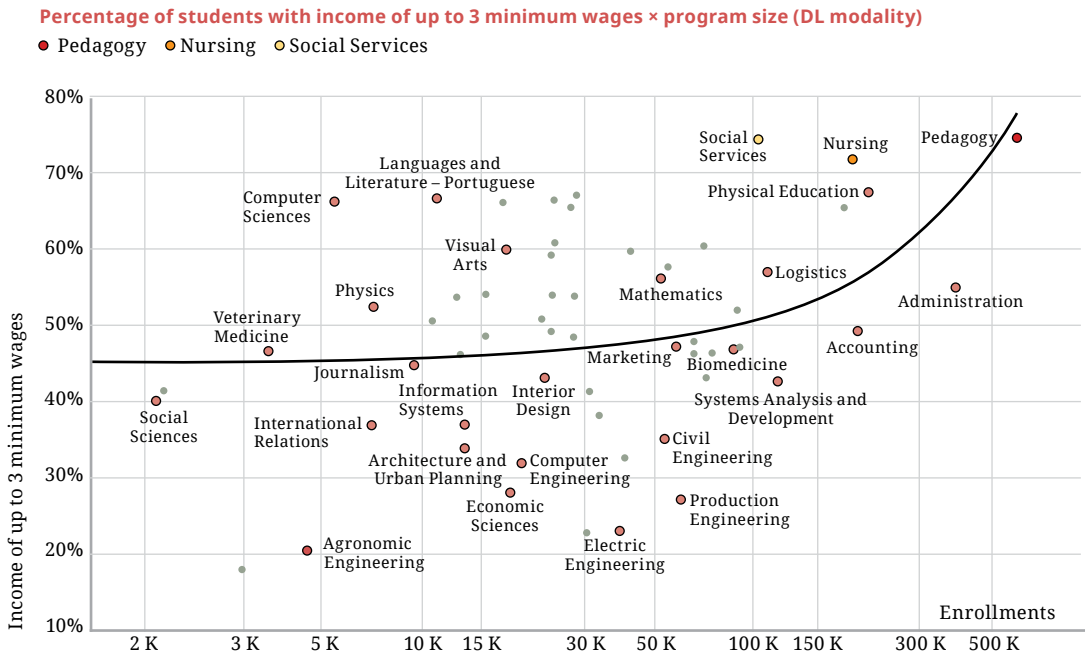
On-site Nursing programs are offered in only 526 municipalities, while Education-related programs are available in 682. According to enrollment numbers, DL is the exclusive mode of access for approximately 47.8 K in Nursing and 155.7 K in Pedagogy. This means that a significant portion of the country will be left without access to higher education in Nursing. This situation reflects Brazil's social inequalities, which cannot be addressed without costs or with simplistic solutions: expanding access to higher education in remote areas involves more modest infrastructure, aligned with the local market size and pricing compatible with the population's economic conditions.

Income distribution × number of enrollments

Another important consideration is how differences in students' socioeconomic profiles influence programs and locations. Charts 19 and 20 illustrate income distribution for DL and on-site programs, respectively. These charts are based on the percentage of students who reported monthly incomes below 3 minimum wages in the Brazilian National Student Performance Exam (Enade) questionnaires (vertical axis), cross-referenced with the total number of higher education enrollments in each modality.

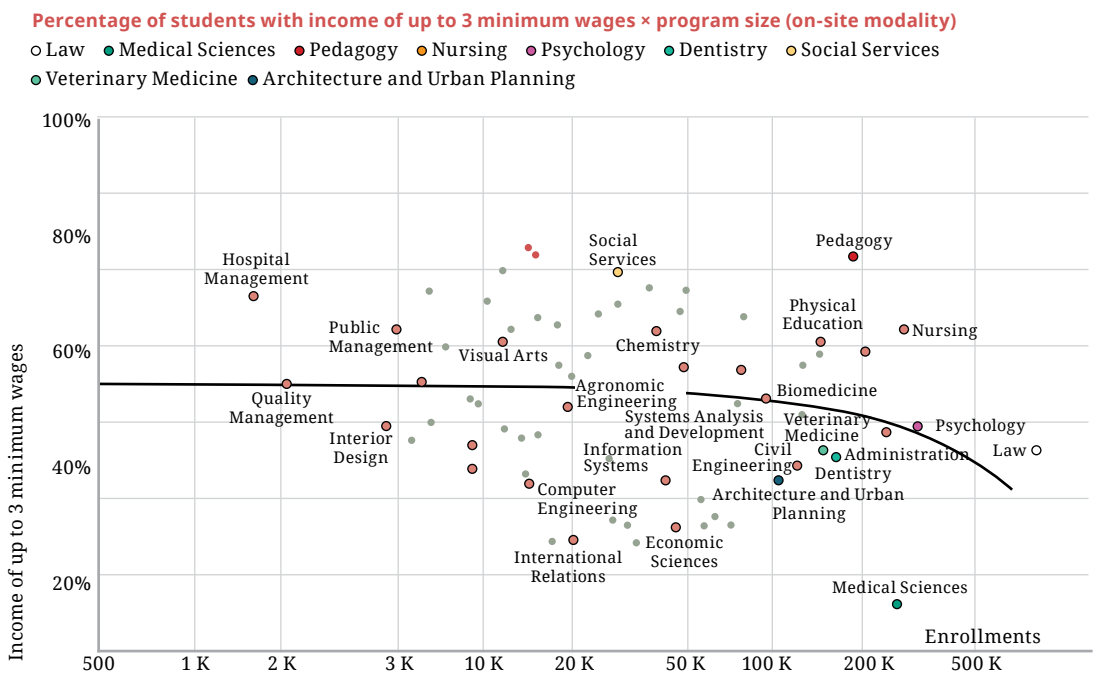
In both DL and on-site modalities, Nursing, Pedagogy and Social Services programs present the lowest income distributions. Not coincidentally, these are among the largest programs in terms of enrollment. The transmission mechanism in this context is the monthly tuition fee for these courses. The supply is highly widespread, facilitated by the low infrastructure requirements imposed on on-site support hubs–under the regulatory framework in place until April 2025–and the demand for professionals in all Brazilian municipalities.

Chart 19 – Income distribution in current DL programs



A comparison between the percentage of students with income of up to 3 minimum wages and the market size. Pedagogy, Nursing and Social Services are the programs with the highest concentrations of socioeconomically vulnerable students.

Chart 20 – Income distribution in current on-site programs



In contrast, Medical Sciences, International Relations and Economic Sciences have the lowest numbers of students with income of up to 3 minimum wages.

Impacts on enrollments in 2025

The following tables resume the programs and enrollments affected by the new regulatory framework.

Table 7 – Exclusively on-site programs

Programs	Enrollments		
	On-site	DL	Total
Law	656.7 K		656.7 K
Nursing	278.8 K	192.4 K	471.2 K
Psychology	341.9 K		341.9 K
Medical Sciences	266.5 K		266.5 K
Dentistry	162.3 K		162.3 K
Total	**1.7 M**	**192.4 K**	**1.9 M**

Table 8 – DL programs

Programs	Enrollments		
	On-site	DL	Total
Other <100 K	713.6 K	1.3 M	2 M
Administration	226.9 K	426.8 K	653.6 K
Accounting	114.1 K	210.6 K	324.7 K
Systems Analysis and Development	87.1 K	212.5 K	299.6 K
Human Resources Management	24.5 K	196.4 K	220.9 K
Logistics	18.5 K	121.1 K	139.6 K
Total	**1.2 M**	**2.4 M**	**3.6 M**

Table 9 – Blended programs

Programs	Enrollments		
	On-site	DL	Total
Other <100 K	764.1 K	638 K	1.4 M
Pedagogy	162.1 K	686.7 K	848.7 K
Physical Education	117.3 K	283.6 K	400.9 K
Physiotherapy	143.8 K	69.9 K	213.8 K
Pharmacy	125.4 K	87.7 K	213.2 K
Nutrition	91.5 K	88.8 K	180.3 K
Biomedicine	94.9 K	85 K	179.9 K
Civil Engineering	118.1 K	53.2 K	171.3 K
Veterinary Medicine	149.5 K	3.5 K	153 K
Social Services	26.1 K	101.1 K	127.7 K
Production Engineering	57.2 K	59.2 K	116.5 K
Architecture and Urban Planning	102.6 K	13.4 K	115.9 K
Agronomy	74.8 K	40.3 K	115.1 K
Mechanical Engineering	71.7 K	31.2 K	102.9 K
Biological Sciences	69.8 K	32.1 K	102 K
Total	**2.2 M**	**2.3 M**	**4.4 M**

Number of students currently enrolled in programs affected by the new regulatory framework	
Programs that must be offered exclusively on-site (Table 7)	There are currently 192,000 students enrolled in DL Nursing programs, which will no longer be offered in this format and are set to transition to on-site modality in August 2025.
Programs eligible for DL modality (Table 8)	For programs that can be offered in DL–provided that the requirements for on-site assessments for each curricular unit and a minimum of 10% on-site activities are met–, the enrollment capacity is 2.2 million students. It is important to note that this category emcompasses approximately 3.1 million enrollments in higher education, of which 1.9 million are delivered through on-site modality. In other words, nearly two-thirds of students enrolled in these programs in Brazil are currently participating in DL.
Programs that must be offered at least in a blended format (Table 9)	Under the new regulatory framework, certain programs must be offered at least in a blended modality. These programs account for a total of 4 million higher education enrollments, of which 2.1 million are currently offered in DL format and will require adjustments to align with the new requirements.

Impact of tuition pricing on enrollments

To evaluate the impact on enrollments, it is necessary to establish certain premises regarding the expected price changes resulting from the new regulatory framework.

Programs affected	Short-term pricing impacts	Final impact on pricing after regulatory alignment
DL programs (that remained as DL)	Minimum of 10% of the total workload conducted on-site, 10% of synchronous computer-mediated activities, and the mandatory on-site assessment for each curricular unit (at on-site support hubs). **The average total cost is expected to increase by approximately 5%**.	Most programs already comply with (or are close to complying with) these regulatory requirements. This is likely to be reflected in a reduction of discounts offered at the time of enrollment.
Education programs (blended I)	Considering the regulatory requirements of 30% on-site workload and 20% of synchronous computer-mediated activities, as well as the market data indicating that on-site modality is 4 to 5 times more costly than DL, **the expected cost increase ranges from 80% to 110% (which places the costs between R$450 and R$500)**.	Considering competitive pressures and the adoption of new technologies, **these programs are expected to operate within the R$400 price range**.
Health and Engineering programs (blended II)	Under the new regulatory framework mandating 40% on-site workload and 20% of synchronous computer-mediated activities, **the expected cost increase ranges from 130% to 160% (between R$550 and R$600)**.	In this case, after market adjustments, **these programs are expected to operate within the R$500 price range**.

It is worth noting that most programs currently operate within the R$200 price range. Therefore, the impact on blended I segment is slightly below a twofold increase, while on blended II is slightly greater than twofold increase. In Nursing programs, the reference is the existing on-site programs, for which the projected cost increase is approximately threefold in locations where HEIs have infrastructure. These estimated impacts will be applied in the sensitivity analysis of market sizes presented in this study.

Forecasted scenario

To understand the potential impact of the new regulatory framework on Brazilian higher education, including the student dropouts due to reduced accessibility and changes between modalities, we present the results summarized in Table 10.

Table 10 – Enrollments in higher education: impacts of the new regulatory framework for DL

Segment	DL | On-site	Total impacts	Post-new regulatory framework outlook
Medical Sciences, Law, Psychology, Dentistry	– | 1.4 M	– | 1.4 M	– | 1.8 M
Nursing (DL prohibited)	**0.2 M** | 0.3 M	– | 0,4 M	
Education-related (blended I)	**1.2 M** | 0.7 M	**0.7 M** | 0.8 M	**1.1 M** | 2.5 M
Health-related + Engineering (blended II)	**1.1 M** | 1.5 M	**0.4 M** | 1.7 M	
Programs eligible for DL	**2.4 M** | 1.2 M	**2.4 M** | 1.3 M	2.4 M | 1.3 M
TOTAL	**4.9 M** | 5.1 M	**3.5 M** | 5.6 M	**2.4 MM** | **1.1 M** | 5.6 M

Source: Projeções NumbersTalk.

Overall, we estimate a loss of approximately 10% of students, excluding “statistical” fluctuations that may result from the on-site attendance requirement, which tends to increase the dropout rate.

Another important consideration is the migration of some students to on-site modality. At this stage, we are not accounting for the dynamic distribution of these numbers over the next three years. However, considering the impacts on enrollments, we anticipate a student loss of approximately 3% to 5% over the final three-year period. In other words, by 2027, it is highly likely that the Census will report around 9.6 million enrollments in higher education.

Insights concerning these results	
On-site support hubs	**Trend toward regional consolidation**: focus on achieving minimum viable scales and eliminating excessively fragmented offerings, particularly within blended programs. **Expected specialization**: phasing out programs that require costly infrastructure, such as Engineering. **Technology as a standard**: growing adoption of fully browser-based solutions accessible via lightweight devices.
Educators	**Growing demand for educators**: the demand for educators is expected to increase; however, automation through artificial intelligence (AI) may offset part of this growth by replacing certain functions such as grading and assessment production. **Decentralization of hiring**: more local paid educators, reducing concentration in major urban centers. **Preferred profile in on-site support hubs**: educators with strong pedagogical skills and proficiency in educational technologies.
Students	**Demand redistributed to existing offerings** (due to the elimination of on-site support hubs): increase in programs such as Social Services and Nutrition (low-priced infrastructure and local market). **Migration to Information Technology (IT) academic area**: students with less defined vocational orientation (Systems Analysis and Development and Information Systems). **Rising in Administration**: Administration programs tends to become the new dominant field of study.
HEIs	**Regionalization supported by technology**: adoption of technological tools as “copilots” in managing the new requirements. **Opportunities in niche and segmented DL**: blended learning becoming less attractive to students may lead to smaller-scale models, featuring more technologies and differentiated pricing. **Renewed focus on underserved programs** (such as Social Communication): underserved programs may have renewed relevance as reduced on-site requirements may enable new offering models.

Further analyses and key areas for exploration

Other topics of the decree have significant market implications and are more difficult to quantify immediately. These should be further examined through analysis, simulations and projections to be conducted by NumbersTalk as a continuation of this study.

Single registering/ accreditation and expansion of offerings	Reduced barriers to entry, favoring smaller HEIs in remote regions. Offer of higher-cost blended learning programs, economically feasible in locations where infrastructure is already in place. Gradual and consistent expasion, with marginal revenue growth surpassing costs in some cases. Initially, there may be an increase in prices (overshooting), followed by adjustments and downward pricing as the market stabilizes.
On-site support hubs infrastructure (Capex)	Substantial investiments required in laboratories and physical infrastructure. Prohibition on shared physical addresses among HEIs, which demands increased cash flow on on-site support hubs. Since many of them have not achieved sufficient profitability to justify such investments, this requirement may result in the closure of up to half of the on-site support hubs operating within highly widespread networks.

Personnel costs (Opex)	New hiring requirements (lead teacher, content producer, pedagogical mediator, DL manager). Increased fixed costs and operational complexity, requiring a stable minimum scale of operations. Challenges to diversifying program offerings within the same on-site support hub due to the mandated teaching specialization.
Obligatory on-site assessments	Increased frequency of on-site assessments (required in each curricular unit) demands additional logistics and infrastructure. Impacts on remote regions, where students may be required to travel longer distances to access on-site support hubs. As a result, there will be more pressure on both Capex and Opex, leading to greater concentration and scales.
Competition between DL and blended segments	Programs such as Administration, Marketing, Human Resources, and Publicity and Advertising (which require low on-site attendance) may absorb demand currently directed toward blended learning, attracting students focused on obtaining a diploma. Lower costs in DL become a significant competitive advantage in these cases.
Dropout and data regulation	The new attendance requirements are expected to reveal the actual dropout rates previously underreported in institutional records. Initially, there may be an increase in the dropout indicators; however, this process is likely to span at least three years. After this adjustment, average dropout rates in higher education are expected to decline, particularly due to the partial migration from DL to blended segment (which have greater monitoring and lower dropout rates).

Final considerations

Bringing together the various findings presented throughout this study, it is possible to affirm that the low price elasticity of demand for higher education in Brazil is likely to partially cushion the negative impacts of price increases driven by the new regulatory framework. Although the increase in costs is significant, it tends to be absorbed to some extent by programs with lower operational demands, such as Pedagogy and Social Services, making logistical and economic barriers to access (for example, travel costs to distant hubs) a more critical concern for student enrollment decisions.

Within this context, the overall impact on enrollment is expected to decline progressively over the coming years, partially offset by the organic growth of the educational market. Nonetheless, programs with lower demand and high infrastructure requirements (Engineering, for instance) are likely to become unviable under the blended learning segment in peripheral regions. The expected outcome is a new balance within the segment currently known as DL: a more sophisticated and rational model, with offers concentrated on a smaller number of specialized on-site support hubs.

The ”long tail” model, in which institutions offer a wide range of low-enrollment programs, is expected to be penalized. The diversity of blended programs will likely be significantly reduced, aligning with the range seen in on-site modality and particularly impacting Health-related and Engineering programs.

Licentiates’ degree programs are expected to remain the most viable offerings in this context. A significant initial increase in pricing is anticipated, followed by a period of nominal stabilization and reduction starting in 2027, once the regulatory transition is fully consolidated.

Another relevant topic concerns IT programs, which may become more attractive to HEIs due to the possibility of sharing infrastructure (for example, equipment and laboratories) with blended programs from other areas. This change could stimulate the expansion of offerings and the downward trend in prices in DL.

Finally, there is a trend toward expanding differentiation strategies within blended segment, with more specialized offers and higher prices. Over time, this movement is expected to be counterbalanced by the entry of new suppliers and by the absorption of demand for programs with lower logistical and operational requirements, particularly in Business-related areas.

About NumbersTalk

NumbersTalk is a consulting company specializing in data science applied to educational management, focusing on higher education. Founded by professionals with extensive experience in quantitative analysis, statistical modeling and strategic planning, the company brings together both technical skills and management visions developed over more than two decades of work in the educational and financial sectors.

A reference in predictive modeling, particularly in studies on student dropout, retention and academic performance, the company develops technological solutions that anticipate scenarios, guide strategic decision-making and offer recommendations systems based on indicators derived from cross-referenced microdata, simulations and monitoring of student metrics.

With a notable performance in regulatory and assessment contexts, NumbersTalk also develops proprietary psychometric instruments, providing automated and individualized feedback to students and institutions. In the current context of regulatory adjustments in higher education, the company has been serving as a technical partner to institutions seeking to get ready for new challenges through evidence-based strategies and analytical intelligence.

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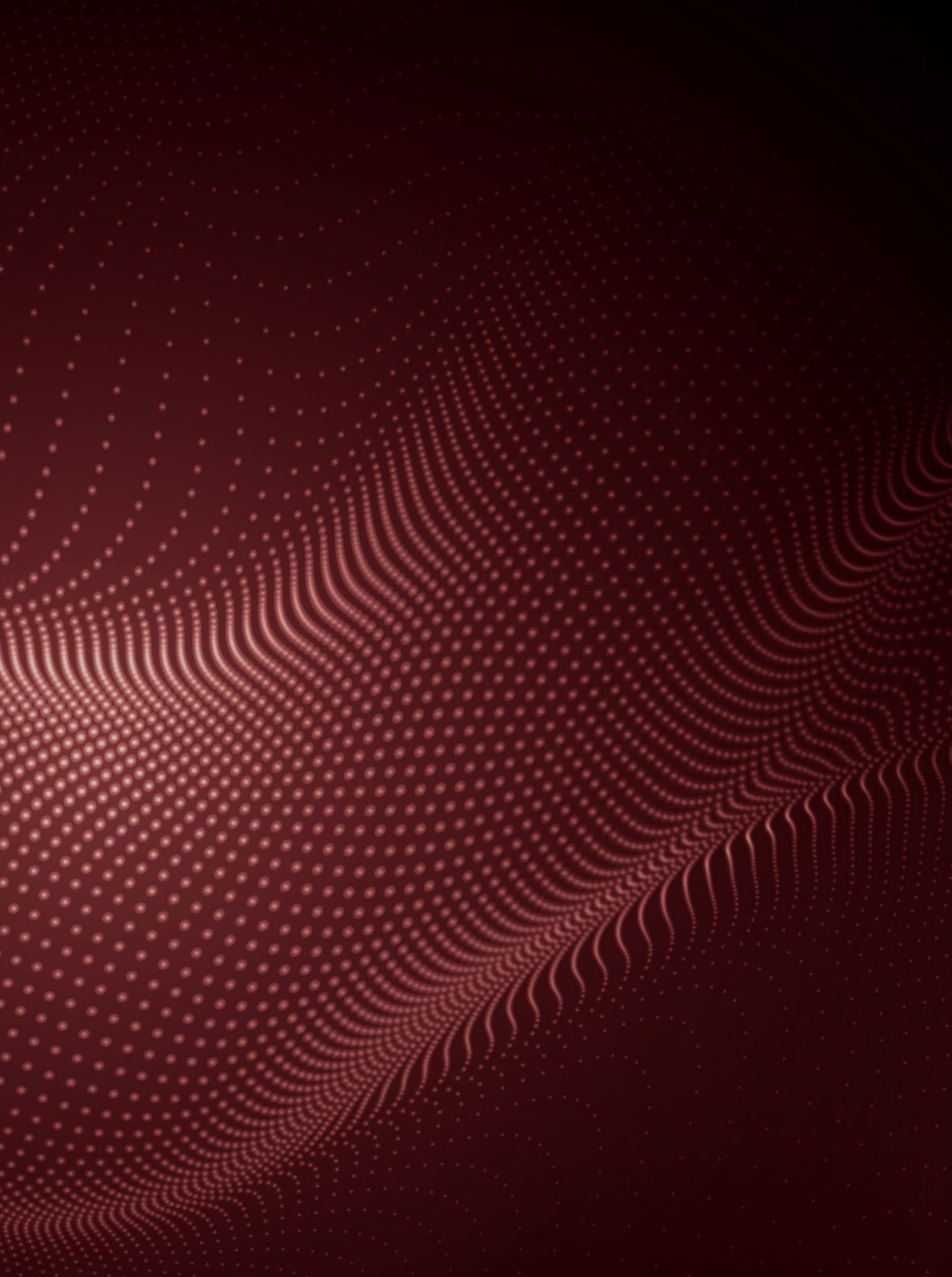
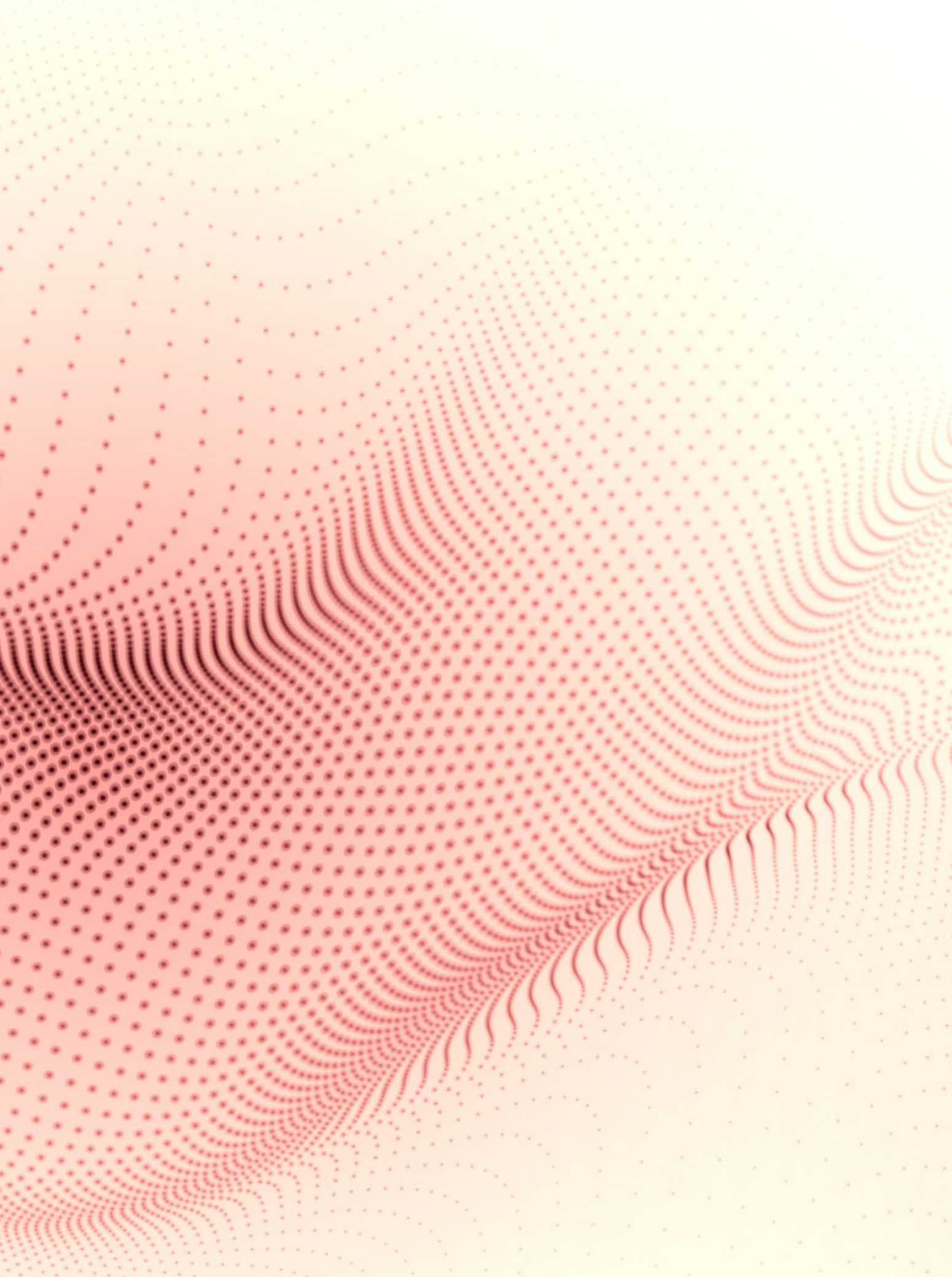


Part 4

The internationalization of distance learning: a brief analysis of the expasion process adapted by Brazilian higher education institutions

Leonardo Labres
MercadoEdu



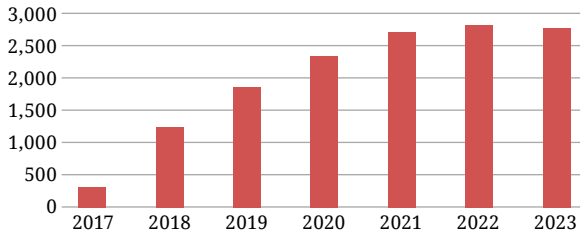
The internationalization of distance learning (DL) has emerged as a strategic response to the saturation of the internal market. As the number of institutions offering DL programs within Brazil continues to grow, resulting in heightened competition, some Brazilian higher education institutions (HEIs) have incorporated internationalization into their expansion strategies. Beyond offering the educational needs of the Brazilian population abroad, this initiative also seeks to identify untapped markets that may represent promising opportunities for student recruitment.

In general, the programs offered are the same as those available in Brazil. As a result, Brazilians residing abroad are eligible to enroll in any DL programs authorized by the Brazilian Ministry of Education (MEC).

For HEIs, the international market presents a significant opportunity. According to the *Brazilians Communities Abroad* report (Ministry of Foreign Affairs of Brazil, 2023), approximately 4.5 million Brazilians reside outside our country's borders. In 2023, 2,761 of them (Censup–Inep, 2023) were enrolled in a DL program offered by a Brazilian HEI–0.06% of the Brazilian population abroad. A preliminary analysis indicates substantial potential for expansion, particularly when compared to the internal market, where nearly 5% of the population is enrolled in higher education.

However, despite the relatively large potential student base (equivalent to twice the population of Belo Horizonte, where we have 319 on-site support hubs and 84,910 students), the numbers indicate a modest growth and even signs of a recent decline. In some institutions, the results even suggest that the internationalization process has been discontinued.

Chart 21 – Total number of students enrolled in DL programs abroad



Some factors may explain the limited success of the international expansion efforts. Unlike the highly escalável and quasi-retail model employed within Brazil, internationalization presents a distinct set of challenges–and the "franchise logic" is not easy to replicate.

In the internal market (considering a generalist perspective), institutions or educational groups provide the learning environment, educational content, tools for pedagogical and administrative operations, support, and all communication campaigns, along with strategic planning and definition. This makes it easy to replicate the most efficient practices and enables the creation of a sales machine.

It is precisely this last point that reveals the first bottleneck in the process. Recruiting students abroad accentuate significant challenges, including identifying the target students' profile, locating them and communicating the educational offering effectively. These obstacles are common in any country, regardless of the product or service offered; when marketing to immigrant populations, the target audience is dispersed over a wide geographic area and integrated within the local population. This atypical distribution neutralizes the effectiveness of mass communication strategies. Network initiatives are efficient and appear to benefit all on-site support hubs of the institution but fail to reach the external audience.

An advertisement placed in Times Square will have a lower return than the same advertisement displayed on Paulista Avenue–and probably higher costs.

It is evident that commercial efforts must be highly targeted. In addition, it is essential to understand the behavior of the community, their predominant activities, objectives and exchange relationships, along with the support networks that connect them–for example, Brazilian forums, local influencers and community gathering points. In some cities, there are neighborhoods with stores selling Brazilian products, typical food delivery services, beauty salons and other establishments that attract this audience.

Although DL is a digital service, in this context, communication demands more oriented strategies and even traditional methods, such as printed materials distributed through local businesses, word-of-mouth

recommendations, referral programs, and, naturally, social media and paid search advertising (for example, Google Ads).

The challenge is that this strategy demands ***dedicated planning, budgeting and monitoring for each specific location****, which is incompatible with the expansion model.*

To understand these challenges, it is essential to analyze the relation between supply and demand in international hubs and in regions with Brazilian communities.

Supply versus demand: residents and on-site support hubs

As with any diagnostic process, it is important to base our analysis on indicators. In this regard, we have some significant data related to supply and demand, which can help us assess how these communities are currently being approached.

The first notable observation is the irregular distribution between the estimated Brazilian population abroad and the actual number of enrolled students of this community. The relation between the geographic distribution of Brazilians immigrants, enrolled students and on-site support hubs can be seen in the Table 11.

Table 11 – Geographic distribution of Brazilians living abroad, students enrolled and on-site support hubs by region/continent

Region/continent	Brazilian population abroad in 2023	%	Enrollments in 2023	%	Hubs in 2023	%
North America	2,078,170	45.2	753	27.3	19	29.2
Europe	1,490,745	32.4	934	33.8	23	35.4
South America	646,730	14.1	20	0.7	2	3.1
Asia	222,053	4.8	718	26.0	18	27.7
Middle East	59,230	1.3	318	11.5	1	1.5
Oceania	53,430	1.2	0	0	0	0
Africa	39,600	0.9	18	0.7	2	3.1
Central America	8,777	0.2	0	0	0	0
Total	**4,598,735**	**100**	**2,761**	**100**	**65**	**100**

Although the growth potential is evident across all communities–due to the current low enrollment numbers–the uneven distribution of supply suggests that expansion is more associated with specific partnerships and commercial aspects than with strategic feasibility studies for each location.

Based on the Table 11, Europe appears to be the only continent with a proportional balance between population, supply and demand. In North America–where 45% of our emigrants live–, for example, there are 27% of enrolled students and 29% registered hubs.

An analysis of data from the North American segment reveals an uneven geographic distribution of DL hubs. In the Consulate General of Brazil in New York jurisdiction–which represents 25% of the Brazilian population on the continent (approximately 500,000 individuals)–, there are only 3 operational units. In contrast, the

Orlando region, which is home to 180,000 Brazilians, have 4 hubs available. Meanwhile, Canada, with a Brazilian population of 133,000 (90,000 of them residing in Toronto), has no registered offerings.

A similar pattern is observed across other continents:

- Europe: hosting 32% of the Brazilian diaspora, it accounts for 35% international hubs (23 units). Germany, with 160,000 Brazilians–representing 10.73% of Brazilian residents in Europe–has only 1 hub, the same number as Italy, which is home to 157,000 Brazilians.
- South America: despite hosting nearly 650,000 Brazilian residents, this region has only 2 hubs.
- Japan: with a Brazilian population of 200,000 (fewer than that of the United Kingdom) and 17 hubs, including 5 of them in Shizuoka Prefecture (30,000 Brazilians)–1 more unit than New York, despite the population being 16 times smaller.

This disparity in distribution is not the only indicator that warrants consideration, nor does it provide accuracy regarding the ideal number of offers for each location. Aspects such as emigrant profiles (objectives, professional qualification, intention to return to Brazil), local attractions (professional and educational opportunities, financial accumulation, and quality of life), as well as the presence of support structures influence potential demand.

However, the weak correlation between supply and population density suggests that some HEIs are overlooking strategic criteria in their expansion. This lack of hierarchy between attention to numbers, potential market identification and commercial opportunities appears to be compromising their operations' success. Concrete evidence is the fact that, in 2023, only 9 (14%) out of 65 international hubs surpassed the threshold of 100 enrolled students. The average of students per international hub (42.47) is approximately one-quarter of the national average (179.83).

The average number of students per international hub is 42.47, whereas the national average is 179.83, more than 4 times greater!

Another important issue concerns the inadequacy of certain program offerings, as many degrees are not recognized or relevant outside Brazil. A more limited portfolio also reduces the number of potential students.

In 2023, 101 programs concentrated the enrollments in the international market, whereas the internal market had 256 programs with active students.

Conclusions: opportunities for improvement and points for attention

The data reveal that the internationalization of DL requires differentiated expansion strategies tailored to each specific geographic reality. While this analysis focused on identifying "commonplaces" in the process, certain points for attention were underscored:

- Focus on expanding in regions with significant Brazilian populations, based on market analysis, considering the location and performance of existing competitors.
- Enhance marketing and sales strategies to effectively reach the dispersed target audience.
- Align communication strategies with the goals of the target audience. It is important to highlight the benefits of studying while abroad, for instance: training to increase the earning potential, plans to return to Brazil, or a complementary training (for those already pursuing educational studies abroad).
- Observe and adapt offerings, when feasible, to target needs. Eventually, short-term vocational courses, focused on operational skills (such as residential electricity, mechanics, civil construction, gastronomy, food safety and handling) will provide more professional opportunities to immigrants than an undergraduate degree, such as Accounting.
- Measure outcomes and plan initiatives considering risk factors and shifts in policies that may affect immigrants in each country.

In implementing these actions, it is important to consider the reality of each location. To support this, we included in this study an annex with tabulated data for future and further analysis.

Annex: tabulated data

Chart 22 – Enrollments evolution by country

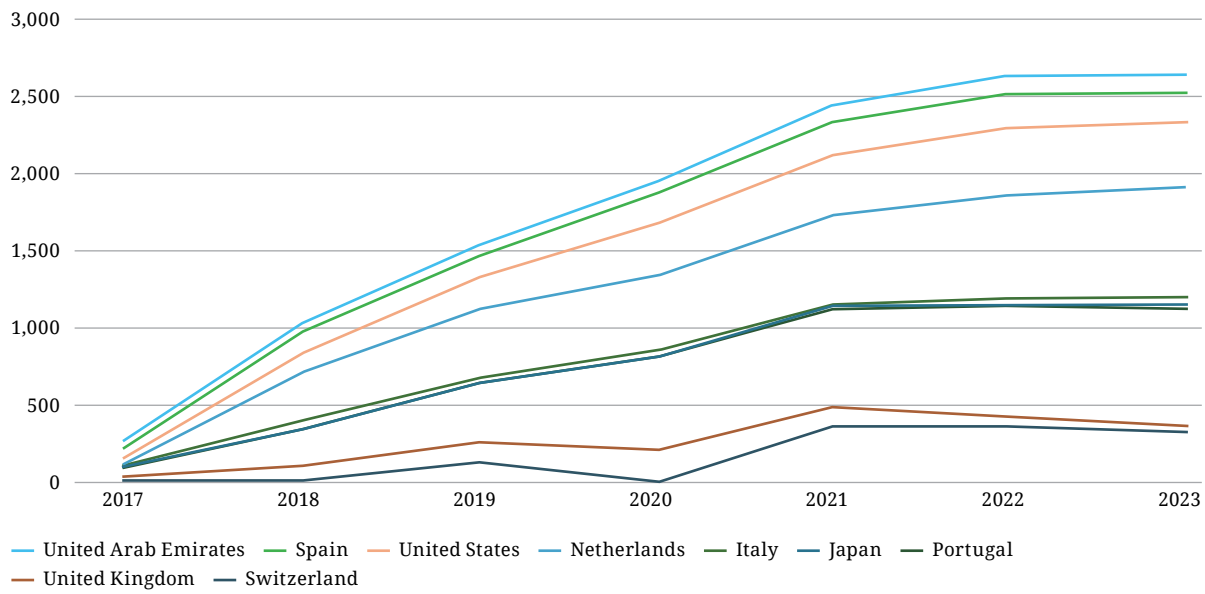


Table 12 – Number of enrollments by country

	2017	2018	2019	2020	2021	2022	2023
Angola						12	18
Argentina		0					
Belgium		37	56	94	55	38	16
China			48	43	50	22	15
Colombia							4
Germany	77	101	117	131	100	69	39
Ireland		45	59	88	49	29	10
Italy						29	64
Japan	12	333	440	474	575	674	703
Netherlands		29	38	50	26	18	7
Portugal	49	135	201	346	399	426	440
Spain	35	102	125	197	123	75	30
Switzerland	27	48	57	69	114	125	136
United Arab Emirates			124		353	353	318
United Kingdom	65	124	147	196	202	220	166
United States	60	237	387	603	640	710	783
Uruguay		43	60	39	22	10	16
Total	325	1,234	1,859	2,330	2,708	2,810	2,765

Chart 23 – On-site support hubs by country

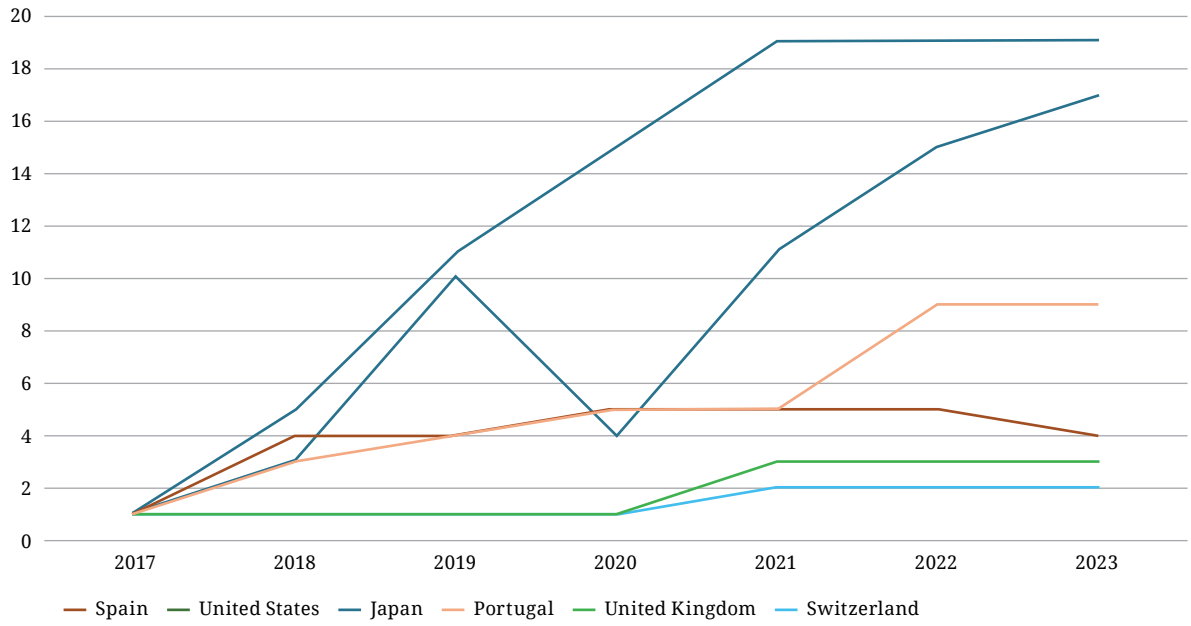


Table 13 – On-site support hubs by country

	2017	2018	2019	2020	2021	2022	2023
Angola	0	0	0	0	0	1	2
Argentina	0	1	0	0	0	0	0
Belgium	0	1	1	1	1	1	1
China	0	0	1	1	1	1	1
Colombia	0	0	0	0	0	0	1
Germany	1	1	1	1	1	1	1
Ireland	0	1	1	1	1	1	1
Italy	0	0	0	0	0	1	1
Japan	1	3	10	4	11	15	17
Netherlands	0	1	1	1	1	1	1
Portugal	1	3	4	5	5	9	9
Spain	1	4	4	5	5	5	4
Switzerland	1	1	1	1	2	2	2
United Arab Emirates	0	0	1	0	1	1	1
United Kingdom	1	1	1	1	3	3	3
United States	1	5	11	15	19	19	19
Uruguay	0	1	1	1	1	1	1

Chart 24 – Total number of HEIs by country

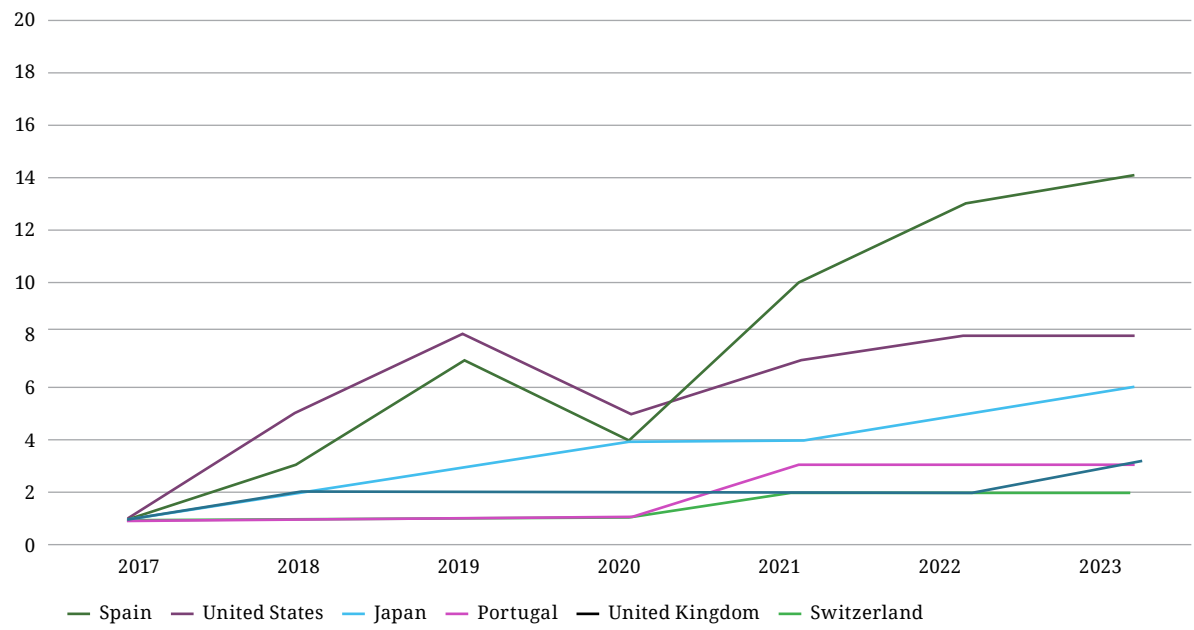


Table 14 – HEIs

	2017	2018	2019	2020	2021	2022	2023
Angola	0	0	0	0	0	1	2
Argentina	0	1	0	0	0	0	0
Belgium	0	1	1	1	1	1	1
China	0	0	1	1	1	1	1
Colombia	0	0	0	0	0	0	1
Germany	1	1	1	1	1	1	1
Ireland	0	1	1	1	1	1	1
Italy	0	0	0	0	0	1	1
Japan	1	3	7	4	10	13	14
Netherlands	0	1	1	1	1	1	1
Portugal	1	2	3	4	4	5	6
Spain	1	2	2	2	2	2	3
Switzerland	1	1	1	1	2	2	2
United Arab Emirates	0	0	1	0	1	1	1
United Kingdom	1	1	1	1	3	3	3
United States	1	5	8	5	7	8	8
Uruguay	0	1	1	1	1	1	1

Chart 25 – Countries with offers in municipalities

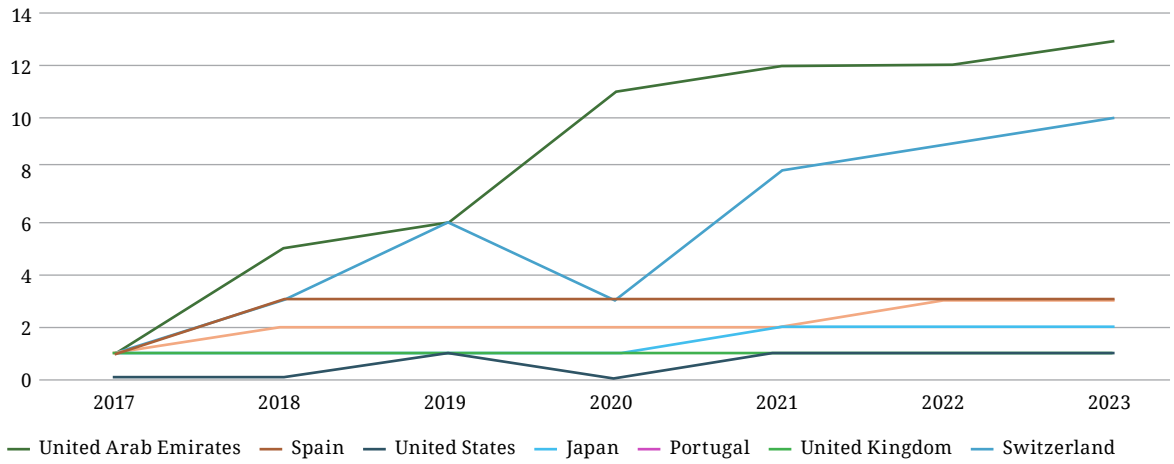


Table 15 – Countries with offers in municipalities

	2017	2018	2019	2020	2021	2022	2023
Angola	0	0	0	0	0	1	2
Argentina	0	1	0	0	0	0	0
Belgium	0	1	1	1	1	1	1
China	0	0	1	1	1	1	1
Colombia	0	0	0	0	0	0	1
Germany	1	1	1	1	1	1	1
Ireland	0	1	1	1	1	1	1
Italy	0	0	0	0	0	1	1
Japan	1	3	6	3	8	9	10
Netherlands	0	1	1	1	1	1	1
Portugal	1	2	2	2	2	3	3
Spain	1	3	3	3	3	3	3
Switzerland	1	1	1	1	2	2	2
United Arab Emirates	0	0	1	0	1	1	1
United Kingdom	1	1	1	1	1	1	1
United States	1	5	6	11	12	12	13
Uruguay	0	1	1	1	1	1	1

About MercadoEdu

Since 2012, **MercadoEdu** has been the leading platform for market analysis and competitive intelligence in the Brazilian educational sector. Our solution transforms complex data into actionable insights, helping institutions, investors and managers to:

- anticipate trends based on georeferenced data, historical regressions comparative analysis.
- optimize strategies using the largest tuition database in the sector (more than 4 million offers updated weekly).
- reduce risks by providing reliable indicators, extracted from public sources and processed with our technology.

How do we do this? With:

- Unified data storage, integrating the main public databases in the educational sector (institutions, students, courses, educators).
- Intuitive tools, enabling users to create customized charts, reports and maps with just a few clicks.
- Advanced benchmarking, enabling comparison with performance, tuition prices and student recruitment metrics of Brazilian competitors.
- One single platform, combining official data, geographic intelligence and the largest tuition database (updated weekly).

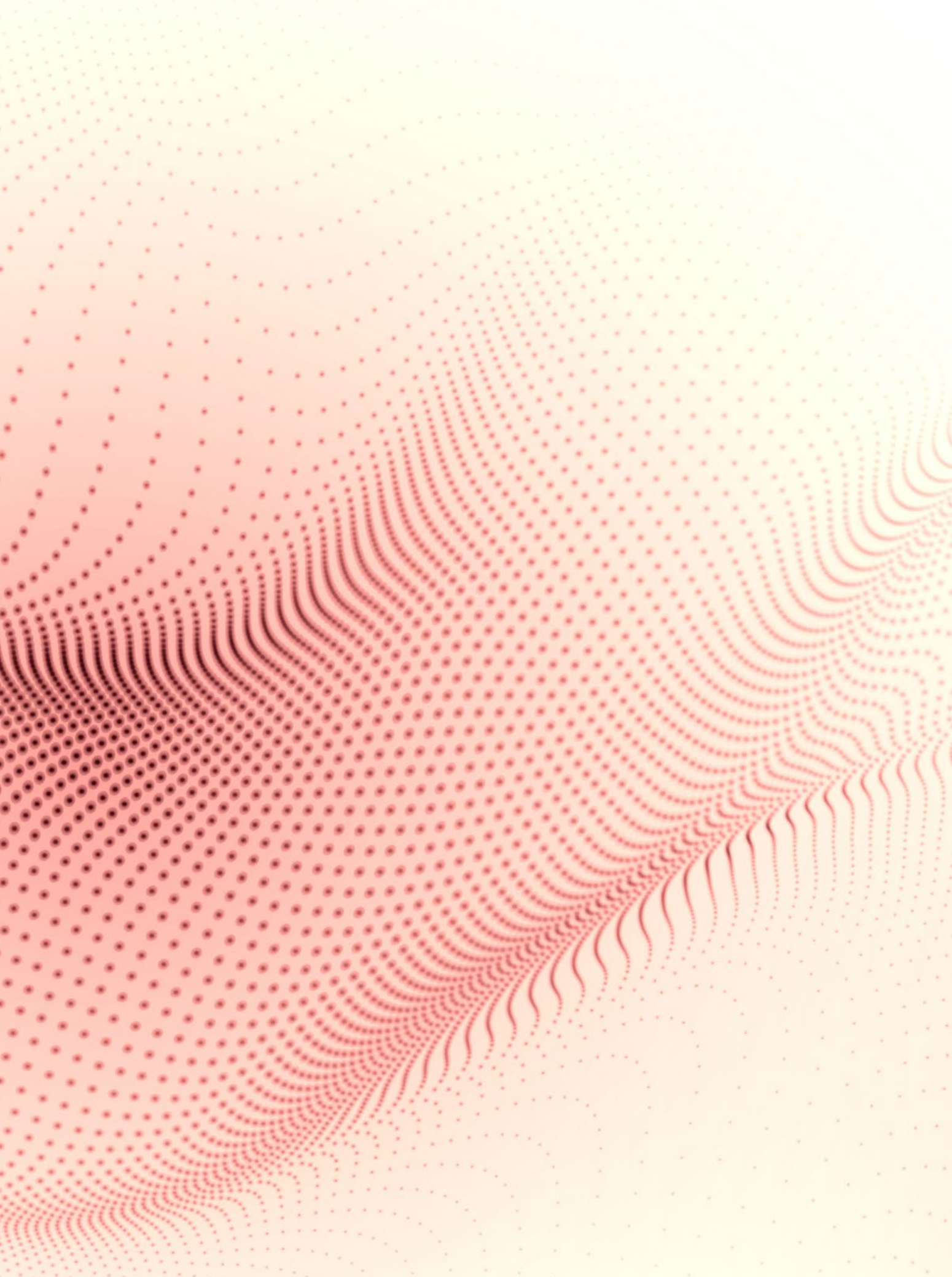
About the author

Leonardo Labres has over 20 years of experience in the educational sector. He holds an associate degree in Marketing, he has worked as a professor in the technology segment, as well as a tax analyst, advisor and marketing analist (focusing on web development and digital communication). For the past 13 years, he has been the partner and commercial director at MercadoEdu, serving over 200 HEIs.

Part 5

Crátilo Group: strategic leadership and innovation in educational institution management

Bruno A. A. Barreto



Within the dynamic and increasingly complex scenario of higher education, Crátilo Group has positioned itself as a strategic entity specialized in high-performance management for higher education institutions (HEIs). Supported by a team of executives and specialists with over two decades of innovative experiences, Crátilo Group stands out in areas such as university governance, market intelligence and educational marketing.

Our core mission is to identify, develop and implement business opportunities that ensure our clients remain aligned with the educational market's continuous transformations.

All the brands within Crátilo Group share a unified objective: to provide customized and integrated solutions tailored to the specific needs of each institution. These solutions aim to support institutions facing challenges related to student recruitment and retention as well as financial sustainability. Our commitment to excellence and innovation is reflected in a results-oriented approach that optimizes each institution's goals and specific needs, promoting sustainable and adaptive growth.

Crátilo Group's pillars of excellence

The Crátilo Group's operations are anchored in strategic pillars that ensure value and differentiation in the educational market:

- Data-driven market intelligence: Crátilo Group employs a data-driven methodology, utilizing analytical models to guide strategic decisions and continuously realign market practices. We maintain an ongoing cycle of in-depth research, accurate diagnosis and predictive analysis, ensuring our strategies remain both effective in the short term and constantly updated and adapted to emerging trends.
  This approach allows us to provide actionable insights that are transformed into practical actions. These interventions support HEIs in identifying growth opportunities, optimizing student recruitment funnels, predicting student behavior and mitigating potential risks. Our analyses encompass market segmentation, competitive analysis, digital marketing optimization and course demand forecasting, offering a 360-degree perspective on the educational ecosystem.
- On-demand operation: Through personalized services and exclusive engagement models, our solutions adapt flexibly to the specific needs of each partner. We offer a modular structure that allows institutions to select only essential services, optimizing resources, minimizing fixed costs and promoting operational efficiency.
  This on-demand customized model enables institutions to select and implement solutions that genuinely align with their strategic and operational goals. Whether supporting a one-time recruitment initiative, a financial restructuring project or implementing a new educational methodology, our agility and scalability are differentials, enabling fast and precise responses to market demands and ensuring that each investment yields maximum return.
- Seasoned executives with demonstrated leadership: Our team comprises seasoned executives with demonstrated leadership in administrative and financial governance, educational marketing, commercial intelligence and academic management. With decades of experience in multiple educational institutions–including large groups, specialized colleges and basic education redes–, we offer a broad and differentiated knowledge regarding sector's challenges and best practices.
  This experience is fundamental for anticipating complex issues, mitigating risks, implementing innovative and long-term sustainable solutions and guiding HEIs through digital and cultural processes, in order to ensure their relevance and competitiveness.

Organization structure and integrated value proposition

The Crátilo Group's organizational structure was designed to maximize value delivery to HEIs through a portfolio of specialized companies. Each company

focuses on complementary elements of the educational ecosystem, operating in synergy to provide a holistic and integrated approach. All brands share a common objective: to qualify our clients not only to effectively recruit and retain new students but also to strengthen financial sustainability, optimize academic management and achieve long-term success in an increasingly competitive scenario.

- Caimán Digital: A digital marketing specialist, Caimán Digital develops attraction and conversion strategies that enhance student recruitment through high-performance digital channels. Its services include advertising campaigns on platforms such as Google Ads e Meta Ads, paid traffic management, search engine optimization (on-page, off-page and technical SEO), website development and optimization with an emphasis on user experience (UX) and conversion, content marketing, marketing automation and customer relationship management (CRM). The primary objective is to maximize return on investment (ROI) and optimize lead conversion through detailed sales funnel analysis and results attribution.
- Crátilo Educacional: A pioneer in the chief marketing officer as a service (CMOaaS), the Crátilo Educacional leads marketing and commercial management strategies for HEIs. This innovative model provides HEIs with access to senior marketing leadership–integrated into the team–without the need for permanent hires, offering both agility and expertise. Its pillars of excellence encompass the execution of strategic communication and sales initiatives, from brand positioning, reputation management and training of admission teams to optimization of enrollment processes. The objective is to ensure measurable outcomes and financial sustainability of its partners, focusing on educational marketing, commercial intelligence and optimization of the student's journey.
- B2Edu: Operating in the fields of governance and market intelligence, B2Edu provides complete solutions for enhancing growth and efficiency of HEIs and basic education institutions. Its work ensures institutional stability and the capacity to adapt to market changes. The main services include corporate and academic governance consulting, long-term strategic planning and in-depth market intelligence. These services encompass competitive analysis, trends identification, development of new courses and programs and feasibility studies for expansion, all adapted to maximize operational impact and efficiency and ensure regulatory compliance.

Crátilo Group positions itself as a pillar of innovation and efficiency within the Brazilian educational market. Guided by a quality-driven approach that covers from strategic planning to tactical execution, the organization continuously seeks to create opportunities for its partners, enabling them to align with the best practices, technologies and innovations of the global market.

Backed by seasoned executives, clear strategic visions and commitment to outcomes, each brand offers solutions that enhance the capacity of educational institutions of thriving in a dynamic and competitive environment. We invite institutions to discover how Crátilo Group can assist them in a sustainable and innovative manner.

Crátilo Group's data-driven methodology: transforming data into action

In the current educational scenario, market intelligence and data analysis play a critical role in the elaboration of effective strategies. The Crátilo Group has established itself as a leader in this segment, using a data-driven methodology that goes beyond mere information gathering, transforming data into actionable and valuable insights.

This systematic approach guides HEIs in both strategic planning and operational execution, enabling evidence-based decisions rather than relying solely on intuition. The continuous cycle of data collection, analysis, interpretation and application is the foundation for optimizing performance and sustainability in the educational market.

Products and research capacities

The Crátilo Group stands out as a reference in educational segment research. Through a rigorous methodology, our studies not only reinforce the market leaders' position of HEIs but also foster innovation and sustainable success.

The capacity to transform raw data into actionable knowledge, ensuring data integrity and compliance with the Brazilian Data Protection Law (LGPD), positions the Crátilo Group as a partner for institutions aiming to enhance their student recruitment and retention strategies, adapt swiftly to market changes and thrive in an increasingly competitive educational environment.

The **Crátilo Group Research Institute** is a vital resource for educational managers seeking to understand market dynamic and anticipate trends. Our studies comprise national, regional and institutional contexts, providing a comprehensive perspective on market potential, competitive dynamics and growth opportunities.

Through a combination of quantitative and qualitative methodologies based on both primary (directly collected) and secondary (public and private sources) data, we ensure in-depth analyses with statistical validity. The research focuses on the following areas:

- National and regional market contexts: We analyze macroeconomic (demographics, per capita income, governmental policies) and sector-specific (regulation, technologic innovations) trends, including the historical behavior of on-site and distance learning (DL) modalities. Using time series analysis and statistical forecasting, we identify opportunities for expansion, portfolio optimization and performance enhancement, as well as potential risks.
- Entrant profiles and enrollments: We develop detailed profiles of prospective students, segmenting them by demographic and socioeconomic data, decision-making motivation, learning preferences and digital proficiency. This in-depth analysis, often complemented by cluster analysis, reveals distinctions between educational modalities and their operational impact, supporting the personalization of marketing campaigns and the adaptation of educational offerings.
- Competitive analysis: We produce comprehensive reports on key trends and competitive dynamics among educational players. These analyses include the mapping of pricing strategies, marketing investments, new program launches, brand reputation and the competitors' student satisfaction. We emphasize the identification of segments in expansion, the assessment of course volume by area and the analysis of the market share, enabling HEIs to position themselves strategically.

The studies include five-year projections, including predictive modeling and scenario planning to present growth forecasts (optimistic, realistic, pessimistic), that enable proactive and data-driven decision-making, mitigating risks and maximizing ROI.

The Crátilo Group shares its expertise to promote discussions and develop the educational segment. Its high-value strategic studies have become market references, and three of them are disclosed free of charge:

1. ***Tracking Educacional Crátilo***: This is a detailed quarterly performance report focusing on the main educational groups listed on the B3. The study maps financial performance–including revenue, earnings before interest depreciation and amortization (EBITDA) and profit margins–and student recruitment metrics, such as enrollment and conversion rates, using data from public reports and market communications.
   This analysis enables HEIs to benchmark their outcomes against competitors, identify best practices and refine their marketing and sales investment strategies. The 2025 first-quarter report, for example, confirms the value of data as a competitive advantage.
   In its eighth edition, the report reveals that the sector has resilience; however, the regulatory pressure demands a shift in the mindset and business model. According to the report, HEIs that stands out combine certain aspects: financial discipline–shorter average collection period (ACP)–, efficient marketing, student retention and differentiated portfolios.

While Vitru allocates 20% of its net revenue to marketing, Ser Educacional operates with 5.8%. Both groups have achieved growth, but through distinct strategies–raising important questions regarding efficiency, positioning and ROI.
In DL, dropout rates exceed 20% for more than one group. For attentive readers, the report points to potential ways of mitigating these numbers without compromising profit margin or base growth.
Professionalized management and the use of market data are becoming essential conditions for higher education sustainability, especially in DL segment.

2. ***Panorama da Captação Brasileira***: Conducted half-yearly, this study is based on in-depth qualitative interviews with marketing managers at HEIs across Brazil. Through thematic and content analysis, it provides insights into satisfaction levels with recruitment tools, operational challenges and strategic views for upcoming cycles.
This report presents detailed data on student recruitment costs by channel and educational modality and examines how geographic, economic and cultural contexts affect HEIs operations. These elements may influence, for instance, decisions on marketing channels, program relevance and regional pricing strategies.
In the report for the first semester (25.1), the research revealed that, in the DL segment, only 21% of HEIs achieved their recruitment goals; 67% of respondents reported student recruitment costs of up to R$ 500.
These findings highlight clear opportunities to reduce costs and improve DL's financial feasibility. This type of market intelligence guides institutions to optimize their budget allocation by adjusting channels and external partnerships to maximize ROI.

3. ***Educação Superior Particular nas Regiões Brasileiras***: This annual report analyzes indicators from the Brazilian Higher Education Census–the official source of educational data in the country. This study highlights, for example, the crucial role of DL in expanding access to education in historically underserved regions, identifying gaps between supply and demand.
Through georeferenced analysis and descriptive statistics, this study provides insights into regional trends, the overall growth of enrollments in higher education and the impact of DL in reducing educational inequalities. These findings support HEIs in decisions regarding on-site support hubs expansion, new courses and programs launching and strategic partnerships.

The Crátilo Group's data-driven research and analysis continue to shape the future of education, promoting a scenario in which quality, accessibility and efficiency are priorities. Our commitment is to continue advancing the sector by offering not only information but also strategic solutions with significant impact in both DL and on-site modalities, contributing to the growth and excellence of our partner institutions.

Analyses and impacts of distance learning: a transformation vector

DL has proven to be a key vector in expanding access to higher education in Brazil, reshaping the educational scenario. In recent years, DL's growth not only doubled the number of private HEIs entrants, reaching 7.9 million enrollments in 2023, but also significantly expanded its educational reach, from 1.6 to over 3.3 thousand cities with DL on-site support hubs.

This progress is fueled by increasing recognition of flexible and accessible learning models–essential to the democratization of education. Through platforms, interactive resources and both synchronous and asynchronous communication tools, technology has been the pillar of this expansion, enabling DL to overcome geographic and temporal barriers and making higher education a reality for a broader and more diverse population.

The new regulatory framework for DL also presents a challenge for HEIs by requiring a reassessment of programs structure and operation as well as a more

rigorous approach in the pedagogical quality and technological infrastructure. Adapting to these new regulations is essential to ensure quality and accessibility; therefore, it is important to use the two-year implementation window to invest in technology (such as simulation platforms, virtual laboratories and proctoring tools), teacher training in active methodologies and online pedagogy and pedagogical innovation (including gamification and personalized learning).

Compliance with these new regulatory guidelines is not merely a legal requirement but also a strategic opportunity for HEIs to differentiate themselves in the market by offering a superior educational experience, more closely aligned with the student expectations and labor market demands.

Market intelligence and student recruitment strategies in distance learning

Studies conducted by the Crátilo Group demonstrate that market intelligence is essential to strengthening the position of HEIs in the DL segment. By integrating data from multiple sources–including demographic and socioeconomic information, competitive analysis, student behavior and course demand–, our analyses offer an accurate perspective of growth opportunities.

This data-driven approach is fundamental to refine student recruitment strategies and optimize marketing investments, ensuring that resources are allocated efficiently to maximize ROI.

The strategic use of digital tools, such as SEO for organic visibility, paid traffic campaigns–search engine marketing (SEM) and social media–with accurate audience targeting and CRM systems for lead nurturing and sales funnel management, has been effective in improving outcomes. This is evidenced by the *Panorama da Captação Brasileira* research, in which 67% of participating institutions adopting these practices reported student recruitment costs of up to R$ 500, highlighting the efficiency of a digital and data-driven approach.

Data analysis and strategic contributions

Cross-referencing data from the 2023 Brazilian Higher Education Census with internal reports from the Crátilo Group reveals significant patterns for developing institutional strategies within DL. For instance, the expansion of DL on-site support hubs in small and medium-sized cities stands out, especially in inland regions of the Southeast e Northeast, as these areas account for a significant portion of entrants in the modality.

The analyses also reveal relevant discrepancies between enrollment increase and the financial sustainability of operations. While the number of entrants continues to rise, many HEIs face challenges in maintaining satisfactory student retention and performance rates. The correlation among average ticket, dropout and recruitment costs, when assessed at the microregional level, becomes an essential tool for planning.

Another point of attention is the distribution of marketing and sales investments–according to the *Tracking Educacional Crátilo*, large groups allocated between 5% and 22% of their total net revenue in these aspects. Institutions that apply intelligence to the allocation of these resources, focusing on the high-performing regional channels, show better outcomes in lead conversion and in expanding the active base.

Final considerations

In recent years, DL has established itself as a vector of democratization and expansion of higher education in Brazil. However, its success relies on more than the massive offer or the access flexibility–it increasingly requires institutions to adopt data-driven decision-making.

The Crátilo Group's studies demonstrate that market intelligence can transform how HEIs plan, invest and grow. The simulation presented reinforces that,

even in challenging scenarios, it is possible to achieve significant outcomes through consistent analyses and regionalized focus. Combining public data and proprietary intelligence provides not only insights into the present but also the capacity to anticipate the future.

Observing DL expansion, it is fundamental that the sector also advances in quality, student retention and employability. May data inspire action–and may that action be increasingly strategic and responsible considering the social impact of education.

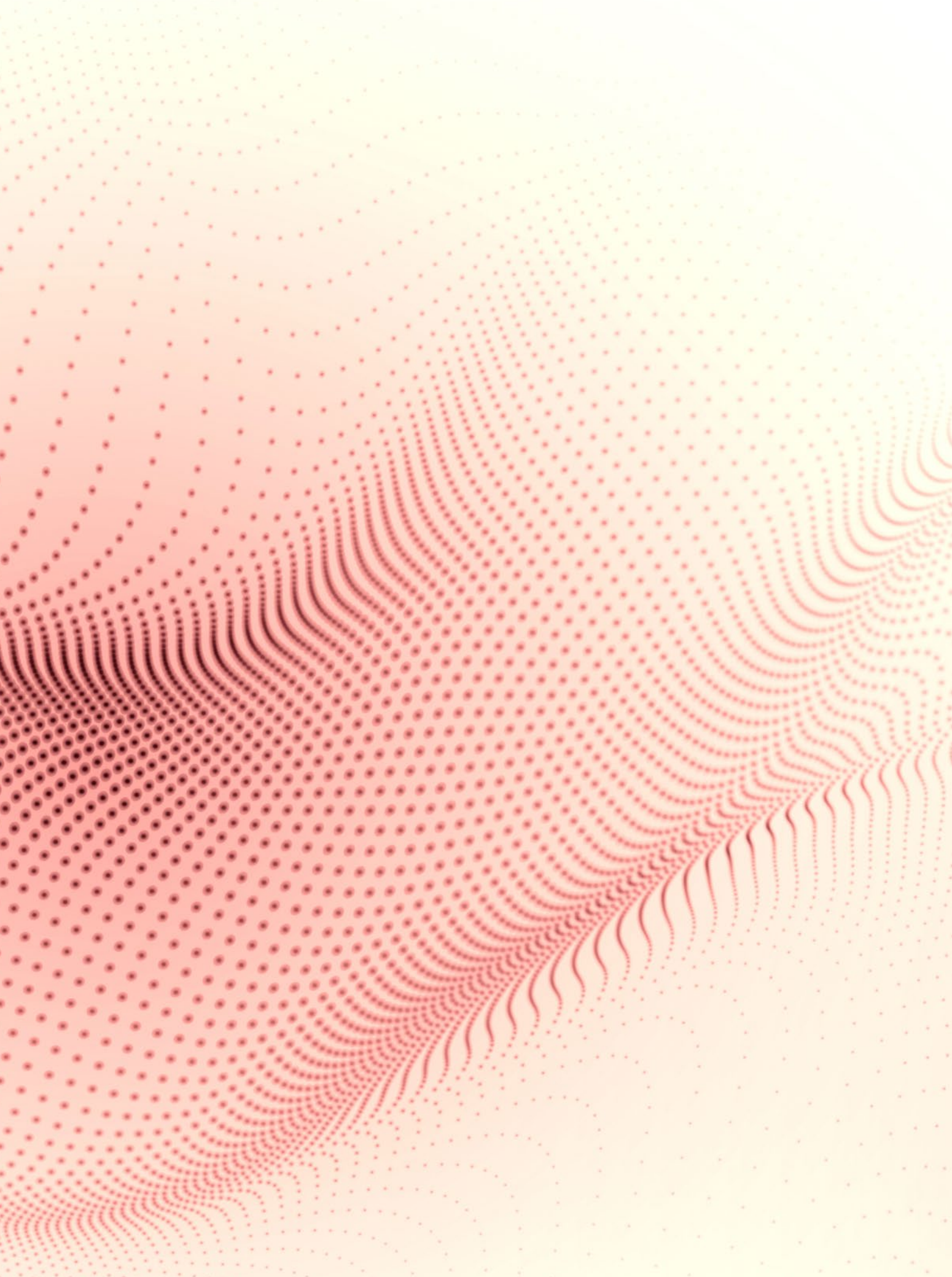
About the author

Bruno A. A. Barreto is the founder and CEO of the Crátilo Group. He holds a doctorate degree in Communication and an MBA in University Management. He has 20 years of experience as an executive from this segment.

Part 6

Cetic.br and NIC.br: 20 years of research and indicators on the dissemination of digital technologies across multiple sectors of society

Daniela Costa



The Regional Center for Studies on the Development of the Information Society (Cetic.br)[1] is a research center from the Brazilian Network Information Center (NIC.br)[2], associated with the Brazilian Internet Steering Committee (CGI.br)[3], responsible for producing indicators, statistics and studies on the access, usage and adoption of the internet and for publishing periodic analyzes and information concerning the development on the network within the country.

The CGI.br was created in 1995 by the Ministry of Science and Technology and the Ministry of Communications, attributed to coordinate and integrate the initiatives related to the internet in Brazil. This body is responsible for establishing strategic guidelines related to its use and development, coordinating and integrating all internet services initiatives in the country and promoting technical quality, innovation and dissemination of the services offered.

The principles of multisectoralism and transparency are the foundation of the internet governance model adopted by the CGI.br. According to it, all sectors of society participate in the decision-making on an equal footing. The Decree n. 4,829 of September 3rd, 2003[4], established the composition of the CGI.br, consisting of nine representatives from the governmental sector; four from the corporate sector; four from the third sector; three from the scientific and technological community; and one internet expert.

In the early 2000s, the intense expansion of the internet in the country led the CGI.br to transfer the functions previously executed by the São Paulo Research Foundation (Fapesp) in administering the country code top-level domain (ccTLD) ".br" to an independent institution. Thus, in 2003, the NIC.br was formally established and, in 2005, it became the institution responsible for managing the ".br" domain names registration.

The NIC.br is a non-profit civil entity of private law. In addition to implementing the decisions and projects of the CGI.br and coordinating the ".br" domain names registration (Registro.br), this body undertakes other responsibilities, led by its research centers: studying, responding to and addressing digital security incidents in Brazil (CERT.br); studying and researching network technologies and operations (Ceptro.br); implementing and operating the internet exchange points (IX.br); facilitating the Brazilian community participation in the global development of the web and providing support for the elaboration of public policies (Ceweb.br); hosting the W3C office in Brazil (W3C Capítulo São Paulo); and monitoring the development and implementation of artificial intelligence based systems in various sectors of society (Brazilian Observatory for Artificial Intelligence – OBIA). Finally, the responsibility for producing indicators on the dissemination of information and communication technologies (ICT) across various social sectors was assigned to the Cetic.br.

Since 2005, the Cetic.br has conducted quantitative and qualitative studies, based on methodologies and national and international frameworks of reference, providing free access to periodic and comparable data concerning digital inclusion and the impacts of digital transformation on public and private organizations. This important role in expanding the access to information about the country's digital ecosystem led the Cetic.br to be recognized as a Category 2 Centre of the United Nations Educational, Scientific and Cultural Organization (Unesco), broadening the promotion of measurement methodologies relating these topics also in Latin American and Caribbean countries, as well as in lusophone countries in Africa.

The Cetic.br conducts annually the surveys *ICT Households*, investigating Brazilians with 10 years old or older; *ICT Kids Online Brazil*, with children and teenagers between 9 and 17 years old; *ICT in Education*, interviewing students, teachers, education administrators and school managers in primary and secondary educational institutions; *ICT in Health*, investigating the adoption of digital technologies by healthcare facilities and by professionals as doctors and nurses; and *ICT Enterprises*, conducted in small, medium and large enterprises with 10 or more employees. This institution is also responsible for the biennial and triennial studies *ICT Electronic Government*, investigating the adoption of digital technologies by the public sector (federal, state and municipal bodies);

1 More informations are available at: <https://cetic.br/>.
2 More informations are available at: <https://nic.br/>.
3 More informations are available at: <https://cgi.br/>.
4 More informations are available at: <https://www.planalto.gov.br/ccivil_03/decreto/2003/d4829.htm>.

ICT in Culture, collecting data of Brazilian cultural facilities; *ICT Providers*, mapping internet services providers; and *ICT Nonprofit Organizations*, conducted in civil society organizations.

Both *ICT Households* and *ICT in Education* measure the Brazilians participation in distance learning (DL) modality initiatives. The *ICT Households: Survey on the Use of Information and Communication Technologies in Brazilian Households*[5] is a sample-based study conducted since 2005 for mapping the access to ICT in permanent private Brazilian households and its use by individuals with 10 years old or older. The survey adheres to internationally recognized methodological standards and indicators, particularly those established by the Partnership on Measuring ICT for Development–a multisectoral initiative led by the International Telecommunication Union (ITU)–such as the *Manual for Measuring ICT Access and Use by Households and Individuals*.

The research sample is based on the Brazilian Population Census and the Continuous Nacional Household Sample Survey (Continuous PNAD), conducted by the Brazilian Institute of Geography and Statistics (IBGE). Data for the *ICT Households* survey are collected through in-person interviews conducted in households located in both urban and rural areas.

The *ICT in Education: Survey on the Use of Information and Communication Technologies in Brazilian Schools*[6] is also a sample-based study, conducted since 2010, with the purpose of investigating the offer of digital technologies in public (municipal, state and federal) and private primary and secondary schools, located both in rural and urban areas. The survey investigates how these technologies are used by students and educators in teaching and learning activities, as well as by school administrators in management practices. Additionally, it includes indicators on access to, use of, and engagement with digital technologies by students and educators outside the school environment, aiming to understand the inequalities, opportunities and challenges related to the integration of digital resources into pedagogical practices and student learning development.

The survey sample is based on the School Census on Basic Education, conducted by the Anísio Teixeira National Institute for Educational Studies and Research (Inep), and includes active schools offering regular primary (from the 4th grade onward) and secondary education. In odd-numbered years, data collection is carried out by telephone, through computer-assisted telephone interviewing (CATI), and involves only school administrators. In even-numbered years, data is collected through in-person interviews, using computer-assisted personal interviewing (CAPI), with students, teachers, pedagogical coordinators and school administrators from the primary and secondary education selected for the sample.

Brazilians' acess and participation in distance learning programs

According to the 2024 *ICT Households*[7], 18% of internet users with 10 years old or older had participated in DL courses during the three months preceding the survey, which was conducted between March and August 2024.

In 2008, when the survey first collected this data, using a response item worded differently from later editions ("taking online courses"), 10% of internet users responded affirmatively to the survey.

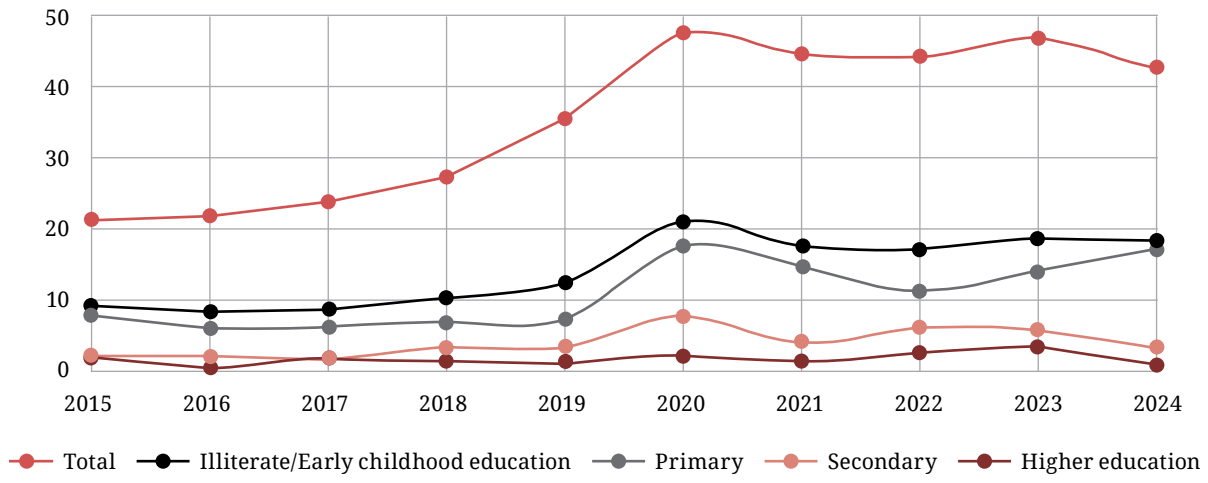
In 2020, during the COVID-19 pandemic, 21% of internet users reported taking DL courses. The highest proportion was among internet users with higher education: 48% indicated that they engaged in this type of activity through the web. After this period, the proportions remained relatively stable, though higher than those registered previously (Chart 26).

5 More informations are available at: <https://cetic.br/pt/pesquisa/domicilios/>.

6 More informations are available at: < https://cetic.br/en/pesquisa/educacao/>.

7 The tables presenting the *ICT Households*' research indicators are available at <https://cetic.br/en/pesquisa/domicilios/indicadores/>.

Chart 26 – Internet users who studied in DL modality within the 12 months preceding the survey



Source: CGI.br. *ICT Households*. Own elaboration.

According to a study conducted in 2020 to measure the use of digital technologies during the implementation of emergency remote teaching[8], 74% of internet users with 16 years old or older enrolled in schools or universities had attended, before the COVID-19 pandemic, full on-site courses; 15% had taken hybrid courses–offered through on-site modality but complemented with remote classes and activities–and 12% had participated in full DL courses. However, in 2020, during the pandemic, 87% of respondents reported that classes or educational activities had begun to be offered remotely.

Furthermore, 35% of internet users with 16 years old or older have attended open DL courses. Among those respondents, 71% took training and professional development courses; 44% participated in entertainment and leisure courses; 40% attended language courses; 26% studied in preparatory courses for exams; and 13% took university preparation courses. Three-fifths (59%) of internet users who attended these courses stated that they had begun them during the COVID-19 pandemic.

The widespread dissemination of digital technologies in society, along with the expansion of platforms, applications and tools for conducting remote activities, has created new spaces for accessing educational activities in the post-pandemic period. Although access to education increased during and after the pandemic, these opportunities are still not available to the entire population.

The history of DL offers numerous examples of its importance in expanding access to education for vulnerable groups: in supporting the literacy and the education of young people and adults who were unable to attend school at the appropriate age; in offering vocational training courses; and in enabling access to education for hospitalized students and individuals in institutions responsible for socio-educational measures, among other cases. These initiatives were carried out mainly through correspondence, radio, and television[9].

However, the data collected by *ICT Households*' survey indicate that participation in DL courses based on digital technologies–especially those requiring an internet connection–is more frequent among other segments of the population. According to indicators from the 2024 survey, individuals who most frequently

8 CGI.BR – Comitê Gestor da Internet no Brasil. **Painel TIC COVID-19**: Pesquisa sobre o uso da Internet no Brasil durante a pandemia do novo coronavírus – 3ª edição: ensino remoto e teletrabalho. 2020. Available at: <https://cetic.br/pt/publicacao/painel-tic-covid-19-pesquisa-sobre-o-uso-da-internet-no-brasil-durante-a-pandemia-do-novo-coronavirus-3-edicao/>. Accessed on: June 25th 2025.

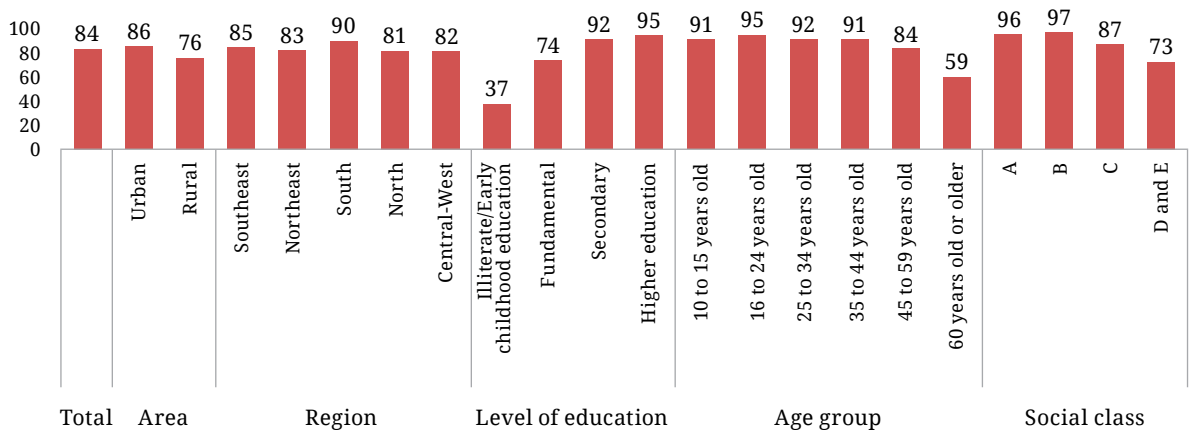
9 MOORE, M. **Educação a distância**: uma visão integrada. Boston, EUA: Cengage, 2007.

report participating in DL courses are those living in urban areas (19%), aged between 16 and 44–particularly between 16 and 24 years old (27%)–, with monthly incomes above five minimum wages (32% among those earning between five and ten minimum wages, and 51% among those earning more than ten), and predominantly belonging to socioeconomic class B (38%).

The predominance of regular DL for the higher education level may be a determining factor in the profile of its students–as this group would exclude children and adolescents, as well as segments of the population not enrolled in higher education programs.

Another important consideration involves the inequalities in access to the internet and digital technologies across the country, which can hinder the participation of individuals from specific sociodemographic groups in initiatives that rely on these resources. Although the proportion of individuals with 10 years old or older with internet access has increased over the past decade–from 58% in the 2015 survey to 84% in the 2024 edition–, significant disparities remain. These are particularly evident in rural areas (76%), among individuals with lower levels of education (37% among those who are illiterate and 74% among those with up to primary education), members of socioeconomic classes D and E (73%), and individuals over the age of 60 (59%) (Chart 27). In absolute numbers, 29 million Brazilians with 10 years old or older are still not internet users.

Chart 27 – Internet users



Source: CGI.br. *ICT Households*. Own elaboration.

Furthermore, the data reveal inequalities even among individuals who are already connected to the internet. In 2024, a study analyzing access to ICT in Brazil considered the conceptual framework of meaningful connectivity[10], which evaluates the quality and conditions of the connection. According to this concept, four key dimensions must be considered to understand disparities in digital access among users: 1) financial accessibility–the cost of connectivity and the conditions of mobile access; 2) diversity of devices used to access internet;

10 CGI.BR–Comitê Gestor da Internet no Brasil. **Conectividade significativa**: propostas para medição e o retrato da população no Brasil. 2024. Available at: <https://cetic.br/pt/publicacao/conectividade-significativa-propostas-para-medicao-e-o-retrato-da-populacao-no-brasil/>.

3) connection quality; and 4) environment, including frequency and variety of usage locations. When these aspects are taken into account, only 22% of the Brazilian population with 10 years old or older would qualify as having meaningful connectivity.

These numbers highlight the importance of understanding the contexts in which different social groups access and use ICT; such insights are essential for planning strategies to expand access to high-quality and inclusive educational initiatives, particularly in the segment of DL.

The distance learning in the continued education of basic education teachers

Understanding the diversity of individual circumstances becomes increasingly relevant in the context of public policies. This is the case, for example, of continued professional development opportunities for basic education teachers. According to data from the *ICT in Education*[11], 56% of teachers working in elementary and secondary schools participated in continued education initiatives focused on the implementation of ICT into teaching and learning activities within 12 months preceding the survey -50% among teachers in municipal schools, 63% in state schools, and 50% in private schools (Chart 28).

11 The indicators mentioned are available at: <https://cetic.br/pt/pesquisa/educacao/indicadores/>.

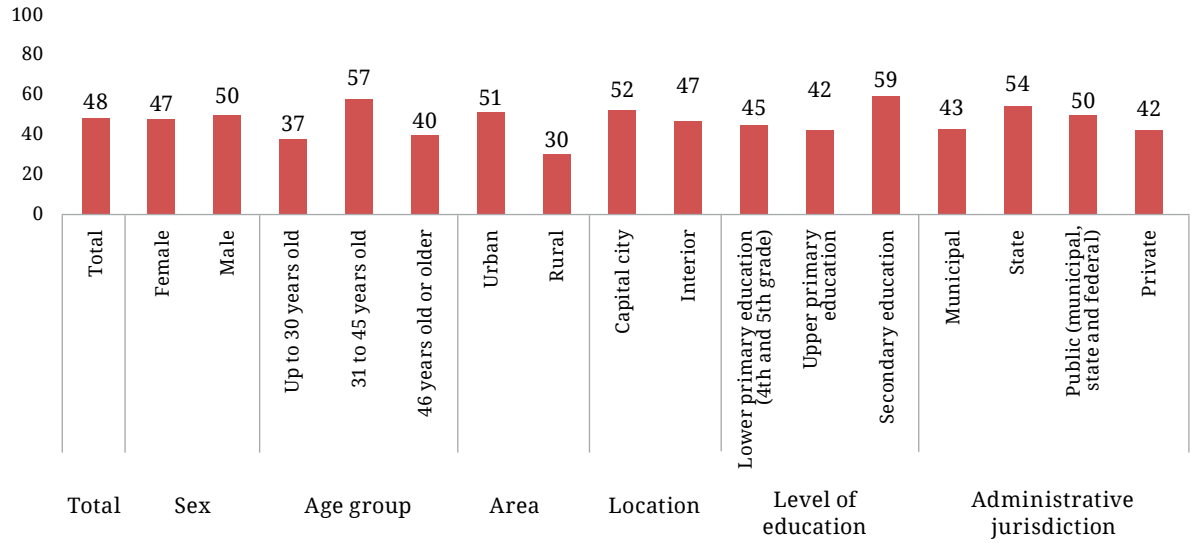
According to teachers in municipal (42%) and state (49%) schools, their training was provided by a government entity, such as the Secretary of Education. Only 14% of municipal teachers and 13% of state teachers reported that they had paid for their continued education using personal resources.

Among teachers working in private schools, 38% reported participating in training initiatives offered by their own institution. However, private school teachers (30%) also report more frequency in accessing training provided by private companies compared to public school teachers (12%).

Higher education institutions were cited as training providers by teachers amongst all institutional types in similar proportions–17% among teachers in municipal schools, 22% in state schools, and 20% in private schools–, highlighting the significant role that HEIs perform in developing policies implemented in basic education.

Among all teachers surveyed, 48% reported participating in these initiatives through DL, 24% in on-site modality, and 23% in hybrid formats combining both on-site and DL components. Participation in on-site training activities was most frequently reported among private school teachers (32%), while participation in remote activities was highest among state school teachers (54%). There are also differences in proportion concerning locations: 51% of teachers in urban areas reported participating in remote training, compared to 30% of those in rural areas. Teachers aged 31 to 45 also reported more participation in DL training initiatives.

Chart 28 – Educators who studied in DL modality (continued education) within 12 months preceding the survey



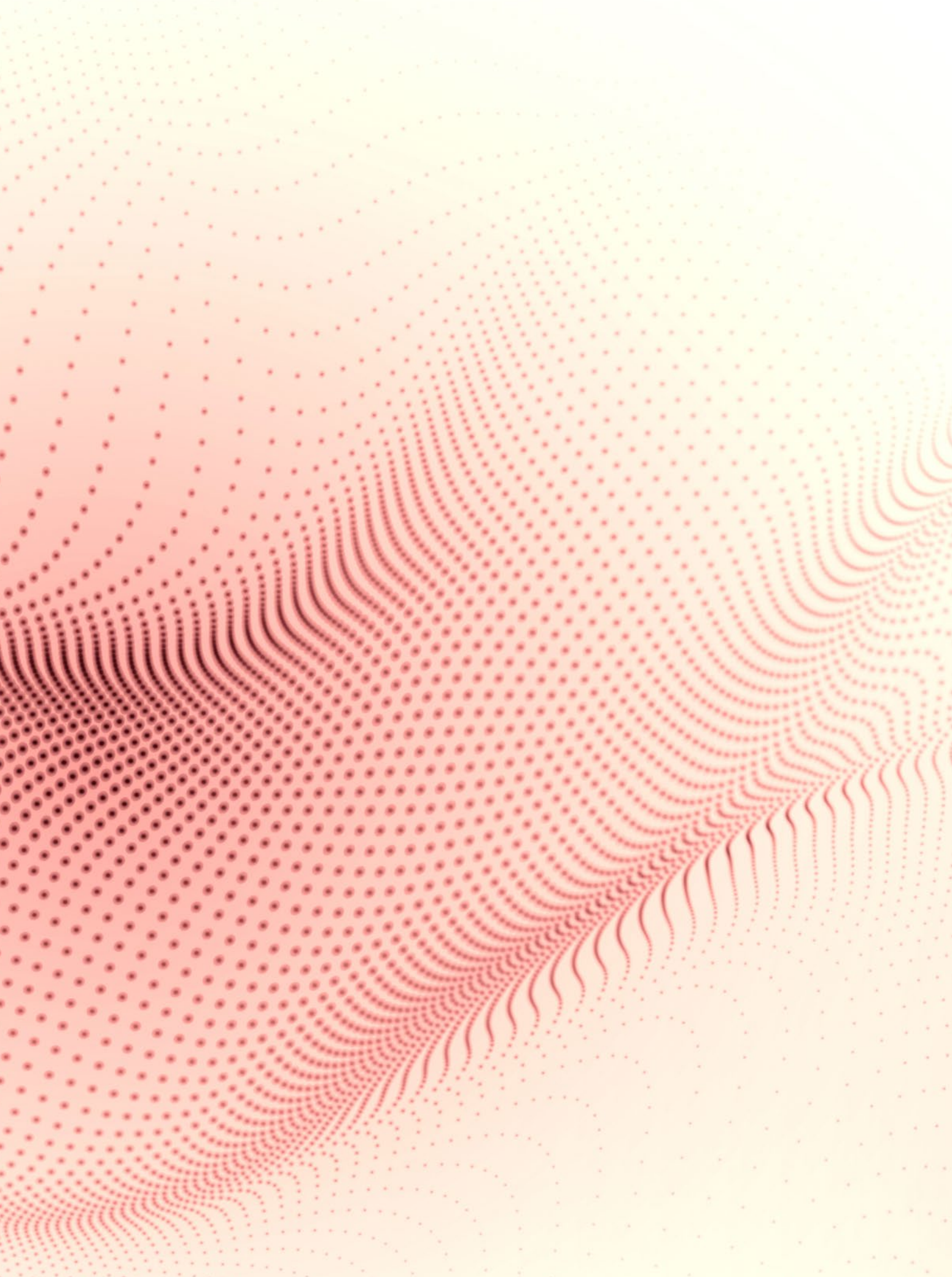
Source: CGI.br. *ICT in Education*. Own elaboration.

Video classes were the most common type of training activity (46%), followed by courses mediated by teachers or tutors (41%) and self-instructional courses without mediation (31%). These data reveal that a significant portion of continued education courses were designed for flexible participation–likely accessed asynchronously–and required a high degree of autonomy from teachers in managing their own learning.

Given that teachers generally belong to a population segment with greater access to digital technologies (100% of them are internet users, and 98% have a computer at home–with 95% owning at least one laptop), they are well positioned to participate in professional development initiatives supported by these tools. When asked about the learning formats they use to stay current with ICT–either through self-instruction or in-service training–, 95% of teachers reported learning independently, and 93% indicated they use videos and online tutorials for this purpose.

However, despite these numbers, there is heterogeneity among teachers in terms of sociodemographic and cultural characteristics and digital competencies. These differences must be considered when developing DL trainings both for academic programs and continued education courses, particularly those aimed at supporting teachers in implementing ICT into teaching and learning processes[12]. It is important that these initiatives are planned to promote teacher development through interaction, participation and critical thinking, relevant skills to enhance their pedagogical practices and communication with students[13].

12 LITTO, F. M.; FORMIGA, M. **Educação a distância**: o estado da arte. São Paulo: Pearson, 2008. v. 1.
13 VALENTE, J. A.; ALMEIDA, M. E. B. (Org.). **Formação de educadores a distância e integração de mídias**. [S.l.]: Avercamp. 2007.

About the author

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