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Admission, enrollment, and completion in undergraduate courses by students from the target group of special education in the city of Ponta Grossa, Paraná[1]

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ABSTRACT

The expansion of higher education has allowed increasingly heterogeneous groups to access Institutions of Higher Education (IHEs), such as the Special Education Target Group (PAEE). In this perspective, this study aims to present and analyze the data on admission, enrollment, and completion in undergraduate courses of PAEE students from the State University of Ponta Grossa (UEPG) and the Federal Technological University of Paraná, Ponta Grossa campus (UTFPR-PG), available in the Higher Education Census from 2009 to 2020. This is a documentary and qualitative research study; the microdata from the Higher Education Census was processed using Excel® software. It was observed that the largest number of entrants at UEPG occurred in 2010, whereas at UTFPR-PG the first admission recorded in the census was in 2016. UEPG shows a higher number of enrollments, while UTFPR-PG has been growing over the past three years. The completion rate for undergraduate courses is low in both IHEs and is lower than the number of enrollments. The scenario represented by these data illustrates how PAEE access is unfolding in the higher education of these two IHEs, providing insights not only on admission and enrollment but also on completion, with the latter requiring further investigation since the numbers of enrolled PAEE students do not correspond with the number of PAEE graduates.

KEYWORDS: Equity in Education. Undergraduate Studies. Special Education.

1 INTRODUCTION

In recent decades, Brazil has witnessed a movement toward the expansion of higher education, reaching historical milestones such as 8.5 million enrollments in 2018, which have enabled increasingly larger segments of the population to access these institutions (SENKEVICS, 2021).

In this context, significant public policies have emerged, including the democratization of access to higher education for minority groups; the expansion of the public sector through programs such as Restructuring and Expansion of Federal Universities (REUNI); the creation and expansion of affirmative action initiatives such as community pre-university courses, quota policies, scholarships, and financing; the expansion of distance education; and equal access to institutions, degrees, and modes of education (SENKEVICS, 2021).

This growth process in higher education has also enabled academic diversification through access to increasingly heterogeneous communities of Institutions of Higher Education (IHEs), which, in turn, has created new demands related to the education of these individuals. These demands are not always straightforward as they involve issues such as access and retention, adaptation to the university environment, demotivation, dropouts, and cognitive needs.

Among the various communities that have recently begun to enter Institutions of Higher Education (IHEs), this article highlights Special Education Target Group (PAEE) students. This group's access to higher education occurred amid a movement toward creating inclusive national and international policies, such as the World Declaration on Education for All (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1990), the Salamanca Statement (UNESCO, 1994), and the National Education Guidelines and Bases Law (LDB) (BRAZIL, 1996), which supported the paradigm shift involving PAEE in the 1990s. More recently, examples include the National Policy on Special Education from the Perspective of Inclusive Education of 2008 (BRAZIL 2008), Decree No. 7.612/2011 – The Living Without Limits Plan (BRAZIL, 2011), Law No. 12.711/2012 (BRAZIL, 2012), Higher Education Accessibility Program – Incluir (BRAZIL, 2013), Brazilian Inclusion Law (LBI) No. 13.146/2015 (BRAZIL, 2015), and Law No. 13.409/2016 (BRAZIL, 2016a).

The current paradigm[2] is characterized by the pursuit of pedagogical practices that serve PAEE students by offering a flexible curriculum, methods, and strategies tailored to their individual needs (CAPELLINI; RODRIGUES, 2012; PADILHA, 2014; RIBEIRO; SILVA, 2019). In addition, there is a recognized need for teacher training to support this new paradigm, ensuring that the students indeed benefit from this advancement. However, this remains a challenge to overcome across various fields, especially in Science Education (MACHADO *et al.*, 2019).

These observations are corroborated by the fact that enrollment of PAEE students has increased from 2008 to 2019 (PEREIRA; REBELO, 2022; MORGADO, 2022). It is noteworthy that the main disabilities observed from 2017 to 2019 were deafblindness; multiple disabilities; high abilities/giftedness; TDG[3]; and intellectual, hearing, visual, and physical disabilities. However, it should be noted that despite the observed increase, there remains a significant disparity between the number of PAEE students enrolling in IHEs and the PAEE population indicated in the Brazilian demographic census that is of age to attend such institutions (MORGADO, 2022).

Based on this context, where the paradigm shift in special education enables PAEE to occupy spaces that were previously denied and neglected, especially in terms of quality public education, the research presented here is developed, reflecting on the need to rethink the educational system, particularly higher education, so that it can address this new challenge: not only welcoming these students but also educating them with quality.

Therefore, the guiding question of this research is: What are the data on admission, enrollment, and completion[4] of undergraduate courses for students from the target group of special education at the State University of Ponta Grossa and the Federal Technological University of Paraná, Ponta Grossa campus, as available in the Higher Education Census (BRAZIL, 2022) between 2009 and 2020?

In an effort to answer the aforementioned question, the objective is to present and analyze the data on admission, enrollment, and completion of undergraduate courses for students from the target group of special education at the State University of Ponta Grossa and the Federal Technological University of Paraná, Ponta Grossa campus, as available in the Higher Education Census (BRAZIL, 2022) between 2009 and 2020.

1.1 Access to Universities

This period was defined considering the publication of the National Policy on Special Education from the Perspective of Inclusive Education in 2008 (BRAZIL, 2008), as it represents an important achievement aimed at ensuring the inclusion of PAEE students through the guidance of the,

> [...] Educational systems to ensure **access** to regular education with participation, learning, and continuity at the highest levels of education; the transversal nature of special education from early childhood education through higher education; the provision of specialized educational services; teacher training for specialized educational services and for other education professionals for inclusion; the participation of families and the community; architectural accessibility, transportation, furniture, communications, and information; and intersectoral coordination in the implementation of public policies. (BRAZIL, 2008, p. 14, emphasis ours).

The delimitation of the period 2009-2020 was also based on research indications showing an increase in enrollment in higher education, beginning in 2008 (PEREIRA; REBELO, 2022; MORGADO, 2022). Thus, there is interest in characterizing this scenario at the State University of Ponta Grossa (UEPG) and the Federal Technological University of Paraná (UTFPR-PG), both public institutions located in the city of Ponta Grossa, Paraná, to determine whether the data from these IHEs follow the national trend in higher education access.

It should be noted that during the analyzed period (2009-2020), UEPG admitted students through the entrance examination (vestibular) and the Series Selection Process (PSS)[5], with the National High School Exam (ENEM) score being used as part of the grade for the objective tests if requested by the candidate (STATE UNIVERSITY OF PONTA GROSSA [UEPG], 2024). For UTFPR, the admission method until 2009 was through the vestibular; however, from that year onward, the university adopted the Unified Selection System (Sisu), offering 100% of its vacancies and discontinuing the vestibular as a selection process between 2010/1

and 2023/1 (FEDERAL TECHNOLOGICAL UNIVERSITY OF PARANÁ [UTFPR], 2023). In other words, throughout the entire analyzed period, the UTFPR used only Sisu for admissions.

Regarding the impact of ENEM on access for PAEE students at these universities, it is noted that this exam "has sought to adapt to the constant changes in the educational scenario. Therefore, this exam features a range of specialized and specific resources to serve the most diverse audiences" (ROCHA; OLIVEIRA; TORRES, 2022, p. 89). Thus, the adoption of this exam as a partial score (UEPG) or in its entirety (UTFPR) may contribute to making access to higher education for PAEE students more equitable.

When consulting the ENEM synopsis for 2009, it is observed that the available accommodations numbered only seven (with the respective resources and requests in the state of Paraná as follows: Braille Exam – 12; Extended Exam – 153; Reader's Aid – 71; Easy Access Room – 62; Transcription Assistance – 35; Libras Interpreter – 91; Lip Reading – no requests). By 2020, however, the available accommodations had increased to 34 (with the respective resources and requests in the state of Paraná as follows: Braille Exam – 18; Extended Exam – 202; Super Extended Exam – 42; Reader's Aid – 317; Easy Access Room – 319; Transcription Assistance – 302; Libras Interpreter – 41; Lip Reading – 19; Wheelchair – 99; Separate Chair – 56; Leg Support – 70; Interpreter Guide – no requests; Videolibras – 36; Stretcher – no requests; Computer – no requests; Special Chair – no requests; Left-handed Chair – no requests; Padded Chair – 2; Exam taken lying on a stretcher or similar furniture – no requests; Furniture suitable for obese individuals – 2; Overlay Sheet – no requests; Ear Protector – 1; Glucose Meter and/or Insulin Application – 43; Braille and/or Reading Ruler and Punch – 9; Soroban – 7; Pacemaker – no requests; Catheter with Periodic Replacement – no requests; Medications – 8; Individual Special Room – 7; Special Room for up to 20 Participants – 19; Room Reserved for Companions – no requests; Specific Furniture – no requests; Specific Material – 13; Additional Time – 620) (INSTITUTO NACIONAL DE ESTUDOS E PESQUISAS EDUCACIONAIS ANÍSIO TEIXEIRA [INEP], 2023).

Therefore, this exam serves as a gateway for PAEE in universities, given the range of accommodations available that facilitate the proper participation of these students, as highlighted in the ENEM synopses (INEP, 2023) and corroborated by the research of Rocha, Oliveira, and Torres (2022).

METHODOLOGY

The research developed here is documentary (MARCONI; LAKATOS, 2003) and qualitative (ROSA, 2013). The main source of information is microdata from the Higher Education Census from 2009 to 2020 (BRAZIL, 2022), and data from 2008 were not included because they were not available on the website of the National Institute for Educational Studies and Research Anísio Teixeira (Inep).

The Higher Education Census, managed by Inep, is an annual statistical and declaratory survey with a nationwide coverage. Its source of information comes from data collected from higher education institutions (HEIs), courses, students, and teachers through an electronic system – Censup (Higher Education Census) (BRAZIL, 2022).

The microdata from the Higher Education Census (BRAZIL, 2022) were processed using Excel® software. After downloading, the files were converted to. csv to .xlsx format with the help of the same software, and using the filters available in the data spreadsheet, the two HEIs of interest were selected, from which three variables were analyzed (according to Inep's categorization), namely:

1. Number of students with disabilities, global developmental disorders, or high abilities/giftedness **enrolled** in undergraduate courses.
2. Number of **enrollments** of students with disabilities, global developmental disorders, or high abilities/giftedness in undergraduate courses; and
3. Number of **undergraduate students** with disabilities, global developmental disorders, or high abilities/giftedness

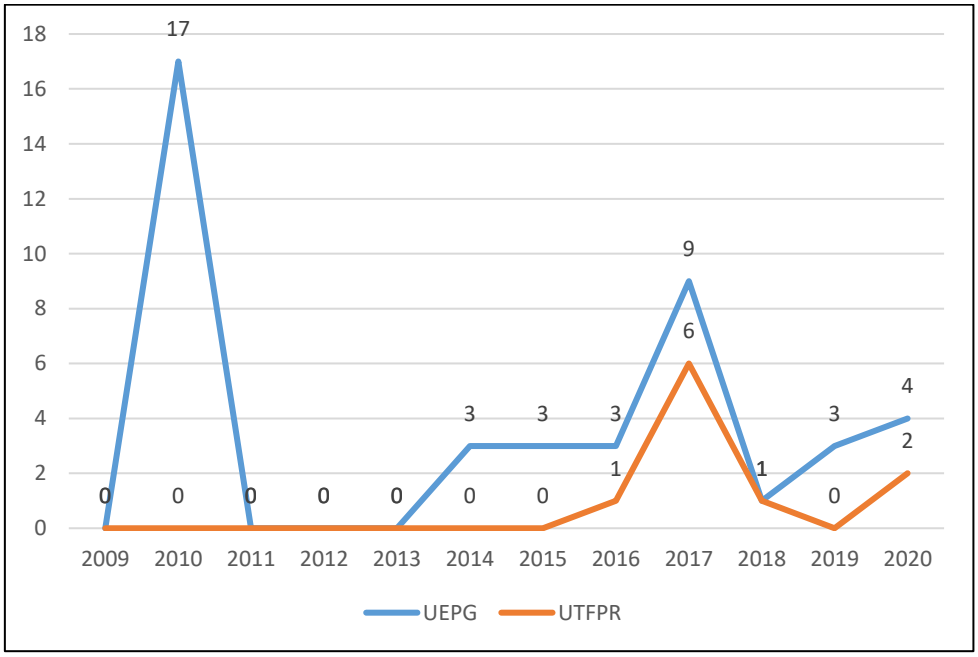
The analysis of the data obtained was conducted using the theoretical frameworks adopted in this study, which belong to the current paradigm of special education from the perspective of inclusive education.

This research was not submitted to the Ethics Committee due to Resolution No. 510, dated April 7, 2016, of the National Health Council, which states that "III – research that uses information from the public domain; IV – census research; V – research with databases whose information is aggregated, without the possibility of individual identification' (BRAZIL, 2016b, p. 44) does not require registration and evaluation by ethics committees (BRAZIL, 2016b).

RESULTS AND DISCUSSIONS

After processing microdata from the Higher Education Census (BRAZIL, 2022), the following values were found for PAEE students in the context of higher education at the investigated HEIs between 2009 and 2020. Graph 1 presents the corresponding values for the admission of these students to undergraduate programs.

Graph 1: PAEE Students Entering HEIs from 2009 to 2020.



Source: Research Data (2022).

It is observed that 2010 presented the highest number of entrants for UEPG (n = 17), a fact that aligns with the objective of the National Policy on Special Education from the Perspective of Inclusive Education published in 2008. When analyzing the admission process at this university in 2010, it was noted that the UEPG used both the entrance exam (vestibular) and the Series Selection Process (PSS); however, candidates could request to use their ENEM score as part of their objective test grades. During the same period, the ENEM offered seven accommodations to students with disabilities. Although this was a dwindling number of available resources, it may have contributed to the number of entrants. It is also worth noting that this HEI had already been developing projects to adapt to this new demand, such as the extension project "Accessibility at the University" (KRÜGER *et al*., 2007).

In the other years analyzed, the number of entrants was lower, or even zero, for both HEIs. It should be highlighted that in 2016, UTFPR-PG registered its first PAEE entrant (as presented in the reports analyzed from the Higher Education Census between 2009 and 2020), even with the quota policies in place and the accommodations provided by the ENEM.

There may be assorted reasons why students do not enroll in these HEIs, such as the offered courses, mode of admission, and the format of the accepted entrance process. Although UTFPR uses Sisu as its admission method, which could potentially enhance access, given that the ENEM offers a range of specialized and specific resources for serving this public (INEP, 2023; ROCHA; OLIVEIRA; TORRES, 2022), its admission numbers are still low, especially when compared to the total number of entrants, as shown in Table 1.

Table 1 – Relationship between the total number of entrants in the analyzed HEIs and PAEE students

Analyzed Universities		
Year	**UEPG / % of PAEE Students**	**UTFPR-PG / % of PAEE Students**
2009	2.047 / 0%	487 / 0%
2010	4.854 / 0,35%	928 / 0%
2011	1.851 / 0%	727 / 0%
2012	1.741 / 0%	671 / 0%
2013	1.788 / 0%	640 / 0%
2014	1.780 / 0,17%	744 / 0%
2015	1.814 / 0,16%	737 / 0%
2016	1.903 / 0,16%	746 / 0,13%
2017	2.280 / 0,39%	801 / 0,75%
2018	2.068 / 0,05%	1.115 / 0,09%
2019	1.889 / 0,16%	847 / 0%
2020	1.790 / 0,22%	853 / 0,23%

Source: Research Data (2022).

These data demonstrate that PAEE is known for its presence in higher education, even if still in a timely manner, occupying few vacancies, but claiming a space that, although often neglected, is their right, as expected based on the findings reported in the research by Pereira and Rebelo (2022) and Morgado (2022).

Table 2 shows the courses that had PAEE entrants in both HEIs. It should be noted that, according to the Higher Education Data Dictionary, the course names were adapted in the Higher Education Census in accordance with the International Standard Classification of Education Cine/UNESCO (BRAZIL, 2020).

Table 2 Courses with PAEE Entrants.

Analyzed Universities		
Year	**UEPG**	**UTFPR-PG**
2009 (n=0)	No entrants.	No entrants.
2010 (n=17)	Bachelor's in Physics (n=2), Geography (n=2), and Mathematics (n=2); Bachelor's in Geography (n=1); Public Administration (n=1); Law (n=2); Software Engineering (n=1), Food Engineering (n=3), and Civil Engineering (n=1); Dentistry (n=1) and Social Work (n=1).	No entrants.
2011 (n=0)	No entrants.	No entrants.
2012	No entrants.	No entrants.

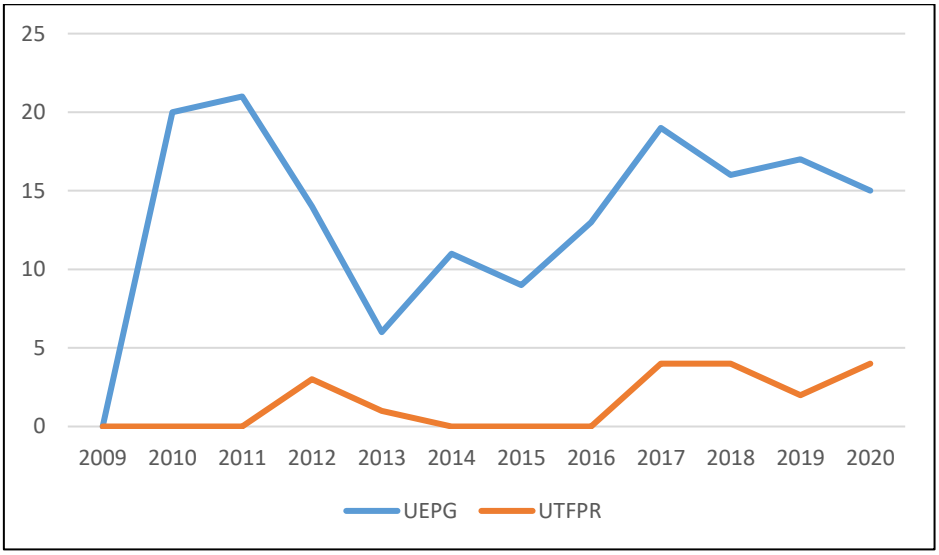
(n=0)		
2013 (n=0)	No entrants.	No entrants.
2014 (n=3)	Bachelor's in Portuguese/Spanish Language (n=1); Bachelor's in Geography (n=1); Software Engineering (n=1).	No entrants.
2015 (n=3)	Bachelor's in Mathematics (n=1); Economics (n=1) and Accounting (n=1).	No entrants.
2016 (n=4)	Bachelor's in History (n=1); Accounting (n=1) and Dentistry (n=1).	Computer Science (n=1).
2017 (n=15)	Bachelor's in Pedagogy (n=1) and Chemistry (n=1); Business Administration (n=2); Public Administration (n=2); Public Management (n=1); Agronomy (n=1) and Animal Science (n=1).	Information Systems (n=1); Computer Science (n=1); Mechanical Engineering (n=1) and Production Engineering (n=1); Mechanical Manufacturing (n=2).
2018 (n=2)	Bachelor's in Computing (n=1).	Chemical Engineering (n=1).
2019 (n=3)	Bachelor's in Visual Arts (n=1) and History (n=1); Accounting (n=1).	No entrants.
2020 (n=6)	Bachelor's in Pedagogy (n=2) and Portuguese/English Language (n=1); Bachelor's in History (n=1).	Bachelor's in Biology (n=1) and Information Systems (n=1).

Legend: After each course, the number of students with PAEE who entered that year is indicated.

Source: Research Data (2022).

Graph 2 shows the enrollments of these students at UEPG and UTFPR-PG from 2009 to 2020.

Graph 2 – PAEE Students Enrolled in HEIs from 2009 to 2020



Source: Research Data (2022).

Although there was variation in the values observed for UEPG, the number of enrollments was still higher than that presented at UTFPR-PG. As mentioned, numerous factors may lead to this phenomenon, including the greater number of courses offered by one of the institutions, which directly influences the number of enrollments. Another noteworthy point is that starting in 2017, enrollments at UTFPR-PG showed growth.

Table 3 presents the total number of enrollments versus the enrollments of PAEE students in both the investigated HEIs. This comparison makes it possible to visualize the need for actions that increase these numbers, especially given their disparity, as in none of the analyzed HEIs did PAEE enrollments exceed 1% of the total enrollments.

Table 3 – Relationship between the Total Number of Enrolled Students in the Analyzed HEIs and PAEE Students

Analyzed Universities		
Year	**UEPG/ % of PAEE students**	**UTFPR-PG/ % of PAEE students**
2009	8.475 / 0%	1.340 / 0%
2010	8.393 / 0,24%	1.748 / 0%
2011	7.836 / 0,27%	1.975 / 0%
2012	7.042 / 0,20%	2.002 / 0,15%
2013	6.886 / 0,09%	2.122 / 0,05%
2014	7.021 / 0,16%	2.397 / 0%
2015	7.119 / 0,13%	2.633 / 0%
2016	7.722 / 0,17%	2.776 / 0%
2017	7.957 / 0,24%	2.991 / 0,13%
2018	7.870 / 0,20%	3.030 / 0,13%
2019	7.731 / 0,22%	3.085 / 0,06%
2020	7.339 / 0,20%	3.135 / 0,13%

Source: Research Data (2022).

In this context, Table 4 shows the courses in which PAEE students enrolled in both HEIs.

Table 4 Courses with Enrolled PAEE Students.

Analyzed Universities		
Year	**UEPG**	**UTFPR-PG**
2009 (n=0)	No enrollments.	No enrollments.
2010 (n=20)	Bachelor's in Physics (n=2), Geography (n=2), Mathematics (n=1), Portuguese/Spanish Language (n=1); Bachelor's in History (n=1) and Geography (n=1); Economics (n=1); Public Administration (n=1); Law (n=3); Software Engineering (n=1), Food Engineering (n=3),	No enrollments.

	Civil Engineering (n=1); Dentistry (n=1) and Social Work (n=1).	
2011 (n=21)	Bachelor's in Physics (n=2), Geography (n=2), Mathematics (n=3), Portuguese/Spanish Language (n=1); Bachelor's in History (n=1) and Geography (n=1); Economics (n=1); Public Administration (n=1); Law (n=3); Software Engineering (n=1) and Food Engineering (n=3); Dentistry (n=1) and Social Work (n=1).	No enrollments.
2012 (n=17)	Bachelor's in Geography (n=1), Mathematics (n=2), Portuguese/Spanish Language (n=1); Bachelor's in History (n=1) and Geography (n=1); Public Administration (n=1); Law (n=3); Food Engineering (n=3); Social Work (n=1).	Computer Science (n=1); Information Systems (n=2).
2013 (n=7)	Bachelor's in Pedagogy (n=1) and Visual Arts (n=1); Accounting (n=1); Business Administration (n=1); Public Administration (n=1) and Law (n=1).	Computer Science (n=1).
2014 (n=11)	Bachelor's in Pedagogy (n=1), Visual Arts (n=1), Portuguese/Spanish Language (n=1); Bachelor's in Geography (n=1); Accounting (n=1); Business Administration (n=1); Public Administration (n=1); Law (n=1); Software Engineering (n=1); Dentistry (n=1) and Tourism (n=1).	No enrollments.
2015 (n=9)	Bachelor's in Mathematics (n=1); Bachelor's in History (n=1); Economics (n=1); Accounting (n=2); Law (n=2); Dentistry (n=1) and Tourism (n=1).	No enrollments.
2016 (n=13)	Bachelor's in Mathematics (n=1) and Portuguese/Spanish Language (n=1); Bachelor's in History (n=2); Economics (n=1); Accounting (n=3); Law (n=2); Dentistry (n=2) and Tourism (n=1).	No enrollments.
2017 (n=23)	Bachelor's in Pedagogy (n=1), Chemistry (n=1), and Portuguese/Spanish Language (n=1); Bachelor's in History (n=2) and Geography (n=1); Economics (n=1); Journalism (n=1); Accounting (n=1); Business Administration (n=2); Public Administration (n=2); Public Management (n=1); Law (n=1); Agronomy (n=2); Animal Science (n=1) and Dentistry (n=1).	Computer Science (n=1); Information Systems (n=1); Mechanical and Production Engineering (n=1); Mechanical Manufacturing (n=1).
2018 (n=20)	Bachelor's in Computing (n=1), Chemistry (n=1), and Portuguese/Spanish Language	Computer Science (n=1); Information

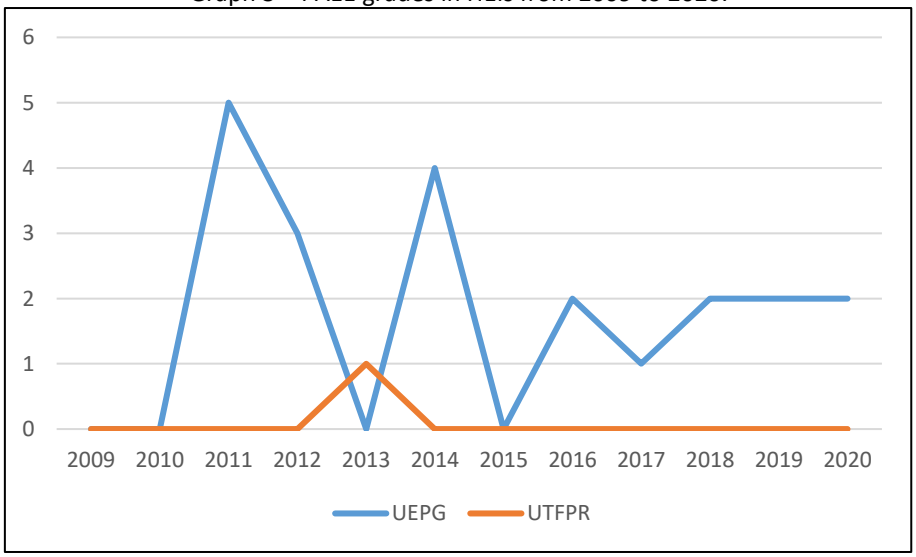
	(n=1); Bachelor's in History (n=2) and Geography (n=1); Journalism (n=1); Accounting (n=1); Business Administration (n=2); Public Administration (n=1); Public Management (n=1); Law (n=1); Agronomy (n=2) and Animal Science (n=1).	Systems (n=1); Mechanical Engineering (n=1) and Mechanical Manufacturing (n=1).
2019 (n=19)	Bachelor's in Visual Arts (n=1), Computing (n=1), History (n=1), Chemistry (n=1), and Portuguese/Spanish Language (n=1); Bachelor's in History (n=1) and Geography (n=1); Accounting (n=2); Business Administration (n=2); Public Administration (n=1); Public Management (n=1); Law (n=1); Agronomy (n=2) and Animal Science (n=1).	Mechanical Engineering (n=1) and Mechanical Manufacturing (n=1).
2020 (n=19)	Bachelor's in Pedagogy (n=1), Visual Arts (n=1), History (n=1), Chemistry (n=1), Portuguese/Spanish Language (n=1), and Portuguese/English Language (n=1); Bachelor's in History (n=2); Accounting (n=1); Business Administration (n=2); Public Administration (n=1); Law (n=1); Agronomy (n=1) and Animal Science (n=1).	Bachelor's in Biology (n=1); Information Systems (n=2) and Mechanical Manufacturing (n=1).

Legend: After each course, the number of students with PAEE who entered that year is indicated.

Source: Research Data (2022).

Beyond admission and enrollment, it is necessary for the PAEE student to complete the chosen undergraduate course, as presented in Graph 3.

Graph 3 – PAEE grades in HEIs from 2009 to 2020.



Source: Research Data (2022).

Graph 3 presents an important finding when compared to the other graphs, especially Graph 2, as the number of PAEE students enrolled in undergraduate

courses is not completing the course within the expected time, given that the completion rate is lower in both analyzed HEIs. It is not within the scope of this study to investigate the reasons for this scenario, but further investigation is necessary.

This observation was corroborated by the difference between the overall number of graduates and the number of PAEE graduates, as shown in Table 4.

Table 4 Relationship between the total number of graduates in the analyzed HEIs and PAEE students.

Analyzed Universities		
Year	**UEPG/% of PAEE students**	**UTFPR-PG/% of PAEE students**
2009	2.000 / 0%	169 / 0%
2010	2.139 / 0%	168 / 0%
2011	1.170 / 0,43%	135 / 0%
2012	1.266 / 0,24%	161 / 0%
2013	1.159 / 0%	148 / 0,67%
2014	1.096 / 0,36%	159 / 0%
2015	1.137 / 0%	158 / 0%
2016	1.142 / 0,17%	211 / 0%
2017	1.014 / 0,1%	352 / 0%
2018	1.266 / 0,16%	328 / 0%
2019	1.132 / 0,18%	337 / 0%
2020	476 / 0,42%	226 / 0%

Source: Research Data (2022).

Table 5 shows the courses that had PAEE graduates at both HEIs.

Table 5 Courses with PAEE Graduates.

Analyzed Universities		
Year	**UEPG**	**UTFPR-PG**
2009 (n=0)	No graduates.	No graduates.
2010 (n=0)	No graduates.	No graduates.
2011 (n=5)	Bachelor's in Physics (n=1) and Geography (n=1); Economics (n=1); Software Engineering (n=1) and Dentistry (n=1).	No graduates.
2012 (n=3)	Bachelor's in Portuguese/Spanish Language (n=1); Bachelor's in History (n=1) and Social Work (n=1).	No graduates.
2013 (n=1)	No graduates.	Computer Science (n=1).

2014 (n=4)	Bachelor's in Pedagogy (n=1) and Visual Arts (n=1); Business Administration (n=1) and Public Administration (n=1).	No graduates.
2015 (n=0)	No graduates.	No graduates.
2016 (n=2)	Law (n=1) and Tourism (n=1).	No graduates.
2017 (n=1)	Dentistry (n=1).	No graduates.
2018 (n=2)	Bachelor's in History (n=1) and Journalism (n=1).	No graduates.
2019 (n=2)	Bachelor's in Geography (n=1) and Public Management (n=1).	No graduates.
2020 (n-2)	Bachelor's in Chemistry (n=1) and Public Administration (n=1).	No graduates.

Legend: After each course, the number of students with PAEE who entered that year is indicated.

Source: Research Data (2022).

Among the three variables analyzed in the two HEIs (admission, enrollment, and completion), the undergraduate courses in which PAEE students were enrolled were always the same. Thus, the following observations and questions arise. Why is this group not represented in highly competitive courses? Despite the increased access of more heterogeneous segments of the population to higher education (SENKEVICS, 2021) and the various national and international policies that support this access (UNESCO, 1990, 1994; BRAZIL, 1996, 2011, 2013, 2015, 2016a), there remains a long way to go before these individuals truly have access to all courses offered by an HEI, including those considered highly competitive.

According to Santos (2021), despite UTFPR's efforts to comply with the quota law and coordinate activities and actions aimed at the admission and retention of the special education target group, the institution still faces "many operational limitations and changes that need to be implemented, such as the creation of an institutional accessibility and inclusion policy" (SANTOS, 2021, p. 5), as well as greater budgetary support for the implementation of an inclusion policy (CANTORANI; PILLATI, 2015; CANTORANI *et al.*, 2020).

CONCLUSIONS

The objective of this study was to present data on the admission, enrollment, and completion of PAEE students at the State University of Ponta Grossa and the Federal Technological University of Paraná, Ponta Grossa campus, between 2009 and 2020, through the Higher Education Census. This follows the national trend of access to higher education by PAEE students (PEREIRA; REBELO, 2022; MORGADO, 2022), even in a timely manner.

These findings align with the National Policy on Special Education from the Perspective of Inclusive Education (BRAZIL, 2008), which advocates the inclusion of students with disabilities, global developmental disorders, and high abilities/giftedness, ensuring access, participation, learning, and continuity in

education at all levels, up to higher education, as well as being envisioned by other public policies (BRAZIL, 2011, 2013, 2015, 2016a). However, mere access (admission and enrollment) does not guarantee that PAEE students fully benefit from the potential of HEIs by graduating with quality, as this group faces numerous barriers in higher education (CRUZ; SOARES; VIANNA, 2019; FANTACINI; ALMEIDA, 2020; MALHEIRO; SCHLÜNZEN JUNIOR, 2020). Although the analyzed Higher Education Census reports (BRAZIL, 2022) do not specify the types of disabilities among PAEE students, the observed numbers legitimize the presence of this group in the two investigated HEIs. Even so, it is important to emphasize that despite these advances, there is still a need for more and better policies that promote access and retention at this level of education (MACIEL; ARAÚJO; NOGUEIRA, 2021).

The scenario represented by these data illustrates how PAEE access is taking place in higher education at these two HEIs in Ponta Grossa, Paraná. It provides insights into admission, enrollment, and completion, with the latter requiring further investigation since the number of PAEE students enrolled does not correspond to the number of PAEE graduates. Moreover, there is a need to promote access for this group to all courses offered by HEIs, rather than concentrating them in just a few areas.

It is also necessary to conduct further investigations regarding the disabilities, global developmental disorders, and high abilities/giftedness found at these two institutions, as well as the affirmative actions developed to meet the demands arising from this group, to provide equitable education that adheres to the principles of the current paradigm of special education and Brazilian legislation.

Furthermore, it is important to investigate the admission processes of these students at both institutions. Given the range of specialized and specific resources available through the ENEM, it was expected that the numbers would be more significant. This raises questions about how to ensure that PAEE students can secure their right place in public higher education in a fair and equitable manner.

INGRESSO, MATRÍCULA E CONCLUSÃO EM CURSOS DE GRADUAÇÃO DE ALUNOS PÚBLICO-ALVO DA EDUCAÇÃO ESPECIAL NA CIDADE DE PONTA GROSSA – PARANÁ

RESUMO

A expansão do ensino superior permitiu o acesso de grupos cada vez mais heterogêneos nas Instituições de Ensino Superior (IES), como o Público-Alvo da Educação Especial (PAEE). Nesta perspectiva, objetiva-se com este estudo apresentar e analisar os dados de ingresso, matrícula e conclusão em cursos de graduação dos alunos PAEE da Universidade Estadual de Ponta Grossa (UEPG) e da Universidade Tecnológica Federal do Paraná campus Ponta Grossa (UTFPR-PG), disponíveis no Censo da Educação Superior entre 2009 e 2020. Esta é uma pesquisa documental e qualitativa, os micros dados do Censo da Educação Superior foram tratados com auxílio do Software Excel®. Observou-se que o maior número de ingressantes na UEPG ocorreu em 2010, enquanto na UTFPR-PG o primeiro ingresso registrado no censo foi em 2016. A UEPG apresenta um maior número de matrículas, enquanto a UTFPR-PG vem crescendo nos últimos três anos. A taxa de conclusão do curso de graduação é baixa em ambas as IES, e menor que o número de matrículas. O cenário representado por estes dados apresenta como o acesso do PAEE está se dando no ensino superior destas duas IES, fornecendo apontamentos sobre o ingresso e matrícula, mas também, sobre a conclusão, sendo que esta última necessita de maiores investigações, pois, os números de alunos PAEE matriculados não são condizentes com o número de alunos PAEE concluintes.

PALAVRAS-CHAVE: Equidade no Ensino. Graduação. Educação Especial.

NOTES

1. This article is an expanded and revised version of an article published in VII SINECT (2022).

2. A paradigm is understood as a set, model, or pattern shared by the scientific community that enables the explanation of certain aspects of reality and generates new theories (KUHN, 2013). It is important to note that according to Kuhn (2013), paradigms can be surpassed, and in such cases, the sets, models, or patterns that are superseded tend to be forgotten, while researchers who remain within the outdated paradigm gradually become isolated.

3. The term GDD (Global Developmental Disorders) encompasses variables such as Autism, Asperger Syndrome, Rett Syndrome, and Disintegrative Disorder (MORGADO, 2022, p. 121).

4. “Admission” refers to a PAEE student who has been approved in the selection process applied by the HEI to which they applied for a spot. “Enrollment” refers to those PAEE students who are regularly enrolled in undergraduate courses at HEIs. “Completion” refers to PAEE students who have finished their undergraduate course at an HEI and thereby obtained their degree.

5. The Series Selection Process (PSS), initiated in 2001, is a gradual, systematic, and cumulative selection modality that is conducted annually to evaluate the performance of candidates for undergraduate higher education at UEPG based on their achievements in each year of high school (UEPG, 2024).

REFERENCES

BRASIL. **Decreto nº 7.612, de 17 de novembro de 2011**. Institui o Plano Nacional dos Direitos da Pessoa com Deficiência - Plano Viver sem Limite, 2011. Available at: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/decreto/d7612.htm#:~:text=1%C2%BA%20Fica%20institu%C3%ADdo%20o%20Plano,da%20Conven%C3%A7%C3%A3o%20Internacional%20sobre%20os. Access on: Aug. 17th, 2022.

BRASIL. **Lei nº 12.711, de 29 de agosto de 2012**. Dispõe sobre o ingresso nas universidades federais e nas instituições federais de ensino técnico de nível médio e dá outras providências, 2012. Available at: https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12711.htm. Access on: Apr. 14th, 2024.

BRASIL. **Lei nº 13.146, de 6 de julho de 2015**. Institui a Lei Brasileira de Inclusão da Pessoa com Deficiência (Estatuto da Pessoa com Deficiência), 2015. Available at: http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2015/lei/l13146.htm. Access on: Aug. 17th, 2022.

BRASIL. **Lei nº 13.409, de 28 de dezembro de 2016**. Altera a Lei nº 12.711, de 29 de agosto de 2012, para dispor sobre a reserva de vagas para pessoas com deficiência nos cursos técnico de nível médio e superior das instituições federais

de ensino, 2016a. Available at: http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2016/lei/l13409.htm. Access on: Aug. 17th, 2022.

BRASIL. **Lei nº 9.394, de 20 de dezembro de 1996**. Estabelece as diretrizes e bases da educação nacional, 1996. Available at: http://www.planalto.gov.br/ccivil_03/leis/l9394.htm. Access on: Aug. 17th, 2022.

BRASIL. Ministério da Educação. **Documento orientador Programa Incluir - Acessibilidade na Educação Superior SECADI/SESu–2013**, 2013. Available at: http://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=12737-documento-orientador-programa-inclui itemid category_slug=marco-2013-pdf&Itemid=30192. Access on: Aug. 17th, 2022.

BRASIL. Ministério da Educação. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. **Resultados**. 2022. Available at: https://www.gov.br/inep/pt-br/areas-deatuacao/pesquisas-estatisticas-e-indicadores/censo-da-educacao-superior/resultados. Access on: Sep. 13rd, 2022.

BRASIL. Ministério da Educação. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. **Microdados**, 2020. Available at: https://www.gov.br/inep/pt-br/areas-deatuacao/pesquisas-estatisticas-e-indicadores/censo-da-educacao-superior/resultados. Access on: Oct. 29th, 2022.

BRASIL. Ministério da Educação. **Política Nacional de Educação Especial na Perspectiva da Educação Inclusiva de 2008**. Brasília, 2008. Available at: http://portal.mec.gov.br/arquivos/pdf/politicaeducespecial.pdf. Access on: Aug. 17th, 2008.

BRASIL. Ministério da Saúde. Conselho Nacional de Saúde. Resolução nº 510, de 07 de abril de 2016. [Dispõe sobre as normas aplicáveis a pesquisas em Ciências Humanas e Sociais cujos procedimentos metodológicos envolvam a utilização de dados diretamente obtidos com os participantes ou de informações identificáveis ou que possam acarretar riscos maiores do que os existentes na vida cotidiana]. **Diário Oficial da União**: Seção 1, n. 98, p. 44, 24 mai. 2016b. Available at: https://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?jornal=1&data=24/05/2016&pagina=44. Access on: Aug. 18th, 2022.

CANTORANI, J. R. H.; PILATTI, L. A. Acessibilidade na Universidade Tecnológica Federal do Paraná: análise a partir de relatórios do Inep e do olhar do gestor. **Educar em Revista**, n. 57, p. 171-189, 2015. DOI https://doi.org/10.1590/0104-4060.41363. Access on: Aug. 22nd, 2022.

CANTORANI, J. R. H.; PILATTI, L. A.; HELMANN, C. L.; SILVA, S. C. R. A acessibilidade e a inclusão em uma Instituição Federal de Ensino Superior a partir

da lei n. 13.409. **Revista Brasileira de Educação**, n. 25, p. 1-26, 2020. DOI http://dx.doi.org/10.1590/S1413-24782020250016. Access on: Aug. 22nd, 2022.

CAPELLINI, V. L. M. F.; RODRIGUES, O. M. P. R. (org.). **Educação Inclusiva: Fundamentos históricos, conceituais e legais**. Volume 2. Bauru: UNESP/FC, 2012. E-book (201 p.). (Coleção: Práticas educacionais inclusivas). ISBN 978-85-99703-70-0. Available at: https://www.researchgate.net/publication/284714199_EDUCACAO_INCLUSIVA_FUNDAMENTOS_HISTORICOS_CONCEITUAIS_E_LEGAIS. Access on: Jun. 14th, 2022.

CRUZ, T. X.; SOARES, W. D.; VIANNA, R. S. M. Inclusão de pessoas com deficiência no ensino superior: Uma revisão integrativa. **Revista Portal Saúde e Sociedade**, 4(1), p. 1062-1075, 2019. DOI https://doi.org/10.28998/rpss.v4i1.6745. Access on: Aug. 17th, 2022.

FANTACINI, R. A. F.; ALMEIDA, M. A. Inclusão no ensino superior: produção científica do Programa de pós-graduação em Educação Especial da UFSCar. **Revista Eletrônica de Educação**, v. 14, p. 1-15, jan/dez. 2020. DOI http://dx.doi.org/10.14244/198271993208. Access on: Aug. 17th, 2022.

INSTITUTO NACIONAL DE ESTUDOS E PESQUISAS EDUCACIONAIS ANÍSIO TEIXEIRA [INEP]. **Sinopses Estatísticas do Exame Nacional do Ensino Médio**. 2023. Available at: https://www.gov.br/inep/pt-br/acesso-a-informacao/dados-abertos/sinopses-estatisticas/enem. Access on: Apr. 14th, 2024.

KRÜGER, J. A.; MACHADO, R. R.; MACHADO, É. R.; VALDÍVIA, F. A.; UCZAK, R.; LICHACOVSKI, J. C. G.; SILVA, M. B. Acessibilidade na universidade: Repensando os processos inclusivos. **Revista Conexão UEPG**, v. 3, n. 1, 2007. Available at: https://www.redalyc.org/articulo.oa?id=514151721005. Access on: Sep. 15th, 2022.

KUHN, T. **A estrutura das revoluções científicas**. Tradução Beatriz Vianna Boeira e Nelson Boeira. 12. ed. São Paulo: Perspectiva, 2013.

MACHADO, M. S.; SIQUEIRA, M. R. P.; ROCHA-OLIVEIRA, R.; DUARTE, A. C. S. Panorama de publicações no ensino de ciências e educação inclusiva: o que tem sido produzido? **R. bras. Ens. Ci. Tecnol.**,v. 12, n. 2, p. 395-426, mai./ago. 2019. DOI http://dx.doi.org/10.3895/rbect.v12n2.5205. Access on: May 22nd, 2023.

MACIEL, C. E.; ARAÚJO, E. J. M.; NOGUEIRA, D. X. P. Acesso de estudantes com deficiência na educação superior: Avanços e desafios. **Revista de Educação, Linguagem e Literatura**, n. 13, 2021, p. 1-23. DOI https://doi.org/10.51913/revelli.v13i0.12235. Access on: Aug. 24th, 2021.

MALHEIRO, C. A. L.; SCHLÜNZEN JUNIOR, K. Inclusão e acessibilidade no ensino superior brasileiro. **Brazilian Journal of Development**, 6 (12, p. 94546-94554, december 2020. Available at: https://brazilianjournals.com/ojs/index.php/BRJD/article/view/20988/16742. Access on: Aug. 17th, 2022.

MARCONI, M. A.; LAKATOS, E. M. **Fundamentos de metodologia científica**. Atlas, 2003.

MORGADO, L. A. S. **Indicadores censitários da educação superior brasileira (2017-2019)**: Estudantes público-alvo da educação especial. 2022. 171 f. Tese (Doutorado em Educação Especial) – Universidade Federal de São Carlos, Centro de Educação e Ciências Humanas, São Carlos, 2022. Available at: https://repositorio.ufscar.br/handle/ufscar/16305. Access on: Jul. 28th, 2022.

ORGANIZAÇÃO DAS NAÇÕES UNIDAS PARA A EDUCAÇÃO, A CIÊNCIA E A CULTURA [UNESCO]. **Declaração Mundial sobre Educação para Todos: Satisfação das Necessidades Básicas de Aprendizagem**. Jomtien: UNESCO, 1990. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000086291_por. Access on: Aug. 17th, 2022.

ORGANIZAÇÃO DAS NAÇÕES UNIDAS PARA A EDUCAÇÃO, A CIÊNCIA E A CULTURA [UNESCO]. **Declaração de Salamanca sobre Princípios, Política e Práticas na Area das Necessidades Educativas Especiais**, Salamanca: UNESCO, 1994. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000139394. Access on: Aug. 17th, 2022.

PADILHA, C. A. T. **Educação e Inclusão no Brasil (1985 – 2010)**. 2014. Dissertação (Mestrado em Educação) – Universidade Estadual de Campinas, Faculdade de Educação, Campinas – São Paulo, 2014. DOI https://doi.org/10.47749/T/UNICAMP.2014.943630. Available at: https://repositorio.unicamp.br/acervo/detalhe/943630?guid=1655223520474&returnUrl=%2fresultado%2flistar%3fguid%3d1655223520474%26quantidadePaginas%3d1%26codigoRegistro%3d943630%23943630&i=1. Access on: Jun. 14th, 2022.

PEREIRA, A. P. E. B. S.; REBELO, A. S. Indicadores de matrículas do público-alvo da Educação Especial na Educação Superior no Brasil (2008-2018). **Séries-Estudos**, Campo Grande, MS, v. 27, n. 60, p. 287-305, maio/ago. 2022. DOI http://dx.doi.org/10.20435/serieestudos.v27i60.1544. Access on: Aug. 17th, 2022.

RIBEIRO, L. L.; SILVA, R. M. A educação especial nas políticas educacionais brasileiras: Uma abordagem histórica. **Arquivos Analíticos de Políticas Educativas**, v. 27, n. 21, p. 1-36, 2019. Available at:

https://epaa.asu.edu/index.php/epaa/article/view/3073/2214. Access on: Jun. 14th, 2022.

ROCHA, L. R. M.; OLIVEIRA, J. P.; TORRES, J. P. Análise dos recursos solicitados para atendimento especializado e/ou específico no exame nacional do ensino médio: Série histórica (2016-2020). **SISYPHUS**, v. 10, n. 3, p. 86-101, 2022. DOI https://doi.org/10.25749/sis.27509. Access on: Apr. 14th, 2024.

ROSA, P. R. S. **Uma introdução à pesquisa qualitativa em ensino de ciências**. Universidade Federal de Mato Grosso do Sul, 2013. E-book. Available at: http://paulorosa.docente.ufms.br/Uma_Introducao_Pesquisa_Qualitativa_Ensino_Ciencias.pdf. Access on: Aug. 12nd, 2022.

SANTOS, T. C. A. **Inclusão e acessibilidade dos estudantes público-alvo da educação especial nos cursos de graduação da Universidade Tecnológica Federal do Paraná (UTFPR)**. 2021. Trabalho de Conclusão de Curso (Licenciatura em Ciências Biológicas) – Universidade Tecnológica Federal do Paraná, Santa Helena, 2021. Available at: http://repositorio.utfpr.edu.br/jspui/handle/1/27043. Access on: Aug. 22nd, 2022.

SENKEVICS, A. S. A expansão recente do ensino superior: cinco tendências de 1991 a 2020. **Cadernos de Estudos e Pesquisas em Políticas Educacionais**, v. 3, n. 4, p. 199-246, 2021. DOI https://doi.org/10.24109/27635139.ceppe.v3i4.4892. Access on: Jul. 14th, 2022.

UNIVERSIDADE ESTADUAL DE PONTA GROSSA [UEPG]. **Coordenadoria de Processos de Seleção**. 2024. Available at: https://cps.uepg.br/inicio/index.php/vestibular/vestibular-2023. Access on: Apr. 14th, 2024.

UNIVERSIDADE TECNOLÓGICA FEDERAL DO PARANÁ [UTFPR]. **Vestibular UTFPR será lançado no próximo dia 14**. 2023. Available at: https://www.utfpr.edu.br/noticias/geral/vestibular-utfpr-sera-lancado-no-proximo-dia-14#:~:text=A%20UTFPR%20aderiu%20ao%20Sisu,Diretorias%20de%20Gradua%C3%A7%C3%A3o%20da%20Universidade. Access on: Apr. 14th, 2024.

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