UNDERGRADUATE STUDENTS' MOTIVATION: REMOTE AND FACE-TO FACE CLASSES

MOTIVAÇÃO DE DISCENTES DO ENSINO SUPERIOR: AULAS REMOTAS E PRESENCIAIS

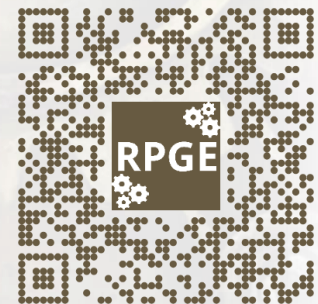## MOTIVACIÓN DE LOS ESTUDIANTES DE ENSEÑANZA SUPERIOR: CLASES A DISTANCIA Y PRESENCIALES

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How to reference this paper:

Editor: Prof. Dr. Sebastião de Souza Lemes
Deputy Executive Editor: Prof. Dr. José Anderson Santos Cruz

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ABSTRACT: The motivation to understand the profile of higher education students regarding the teaching and learning process arose due to the emergency situation caused by the COVID-19 pandemic. This situation demanded the adaptation of the educational system to prevent academic setbacks for students. The objective was to analyze the student profile from 2019 to 2022, considering the perspectives observed in the evaluation of disciplines conducted by the students through software created by the institution. This software encompassed their attendance and participation in classes, prior knowledge and experiences, self-study outside class hours, and the importance of discipline for the chosen course. The results obtained showed an increase in positive evaluations regarding students' prior knowledge during the period of remote classes, followed by a decline in 2022. Overall, students demonstrate positive attendance to classes, as well as an understanding of the importance of the disciplines for their education.

KEYWORDS: Student profile. Subject evaluation. Previous knowledge.

RESUMO: *A motivação para compreender o perfil dos discentes do Ensino Superior em relação ao processo de ensino e aprendizagem surgiu devido à situação emergencial provocada pela pandemia da COVID-19. Essa situação demandou a adaptação do sistema educacional, visando evitar prejuízos à formação acadêmica dos alunos. O objetivo foi analisar o perfil discente, de 2019 a 2022, considerando as perspectivas observadas na avaliação de disciplina realizada pelos alunos, por meio de um software criado pela instituição, que contemplou sua frequência e acompanhamento das aulas, conhecimentos e experiências anteriores, estudos fora do horário de aula e a importância da disciplina para o curso escolhido. Pelos resultados obtidos, verificou-se um aumento de avaliações positivas em relação aos conhecimentos prévios dos estudantes no período de aulas remotas, e uma queda em 2022. Em geral, os alunos apresentam frequência positiva às aulas, bem como compreendem a importância das disciplinas para sua formação.*

PALAVRAS-CHAVE: Perfil discente. Avaliação de disciplina. Conhecimentos prévios.

RESUMEN: *La motivación para comprender el perfil del estudiante de Educación Superior acerca de su relación con el proceso de enseñanza y aprendizaje se inició a raíz de la situación de emergencia por la pandemia del Covid-19, que ocasionó la necesidad de adecuar el sistema educativo. El objetivo fue analizar el perfil del estudiante, del 2019 al 2022, considerando las perspectivas observadas en la evaluación de la materia que realizan los estudiantes, a través de un software creado por la institución, que incluyó su asistencia y seguimiento de clases, conocimientos previos y experiencias, estudios en el extranjero del horario de clases y la importancia de la materia. A partir de los resultados obtenidos, hubo un aumento de valoraciones positivas en relación a los conocimientos previos en el periodo de clases a distancia, y una disminución en el 2022. En general, presentan asistencia a clases positiva, y entender la importancia de temas.*

PALABRAS CLAVE: *Perfil de estudiante. Evaluación de la disciplina. Conocimiento previo.*

Introduction

The motivation to understand the profile of higher education students regarding their relationship with the teaching and learning process arose due to the worldwide emergency caused by the COVID-19 pandemic, which necessitated the adaptation of the educational system to prevent academic setbacks for students. In this scenario, governmental agencies quickly issued legal documents to support decisions by educational institutions, authorizing, especially, alternatives for replacing in-person teaching.

At the national level, we can mention Ordinance No. 343 of March 17, 2020 (Brasil, 2020a), which deals with the substitution of in-person classes with alternatives in digital media, and Ordinance No. 14,040 of August 18, 2020 (Brasil, 2020b), establishing exceptional norms during the period of public calamity.

At the state level in São Paulo, we observe Decree No. 65,061 of July 13, 2020 (São Paulo, 2020a), amended by Decree No. 65,140 of August 19, 2020 (São Paulo, 2020b), related to the resumption of in-person classes and activities. Also, Decree No. 65,384 of December 17, 2020 (São Paulo, 2020c), and No. 65,849 of July 6, 2021 (São Paulo, 2021a), which includes the institution of the Education Monitoring System for COVID-19. The State Council of Education (CEE), through Resolutions 177/2020 of March 18, 2020 (São Paulo, 2020d), and 195/2021 of January 13, 2021 (São Paulo, 2021b), sets norms for organizing school calendars.

Several regulations were published in the State of São Paulo with the aim of guiding education during the period. In the context of undergraduate studies at the institution under study, Resolutions CoG 7949 of April 27, 2020 (São Paulo, 2020e), and CoG 8076 of April 15, 2021 (São Paulo, 2021c) were encompassed, authorizing the substitution of in-person classes with the use of information and communication technologies. Resolution CoG 7962 of June 23, 2020 (São Paulo, 2020f), fixed the new school calendar for the academic year 2020. Resolutions CoG 8092 of May 25, 2021 (São Paulo, 2021d), and CoG 8118 of August 26, 2021 (São Paulo, 2021e), guide the permission for conducting supervised in-person practical internships, and Resolution CoG 8156 of December 16, 2021 (São Paulo, 2021f), which reduces the workload for the 2021 graduates in the health field.

These changes directly affected the daily school life of both teachers and students, who needed to adapt to new technologies, reorganize their routines, and change the ways of social interactions. Students who enrolled during the period of remote classes had a different experience of entering higher education, and in 2022, they underwent a new adaptation to in-person teaching.

Although remote teaching has occurred recently, it has been the subject of study by various researchers for years. These researchers investigate the implications of technologies in the school context, from the use of electronic means to reach an audience from disadvantaged backgrounds who would otherwise not have access, to the multiple possibilities for customizing learning according to students' individual interests.

According to Levy (2007), cyberculture has brought mutations in relationships with knowledge. The teacher becomes a manager of learning and thinking. Lopes (2018) comments that the internet has contributed to student motivation due to the possibilities it allows. And the trust relationship built by the teacher contributes to increasing this motivation. Remote teaching has allowed for new perspectives on teaching methods, as well as highlighted discussions about the possibilities of hybrid teaching, prompting considerations for changes in the academic structure (Bacich; Moran; Florentino, 2021).

According to Moran (2021), the principle of hybrid teaching is related to the possibility of redesigning the best possible combinations for learning, adapting to the specific needs of students, identifying the skills to be worked on considering the different areas of knowledge, degree of maturity, and autonomy of each student. These changes in face-to-face and remote teaching have prompted an analysis of the profile of higher education students, exploring the possibilities of their relationship with motivation. Motivation can occur due to intrinsic or extrinsic factors, with the former related to spontaneity, i.e., the natural propensity to perform tasks, and the latter linked to external rewards, i.e., the completion of an activity with the purpose of obtaining a result.

As stated by Bzuneck (2001), immediate motivation is related to the application of effort by the student to the tasks of the learning process, i.e., according to their choices in the course of a certain action, which also involves the quality of personal investment, resulting in the final product, the knowledge constructed, and the skills acquired. The author highlights that results are not always identified immediately and that the student does not learn exclusively through motivation, but it is a factor that interferes with the outcome of their learning, as expected and revealed in school grades.

To motivate students, it is necessary to propose challenging activities of the intermediate level, i.e., they cannot be so easy as to generate boredom nor so complex as to lead to feelings of anxiety, failure, and frustration (Bzuneck, 2010).

In this context, the purpose of this study was to analyze the profile of students from a public institution in the state of São Paulo from 2019 to 2022. This analysis considered the

perspectives observed in the students' evaluation of disciplines, encompassing self-assessment regarding attendance and class participation, prior knowledge and experiences relevant to the topics covered, a study undertaken outside class hours, and the perception of the discipline's relevance to the chosen undergraduate course.

Materials and Methods

The research, approved by the Ethics Committee under CAAE 61509122.4.0000.9927, was conducted at a public institution of higher education located in the interior of the state of São Paulo, which offers undergraduate and postgraduate courses, as well as university extension courses. Admission is through entrance exams or through Sisu, with a percentage of seats reserved for social and racial quota policies. To support the study, we drew upon research on intrinsic and extrinsic motivation by Guimarães (2001, 2004), Bzuneck (2001) and Boruchovitch (2004), as well as psychological analyses by Vigotsky (2000) including the concept of the zone of proximal development, which represents the distance between the actual and potential development zones.

Initially, data were collected from students enrolled between 2019 and 2022, based on information released by the institution's communication department (DvComun), to identify the motivations behind students' choice of the institution as the basis for their initial higher education.

An analysis of the data from the "Discipline Evaluation Application" was conducted to identify the students' profiles. Professors use This application at the end of each semester, covering the period from 2019 to the 1st semester of 2022. Developed by the institution, the application aims to evaluate disciplines, including student self-assessment and reflections on content and pedagogical approach. The application is available for download by students on Google Play and the AppStore and in a version for professors.

The application addressed eleven questions related to students' self-assessment, teacher evaluation, and the discipline itself. However, in line with the study's objectives, four specific questions were selected:

1. 1. Attendance and follow-up of classes in this discipline;
   2. Previous knowledge and experience on the topic presented;
   3. Study outside class per week (A: > 4h; B: 2-4h; C: < 2h; D: Eve of test; E: none);
   10. Importance of the discipline for your undergraduate course.

The questionnaire was administered by the responsible teachers at the end of each semester, generating a code where students had a 15-minute deadline to respond. To evaluate the disciplines, students needed to select one of the five alternatives for each question: very good, good, fair, bad, and very bad.

Initially, seven questions that were not analyzed were excluded from the database, as they addressed issues related to content and the teacher, which were not the focus of this study, namely:

4. Teacher's mastery of the discipline's content;

5. Teacher-student relationship (accessibility, respect, classroom management);

6. Clarity and effectiveness in content delivery;

7. Contribution and quality of teaching support resources (whiteboard, slides, videos, texts, teaching platform/Moodle, laboratory, exercises, field trips, visits, etc.);

8. Coherence of assessments with the learning process;

9. Encouragement of reflection and critical thinking by students;

11. Evaluation of the whole: discipline, teacher(s), and approach.

Em seguida, foram excluídas as disciplinas e/ou turmas sem registro de avaliação no período. As turmas das disciplinas que eram ministradas por mais de um docente, apresentavam as respostas dos alunos em relação a cada um deles. Como o objeto desse estudo é relacionado ao perfil discente e não às relações docentes, considerando que seriam os mesmos alunos e as respostas deveriam ser as mesmas, porém os dados eram distintos, foi realizada uma média dessas respostas, pois a duplicação ou multiplicação dos resultados poderiam interferir nos dados finais.

The study only included essential basic courses. Based on the curriculum of the undergraduate courses at the institution studied, compulsory disciplines in at least one of the offered courses were classified as "mandatory," while others were classified as "optative."

Furthermore, the disciplines were classified into one of three knowledge areas: (i) biological: advancing knowledge in the field, but not necessarily presenting applicability; (ii) exact: featuring characteristics that allow for measurement and quantification; and (iii) humanities: indicating the improvement of individuals, the economy, and environments. To

guide this classification, the knowledge areas of Capes[3] (Coordination for the Improvement of Higher Education Personnel) were used, considering that disciplines with applications in agrarian areas were selected as Agricultural Sciences, others as Biological Sciences, and those related to land and soil as Exact and Earth Sciences. This characterization was also guided by the descriptions of the disciplines' syllabi.

Results and Discussion

The analysis was divided into: Profile of Entrants, which presents data gathered by the institution's communication advisory; Sample, indicating the number of students reached; Characterization of Disciplines, describing the types and areas of the sciences of the analyzed disciplines; and Data from the Discipline Evaluation App, presenting the analysis of student responses.

Profile of Entrants

Initially, data regarding the profile of incoming students at the participating institution were analyzed, based on a survey conducted by the institution itself at the time of enrollment, covering the total number of students. From 2019 to 2020, four questions were tabulated about the type of institution attended during high school, family income, motivation for choosing the university, and feelings about this new stage of academic life.

Despite a slight decrease from 2021 to 2022, Figure 1 shows a trend of increasing numbers of students from public schools. This trend may be related to changes in university admission procedures. Since 2015, universities have progressively begun selecting students through the Unified Selection System (Sisu), with reserved spots under the Affirmative Action Law, including affirmative actions for students who completed high school entirely in public schools and self-identified as Black, Brown, and Indigenous (BBI).

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[3] Available at: www.gov.br/capes/pt-br/acesso-a-informacao/acoes-e-programas/avaliacao/instrumentos/documentos-de-apoio-1/tabela-de-areas-de-conhecimento-avaliacao. Accessed in: 2 Sept. 2022.
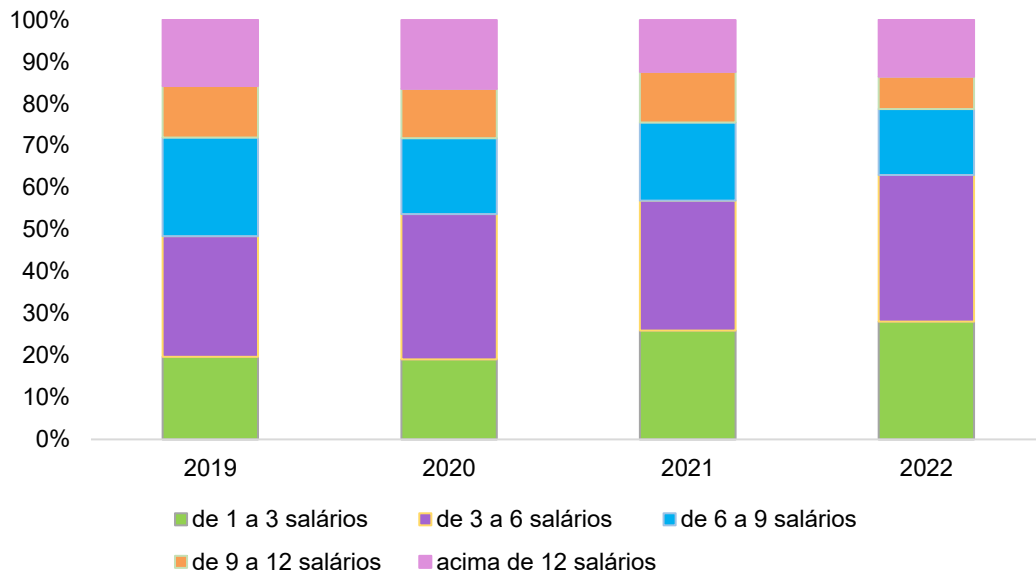
Figure 1 - Students who attended high school in public and private schools[4]
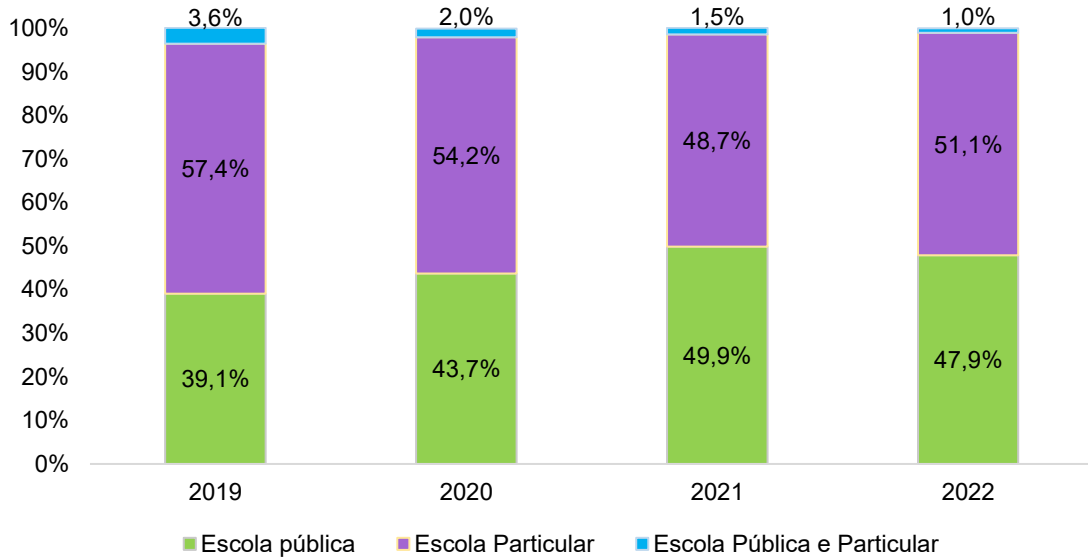
Source: Esalq/USP (2022).

Figure 2 shows an increase in students from families with incomes of 1 to 3 salaries during the period, also as a consequence of changes in the institution's admission process.

Figure 2 - Family income of incoming students[5]

Source: Esalq/USP (2022).

[4] Green color: Public school; Purple: Private School; Blue: Public and Private School.

[5] Translation of the text: Green color: from 1 to 3 salaries; Purple color: from 3 to 6 salaries; Blue color: from 6 to 9 salaries; Orange: from 9 to 12 salaries: Pink: above 12 salaries.

Considering this profile of incoming students, their motivation for choosing the institution as the basis for their academic formation was analyzed. Drawing from Self-Determination Theory, which views the individual as an active organism in their development seeking positive integration in social relationships, Guimarães and Boruchovitch (2004) elucidate intrinsic motivation as a natural disposition toward seeking challenges, novelty, achievement, and satisfaction, representing a positive characteristic of human nature.

For intrinsic motivation, three innate psychological needs are necessary: autonomy, competence, and relatedness. In this sense, intrinsically motivated individuals engage in activities because they believe they do so out of their desire, without external obligations, setting goals, planning actions, and evaluating results. On the other hand, some individuals perceive that they are being manipulated by external factors, leading to negative feelings such as weakness and inefficacy (Guimarães; Boruchovitch, 2004). Figure 3 shows that the majority's choice is linked to intrinsic motivation, i.e., personal and professional achievement, and the actual choice of the institution.

Figure 3 - Motivation of incoming students to study at the chosen University
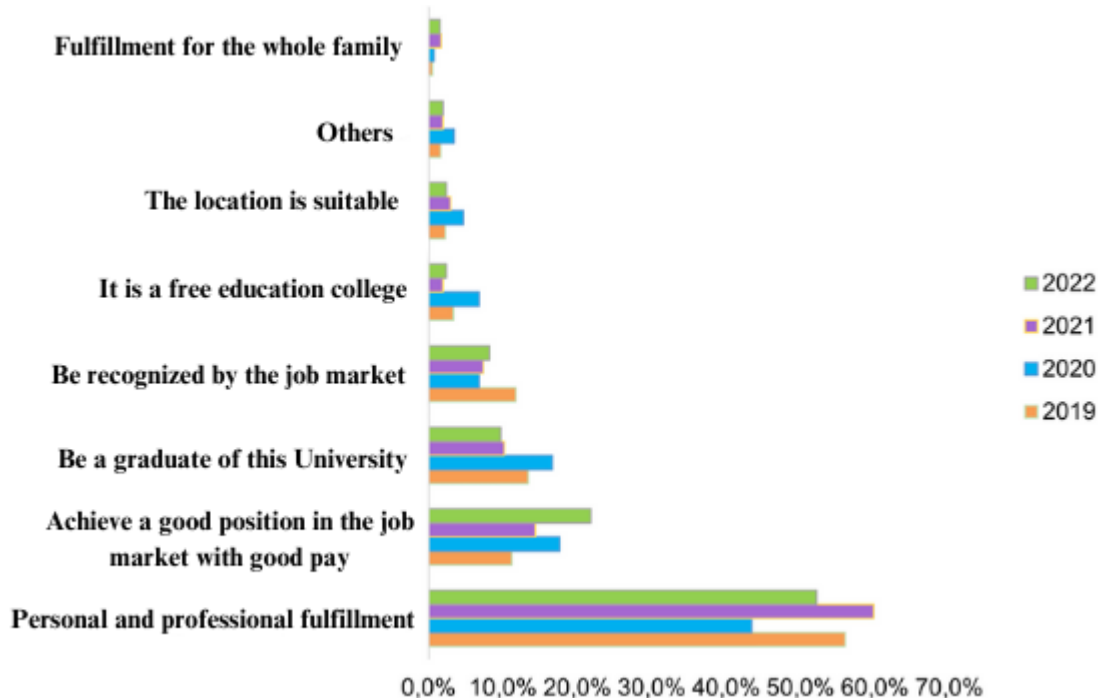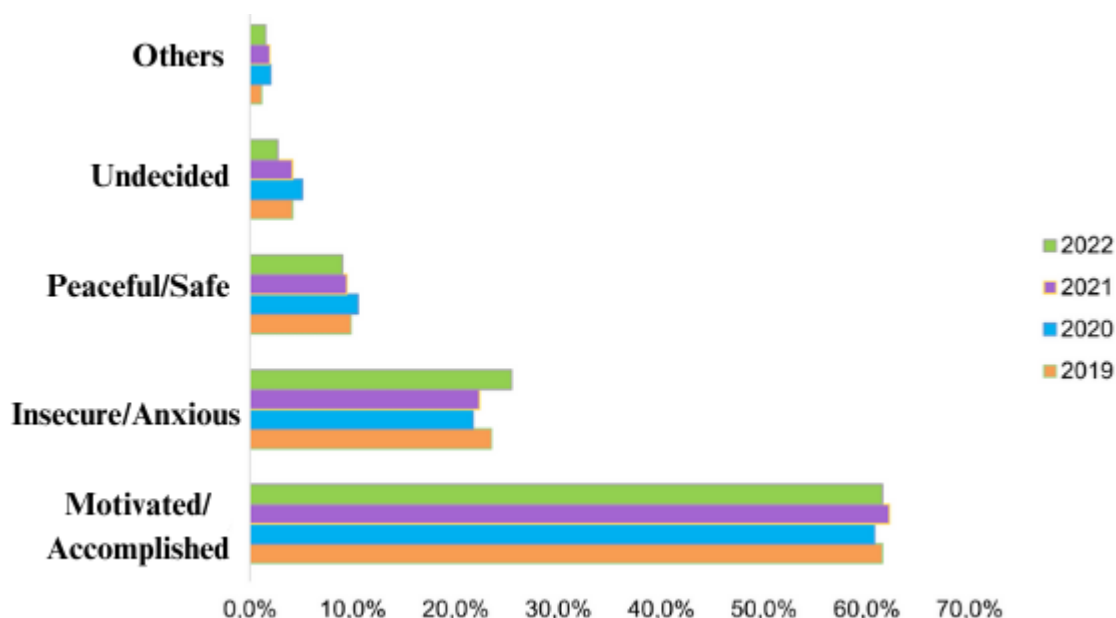

Source: Esalq/USP (2022).

Extrinsic motivations, such as prospects of a good salary in the job market, pursuit of recognition, or family expectations, possibly influenced some of the students' choices.

Guimarães and Boruchovitch (2004) explain that the influence of external factors can lead individuals to feel compelled to certain actions, diverting the necessary focus for a more meaningful interaction with the environment, which can be detrimental to intrinsic motivation.

The motivation for personal and professional achievement decreased by 7.7% from 2021 to 2022 and increased by 7.5% regarding job placement and good remuneration. On the other hand, from 2020 to 2021, there was a significant increase (16.4%) in the former case, considering it was a period of remote learning commencement. Figure 4 reveals the students' sentiments regarding their enrollment in the University. It is noticeable that the majority feel motivated/fulfilled.

Figure 4 - Sentiment upon enrolling in the University[6]


Source: Esalq/USP (2022).

Although there are students who enroll in the University with feelings of insecurity, anxiety, or indecision, the overall data does not reveal significant discrepancies over the years. A motivated student is highly engaged in tasks, committed, diligent, enthusiastic in execution, takes pride in results, and seeks to develop new skills (Guimarães, Boruchovitch, 2004).

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[6]

Sample

To verify the student profile, data from mandatory courses offered by the institution's undergraduate programs, which were evaluated by the students, were analyzed. Figure 5 presents the number of students enrolled in each course and the number of responses obtained per academic Semester. The legend of the graph represents the year and academic Semester, with 2019-1 equivalent to the year 2019 and the first Semester; 2019-2, the year 2019 and the second Semester, and so forth.

Figure 5 - Enrolled students and responses obtained, by year and Semester[7]
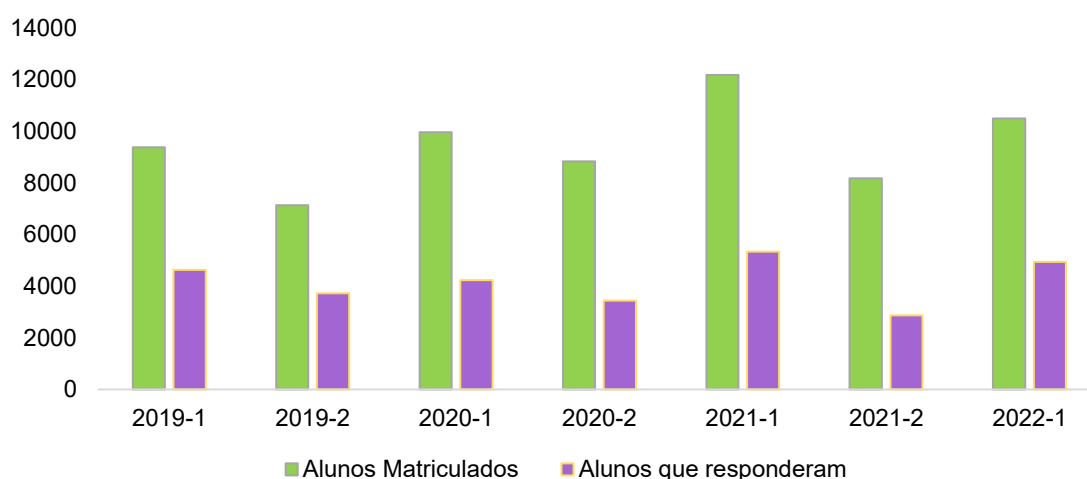
Source: Authors' elaboration.

The total number of students who responded during the analyzed period represented 44% of the total enrolled students.

Characterization of Courses

The courses were categorized as "mandatory," meaning essential for at least one of the analyzed programs, and "elective," indicating the students' choice of areas of interest. Figure 6 shows the number of mandatory courses that comprised the sample.

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[7] Color translation: Green color: Enrolled Students; Purple color: Students who responded.

Figure 6 - Mandatory and elective courses[8]
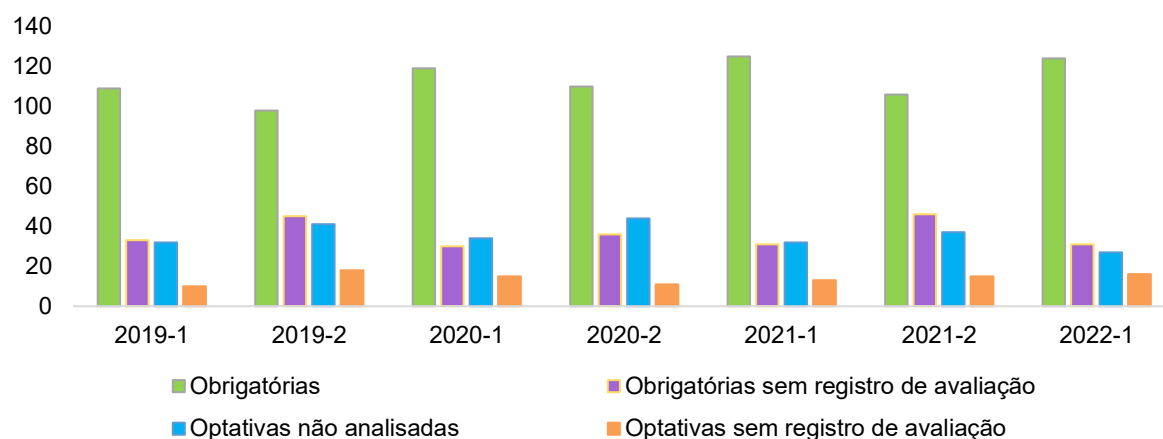
Source: Authors' elaboration.

Considering the mandatory courses that were the subject of study, Table 1 demonstrates the areas of sciences and fields of knowledge according to Capes (Coordination for the Improvement of Higher Education Personnel) during the period from 2019 to 2022. Courses that appeared in more than one semester were counted only once.

Table 1 - Areas of Undergraduate Courses

| Science Areas		Knowledge Areas according to Capes	
Area	**Quantity**	**Area**	**Quantity**
Humanities	100	pplied Social Sciences	76
Biological	95	Agricultural Sciences	62
Exact Sciences	70	Biological Sciences	42
		Exact and Earth Sciences	37
		Humanities	29
		Engineering	14
		Health Sciences	4
		Multidisciplinary	1
Total	**265**	**Total**	**265**

Source: Authors' elaboration.

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[8] Translation of the colors: Green: Compulsory; Blue: Unexamined electives; Purple: Compulsory with no record of evaluation; Orange: Electives with no record of evaluation.

Data from the discipline evaluation application

The values in Figures 7 to 16, to allow for comparison considering the total distinct responses per semester and year, were transformed into percentages. The first question was regarding attendance and participation in classes.

In Figure 7, we observe a large number of students with positive attendance and participation. This result may be due to the mandatory attendance requirement for approval, as well as the natural inclination of students to engage with the subjects for their academic and professional development.

Figure 7 - Attendance and participation in classes for each discipline[9]
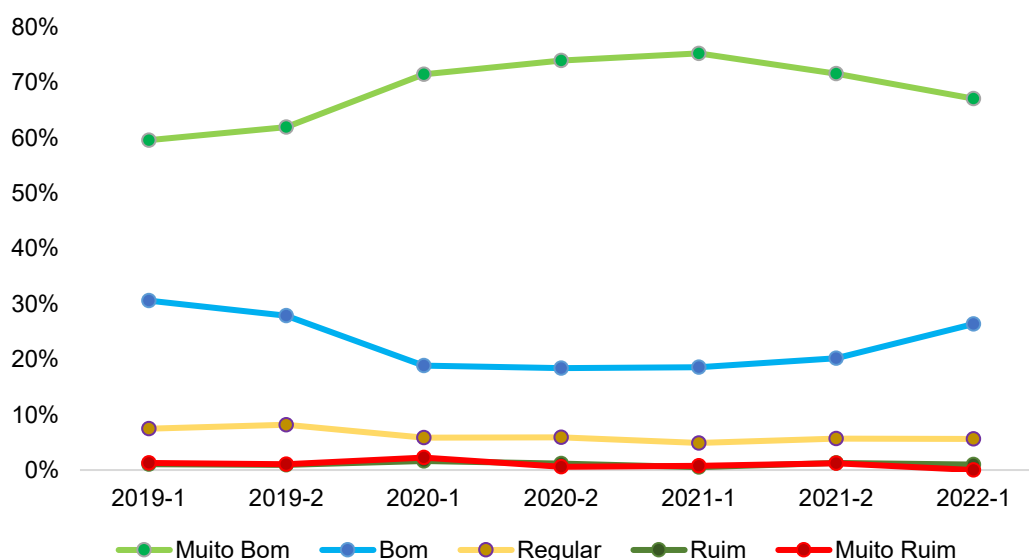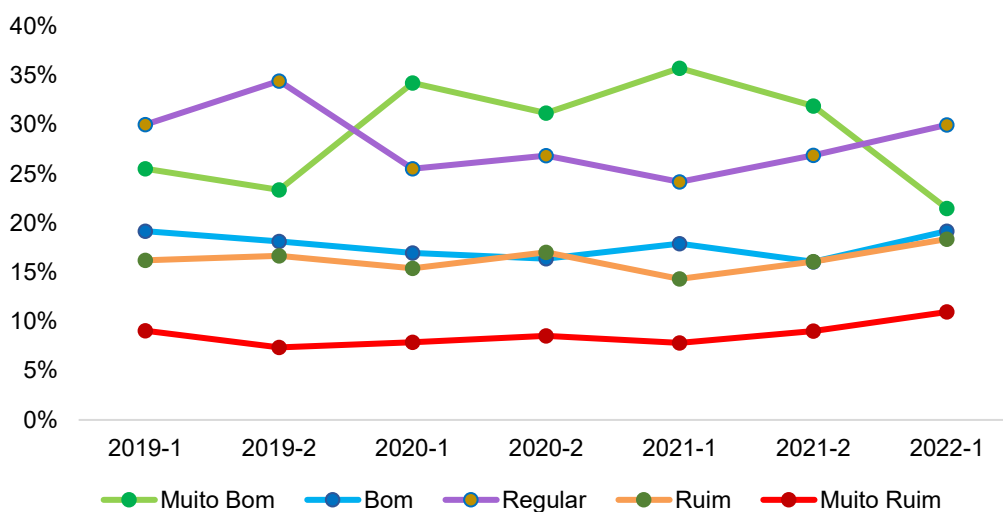

Source: Authors' elaboration.

The second question was regarding students' prior knowledge. These data were categorized into general, then by field of science (humanities, biological, and exact), and finally, only the data from mandatory courses in the 1st semester of each year, divided into the three areas, considering that it mainly encompasses incoming undergraduate students. Figure 8 reveals the general data, considering courses from all areas of knowledge.

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[9] Color translation: Green color: Very good; Blue color: With; Yellow color: Regular; Dark Green color: Bad; Red color: Very bad.

Figure 8 - Previous Knowledge and Experience on the Subject Matter[10]
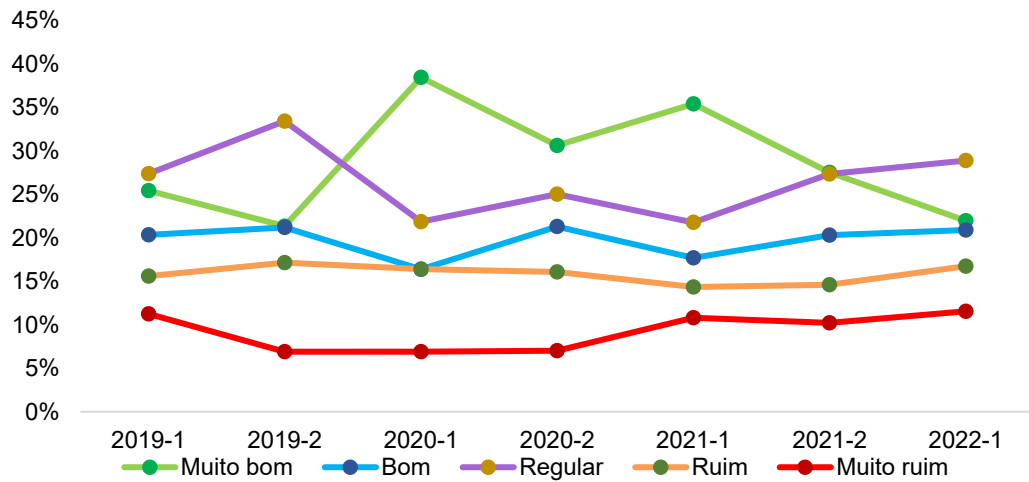

Source: Authors' elaboration.

It is observed that during the period of remote classes (2020 to 2021), students' previous knowledge (very good) surpassed that of face-to-face courses, while the average of "bad" and "very bad" responses remained between 7 and 11%, and 14 and 18%, respectively.

In Figures 9, 10, and 11, this knowledge was categorized into the three areas of science: Humanities, Biological, and Exact. There was still a predominance of increased reference to "very good" during the period of remote classes. Figure 9 refers to the Humanities field. In 2020 and 2021, we found the highest percentages of "Very good" responses, which constitutes a positive factor for student motivation in the face of the demands of remote classes.

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[10] Color translation: Green color: Very good; Blue color: Good; Purple color: Regular; Orange color: Bad; Red color: Very bad.

Figure 9 – Humanities: Previous Knowledge and Experience on the Subject Matter[11]
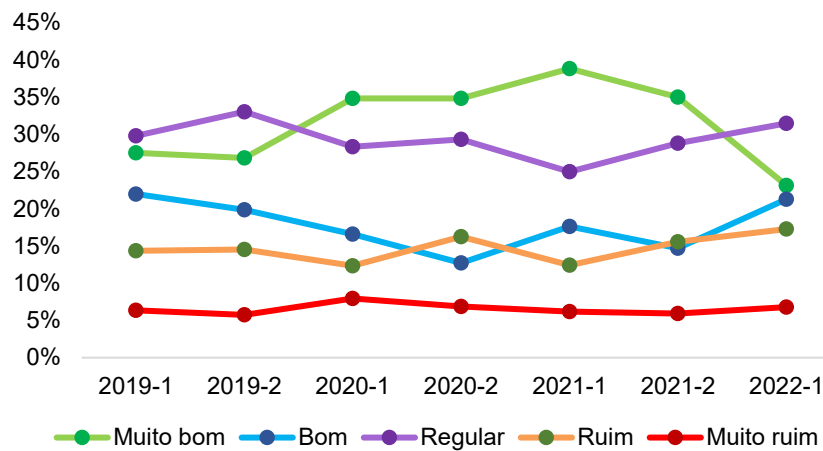

Source: Authors' elaboration.

The percentages from 2020-1 to 2021-1 of "very bad" response records support the perception that, despite students facing a period without face-to-face classes, their previous high school knowledge contributed to their academic formation.

Figure 10, from the Biological Sciences field, also adds positive data from 2020 to 2021, in the "very good" responses. However, compared to the Humanities field (21%), there is a significant drop in Biological Sciences (13%) in the "good" option in 2020-2.

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[11] Color translation: Green color: Very good; Blue color: Good; Purple color: Regular; Orange color: Bad; Red color: Very bad.

Figure 10 - Biological Sciences. Previous Knowledge and Experience on the Subject Matter[12]

Source: Authors' elaboration.

In Figure 11, the discrepancy in the field of Exact Sciences is quite evident in 2019, with 2020 and 2021 showing positive improvement. However, another variation is observed in 2022 upon the return of face-to-face classes.

Figure 11 - Exact Sciences. Previous Knowledge and Experience on the Subject Matter[13]
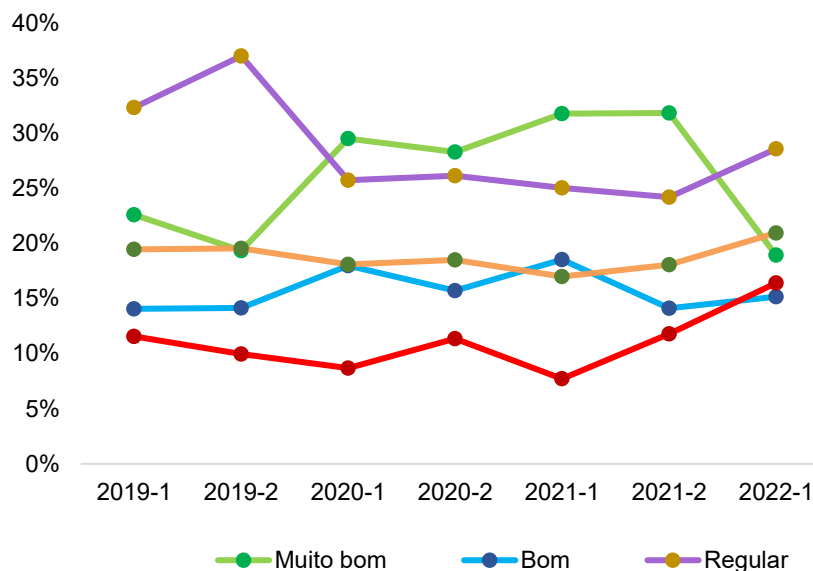
Source: Authors' elaboration.

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[12] Color translation: Green color: Very good; Blue color: Good; Purple color: Regular; Orange color: Bad; Red color: Very bad.
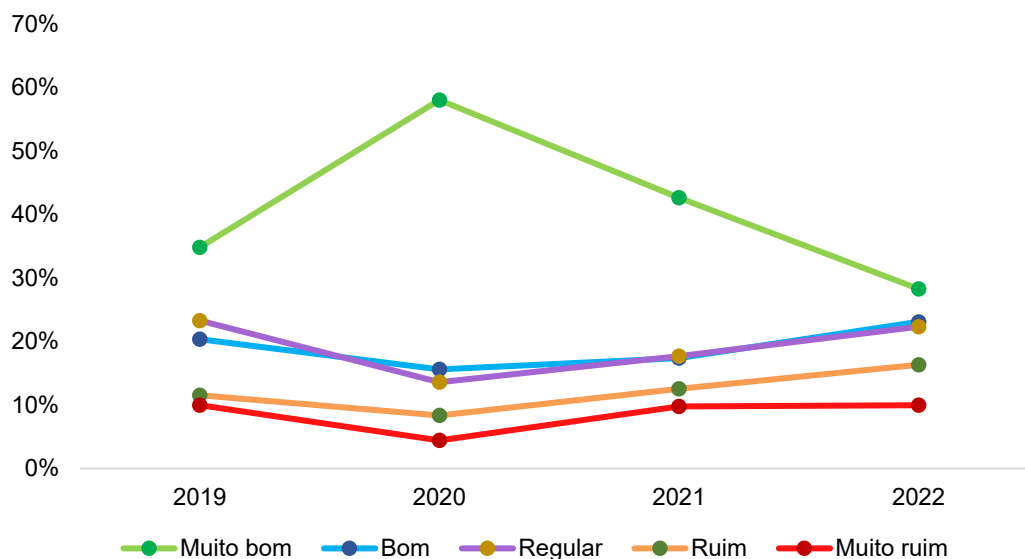[13] Color translation: Green color: Very good; Blue color: Good; Purple color: Regular; Orange color: Bad; Red color: Very bad.

In all three areas, as observed in Figures 9 to 11, a high number of records in the "fair" category stand out, demonstrating the possible difficulty encountered by students in the disciplines overall. In 2022-1 (Figures 9 to 11), there is a significant decline in students' knowledge, which may lead to greater difficulties in keeping up with the disciplines due to the absence of necessary essential content.

Incoming students may exhibit some heterogeneity regarding basic high school subjects, and sometimes, they may have gaps in certain areas that are essential for understanding the content. The graphs in Figures 12, 13, and 14 represent the disciplines of incoming students in the first Semester of each year. These students are automatically enrolled in these disciplines, and there may be enrollments of students outside the ideal period.

Figure 12 pertains to the disciplines of incoming students in the Humanities area. When compared with Figure 9, which represents all students, it is noticeable that the number remains significant in 2020-1.

Figure 12 - Ideal Period: 1st Semester. Area: Humanities. Previous Knowledge and Experience on the Subject Matter[14]
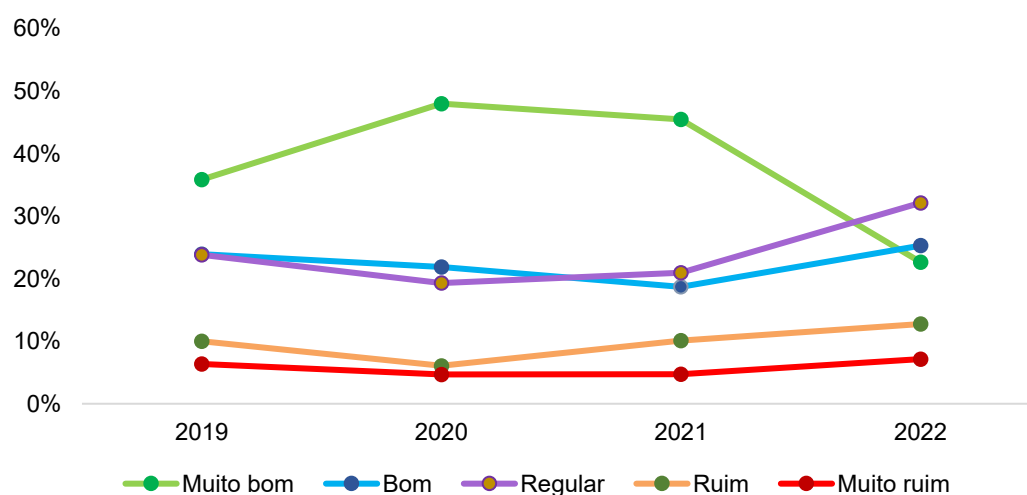

Source: Authors' elaboration.

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[14] Color translation: Green color: Very good; Blue color: Good; Purple color: Regular; Orange color: Bad; Red color: Very bad.

There is a slight difference in the Biological Sciences (Figure 13) compared to the general area data (Figure 10). Nonetheless, 2020 and 2021 show the most positive data for the period.

Figure 13 - Ideal Period: 1st Semester. Area: Biological Sciences. Previous Knowledge and Experience on the Subject Matter[15]
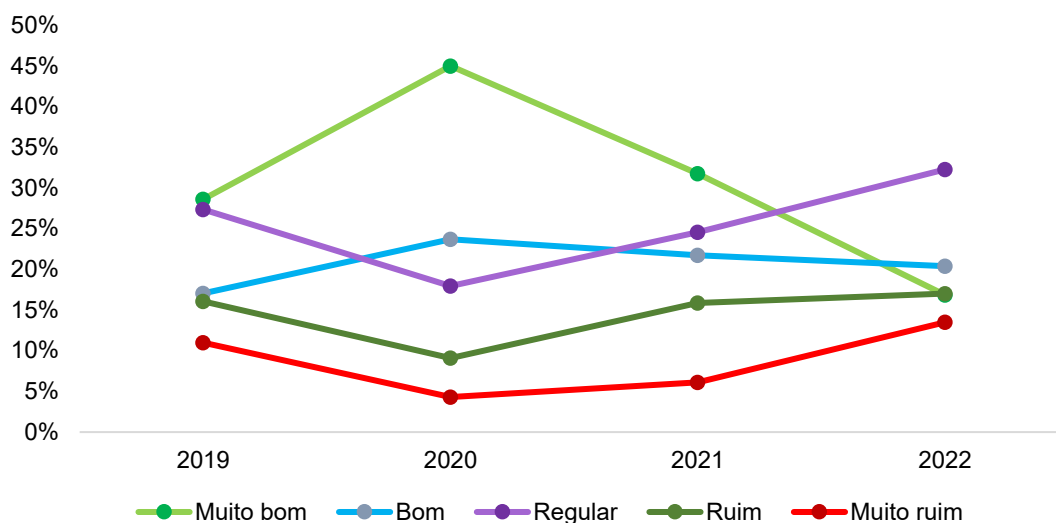

Source: Authors' elaboration.

There is a significant discrepancy in the field of Exact Sciences, as depicted in Figure 14. There is a notable increase in students who reported a lack of previous knowledge progressively over the period.

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[15] Color translation: Green color: Very good; Blue color: Good; Purple color: Regular; Orange color: Bad; Red color: Very bad.

Figure 14 - Ideal Period: 1st Semester. Area: Exact Sciences. Previous Knowledge and Experience on the Subject Matter[16]

Source: Authors' elaboration.

From the data of 2022, it can be concluded that there was a gap in the final years of high school, which was characterized by emergency remote teaching. In all three areas of science, the data in 2020 reflects incoming students who, for the most part, studied their entire high school education through face-to-face classes. The percentage for 2022 reveals a significant decrease in the incoming students' previous knowledge, considering that the majority completed, in part or entirely, through remote classes.

The student's prior knowledge can be considered the starting point for the teacher's planning. Vygotsky, from a historical-cultural perspective on education, emphasizes the importance of the Zone of Proximal Development, which is what the student can do with the help of another person, and the Zone of Actual Development, which reflects what the student can accomplish independently (Vygotsky, 2000). These psychological functions constantly change, so it is crucial to identify prior knowledge and progressively advance towards the construction of new knowledge, as learning precedes human development.

The third question of the application is related to the frequency of students' study outside of class. The study time outside of classes was analyzed using the overall data. From the data in Figure 15, it was observed that during the period of remote learning, there was an increase

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[16] Color translation: Green color: Very good; Blue color: Good; Purple color: Regular; Dark green: Bad; Red color: Very bad.

in study hours and a significant decrease in the number of students who did not dedicate time beyond class hours.

Figure 15 - Frequency of study outside of class, per week[17]
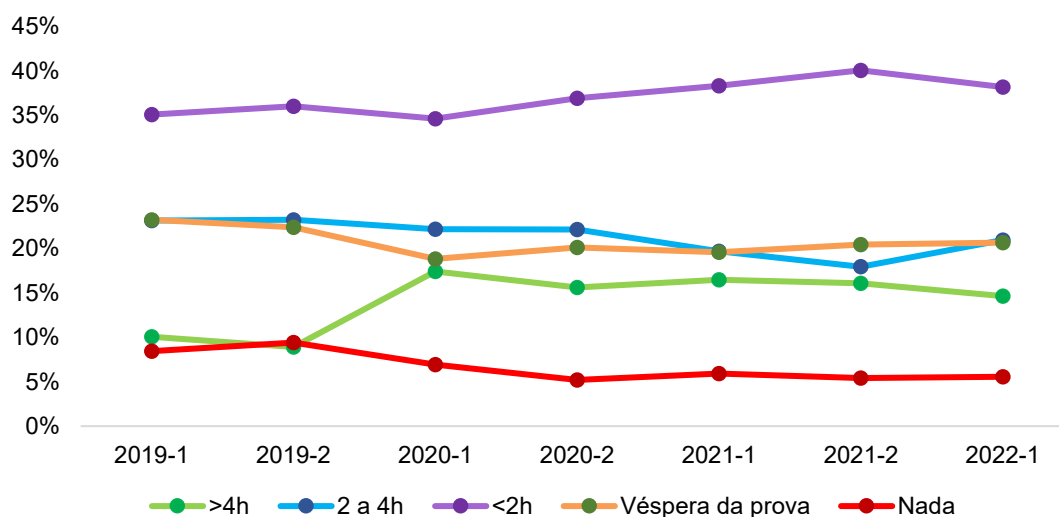
Source: Authors' elaboration.

Studying beyond mandatory classes may be associated with student motivation, both intrinsic and extrinsic. In the former scenario, students naturally engage in developing their skills. In the latter case, it may indicate students facing difficulties and needing additional study hours to meet academic demands.

Bzuneck and Guimarães (2010), based on the Self-Determination Theory, mention autonomous motivation, which is acquired when the three components of this theory are listed: internal locus (intentional behavior); psychological freedom (will and personal interests, without obligation) and choice (flexibility in decision-making). On the other hand, controlled motivation is related to external pressures, obligations, deadlines, rewards, and punishments.

Attendance in class, whether in-person or remote, as a requirement for passing, may represent controlled motivation for some students, as it may be linked to assessments and grades to fulfill evaluative requirements. On the other hand, studying outside class may be an important indicator of autonomous motivation among students, as shown in Figure 15.

Controlled motivation by students yields less satisfactory results than autonomous motivation. However, it should not be dismissed, as in some cases, rewards may be necessary

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[17] Color translation: Green color:>4h; Blue color: 2 to 4h; Purple color: <2; Orange color: The day before the test; Red color: Nothing.

to foster autonomy. Research indicates that the majority of teachers recognize the importance of autonomous motivation for better student development; however, in practice, the use of controls tends to prevail (Bzuneck, Guimarães, 2010).

According to Bzuneck (2001), motivation reflects on one's personal relationships, meaning that unmotivated students study little and consequently learn little. Guimarães and Boruchovitch (2004) emphasize that the relationship between students and teachers plays a crucial role in satisfying or frustrating students' psychological needs. They highlight the importance of establishing bonds and a sense of belonging for students. As a result, students who feel more secure tend to handle academic setbacks more calmly and demonstrate greater engagement in the learning process.

As Guimarães (2001) points out, students are involved in learning tasks throughout much of the school period. Engagement in such activities depends greatly on students' perceptions of them. Figure 16 indicates that, regardless of whether classes are in-person or remote, the vast majority understand the importance of the subjects for their academic and professional formation. However, a small percentage disregards this fact.

Figure 16 - Importance of subjects for students' undergraduate courses
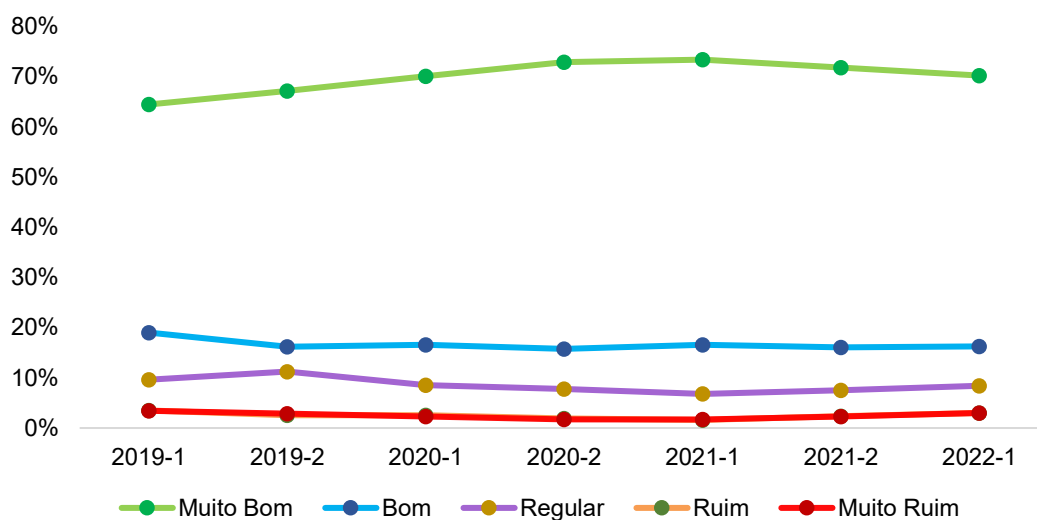
Source: Authors' elaboration.

A significant source of intrinsic motivation occurs when students perceive the importance and personal significance of the activities and tasks prescribed by teachers (Bzuneck, 2010). According to Bzuneck (2010), every student begins to value learning when they can relate such knowledge to their real life, their world, and their personal interests.

Furthermore, making it clear to students that mastering and developing the skills taught contribute to professional success also leads to positive outcomes.

For Bzuneck (2010), high school students can be motivated by realizing the importance of knowledge, both for a good placement in college entrance exams and as a prerequisite for college courses. The author also emphasizes that it is not enough to merely declare the importance; it must indeed be present in their learning task. Despite the positive data on the student profile regarding the importance of subjects for their education, it becomes interesting to identify whether this is reflected in the actions of the students.

Final considerations

Rethinking the teaching and learning process requires the School Manager, based on the diagnosis conducted, to seek alternatives to minimize the impacts observed in 2022, related to the deficiency or lack of knowledge of basic subjects. It becomes essential to reorganize the pedagogical work of teachers to address specific difficulties that may arise with this new student profile, with alternatives such as academic reinforcement, leveling, extracurricular activities, guidance on study techniques and organization, and time management.

The identification of the zone of proximal development, as conceived by Vygotsky (2000), refers to the difference between the actual developmental level, that is, the knowledge already acquired by the individual, and the potential developmental level, which consists of activities that the individual is capable of doing with guidance. This understanding contributes to a more practical orientation of the teaching and learning process.

Regarding the discipline evaluation application, in addition to prior knowledge, it could also assess the students' perception of their learning level at the end of the semester. With this perception, it would be easier to identify whether students have progressed in their knowledge because extrinsic motivation, according to Bzuneck (2001), may be linked only to a form of reward. In this sense, controlled motivation for obtaining grades for approval may mask the real learning of students.

Regarding studying outside the classroom, it is essential for the school manager to consider strategies for students to recognize the importance of this practice for their education. It is crucial for students to be engaged and motivated to dedicate themselves to increasing curiosity for advanced knowledge and expanding cultural capital. This can be achieved through various initiatives, such as participation in congresses, workshops, and dynamics, ongoing

teacher training, creating a stimulating educational environment, proposing solutions to real and challenging problems, implementing mentoring programs, and encouraging participation in research groups.

Despite the relevance of the collected data for the study's objective, we acknowledge the limitations of the research, such as the analysis restricted to essential basic subjects, termed "mandatory"; subjects not evaluated by students; temporal scope, limited to the period from 2019 to the 1st semester of 2022; spatial scope, limited to a specific institution.

Finally, a challenge arises for the school manager in dealing with a future student profile, where conducting new studies with data from upcoming semesters becomes pertinent, aiming to identify trends for 2025. It is possible that there will be a return to the predominant profile of entrants who completed high school entirely in person. Additionally, there is an opportunity to conduct more in-depth analyses, exploring new cuts due to the limitations of the current research. This will enable a more comprehensive understanding of the educational landscape and allow the school manager to adopt more effective strategies to meet the needs of students.

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CRediT Author Statement

Conflicts of interest: There are no conflicts of interest.

Ethical approval: Research approved by the Ethics Committee CAAE 61509122.4.0000.9927.

Data and material availability: Incoming student profile data organized by the Communication Division of Esalq/USP are publicly available, accessible on the Institution's website, as cited in the reference, and used for analysis. Responses from the course evaluation application are institutionally owned, without public disclosure. These data were processed and presented in this work as general data, with no possibility of participant identification. The results are from the Final Course Work (TCC) of the MBA in School Management by Pecege and are original.

Author's contributions: Fabiana Lumi Kikuchi Hamada: Conceptualization. Theoretical and methodological framework. Data collection, processing, and analysis. Writing. Final version editing. Rosebelly Nunes Marques: Supervision. Research coordination. Conceptualization. Overall work review.

Processing and editing: Editora Ibero-Americana de Educação.
Proofreading, formatting, normalization and translation.