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Academic access, retention, and success in the Integrated High School[1]

Acesso, permanência e êxito escolar no Ensino Médio Integrado

Acceso, permanencia y éxito académico en la Escuela Secundaria Integrada

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Abstract: This article aims to understand academic access, retention, and success in the Industrial Automation Integrated High School program at the Federal Institute of Santa Catarina's Luzerna Campus. The research is characterized as a quantitative approach, with some elements of qualitative research. The study design is documentary, and the analyzed data came from two sources: 2017-2024 rates related to the program in question, found in reports available at the Integrated System for Academic Activities Management; and forms filled out by students at the time of unenrollment. In the data analyses, academic access, retention, and success rates are initially presented; then, key factors for student dropout are listed. At last, it is concluded that dropout rates in the Industrial Automation Integrated High School program are high, and that student dissatisfaction with the teaching methods of some educators, as well as low performance and/or learning difficulties, are among key aspects leading to student dropout in the programs.
Keywords: Access, retention, and success; Integrated High School; Federal Institute.

Resumo: Este artigo tem como objetivo entender o acesso, a permanência e o êxito escolar no curso de Ensino Médio Integrado em Automação Industrial (EMITAI) do Câmpus Luzerna do Instituto Federal Catarinense (IFC). A pesquisa caracteriza-se como de abordagem quantitativa, com alguns elementos de pesquisa qualitativa. O delineamento do estudo configura-se como documental, e os dados analisados foram de duas fontes: índices de 2017 a 2024 referentes ao curso em questão, presentes nos relatórios disponíveis no Sistema Integrado de Gestão de Atividades Acadêmicas (SIGAA); e formulários preenchidos pelos discentes no momento do cancelamento da matrícula. Na análise de dados, inicialmente são apresentados os índices de acesso, permanência e êxito escolar e, em seguida, são listados os fatores determinantes para a evasão no curso. Por fim, é concluído que os índices de evasão escolar no curso de EMITAI são elevados e de que a insatisfação dos discentes com a didática de alguns professores e o baixo rendimento e/ou dificuldade de aprendizagem escolar estão entre os aspectos determinantes para a evasão no EMITAI.
Palavras-chave*:* Acesso, permanência e êxito; Ensino Médio Integrado; Instituto Federal.

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Resumen: Este artículo tiene como objetivo comprender el acceso, la permanencia y el éxito académico en el curso de Secundaria Integrado en Automatización Industrial (EMITAI) del Campus Luzerna del Instituto Federal Catarinense (IFC). La investigación se caracteriza como un enfoque cuantitativo, con algunos elementos de la investigación cualitativa. El diseño del estudio es configurado como documental, y los datos analizados fueran de dos fuentes: índices de 2017 hasta 2024 relacionados con el curso en cuestión, presentes en los informes disponibles en el Sistema Integrado de Gestión de Actividades Académicas (SIGAA); y formularios completados por estudiantes en el momento de cancelación del registro. En el análisis de inscripción de datos, se presentan inicialmente los índices de acceso, la permanencia y éxito académico y, en seguida, se enumeran los factores determinantes para la evasión en curso. Por fin, concluyó que los índices de ausentismo escolar en los cursos de EMITAI son elevados y que la insatisfacción de los estudiantes con la didáctica de algunos profesores y el bajo ganancia y/o dificultad de aprendizaje académica están entre los aspectos determinantes para la evasión en el EMITAI.
Palabras clave: Acceso, permanencia y éxito; Enseño Secundario Integrado; Instituto Federal.

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Introduction

The triad of academic access, retention, and success has gained prominence in academic research and educational discussions across Brazil in recent years. This is currently a pressing issue for institutions and school systems, as, beyond ensuring access to education, there is a growing concern about guaranteeing student retention and program completion, regardless of education level and/or stage.

Studies addressing this subject indicate that in some school systems, the binomial of academic retention and success poses a significant challenge for institutions to overcome, given the high student dropout rates. Among the school systems facing this obstacle, the Federal School System of Professional, Scientific, and Technological Education stands out[4] (Alvarez, 2020; Cotrim-Guimarães, 2022; Costa; Marinho, 2018; Rezende, 2022; Santos, 2017; Silva; Castioni; Martínez, 2021).

The Federal School System of Professional, Scientific, and Technological Education was established on December 29, 2008, by Law No. 11,892 (Brasil, 2008), bringing Professional and Technological Education programs to places where they had never been offered before. However, in many locations, these programs were not properly implemented,

[4] According to Law 11,892 (Brasil, 2008), the Federal School System of Professional, Scientific and Technological Education comprises the following institutions: I. Federal Institutes of Education, Science and Technology; II. Federal Technological University of Paraná; III. Federal Center of Technological Education Celso Suckow da Fonseca (Rio de Janeiro) and Federal Center of Technological Education of Minas Gerais; IV. technical schools associated with federal universities; e V. Colégio Pedro II.

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nor did they serve all students as intended, as highlighted in Costa and Marinho's study (2018). According to Alvares (2020), these shortcomings are reflected in the high student dropout rates observed in many programs across different regions of Brazil where these programs are offered, representing one of the main obstacles to the consolidation of this educational system in many places.

In this context, it is essential to examine this issue across different program types and regional contexts to understand how rates of academic (un)success manifest in the most diverse locations where the Federal School System of Professional, Scientific and Technological Education operates. Such analyses should also identify potential causes of student dropout[5], enabling the subsequent reformulation of policies aimed at improving students' academic retention and success. Otherwise, as Araújo, Silva, and Mendes (2014, p. 16) affirm, "we will democratize access without democratizing knowledge, something imperative to break down the elitist, segregated, and dualistic nature of school culture."

Following this perspective, Silva, Castioni, and Martínez (2021) complement:

> It is necessary to deliberately establish strategies to combat student dropout in the Federal School System of Professional, Scientific and Technological Education, particularly in technical secondary programs, looking beyond numbers and mere economic outcome, relying on the school's community to make changes where they truly matter, so that countless young student's educational trajectories aren't interrupted (Silva; Castioni; Martínez, 2021, p. 456).

Therefore, this research specifically aims to contribute to discussions regarding aspects of academic access, retention, and success in Integrated High School programs[6] offered at the Federal Institute of Santa Catarina's Luzerna Campus[7], which is a part of the Federal School System of Professional, Scientific and Technological Education. This particular campus and program type were selected based on their relevance to the daily work experience of the researchers proposing this study.

As such, this study's central research question can be formulated as follows: What do the academic records from the Federal Institute of Santa Catarina's Luzerna Campus reveal about academic (un)success in Integrated High School programs with high student dropout rates?

[5] This research uses the term "student dropout" to refer to withdrawn enrollments in the analyzed program.
[6] Candidates must pass an entrance exam to enroll in the Integrated High School programs at the Luzerna Campus. This exam is administered annually by the institute's General Coordination of Enrollment.
[7] The Federal Institute of Santa Catarina comprises fifteen campuses (Abelardo Luz, Araquari, Blumenau, Brusque, Camboriú, Concórdia, Fraiburgo, Ibirama, Luzerna, Rio do Sul, Santa Rosa do Sul, São Bento do Sul, São Francisco do Sul, Sombrio, and Videira), which are distributed throughout the Santa Catarina state. The Luzerna campus, located in Vale do Contestado, is a part of this institute. It offers different types of programs. The most notable are integrated technical high school programs, subsequent technical courses, and undergraduate programs (IFC, 2023).

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To address this question, the main objective established was to understand academic access, retention, and success at the Industrial Automation Integrated High School program at the Federal Institute of Santa Catarina's Luzerna Campus.

The specific objectives were defined as: I. To identify rates of academic access, retention, and success in the Industrial Automation Integrated High School program; and II. To examine the reasons leading students to withdraw their enrollment from this program.

This research is justified by the importance of understanding academic retention and success rates in the Integrated High School programs offered at the Luzerna Campus, so that this institution can be informed about its students' academic (un)success and possible causes for withdrawal from this type of program. Such findings allow the Luzerna Campus to continually reevaluate strategies and policies it adopts to ensure the academic success of students enrolled in integrated programs, while also facilitating the creation of policies aimed at effectively contributing to students' academic success.

Methodological Procedures

This research is characterized as a quantitative approach, with some elements of qualitative research (Gil, 2002; Pereira *et al.*, 2018). It follows a documentary investigation design, characterized by the analysis of various sources, such as newspapers, brochures, official documents, and reports (Gil, 2002). In this study, the analyzed reports were retrieved from the Luzerna Campus' Integrated System for Academic Activities Management.

This campus offers three integrated programs: Industrial Automation, Work Safety, and Mechanics. However, as the Industrial Automation program has the institution's highest student dropout rates, it was selected for this analysis of academic access, retention, and success.

Therefore, the analyzed data consists of school enrollment statistics from 2017 to 2024 for the Industrial Automation Integrated High School program at the Federal Institute of Santa Catarina's Luzerna Campus. These academic records were collected on July 15, 2024, through queries in the Integrated System for Academic Activities Management.

Additionally, forms completed by students at the time of unenrollment were analyzed to identify the reasons behind their decision to withdraw from the program. Access to these responses was granted by the Luzerna Campus' Academic Record and Institutional Registry via an electronic spreadsheet where the data is compiled.

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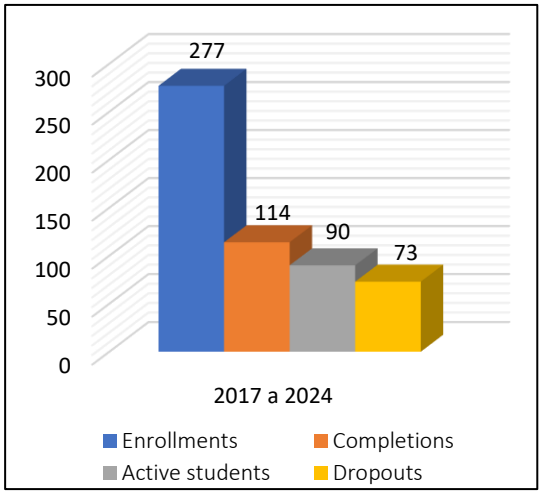
To present, examine, and discuss the findings, this study first outlines the percentages of academic access, retention, and success among Industrial Automation Integrated High School students. Subsequently, key factors contributing to student dropout rates in this program are addressed.

Results and Discussions

Academic Access, Retention, and Success Rates in the Industrial Automation Integrated High School Program

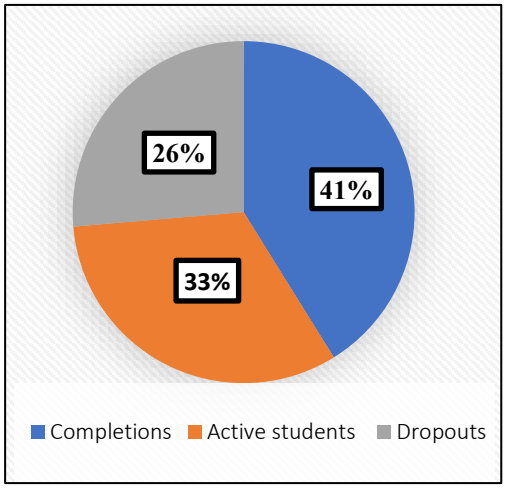
Between 2017 and 2024, two hundred and seventy-seven students enrolled in the Industrial Automation Integrated High School program. Of these, a hundred and fourteen (41%) completed the program, seventy-three (26%) withdrew, and ninety (33%) are actively enrolled, as presented in Figures 1 and 2:

Figure 1: Total number of enrollments, active students, dropouts, and completions in the Industrial Automation Integrated High School program from 2017 to 2024.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

Figure 2: Percentage of students who completed, dropped out, or are actively enrolled in the Industrial Automation Integrated High School program from 2017 to 2024.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

As students who enrolled between 2017 and 2021 have already had sufficient time to complete the program, while those enrolled from 2022 to 2024 have not, the enrollment and dropout rates data were analyzed separately for these two periods: 2017-2021 and 2022-2024.

ISSN 2238-8346
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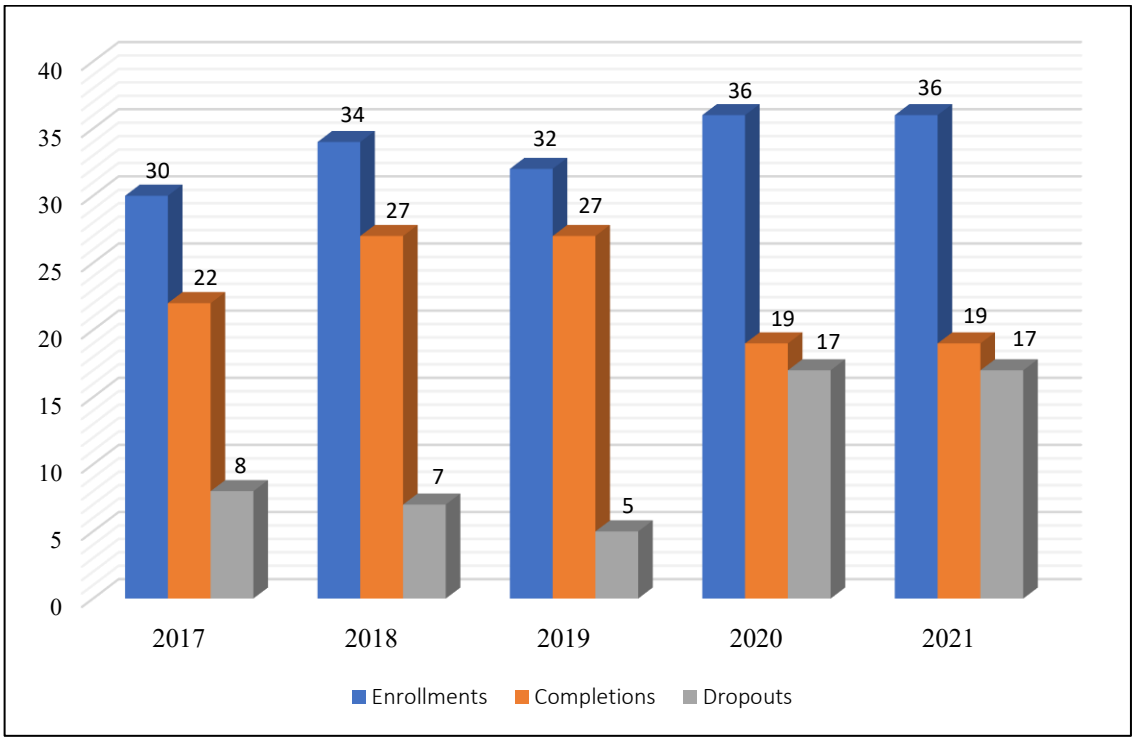
Accordingly, Figure 3 displays general data regarding enrollment (registrations), academic success (program completion), and dropout rates (withdrawal requests) for the Industrial Automation Integrated High School program from 2017 to 2021, categorized by enrollment year.

Figure 3: Enrollment and dropout rates, and students who completed the Industrial Automation Integrated High School program from 2017 to 2021.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

The data presented in Figure 3 demonstrate that, in 2020 and 2021, there was a significant increase in student dropout rates compared to 2017, 2018, and 2019. It is understood that one potential contributing factor may have been the COVID-19 pandemic, as this surge coincides with the pandemic's peak years. However, based solely on the analyzed data, this study cannot confirm whether the pandemic was the primary or sole cause of this considerable increase.

To complement the data in Figure 3, Figures 4 and 5 were elaborated, aiming to present the absolute numbers and percentages of enrollment, program completion, and student dropout from 2017 to 2021 in the Industrial Automation Integrated High School program.

During this period, one hundred and sixty-eight students enrolled in the program. Of these, one hundred and fourteen (68%) were successful (completed the program), and fifty-four (32%) dropped out (withdrew), as highlighted in the following figures:

ISSN 2238-8346
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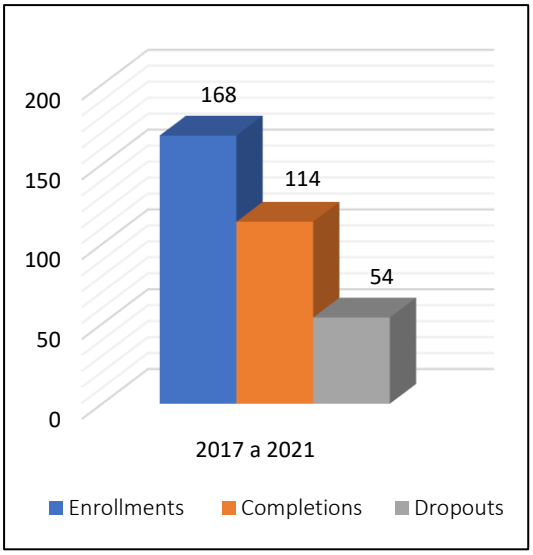
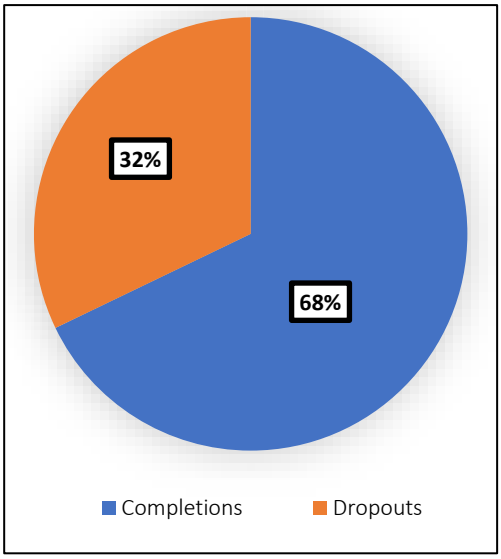
Figure 4: Absolute number of students who completed, dropped out, or were actively enrolled in the Industrial Automation Integrated High School program from 2017 to 2021.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

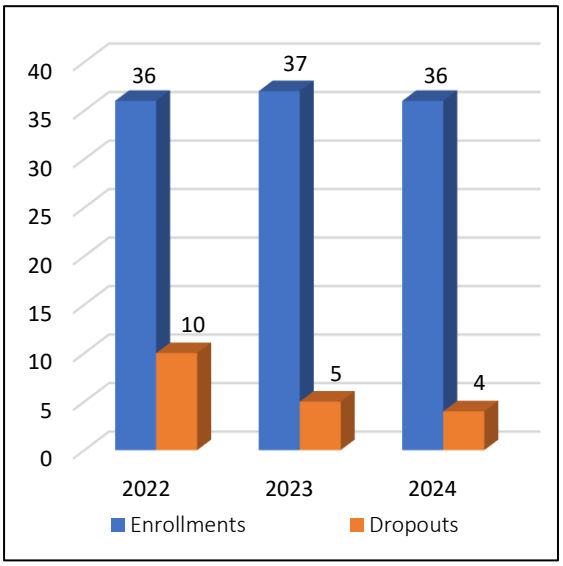
Figure 5: Percentage of students who completed or dropped out of the Industrial Automation Integrated High School program from 2017 to 2021.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

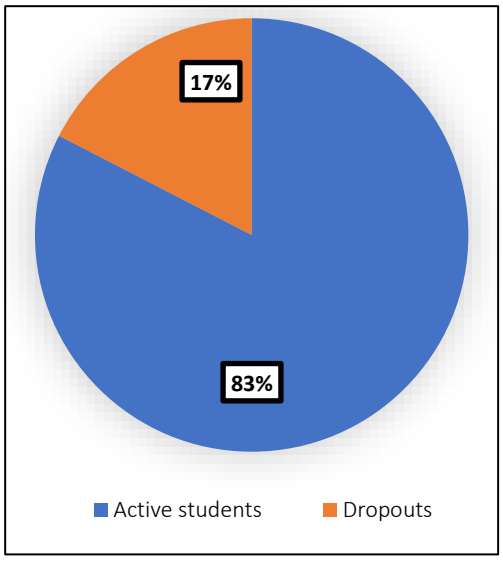
In the second phase of this study, data from the 2022-2024 period were analyzed. These results, presented in Figures 6 and 7, include enrollment statistics (registrations) and dropout rates (withdrawal requests).

Figure 6: Enrollment and dropout numbers in the Industrial Automation Integrated High School program from 2022 to 2024.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

Figure 7: Percentage of active and withdrawn enrollments in the Industrial Automation Integrated High School program from 2022 to 2024.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

ISSN 2238-8346
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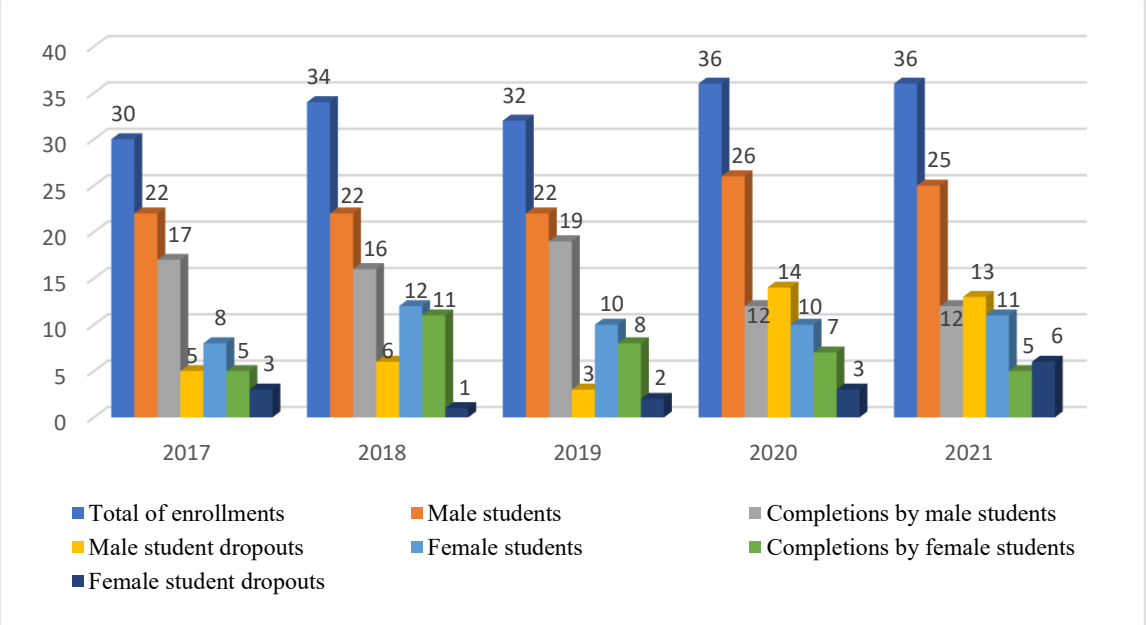
As shown in Figures 6 and 7, one hundred and nine students enrolled during this period, of whom nineteen (17%) had already withdrawn by the time data were extracted from the Integrated System for Academic Activities Management. This student dropout rate is notably high, particularly given part of these students had been at the institution for a few months, as they enrolled in 2024. These numbers and percentages underscore how academic retention and success remain critical institutional challenges in the post-pandemic era.

A student profile for the program was also established. Based on data from all research years (2017-2024), the Industrial Automation Integrated High School program shows a significant gender disparity, with 71% of the students being male, compared to only 29% being female.

Given this predominance of male students in the Industrial Automation Integrated High School program, the study investigated whether gender might negatively affect academic retention and success rates for female students. Accordingly, enrollment, completion, and dropout rates were analyzed by gender.

As only students who enrolled until 2021 have had sufficient time to complete the program, the 2017-2021 period was used for gender-based analysis. The data are presented in Figure 8:

Figure 8: Enrollment and dropout rates, and students who completed the Industrial Automation Integrated High School program, according to gender, from 2017 to 2021.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

ISSN 2238-8346
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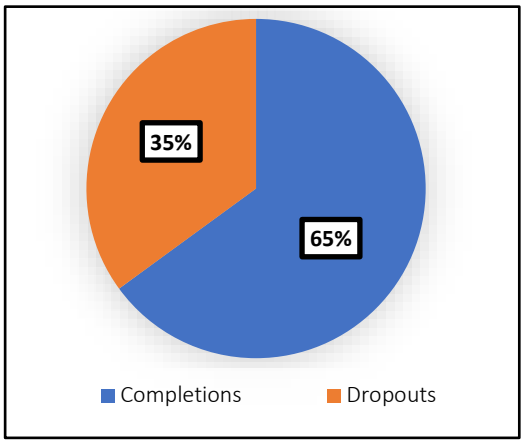
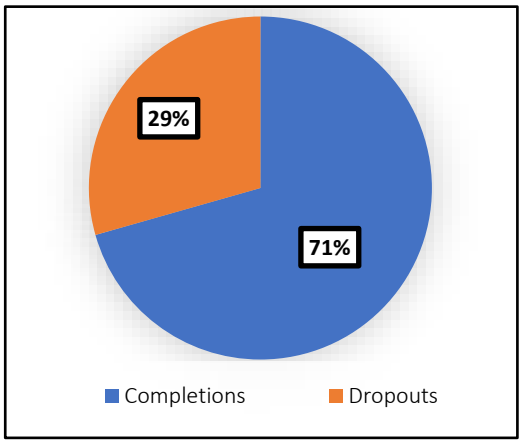
Analysis of Figure 8 reveals that although the Industrial Automation Integrated High School program primarily attracts male students, female students demonstrate higher rates of academic retention and success. To illustrate this finding, Figures 9 (male students) and 10 (female students) were elaborated to present total success (program was completed) and dropout (withdrawn enrollment) rates from 2017-2021, according to gender.

Figure 9: Percentage of male students who completed the Industrial Automation Integrated High School program from 2017 to 2021.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

Figure 10: Percentage of female students who completed the Industrial Automation Integrated High School program from 2017 to 2021.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

The evidence presented in Figures 9 and 10 indicates that gender does not significantly influence student dropout rates among female students in the Industrial Automation Integrated High School program, as, despite being a minority in the program, they achieve higher academic success rates (71%) compared to male students (65%). Consequently, gender appears to primarily affect program selection, as evidenced by the program's classes being predominantly comprised of male students, as shown in Figure 8.

Regarding racial demographics, two hundred and thirty-one (83%) students self-identified as white at enrollment; forty-five (16%) self-identified as Mixed Race; and four (1%) self-identified as Black; while none self-identified as Asian or Indigenous, according to Figures 11 and 12:

ISSN 2238-8346
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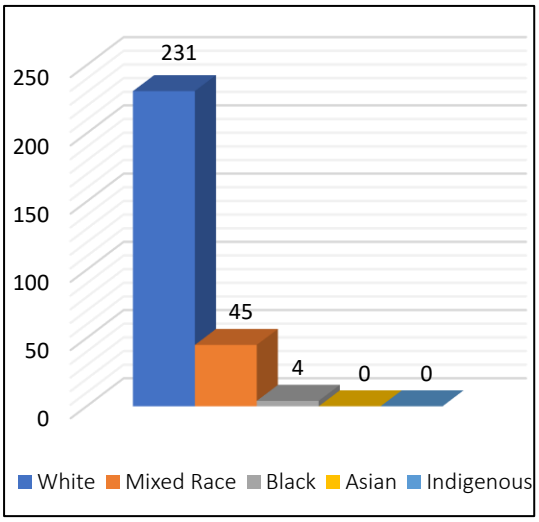
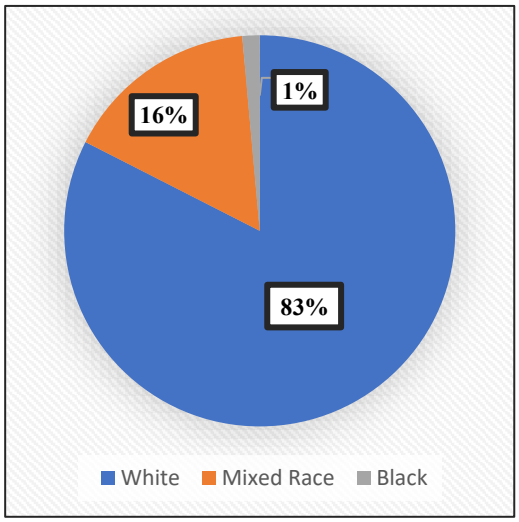
Figure 11: Students' racial self-identification in the Industrial Automation Integrated High School program from 2017 to 2024.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

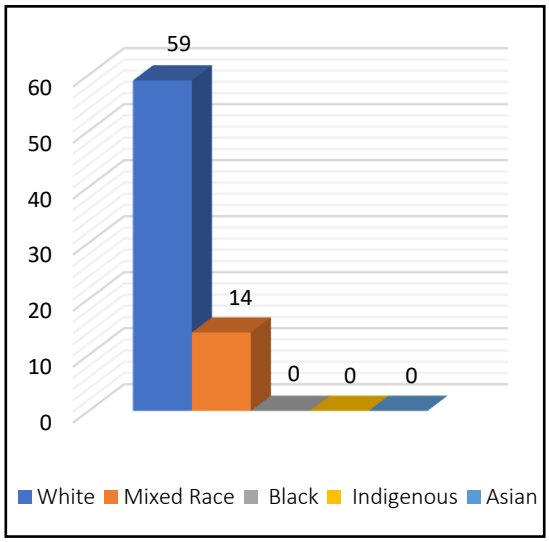
Figure 12: Percentages of students' racial self-identification in the Industrial Automation Integrated High School program from 2017 to 2024.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

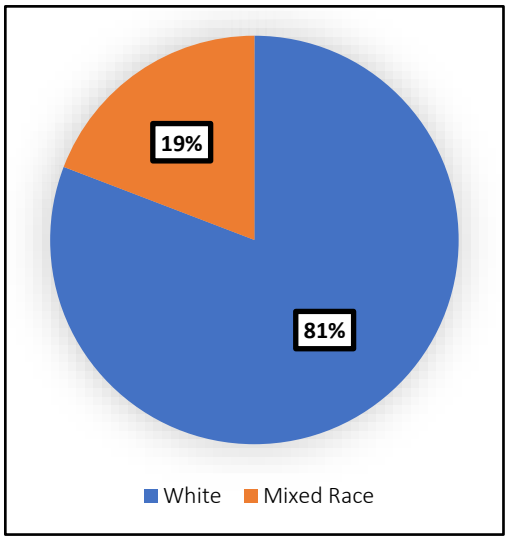
Considering racial self-identification among students who withdrew enrollment, fifty-nine (81%) self-identified as white, fourteen (19%) self-identified as Mixed Race, and none self-identified as Black, Asian, or Indigenous, as presented in Figures 13 and 14:

Figure 13: Dropout students from the Industrial Automation Integrated High School program according to race from 2017 to 2024.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

Figure 14: Percentage of dropout students from the Industrial Automation Integrated High School program according to race from 2017 to 2024.



Source: elaborated by the authors based on academic data from the Luzerna Campus.

ISSN 2238-8346
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The numbers presented in Figures 13 and 14, according to the racial distribution of students who withdrew enrollment, are similar to the total percentages of students who self-identified as white and Mixed Race at enrollment, in line with Figures 11 and 12.

Therefore, this finding suggests race does not significantly influence dropout rates in the Industrial Automation Integrated High School program (though studies like Souza's [2017] indicate it remains a consequential factor in other Integrated High School programs offered by the Federal School System), as, despite minimal variation, the percentages of enrollment and withdrawal rates according to race are similar.

Given that there are limitations on which data can be registered in the Integrated System for Academic Activities Management concerning Integrated High School students, some highly significant factors could not be examined, such as: primary school type attended by students (public or private); socioeconomic status (family income); entrance exam performance; and others.

This study understands these factors could provide crucial information to have a better grasp of academic retention and success in Integrated High School programs in the Federal Institute of Santa Catarina's Luzerna Campus, given that research conducted in other contexts, such as Rezende's (2022), indicate these aspects directly interfere with the (un)success of Integrated High School students.

Cotrim-Guimarães (2022, p. 7) corroborates this conclusion by noting that students likely to drop out from Integrated High School programs typically come from "[…] low-income households, have parents with unstable employment, attended public primary schools, identify as Black, and were held back for at least one school year […]." In other words, besides academic exclusion, there is evidence of social exclusion in the context of Integrated High School programs from the Federal School System of Professional, Scientific, and Technological Education.

Key Factors Contributing to Student Dropout in the Industrial Automation Integrated High School program

When a student contacts the Luzerna Campus's Academic Record and Institutional Registry to withdraw from a program, the department requires them to complete a form containing a single multiple-choice question, where the student indicates their reasons for dropping out.

The Academic Record and Institutional Registry provided access to students' answers through an electronic spreadsheet with their reasons for withdrawal. Given

ISSN 2238-8346
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that the COVID-19 pandemic persisted until mid-2023, creating exceptional circumstances in academic environments during that time, the analyses focused exclusively on withdrawal reasons for the current academic year (2024). Between January and mid-July 2024, ten students withdrew from the Industrial Automation Integrated High School program.

This analysis revealed that low academic performance and/or learning difficulties are among the primary factors leading to withdrawal, as underscored by the students.

For many years, low academic performance and/or learning difficulties (selected by 30% of the students as their reason for withdrawal) have been identified in studies as key factors for student dropout in Integrated High School programs. Among authors who have contributed to this discussion, Veiga (2016) stands out for his research on causes for student dropout in integrated programs at the Federal Center of Technological Education Celso Suckow da Fonseca. His findings (Veiga, 2016) indicate that regarding learning difficulties and resulting low academic performance, students, particularly those with public school backgrounds, report significant challenges in keeping pace with integrated programs' curricula.

Dissatisfaction with teaching methods used by some educators of the Industrial Automation Integrated High School emerged as another significant factor contributing to student dropout (selected by 20% of students). This finding underscores how pedagogical approaches substantially influence student retention and success in integrated programs.

In these programs, teachers' educational practices represent a complex issue, fundamentally linked to the initial training of educators working in the Federal School System of Professional, Scientific, and Technological Education.

Therefore, teacher training deserves particular attention in this context, as instructors face a complex educational practice, in which an alternative educational model—integrated education—is implemented for adolescents—the core demographic of Integrated High Schools—who carry the multifaceted challenges of this life stage, including a plurality of perspectives, ideas, difficulties, prior educational experiences etc.

Concerning themselves with how the teachers working in this context were trained, Guedes and Sanchez (2017) explain that in the Federal School System of Professional, Scientific, and Technological Education, particularly in the Federal Institutes, there are two distinct teacher profiles: those who received formal teaching training during their undergraduate studies, and those who did not:

ISSN 2238-8346
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> [...] the former, who studied subjects aimed at general education—such as Chemistry, Physics, or Geography—received formal teaching training; however, when it comes to Integrated High School programs focused on professional education, they teach their regular subjects without preparation for the professional education field. A key issue this group faces is that Brazilian universities' teacher training programs rarely address the relationship between work and education, and more specifically, do not discuss professional education at all. Although trained for teaching roles, their focus remains solely on propaedeutic secondary education. Then, among instructors without pedagogical training, the situation is more critical, as they teach the program's specialized subjects aimed at professional education. These instructors are typically engineers, nurses, physicians, biologists, who have mastered their scientific fields at undergraduate and graduate levels, but teach at technical High School programs without formal pedagogical qualifications. This second group also includes technologists. In summary, one group has teaching training but lacks the capacity to address specific work-education issues; the other comprises subject specialists without pedagogical training or understanding of teaching techniques (Guedes; Sanchez, 2017, pp. 239-240).

Given this context, for authors such as Heeren (2019) and Souza, Pereira, and Rodrigues (2016), teaching training for integrated programs (both at undergraduate levels and as an ongoing professional development) represents a significant challenge due to these programs' unique characteristics.

Considering the arguments presented by Guedes and Sanchez (2017), Heeren (2019), and Souza, Pereira, and Rodrigues (2016), along with the significant number of students who selected dissatisfaction with teaching methods as a key factor for leaving the Industrial Automation Integrated High School program, it is clear that ongoing teacher training for this program's instructors is crucial for the Luzerna Campus to gradually improve student retention and success. This professional qualification must be a continuous project, not just an occasional activity at the start of the academic year, and should specifically address the unique characteristics of integrated programs.

In light of this scenario, it is evident that learning difficulties and/or low academic performance, combined with challenges related to (recurring) inadequate teacher training for this specific context—resulting in pedagogical practices that fail to address the unique characteristics of Integrated High School programs—represent a critical combination that institutions must address to reduce rates of academic unsuccess (particularly school failure and dropout) in Integrated High School programs.

In addition to the two primary factors contributing to student dropout rates in the Industrial Automation Integrated High School program at Luzerna Campus,

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students mentioned other aspects when requesting withdrawal. However, these reasons—such as relocation, difficult adapting to the Luzerna Campus' environment, scheduling conflicts between external activities and the hours when the program is offered (morning/evening), and lack of identification with the program—were reported by significantly fewer students compared to issues related to teaching methods and low performance and/or learning difficulties.

Conclusions

The primary objective of this study was to examine academic access, retention, and success in the Industrial Automation Integrated High School program at the Federal Institute of Santa Catarina's Luzerna Campus.

The analyses revealed high student dropout rates in the program. From 2020 onward (coinciding with the COVID-19 pandemic), the program experienced a significant rise in withdrawal requests, and these elevated rates persisted even after the pandemic ended.

Among factors contributing to student dropout in the Industrial Automation Integrated High School program, two key aspects emerge: dissatisfaction with certain teaching methods and low academic performance and/or learning difficulties. Notably, these factors align with findings from other studies in this field, including Veiga's (2016, p. 7), which highlights "[...] the faculty's lack of pedagogical knowledge [...]" and students' learning difficulties as elements directly impacting dropout rates in Integrated High School programs.

Regarding study limitations, the Integrated System for Academic Activities Management lacked data concerning students' primary school backgrounds (public or private), socioeconomic status (family income), and entrance exam performance. Analysis of these factors would have provided a better understanding of academic access, retention, and success in the program.

An additional limitation was the absence of a data collection instrument that allowed a deeper understanding of the reasons leading to student dropout, that is, an instrument that allowed students to provide detailed explanations for their withdrawal motivations, such as an open-response questionnaire.

Future research could investigate academic access, retention, and success in the other programs offered at the Luzerna Campus. Additional studies could also examine other factors (beyond those addressed here) that may influence dropout rates in Integrated High School programs, as well as conduct in-depth interviews with students who have withdrawn, intending to have a deeper grasp of their reasons for leaving.

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These studies could contribute to providing an education aligned with the existing curricular goals for Integrated High School programs—transcending mere curricular integration (Ciavatta; Ramos, 2011; Frigotto; Ciavatta; Ramos, 2012)—and an education that reaches the intended demographic for this type of program: the children of the working class (Brasil, 2007; Ramos, 2014).

References

ALVAREZ, K. R. Permanência e êxito escolar nos institutos federais. *Ensino em Foco*, Salvador, v. 3, n. 6, p. 106-115, set., 2020. Disponível em: https://publicacoes.ifba.edu.br/ensinoemfoco/article/view/681. Acesso em: 22 mai. 2025. DOI: https://doi.org/10.55847/ef.v3i6.681.

ARAÚJO, A. C.; SILVA, C. N. N.; MENDES, J. S. Introdução. In: HEIJMANS, R. D.; DE ARAÚJO, A. C.; MENDES, J. S. *Evasão na educação*: estudos, políticas e propostas de enfrentamento. Brasília: IFB/CEPROTEC/RIMEPES, 2014, p. 15-19.

BRASIL. *Educação Profissional Técnica de Nível Médio Integrada ao Ensino Médio*. Brasília: Secretaria de Educação Profissional e Tecnológica, Ministério da Educação, 2007. Disponível em: http://portal.mec.gov.br/setec/arquivos/pdf/documento_base.pdf. Acesso em: 12 jul. 2024.

BRASIL. Lei nº 11.892. *Institui a Rede Federal de Educação Profissional, Científica e Tecnológica, cria os Institutos Federais de Educação, Ciência e Tecnologia, e dá outras providências*. Brasília, 2008. Disponível em: https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2008/lei/l11892.htm. Acesso em: 30 jul. 2024.

CIAVATTA, M.; RAMOS, M. *Ensino Médio e Educação Profissional no Brasil*: dualidade e fragmentação. Revista Retratos da Escola, Brasília, v. 5, n. 8, p. 27-41, jan./jun., 2011. Disponível em: https://retratosdaescola.emnuvens.com.br/rde/article/view/45. Acesso em: 22 mai. 2025. DOI: https://doi.org/10.22420/rde.v5i8.45.

COTRIM-GUIMARÃES, I. M. A. *Desigualdades sociais, evasão e permanência no ensino médio integrado*: uma análise sob a perspectiva do processo pedagógico. 2022. 252f. Tese (Doutorado em Educação) – Universidade Federal de Minas Gerais, Belo Horizonte, 2022.

COSTA, P. L. A.; MARINHO, R. J. A. IFs: Educação profissional e tecnológica brasileira reinstitucionalizada: novos e velhos desafios. In: Frigotto, Gaudêncio. *Institutos Federais de Educação, Ciência e Tecnologia*: relação com o ensino médio integrado e o projeto societário de desenvolvimento societário de desenvolvimento. Rio de Janeiro: UERJ, 2018. p. 295-306.

FRIGOTTO, G.; CIAVATTA, M.; RAMOS, M. *Ensino Médio Integrado*: concepção e contradições. 3.ed. São Paulo: Cortez, 2012.

GUEDES, I. A. C.; SANCHEZ, L. B. A formação docente para a educação profissional técnica e sua influência na atuação dos professores do Instituto Federal do Amapá–Campus Macapá: um estudo de caso. *Holos*, Natal, v. 7, p. 238-252, dez., 2017. Disponível em: https://www2.ifrn.edu.br/ojs/index.php/HOLOS/article/view/6093. Acesso em: 22 mai. 2025. DOI: https://doi.org/10.15628/holos.2017.6093.

ISSN 2238-8346
DOI https://doi.org/10.14393/REPOD-v14n2a2025-74912

HEEREN, M. V. A formação docente continuada no Instituto Federal de São Paulo: especificidades do ensino médio integrado. *Sinergia*, São Paulo, v. 20, n. 4, p. 282-287, out./dez. 2019. Disponível em: https://ojs.ifsp.edu.br/sinergia/article/view/897. Acesso em: 22 mai. 2025.

IFC. Instituto Federal Catarinense de Educação, Ciência e Tecnologia. *Plano de Desenvolvimento Institucional (PDI) – 2024-2028*. Blumenau, 2023. Disponível em: https://pdi.ifc.edu.br/wp-content/uploads/sites/80/2024/01/Resolucao-03.2024-IFC-AprovaPDI-2024-2028-Anexo.pdf. Acesso em: 18 jul. 2023.

PEREIRA, A. S. *et al. Metodologia da pesquisa científica*. Santa Maria: UAB/NTE/UFSM, 2018.

RAMOS, M. N. *História e política da educação profissional*. Curitiba: Instituto Federal do Paraná, 2014.

REZENDE, S. E. F. *Fatores de evasão escolar nos cursos técnicos integrados ao ensino médio*. 2022. 128f. Dissertação (Mestrado em Educação Profissional e Tecnológica) – Instituto Federal Goiano, Ceres, 2022.

SANTOS, M. F. P. *Evasão e reprovação escolar nos cursos integrados do IFBA campus Eunápolis*. 2017. 218f. Dissertação (Mestrado em Formação de Professores da Educação Básica) – Universidade Estadual de Santa Cruz, Ilhéus, 2017.

SILVA, D. B. M.; CASTIONI, R.; MARTÍNEZ, R. T. Evasão escolar e os indicadores da Rede Federal de Educação Profissional no Brasil entre 2003 e 2015. *Vértices*, Campos dos Goitacazes, v. 23, n. 2, p. 437-460, mai./ago., 2021. Disponível em: https://editoraessentia.iff.edu.br/index.php/vertices/article/view/15936. Acesso em: 22 mai. 2025. DOI: https://doi.org/10.19180/1809-2667.v23n22021p437-460.

SOUZA, F. C. S.; PEREIRA, U. Á.; RODRIGUES, I. S. Ensino Médio Integrado e formação docente: impasses e proposições. *Dialogia*, São Paulo, n. 24, p. 25-37, jul./dez., 2016. Disponível em: https://periodicos.uninove.br/dialogia/article/view/6372. Acesso em: 22 mai. 2025. DOI: https://doi.org/10.5585/dialogia.N24.6372.

VEIGA, C. R. *Fatores predominantes da evasão escolar no ensino médio integrado: uma proposta de estratégia de prevenção para o CEFET/RJ*. 2016. 102f. Dissertação (Mestrado em Sistema de Gestão) – Universidade Federal Fluminense, Niterói, 2016.