RBEPT
Revista Brasileira da Educação Profissional e Tecnológica

Extension initiation as a pathway to the educational process of Integrated High School students at IF Baiano

Iniciação em extensão como um caminho para o processo formativo do estudante do Ensino Médio Integrado do IF Baiano

Received: May 24, 2025 | **Revised**: June 28, 2025 | **Accepted**: July 22, 2025 | **Published**: 30/07/2026

Ana Paula Marques de Figueredo
ORCID: https://orcid.org/0009-0003-9988-1636
Federal Institute of Education, Science and Technology Baiano (IF Baiano)
E-mail: anaffig@hotmail.com

Cristiane Brito Machado
ORCID: https://orcid.org/0000-0002-2326-715X
Federal Institute of Education, Science and Technology Baiano (IF Baiano)
E-mail: cristiane.brito@ifbaiano.edu.br

Marcelo Souza Oliveira
ORCID: https://orcid.org/0000-0002-0171-8896
Federal Institute of Education, Science and Technology Baiano (IF Baiano)
E-mail: marcelo.oliveira@ifbaiano.edu.br

How to cite this article: FIGUEREDO, A. P. M; MACHADO, C. B; OLIVEIRA, M. S. Extension initiation as a pathway to the educational process of Integrated High School students at IF Baiano. **Revista Brasileira da Educação Profissional e Tecnológica**, [S.l.], v. 02, n. 26, p.1-22 18438 jul. 2026. ISSN 2447-1801.

Abstract

This article analyzed institutional documents based on the results of 11 projects from the Junior Institutional Extension Scholarship Program (Programa Institucional de Bolsa de Iniciação em Extensão – PIBIEX Júnior, Call Notice No. 80/2021), from the perspective of the Integral Human Education (IHE) of students enrolled in the Integrated High School (IHS) program at IF Baiano. This qualitative and exploratory study employed bibliographic and documentary research, using Bardin's (2011) content analysis, in accordance with scholars who discuss Professional and Technological Education (PTE) and extension activities. Although not explicitly documented in the institutional records, it was subjectively inferred that participation in the program contributed to the students' educational process. It was concluded that creating an instrument capable of clearly documenting students' Integral Human Education is essential, thereby demonstrating the outcomes of their educational process.

Keywords: PTE; integrated high school; integral human education; PIBIEX.

Resumo

Este artigo analisou os documentos institucionais a partir dos resultados de 11 projetos do Programa Institucional de Bolsa de Iniciação em Extensão (PIBIEX) Júnior (Edital nº 80/2021), sob a ótica da Formação Humana Integral (FHI) do estudante do ensino médio integrado (EMI) do IF Baiano. A pesquisa qualitativa e exploratória, utilizou-se do levantamento bibliográfico e documental, por meio da análise de conteúdo de Bardin (2011), em conformidade com teóricos que debatem a EPT e a extensão. Apesar de não ser registrado explicitamente em documentos, inferiu-se subjetivamente que a participação no programa contribuiu para o processo formativo dos discentes. Concluiu-se, ser essencial criar um instrumento que registre claramente a FMI dos discentes, demonstrando os resultados no processo formativo destes.

Palavras-chave: EPT; ensino médio integrado; formação humana integral; PIBIEX.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

1 INTRODUCTION

Established by Law No. 11,892/2008, the Federal Institute Baiano (IF Baiano) has the mission of providing public, free, and high-quality professional, scientific, and technological education by integrating teaching, research, and extension activities to promote human, social, and technological development (IF Baiano, 2021c).

Professional and Technological Education (PTE), integrated with high school education, promotes Integral Human Education (IHE) by integrating work, science, and technology (Ramos, 2014). It is presented as a means of preparing students for professional education, qualifying them for the labor market while fostering citizenship, enabling them to live in society, promoting social and professional transformation, and supporting the development of all dimensions of the individual, including intellectual, emotional, social, physical, among others (IF Baiano, 2021c).

According to Frigotto (1987), integrated education should prioritize essential knowledge, whereas Freire (1983) emphasizes extension as a liberating educational practice that transforms both students and the community. The integration of teaching, research, and extension activities fosters students' active engagement, enabling them to develop critically and autonomously for the world of work.

Within this framework, Upper Secondary Professional and Technological Education (USPTE) at IF Baiano, through its teaching, research, and extension activities, plays an important role in promoting the integral and integrated education of upper secondary students. Síveres (2013) supports this perspective by arguing that the experiences provided through extension activities add value to academic knowledge by promoting ethical and political reflection and practical experiences that transform students' perspectives. Participation in extension programs and projects contributes significantly to the personal and professional development of those involved.

In line with this perspective, IF Baiano, guided by its social and institutional commitment, develops the Institutional Extension Scholarship Program (Programa Institucional de Bolsa de Iniciação em Extensão – PIBIEX), encouraging the participation of undergraduate students (Higher Education Modality) as well as students enrolled in integrated and/or subsequent upper secondary programs (Junior Modality), with the aim of contributing to their personal, professional, and civic education (IF Baiano, 2021a).

Accordingly, students enrolled in the Integrated High School (IHS) program at IF Baiano who participate in extension activities tend to experience a more comprehensive and meaningful educational process, since extension initiatives promote dialogue between theory and practice, foster interaction between scientific and community knowledge, and encourage collaboration among students. These experiences enable them to engage with real-world contexts, develop their potential, discover their talents, prepare for the world of work, and become active citizens capable of contributing to society.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

Thus, this article, which is part of a multipaper[1] master's dissertation, analyzed institutional documents based on the results of the PIBIEX program from the perspective of student education, seeking to answer the following research question: In what ways can the outcomes of PIBIEX Júnior contribute to the educational process of students participating in the program?

This is a qualitative study aimed at analytically and descriptively addressing a specific issue related to the Integral Human Education of students enrolled in the Integrated High School program at IF Baiano who participated in PIBIEX Júnior, thereby enabling a more in-depth investigation (Oliveira et al., 2020). Furthermore, this study has an applied nature, since, based on the findings, two Educational Products [2]were developed—a mandatory requirement of the Professional Master's Degree in Professional and Technological Education (ProfEPT)—with the purpose of addressing the research problem and demonstrating the practical applicability of the study (Gil, 2008).

Considering the subjective nature of the object under investigation, this exploratory study sought to examine the specific characteristics of PIBIEX projects and their outcomes concerning the educational processes of the participating students. This approach enabled greater familiarity with and deeper understanding of the topic through documentary analysis and bibliographic research as methodological procedures (Gil, 2008). Accordingly, the theoretical framework of this article was supported by the contributions of authors such as Arantes and Peres (2015), Ramos (2014), Freire (1983), Frigotto (1987), Gadotti (2004), Manacorda (2007), and Síveres (2013). Bardin's (2011) content analysis was also employed for data treatment through document-based data collection techniques.

It is important to emphasize that, before initiating the analysis of the extension projects (documents and reports) and conducting the scientific research within IF Baiano, the researchers submitted Request No. 01/2023 to obtain access to the Unified Public Administration System (Sistema Unificado de Administração Pública – SUAP) and to the extension projects, as well as the Acknowledgment and Responsibility Agreement required for conducting scientific research at IF Baiano. These procedures were intended to ensure document confidentiality, data anonymization, and access to information exclusively by members of the research team. It should also be noted that the master's student conducting the research is an employee of IF Baiano, assigned to the Office of the Vice President for Extension (Pró-Reitoria de Extensão – PROEX), where she has worked since 2018 in the General Coordination of Extension Programs and Projects (Coordenação Geral de Programas e Projetos de Extensão – CGPPE).

---

1 The Multipaper format refers to the presentation of a master's dissertation or doctoral thesis as a collection of publishable articles, with or without an introductory chapter and concluding remarks (Mutti & Klüber, 2018, p. 3). The present article is part of the master's dissertation entitled The Institutional Extension Initiation Scholarship Program at IF Baiano: Outcomes in the Educational Process of Integrated High School Students, available at: http://educapes.capes.gov.br/handle/capes/870774.

2 Guidelines for the Final Report of the Student Extension Scholarship Recipient, available at: http://educapes.capes.gov.br/handle/capes/870776 ; and Final Report of the Student Extension Scholarship Recipient, available at: https://educapes.capes.gov.br/handle/capes/870788.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

Initially, the research proposal aimed to analyze the final reports of extension projects with the status "completed," corresponding to the period from 2019 to 2021, extracted from SUAP—the system used for the submission and management of these projects. However, due to limitations regarding data access and quality during this period, the researchers chose to focus their analysis on completed projects associated with PIBIEX Júnior Call Notice No. 80/2021 (IF Baiano, 2021a).

As of January 31, 2024, the cutoff date for data extraction, 14 of the 32 projects approved under this Call Notice were registered as "completed" in SUAP—a prerequisite for the analysis of project records and reports. Of these, 11 projects were included in the study because they involved scholarship recipients enrolled in the Integrated High School (IHS) program. The remaining three projects were excluded because they involved students enrolled in Subsequent High School programs, who did not meet the study's inclusion criteria. The analyses comprised projects from six of the fourteen IF Baiano campuses, distributed as follows: Bom Jesus da Lapa (2 projects), Itaberaba (1), Santa Inês (1), Serrinha (1), Valença (1), and Xique-Xique (5).

To ensure the confidentiality of project data, each project was assigned an identification code consisting of the letter "P" (for project) followed by a sequential number from 1 to 11 (P1–P11) (IF Baiano, 2024c). In some cases, additional information was also replaced to preserve anonymity. To uncover issues related to the research topic, the researchers analyzed the records, documents, and reports of these projects in their entirety, covering all stages from project submission to the students' participation in the Fourth Seminar on Extension, Innovation, and Culture (IV Seminário de Extensão, Inovação e Cultura – SEIC), the scientific event at which the project results were presented.

In addition, the following institutional documents were analyzed: the IF Baiano Research and Extension Scholarship Regulations (Resolution No. 20, June 18, 2013 – IF Baiano, 2013); the Institutional Political-Pedagogical Project (PPPI, 2014); the IF Baiano Extension Activities Regulations (Resolution No. 46, July 29, 2019 – IF Baiano, 2019); the IF Baiano Statute (Resolution No. 113, February 22, 2021 – IF Baiano, 2021b); the IF Baiano Institutional Development Plan (IDP 2021–2025, Resolution No. 117, February 23, 2021 – IF Baiano, 2021c); and PIBIEX Júnior Call Notice No. 80/2021 (IF Baiano, 2021a).

The projects analyzed demonstrated students' active participation, highlighting scientific publications, educational materials produced, and participation in scientific events. The findings showed that PIBIEX contributes to Integral Human Education by integrating theory and practice, fostering students' talents, and developing their potential in accordance with the principles of polytechnic education and work as an educational principle (Frigotto, 1987; IF Baiano, 2021a). Therefore, extension activities play an essential role in the academic and professional development of students enrolled in the Integrated High School program by promoting a comprehensive educational process that is responsive to social demands and scientific development.

2 PIBIEX AS A PATHWAY TO THE STUDENTS' EDUCATIONAL PROCESS

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

According to the institutional principles established in the IF Baiano Statute, extension is understood as one of the institution's core activities and should be fully integrated with teaching, research, and institutional development. Furthermore, one of IF Baiano's purposes is to "offer extension activities to foster the development of students' critical thinking through empirical investigation" (IF Baiano, 2021b). In this regard, the institutional objectives of IF Baiano and the guidelines for Professional and Technological Education (PTE) emphasize that extension activities should "stimulate the development of technical and technological solutions in articulation with the world of work and different sectors of society, with emphasis on the production, development, and dissemination of scientific, technological, cultural, and environmental knowledge" (IF Baiano, 2021b).

Furthermore, among the objectives of extension activities established in Article 9 of Resolution No. 46/2019, IF Baiano reaffirms extension as an indispensable component of students' educational process and seeks to "encourage activities whose development involves multidisciplinary, interdisciplinary, and/or transdisciplinary and interprofessional relationships among sectors of the institution and society" (IF Baiano, 2019).

From the perspective of the institutional documents, the guidelines governing extension activities associated with students' educational process include the inseparability of extension, research, and teaching; inter- and transdisciplinarity; the promotion of citizenship and socio-environmental responsibility; local, regional, and territorial development; the dissemination of knowledge; technical, operational, and instrumental training; technical assistance and rural extension; and the promotion of arts, culture, and sports in the construction of regional identity (IF Baiano, 2019).

Regarding the promotion of citizenship and socio-environmental responsibility through extension actions and projects addressing social, cultural, political, sports-related, environmental, and economic dimensions, this guideline is understood as fundamental for developing individuals who are aware of and committed to social and environmental issues. It promotes critical and reflective attitudes toward injustice and inequality, enabling students to become active agents in the pursuit of a more just and equitable society (IF Baiano, 2019).

Considering the principles of Professional and Technological Education and the importance of extension activities for students and their learning process, IF Baiano is expected to "[...] develop extension programs and projects, cultural production initiatives, and scientific and technological dissemination activities in all fields of knowledge [...]" (IF Baiano, 2021b), with the aim of democratizing education and promoting social and technological development focused on society's needs, thereby contributing to improving the population's quality of life (CONIF, 2013).

Within IF Baiano, Resolution No. 46/2019 (IF Baiano, 2019), which regulates extension activities, presents the main concepts and guidelines for extension, the different modalities of extension activities (Projects, Programs, Events, and Courses), the objectives of extension, the organizational structure and responsibilities of the Office of the Vice President for Extension (PROEX), as well as information regarding institutional, logistical, and financial support and certification.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

Within IF Baiano, Resolution No. 46/2019 (IF Baiano, 2019), which regulates extension activities, presents the main concepts and guidelines for extension, the different modalities of extension activities (Projects, Programs, Events, and Courses), the objectives of extension, the organizational structure and responsibilities of the Office of the Vice President for Extension (PROEX), as well as information regarding institutional, logistical, and financial support and certification.

> To encourage upper secondary, technical, technological, and undergraduate students to participate in scientific activities through the development of research and extension initiation projects, making use of the infrastructure available at the Institute and thereby contributing to the professional development of researchers and extension practitioners, as well as to the scientific and cultural education of students (IF Baiano, 2013).

Both documents serve as the guiding framework for extension activities at IF Baiano. However, it is important to emphasize that Resolution No. 20/2013 uses the expression Scientific Initiation Scholarships to refer to both research and extension. Although this issue is not the primary focus of the present study and, therefore, will not be explored in depth, it is worth noting that contradictions were identified throughout this research regarding the use of the expression Scientific Initiation to refer to research and Extension Initiation to refer to extension activities. This issue became evident during the search for theoretical studies addressing Scientific Initiation Scholarships from the perspective of extension. The articles, master's dissertations, and doctoral theses reviewed consistently demonstrated that the expression Scientific Initiation is employed in reference to research activities.

Another relevant aspect is that, in 2014, the Secretariat of Professional and Technological Education (SETEC) issued Ordinance No. 58 of November 21, 2014 (SETEC, 2014), later revoked by Ordinance No. 512 of June 13, 2022 (SETEC, 2022), regulating the granting of scholarships for research, development, innovation, and exchange programs within the Federal Institutes of Education, Science and Technology.

In this document, it was observed that extension activities are not mentioned in its preamble, which appears to be an oversight. This omission suggests that extension may not yet be fully recognized as one of the core institutional activities and continues to receive limited recognition within the Brazilian Federal Education Network. Nevertheless, the document also establishes guidelines and provides fundamental criteria and information intended to support institutions in developing their own regulations and policies, including those concerning extension initiation.

An examination of these documents suggests that both the Federal Education Network and IF Baiano tend to assign greater priority to research than to extension. This finding calls for further reflection and highlights the need for future studies addressing this issue. Another point deserving particular attention by IF Baiano concerns compliance with the provisions established by the Secretariat of Professional

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

and Technological Education (SETEC), given that Resolution No. 20/2013 is outdated in several respects.

According to Arantes and Peres (2015, p. 39), "High School Scientific Initiation Programs (SI/HS) are configured as an educational public policy, institutionalized and primarily funded by the State, integrating public policies for scientific education and the social inclusion of young people."

Despite the limited availability of studies specifically addressing extension initiation, there is no doubt that Extension Initiation Scholarships constitute an important educational public policy. Besides providing financial support that may prevent students from seeking employment to cover basic living expenses, these scholarships also generate significant academic benefits. They enable greater dedication to academic studies, provide opportunities for experiential learning, foster practical skills, stimulate creativity and intellectual curiosity, and contribute to students' personal and academic development.

The absence of extension scholarships could distance students from their educational process. Although financial support is not the primary purpose of extension scholarships, these grants assist students experiencing socioeconomic vulnerability. Consequently, they represent an important strategy for promoting student retention, reducing dropout rates, and bringing students closer to the principles of Integral Human Education (IHE).

Interaction among students, faculty members, staff, and the community through extension activities is essential to students' learning process and the exchange of experiences. Therefore, greater investment in institutional extension policies is considered highly important, as it would enable a larger number of students to participate in IF Baiano's scholarship programs, thereby contributing to their educational development.

According to Call Notice No. 80/2021, the objectives of PIBIEX are:

> 1.3.1 To contribute to students' educational, professional, and civic development through experiences carried out in partnership with both the internal and external community;
>
> 1.3.2 To encourage students' participation in extension projects developed by IF Baiano extension practitioners;
>
> 1.3.3 To promote the involvement of students and staff members in extension activities, fostering integration between IF Baiano campuses and society;
>
> 1.3.4 To promote greater democratization of knowledge by strengthening the inseparability of Teaching, Research, and Extension;
>
> 1.3.5 To contribute to the process of strengthening the social and cultural development of regional identity territories, considering the productive arrangements associated with the profile of each IF Baiano campus (IF Baiano, 2021a).

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

According to Item 1.3.1, PIBIEX should "contribute to students' educational, professional, and civic development through experiences carried out in partnership with both the internal and external community" (IF Baiano, 2021a). This desired educational development corresponds precisely to the concept of Integral Human Education (IHE), which encompasses the structuring dimensions of human life—work, science, culture, and technology (Ramos, 2014)—through which individuals achieve their full development.

An analysis of the objective established in Item 1.3.5 also reveals a close relationship with students' educational process. Participation in extension projects related to local productive arrangements can provide students with meaningful learning experiences, enabling them to understand their local reality, value their own communities, apply theoretical knowledge to practical situations, develop critical thinking, autonomy, and citizenship-related values, as well as acquire the technical, entrepreneurial, innovative, and socio-emotional competencies essential for their integral education.

According to Freire (1983), the human world is fundamentally a world of communication; therefore, dialogue is essential. From this perspective, extension constitutes a dialogical process based on the exchange of knowledge. Interaction with the community enables students to understand the needs and potential of their regions, fostering critical awareness of local social, cultural, and economic issues.

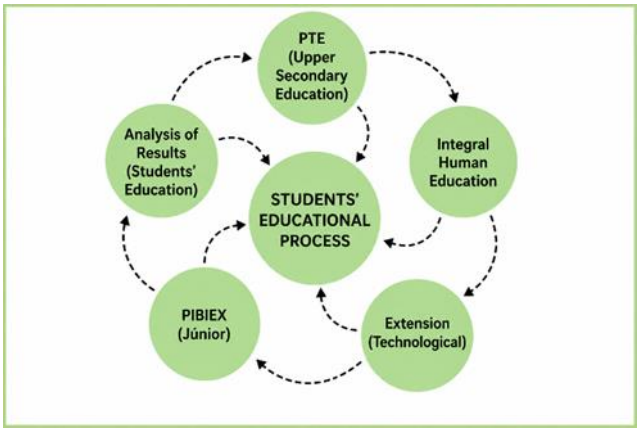
Therefore, students participating in PIBIEX extension projects should have the opportunity to learn about local traditions, cultural practices, and community knowledge, while valuing and respecting the community's identity. In doing so, they can contribute to the sustainable economic development of their regions and become active, aware, responsible, and committed citizens, acting as agents of social transformation. This perspective is consistent with Freire's (1983) conception, when he states:

> Human beings, as historical beings engaged in a continuous process of inquiry, constantly construct and reconstruct their knowledge. For this reason, every new form of knowledge emerges from knowledge that has become old, which, in turn, had previously emerged from another body of knowledge that had likewise become old before establishing itself as new knowledge (Freire, 1983).

In light of the above, Figure 1 provides a systemic and integrated representation of the students' educational process within the context of Professional and Technological Education (PTE), with emphasis on Upper Secondary Education and participation in extension projects, particularly within the scope of PIBIEX Júnior. The figure illustrates the educational outcomes expected for IF Baiano students who participate in this program.

Figure 1: PIBIEX Júnior and the educational process of students

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

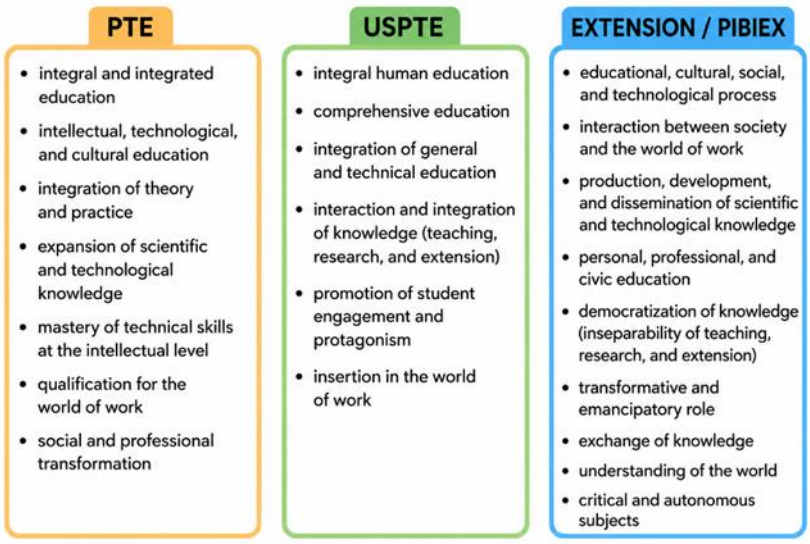


Source: prepared by the authors, 2024.

In this regard, the analysis of the results of the PIBIEX 2021 projects made it possible to identify how this educational process occurs in practice. To this end, the analysis was based on the principles of Upper Secondary Professional and Technological Education (USPTE), Technological Extension, and PIBIEX itself, with emphasis on the students' educational process and their Integral Human Education (IHE).

To support the analysis of the projects, records, and institutional documents, Figure 2 was used. It summarizes the main aspects identified throughout the study concerning Professional and Technological Education (PTE), Upper Secondary Professional and Technological Education (USPTE), Extension, and PIBIEX, from the perspective of Integral Human Education (IHE).

Figure 2: PTE × USPTE × Extension/PIBIEX



Source: prepared by the authors, 2024; based on the foundations of Professional and Technological Education (PTE) and institutional documents.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

When comparing the information presented in Figure 2, it is possible to observe that some terms are similar, others are identical, and additional concepts also emerge. For example, the expression "production, development, and dissemination of scientific and technological knowledge" appears in the context of Professional and Technological Education (PTE) as "expansion of scientific and technological knowledge," whereas it is not explicitly addressed within Upper Secondary Professional and Technological Education (USPTE). Likewise, student protagonism, a key element in students' educational development, appears only in the concepts specifically associated with USPTE, with no direct reference in the descriptions of PTE or Extension/PIBIEX.

When analyzing the objectives of PIBIEX established in Call Notice No. 80/2021, the program explicitly refers to students' personal, professional, and civic education (IF Baiano, 2021a). However, in Figure 2, this expression does not appear in the descriptions of PTE, USPTE, or Extension. Nevertheless, a clear dialogical relationship can be identified with the concepts of "integral and integrated education" and "intellectual, technological, and cultural education" presented under PTE, as well as with the USPTE concepts of Integral Human Education (IHE), omnilateral education, and the integration of general and technical education.

It is important to emphasize that every stage of an extension project—from implementation, monitoring, and completion to the issuance of technical opinions, financial accountability review, validation through the monitoring report, and the certification of project team members—is essential, since the results presented in the reports are based on the information recorded by the Project Coordinator. However, considering the functionalities of the Unified Public Administration System (SUAP), the stages related to project implementation, monitoring, and completion require coherent and detailed records, as well as supporting documents that substantiate project information and are subsequently reflected in the reports. This is particularly important regarding the activities carried out by students, as these records enable a more effective analysis of their educational process.

The reports are generated from the information entered into the project records and may be extracted either as partial or final reports. In the present study, the final reports were used, since the objective was to understand, based on the reported outcomes, the contributions of PIBIEX to students' educational process. Accordingly, the analysis was based on information contained in the following reports extracted from SUAP: the Project Report (PR), Final Report (FR), Financial Accountability Report (FAR), Lessons Learned Report (LLR), as well as supporting documents, educational materials, products generated, and conference proceedings (project experience reports presented at SEIC).

It is important to note that, upon initiating the analysis of the Project Reports (PRs), Final Reports (FRs), and Financial Accountability Reports (FARs), it became evident that these documents did not contain all the information required for the analysis of the completed projects included in this study. Consequently, the Lessons Learned Reports (LLRs) had to be extracted as complementary sources of information to the Project Reports and Final Reports. It should also be noted that the Financial Accountability Reports contained exclusively financial information and were therefore not analyzed, as they did not contribute to the objectives of this research.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

Furthermore, complementary data were obtained through spreadsheets generated by the SUAP system and through a detailed examination of the projects within the platform itself. This procedure enabled a thorough review of project records and supporting documents, thereby strengthening the analytical process. Therefore, it became evident that the Final Reports alone were insufficient, as they did not include relevant information concerning the Dissemination of Results and the Lessons Learned, which had initially been considered essential sources of data for this investigation.

2.1 ANALYSIS OF THE RESULTS OF THE EXTENSION PROJECTS

When analyzing Project P1, it was observed, according to the Project Coordinator's report, that ***"third-year students enrolled in the Integrated High School Technical Program in Information Technology sought, through this project, to create spaces for dialogue and opportunities for the digital inclusion of public-school students in the final years of elementary education"*** (IF Baiano, 2021d). Although indirectly, the project demonstrates an intention to promote interaction with the external community and a concern with fostering dialogue in order to understand the needs of the target population addressed by the proposal. This finding is consistent with one of the objectives of PIBIEX, namely, "to promote the involvement of students and staff members in extension activities, fostering integration between IF Baiano campuses and society" (IF Baiano, 2021a).

According to Freire (1983), for extension/communication to occur, there must be an interrelationship between academic knowledge and community knowledge. This interaction creates opportunities for the exchange of knowledge between students and the community. Based on the project records analyzed, it was not possible to identify whether or how the community participated in this exchange of knowledge. The project's methodology consisted of offering workshops. In principle, the participating community gained access to basic computer literacy knowledge.

From this perspective, it is important to emphasize that, for extension activities to contribute effectively to students' educational process, students should have the opportunity to learn about local traditions, cultural practices, and community knowledge while valuing and respecting the identity of the communities with which they engage.

It is noteworthy that this project demonstrated a concern with the dissemination or transmission of knowledge, an approach that, in principle, does not fully align with Freire's educational perspective. According to Freire (1983), extension should not be understood merely as the transfer or deposit of knowledge. Therefore, it is important to emphasize that students' educational process should also encompass the exchange of knowledge with the community, providing opportunities to experience realities beyond the school environment and, through the real challenges encountered in extension activities, develop autonomy and decision-making skills. This process contributes to the development of a wide range of competencies.

Furthermore, considering the theoretical foundations of Professional and Technological Education (PTE) and Extension, the project demonstrated concern with

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

articulating the theoretical knowledge acquired in the classroom with the practical experiences provided through the proposed activities and the products generated by the project, as illustrated in the following excerpt. However, it was not possible to identify how this learning process actually occurred.

> P1: *It fostered* ***the development of skills in the field of Information Technology*** *by engaging participants in digital literacy practices within digital contexts, with emphasis on their social meanings* (IF Baiano, 2021d, emphasis added).

Another relevant aspect is that the thematic focus on Information Technology demonstrated coherence between the academic program and the extension project, enabling the application of theory to practice. Nevertheless, as highlighted in the excerpt below, the practical knowledge acquired was restricted to the field of Information Technology. Based on the available records, no evidence of dialogue with other areas of knowledge was identified, since the reported activities were directly related to Information Technology:

> P1: ***To put into practice the theoretical knowledge acquired in the various fields of Information Technology*** (IF Baiano, 2021d, emphasis added).

According to Gadotti (2004, p. 2), "interdisciplinarity seeks to ensure the construction of comprehensive knowledge by overcoming the boundaries between disciplines," which is consistent with interdisciplinarity/transdisciplinarity, one of the guiding principles of extension activities, which states that institutions should:

> Prioritize a model that integrates different fields of knowledge and different educational levels, fulfilling the institutional commitment to serve the local and regional community with a view to its economic, social, artistic, and cultural development (IF Baiano, 2019).

In this sense, it is understood that connecting different fields of knowledge is essential to enable engagement with multiple themes. According to the theoretical framework adopted in this study, interdisciplinarity constitutes a fundamental characteristic of Professional and Technological Education, since it promotes a more holistic and integrated educational approach aimed at preparing students both for the world of work and for active citizenship.

When analyzing Project P2, although the scholarship recipient was enrolled in the Technical Program in Agriculture and the project addressed financial education, the records do not clearly indicate the perspective from which this topic was approached. Consequently, it was not possible to determine whether this aspect effectively contributed to the student's integral educational development.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

> P2: ***The scholarship recipient involved in the project demonstrated excellent performance in the activities assigned to her, gaining access to content related to financial education (through films, courses, and books), thereby becoming a disseminator of this knowledge*** *not only within her educational institution but also among her family members and the community where she lives* (IF Baiano, 2021d, emphasis added).
>
> P2: ***For the participants of the short course/workshop, it was possible to provide*** *a brief explanation of the practical use of money, aiminf at benefits not only for individuals but also for the community as a whole* (IF Baiano, 2021d, emphasis added).

When analyzing Project P3, a relationship with interdisciplinarity can be observed through the participation of a student enrolled in the Technical Program in Food Science in an activity focused on promoting reading. The Integrated High School (IHS) student had the opportunity to experience learning through reading practices aimed at encouraging the development of new readers. Engagement with reading contributes positively to Integral Human Education (IHE) by fostering critical thinking, stimulating creativity, and strengthening students' argumentative skills. Furthermore, it provides opportunities to deepen and expand knowledge, as well as to enhance the interpretation of the world and the social reality in which students live, in accordance with the principles presented in Figure 2.

> P3: ***The activities carried out encouraged reading,*** *providing both project members and children with opportunities for exchange, enjoyment, and engagement.*
>
> *Promotion of activities that* ***foster autonomy and creativity****.*
>
> *Activities focused on* ***sensitivity, critical thinking, stimulating imagination, creation and re-creation, and encouraging an appreciation for reading*** *(IF Baiano, 2021d, emphasis added)*

Project P3 and Project P5 demonstrate coherence between their objectives and their proposed activities. Interdisciplinarity is also evident in Project P5, enabling the scholarship recipient enrolled in the Technical Program in Agroecology to experience learning in another field of knowledge directly related to their educational process. The project promoted the articulation between theory and practice, providing students with new learning experiences and expanding their knowledge, in accordance with the principles of Professional and Technological Education (PTE) and Extension illustrated in Figure 2.

> P5: *Twelve (12)* ***educational workshops were conducted, contributing to the development of reading skills and socio-***

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

> ***emotional competencies among upper secondary students, particularly those with intellectual disabilities.***
>
> ***Upper secondary students experiencing reading difficulties were provided with opportunities to improve their reading skills.***
>
> ***The project sought to develop readers capable of mobilizing knowledge to solve problems encountered in everyday life through the interpretation of texts.***
>
> ***The scholarship recipient learned to organize her time so that, in addition to fulfilling her academic responsibilities, she could collaborate with the research scholarship recipient in planning and conducting the workshops for students participating in the project*** (IF Baiano, 2021d, emphasis added).

Moreover, the project contributed to improving the reading proficiency of Integrated High School students who experienced learning difficulties in this area. Reading constitutes one of the fundamental dimensions of Integral Human Education, as it promotes cognitive development, enhances language proficiency, and enables students to better understand diverse social realities, thereby fostering critical and ethical attitudes toward the challenges faced by society.

Furthermore, reading encourages participation in debates and discussions, strengthening students' argumentation skills and active listening abilities while enhancing their capacity to solve complex problems and make informed decisions. Consequently, it promotes the personal, professional, and civic education established among the objectives of PIBIEX.

In this regard, both projects incorporated an interdisciplinary approach, representing a highly positive outcome from the perspective of Integral Human Education. This finding corroborates Manacorda (2007, p. 87), who argues that "within integrated education, theory and practice advance together, enabling all individuals, without distinction, to develop their potential and abilities without separating manual from intellectual work." Therefore, projects such as these provide opportunities for students to achieve *omnilateral* education.

The following excerpt, taken from Project P4, whose technological focus is people with disabilities, functional limitations, and special educational needs, demonstrates a concern with addressing the guiding principles of Extension, particularly the inseparability of teaching, research, and extension. The project connected knowledge developed within the academic program to a social demand by promoting the inclusion of deaf students seeking admission to an IF Baiano program, thereby fostering the acquisition of new knowledge through an interdisciplinary approach. In addition, it promoted citizenship by addressing the exclusion experienced by these students through the development of a specialized technical glossary.

> P4: *The implementation of this extension project* ***undoubtedly contributed to minimizing an existing problem by enabling deaf***

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

> ***students wishing to pursue studies in Animal Science to achieve greater success in their academic activities and productions.***
>
> ***Guidance and training aimed at understanding the process of creating sign-terms for scientific terminology in specific fields of knowledge, in this case, Animal Science*** (IF Baiano, 2021d, emphasis added).

Within this project, the Project Coordinator included the student's own account, making it one of the few projects analyzed that presented the student's 'perspective and voice' regarding the extension experience. The report revealed that the project contributed to the student's academic and personal learning process, as well as to the acquisition of new knowledge. The student also stated that participation in the project enabled a better understanding of the difficulties faced by deaf students due to the lack of educational resources. It is evident that the scholarship recipient developed a more humane and empathetic perspective toward such situations, as illustrated in the following statement:

> P4: ***The knowledge I acquired while participating in the extension project, the development of the technical glossary in Brazilian Sign Language (Libras) and Portuguese... I did not know even the basics of Brazilian Sign Language****. As soon as I learned about the project, I became interested because I had always wanted to know more about it! I can say with complete confidence that* ***participating in this project contributed greatly to my academic life*** *because I learned countless things. It also helped dispel many misconceptions I had, as I believed things were one way when they were actually quite different. It was an innovative experience for me* ***because I was able to contribute to the inclusion of deaf students in academic life...*** *Through the research conducted for the project, I was able to understand some of the major difficulties they face, one example being the limited availability of educational support materials.* ***The project also contributed greatly to my personal life because it changed the way I perceive these situations. Without a doubt, it was an extremely enriching project that provided invaluable contributions and learning experiences that I will always remember!*** (IF Baiano, 2021d, emphasis added).

The student acquired knowledge related to the technical program and its curriculum, while also developing respect for diversity, social inclusion, social transformation, and student agency, as represented in Figure 2. Throughout this process, the student actively constructed their own knowledge, which is consistent with the principles of Integral Human Education (IHE). Although the project itself did not explain how learning occurred or how teaching, research, and extension were articulated, the student's account suggests that the experience fostered a new perspective on social and inclusion-related issues, as illustrated below:

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

> P4: *The* ***results of this project contribute to the integration of teaching, research, and extension by enabling the resources produced here to support future projects, as well as the courses taught by the project coordinators. I can state that the improvement of my knowledge has been continuous, from the earliest stages of the project, such as defining the technical terminology, which helped me better remember and understand the subjects studied during the Technical Program in Agriculture, to participating in scientific events, which also contributed to my personal development by improving my discipline and organizational skills*** (IF Baiano, 2021d, emphasis added).

The analysis of Project P6 revealed that it represents a highly relevant extension initiative. First, it aligns with the guidelines and objectives of both Extension and PIBIEX. Second, it appears to have provided valuable learning opportunities for the participating students, particularly through interaction with the community, the exchange of knowledge, and the production of educational booklets intended to systematize and disseminate the agroecological practices developed by local farmers. Nevertheless, the reported results do not explain how the students' educational process actually occurred.

> P6: ***An educational booklet was produced containing agroecological recipes*** *for vegetable cultivation applied in [...], as described by Staff Member A and Staff Member B,* ***with contributions from the women farmers who participated in the project.***
>
> ***We learned more about the productive and reproductive work carried out by women within agri-food systems, recognizing its importance for the food and nutritional security of families and communities and for the development of agroecology.***
>
> *Throughout the project,* ***we gained greater understanding of the importance of agroecology in the lives of women, as well as the production processes and agricultural practices related to soil management, crop management, pest and disease prevention, and other practices capable of promoting food and nutritional security, environmental preservation, the permanence of families in rural areas through income generation, and the strengthening of the autonomy of the women involved.***
>
> ***This learning process resulted in the development of an educational booklet aimed at systematizing and disseminating the agroecological practices developed among the interviewed women farmers themselves*** (IF Baiano, 2021d, emphasis added).

Project P7 also included the student's own testimony. Nevertheless, neither the project documentation nor the report clearly explained how this extension activity promoted such learning. Although the project culminated in the production of an educational booklet and informational posters, it was not possible to determine how

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

the student participated in the development of these materials or how interaction with the target community occurred.

> P7: […] *I **learned to look at snakes as animals like any other, recognizing that they are important for the functioning of our ecosystem and are naturally adapted to survive within it. I also learned that environmental education and access to information are the first steps toward developing a healthy relationship between human beings and nature*** (IF Baiano, 2021d, emphasis added).

This statement suggests that the project served as a space for the production and dissemination of knowledge and for fostering a broader understanding of the world.

The analysis of Project P8 indicates an emphasis on intellectual, technological, and cultural education (Figure 2), considering human beings in a broad and holistic manner. The project valued not only cognitive learning but also care for the body, recognizing bodily practices as an important means of promoting physical well-being and integral development.

> P8: *This project produced significant results for both its participants and the project team**. Despite all the challenges encountered, it was possible to achieve benefits not only in terms of the number of participants** but also in qualitative terms, as reflected in the participants' reports and testimonials* (IF Baiano, 2021d, emphasis added).
>
> *Furthermore, the project **expanded to locations where we had not originally planned to operate [...] thereby providing benefits to its users. Finally, we concluded that the project was highly important for both the municipality and the Campus, considering that it represents the only free therapeutic body practice available in the city, aimed at improving the quality of life of local residents*** (IF Baiano, 2021d, emphasis added).

Furthermore, these projects promote the dissemination of knowledge, as established among the objectives of PIBIEX (Figure 2), since initiatives involving interaction with the community contribute to the expansion of knowledge. In other words, the exchange of knowledge is clearly evidenced.

> P9: *Through the project, it was possible to distribute cassava stem cuttings to family farmers from several municipalities [...], provide training for family farmers in agroecological cassava production, establish an experimental field comparing traditional and improved*

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

> *cassava varieties, and train students in the field of rural extension* (IF Baiano, 2021d, emphasis added).
>
> P10: *...Based on the systematized data,* ***the results were presented at an IF Baiano conference, and a scientific article will be published in a journal in the field*** (IF Baiano, 2021d, emphasis added).
>
> P11: ***Overall, the project was highly important for the education of the scholarship recipient and the volunteer participants and contributed to classes in several academic subjects*** (IF Baiano, 2021d, emphasis added).

Regarding Projects P8, P9, P10, and P11, the reports generally do not clearly and objectively explain how the students participated in the proposed activities or how these activities contributed to their Integral Human Education (IHE). Although the activities described—such as interaction with agricultural communities, the exchange of knowledge, the practical application of theoretical knowledge, and the development of educational booklets—may have potentially contributed to the students' educational process, these contributions were described only in a highly subjective manner. This lack of detail makes it difficult to assess the actual impact of these activities on students' development.

The analysis of the projects revealed that the "Results Achieved" section of the Final Reports focuses primarily on presenting outcomes related to the objectives initially proposed, including information concerning the communities served. However, these reports do not discuss the results in sufficient depth, particularly with respect to the objectives of PIBIEX related to the educational process of the extension scholarship recipients. In light of Figure 1 and based on the inferences drawn from the analysis of the PIBIEX results, the arrows connecting Professional and Technological Education (PTE), Upper Secondary Professional and Technological Education (USPTE), Integral Human Education (IHE), Technological Extension, PIBIEX, and the analysis of results, from the perspective of students' educational process, remain dashed. This indicates that the Final Reports do not provide clear evidence for assessing how PIBIEX contributes to students' Integral Human Education. Nevertheless, subjective elements were identified that suggest some contribution in this regard.

Freire (1983) characterizes extension as a liberating educational practice that encourages students to reflect and act critically and transformatively through the exchange of knowledge with the community. However, the findings of this study indicate that the educational contributions to students participating in PIBIEX Júnior projects were addressed only superficially. The Final Reports available in SUAP do not provide sufficient and relevant information to evaluate the effective participation of students enrolled in the Integrated High School (IHS) program in extension activities. This lack of information limits a more accurate assessment of the impact of PIBIEX on students' Integral Human Education, highlighting the need for more detailed, systematic, and consistent documentation.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

3 FINAL CONSIDERATIONS

This article analyzed institutional documents in light of the results of PIBIEX projects, considering the perspective of Integral Human Education (IHE). The analysis revealed that, in institutional documents such as the Statute, the Institutional Development Plan (IDP), the Institutional Political-Pedagogical Project (IPPP), the Extension Activities Regulations, and the Call Notices, Integral Human Education is addressed only implicitly. This approach reflects gaps in the national regulations that guide these institutional instruments, which likewise do not explicitly define the concept of Integral Human Education.

It was also observed that the PIBIEX Call Notices employ expressions such as "educational, professional, and civic education," which are conceptually related to the notions of "integral and integrated education" and "intellectual, technological, and cultural education" found within the theoretical framework of Professional and Technological Education (PTE). Nevertheless, these concepts require greater theoretical alignment and conceptual clarity.

The analysis further demonstrated that this conceptual gap influences the documentation of extension projects. Many of the projects analyzed did not clearly describe how students participated in the proposed activities or how their educational process unfolded, particularly when considered in light of the theoretical foundations of Professional and Technological Education and Extension. The reports frequently presented results superficially, focusing primarily on the project objectives, with limited information regarding students' effective participation or the educational outcomes they achieved, such as participation in scientific events. Supporting documentation—including work plans and attendance records—was likewise insufficient to determine whether all planned activities had been carried out and how they contributed to students' educational development. Furthermore, students' own perceptions of their learning experiences were rarely documented, limiting a broader understanding of their protagonism throughout the educational process.

Despite these limitations, the projects analyzed revealed important initiatives. Many scholarship recipients had opportunities to engage in scientific research, report their experiences, participate in scientific events, and publish their work in conference proceedings. These experiences contributed to the students' academic, personal, and professional development. Several projects also stood out for promoting citizenship, socio-environmental responsibility, and interdisciplinarity, bringing students closer to social reality while fostering critical and reflective attitudes toward social inequalities. The integration of teaching, research, and extension proved to be particularly relevant in bridging theory and practice, thereby contributing to Integral Human Education, one of the central objectives of PIBIEX.

In light of the gaps identified, it is essential that the institution review and update its institutional documents by improving the guidelines governing the documentation and monitoring of extension projects. Furthermore, IF Baiano should place greater emphasis on student protagonism from the earliest stages of project development, ensuring that students' activities and educational outcomes are systematically documented. It is equally important that students understand their role within the

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

educational process, thereby strengthening the relationship between the activities they undertake and the institution's mission. To this end, IF Baiano should establish mechanisms to identify and evaluate students' effective participation and the outcomes of PIBIEX, ensuring that the program contributes more consistently to the Integral Human Education of students enrolled in the Integrated High School (IHS) program.

REFERENCES

ARANTES, Shirley de Lima Ferreira; PERES, Simone Ouvinha. Programas de iniciação científica para o ensino médio no Brasil: educação científica e inclusão social. **Revista Pesquisas e Práticas Psicossociais**, São João del-Rei, v. 10, n. 1, p. 37-54, 2015.

BARDIN, Laurence. Análise de conteúdo (ed. rev. e amp.). (LA Reto & A. Pinheiro. Trad.). **Lisboa: Edições**, v. 70, 2011.

BRASIL. **Lei nº 11.892, de 29 de dezembro de 2008**. Institui a Rede Federal de Educação Profissional, Científica e Tecnológica e cria os Institutos Federais de Educação, Ciência e Tecnologia, e dá outras providências. Brasília, 2008. Available at: https://www.planalto.gov.br/ccivil_03/_ato2007-2010/2008/lei/l11892.htm. Access on Sep.15 .2023.

BRASIL. MEC. SETEC. **Portaria nº 58, de 21 de novembro de 2014**. Regulamenta a concessão de bolsas de pesquisa, desenvolvimento, inovação e intercâmbio, no âmbito dos Institutos Federais de Educação, Ciência e Tecnologia. Available at: https://www.ifpb.edu.br/proexc/assuntos/legislacoes-e-normas/legislacoes/2014/portaria-no-58-2014-setec-mec/portaria-58-2014-setecmec.pdf. Access on: Jan.31.2024.

BRASIL. MEC. SETEC. Portaria nº 512, de 13 de junho de 2022. Regulamenta o disposto no 6º do art. 5º da Lei nº 11.892, de 29 de dezembro de 2008, para disciplinar o processo de concessão de bolsas de pesquisa, de desenvolvimento, de inovação e de intercâmbio pelos Institutos Federais de Educação, Ciência e Tecnologia. Available at: https://www.in.gov.br/en/web/dou/-/portaria-n-512-de-13-de-junho-de-2022-410376851. **Diário Oficial da União**. Access on: Jan.31.2024.

CONSELHO NACIONAL DAS INSTITUIÇÕES FEDERAIS DE EDUCAÇÃO PROFISSIONAL, CIENTÍFICA E TECNOLÓGICA (CONIF). **Extensão Tecnológica:** Rede Federal de Educação Profissional, Científica e Tecnológica. Cuiabá (MT): CONIF/IFMT, 2013.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

FREIRE, Paulo. **Extensão ou comunicação?**. Editora Paz e Terra, 1983.

FRIGOTTO, Gaudêncio. (org) **Trabalho e Conhecimento: Dilemas na educação do trabalhador**. São Paulo: Cortez, 1987.

GADOTTI, Moacir. **Interdisciplinaridade: atitude e método**. 2004. São Paulo: Instituto Paulo Freire. Disponível em: www.paulofreire.org. Access on: Nov.15.2023.

GIL, Antonio Carlos. **Métodos e técnicas de pesquisa socia**l. 6. ed. São Paulo: Atlas, 2008.

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA BAIANO. **Edital nº 80/2021, do Programa Institucional de Bolsa de Iniciação em extensão (PIBIEX)**. 2021a. Available at: https:// https://ifbaiano.edu.br/portal/extensao/2021-2/. Access on: Nov.15.2023.

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA BAIANO. **Projeto Pedagógico Político Institucional do IF Baiano**. 2014. Available at: https://www.ifbaiano.edu.br/unidades/santaines/files/2013/06/PPPI-PROJETO-POLITICO-PEDAGOGICO-INSTITUCIONAL.pdf. Access on: Nov.19.2023.

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA BAIANO. **Resolução CONSUP/IF BAIANO nº 20, de 18 de julho de 2013**. Programa de Bolsa de Iniciação Científica no âmbito do IF Baiano. 2013.

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA BAIANO. **Resolução CONSUP/IF BAIANO nº 46, de 29 de julho de 2019**. Regulamento das Atividades de Extensão do IF Baiano. Available at: https://ifbaiano.edu.br/portal/wp-content/uploads/2019/09/Resolu%C3%A7ao46.pdf. Access on: Nov.15.2023.

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA BAIANO. **Resolução CONSUP/IF BAIANO nº 113,** de 22 de fevereiro de 2021. **Estatuto do IF Baiano**. 2021b. Available at: https://ifbaiano.edu.br/portal/wp-content/uploads/2021/07/ESTATUTO-DO-IF-BAIANO.pdf. Access on: Nov.15.2023.

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA BAIANO. **Resolução CONSUP/IF BAIANO nº 117,** de 23 de fevereiro de 2021, **Plano de Desenvolvimento Institucional**. 2021c. Available at: https://ifbaiano.edu.br/portal/wp-content/uploads/2021/02/Resolucao-117.2021-com-anexo.pdf. Access on: Nov.15.2023.

CC BY 4.0 | ISSN 2447-1801 | DOI: https://doi.org/10.15628;rbept.2026.18438

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA BAIANO. **Sistema Unificado de Administração Pública (SUAP)**. **Projetos de extensão concluídos**. 2021d. Available at: https://suap.ifbaiano.edu.br/. Access on: Sep.01.2023.

MANACORDA, Mario Alighiero. **Marx e a pedagogia moderna**. Campinas: Alínea, 2007.

DE OLIVEIRA, Guilherme Saramago *et a*l. Grupo Focal: uma técnica de coleta de dados numa investigação qualitativa? **Cadernos da FUCAMP**, v. 19, n. 41, 2020.

RAMOS, Marise Nogueira. **História e política da educação profissional**. Curitiba. Instituto Federal do Paraná, v. 5, 2014.

SÍVERES, Luiz. **A Extensão universitária como um princípio de aprendizagem**. Brasília: Liber Livro, 2013.