

THE MULTIPLICITY OF VOICES LINKED IN PORTFOLIOS OF INTERNS OF A  
CHEMISTRY DEGREE COURSE IN THE PANDEMIC CONTEXT

*A MULTIPLICIDADE DE VOZES ENLAÇADAS EM PORTFÓLIOS DOS/AS  
ESTAGIÁRIOS/AS DE UM CURSO DE LICENCIATURA EM QUÍMICA NO  
CONTEXTO PANDÊMICO*

*LA MULTIPLICIDAD DE VOCES ENTRELAZADAS EN LOS PORTAFOLIOS DE  
LOS/LAS PASANTES DE UNA CARRERA DE QUÍMICA EN EL CONTEXTO DE  
PANDEMIA*



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**ABSTRACT:** The present work aimed to interweave reflections on the initial training of Science/Chemistry teachers based on the written Portfolios of interns in the curricular component of Supervised Internship III of the Chemistry Degree Course at the Federal University of Grande Dourados (UFGD) in context of COVID-19. The pandemic was marked by remote classes, which made the scenario complex for the Supervised Internship field. The nature of the research was qualitative, based on Discursive Textual Analysis (DTA). The empirical material for analysis were the Portfolios that the Interns produced. In this way, we value the multiple voices that emerged and linked from these Portfolios, among which were: a) an inclusive school; b) infrastructure; c) internet access; d) appreciation of teachers; e) public educational policies; f) knowledge of school reality. Therefore, we conclude that the use of Portfolios was a formative and powerful strategy, enabling an Internship that envisioned praxis.

**KEYWORDS:** Pandemic. Initial teacher training. Supervised internship. Remote teaching.

**RESUMO:** O presente trabalho ambicionou entretecer reflexões na formação inicial de professores/as de Ciências/Química a partir das escritas de Portfólios de estagiários/as no componente curricular de Estágio Supervisionado III do Curso de Licenciatura em Química da Universidade Federal da Grande Dourados (UFGD) no contexto da COVID-19. A pandemia foi demarcada com aulas no formato remoto, o que tornou o cenário complexo para o campo do Estágio Supervisionado. A natureza da pesquisa foi qualitativa, fundamentada na Análise Textual Discursiva (ATD). O material empírico para análise foram os Portfólios que os/as Estagiários/as produziram. Desta forma, valorizamos as múltiplas vozes emergidas e enlaçadas destes Portfólios, dentre as quais foram: a) uma escola inclusiva; b) infraestrutura; c) acesso a internet; d) valorização de professores/as; e) políticas públicas educacionais; f) conhecimento da realidade escolar. Portanto, concluímos que o uso dos Portfólios foi uma estratégia formativa e potente possibilitando um Estágio que vislumbrou a práxis.

**PALAVRAS-CHAVE:** Pandemia. Formação inicial de professores/as. Estágio Supervisionado. Ensino remoto.

**RESUMEN:** El presente trabajo tuvo como objetivo tejer reflexiones sobre la formación inicial de profesores de Ciencias/Química a partir de los escritos de Portafolios de pasantes en el componente curricular de la Pasantía Supervisada III de la Carrera de Química de la Universidad Federal de Grande Dourados (UFGD) en el contexto del COVID-19. La pandemia se delimitó con clases en formato remoto, lo que complejizó el escenario para el ámbito de las Prácticas Supervisadas. La naturaleza de la investigación fue cualitativa, basada en el Análisis Textual Discursivo (ATD). El material empírico para el análisis fueron los Portafolios que elaboraron los Pasantes. De esta manera, valoramos las múltiples voces que surgieron y se vincularon en estos Portafolios, entre las que se encuentran: a) una escuela inclusiva; b) infraestructura; c) acceso a Internet; d) valorar a los docentes; e) políticas públicas educativas; f) Conocimiento de la realidad escolar. Por lo tanto, concluimos que el uso de los Portafolios fue una estrategia formativa y poderosa, posibilitando una Pasantía que visualizó la praxis.

**PALABRAS CLAVE:** Pandemia. Formación inicial del profesorado. Prácticas supervisadas. Enseñanza remota.

## Initial bindings

The present study aims to intertwine discussions about/in the training of teachers in a Chemistry Degree Course during the COVID-19 pandemic with the potential of using Portfolios in the curricular component of Supervised Internship (ES) teaching. In the meantime, ES focuses on providing interns with tools to enter the school field so that they can relate and articulate the theoretical-practical concepts studied throughout the Degree Course.

In this aspect, Pimenta (2012), Silva and Schnetzler (2008), place higher education as a space for the interface between theoretical training and professional experience. In the same vein, the development of knowledge about the profession “teacher” is mediated by investigative movements of reflection, analysis and systematization that aim to articulate the activities carried out by interns in the context of the basic education school.

According to Sarmiento, Rocha and Paniago (2018), during the Internship, the teaching identity is developed in which daily school life is experienced. It is the time to plan and teach classes, in this movement of study, planning and experiences, experiences anchored in powerful teacher training can occur.

According to Pimenta and Gonçalves (1990), Pimenta (2012), Pimenta and Lima (2017), the purpose of the Internship is to provide an approximation to reality, in which you will act professionally, articulating theoretical-practical assumptions studied throughout your academic career. Thus, this curricular component moves away from the mistaken understanding that it would be the practical part of a Degree Course.

The aforementioned authors defend a redefinition of the Internship so that it encompasses a critical-reflexive perspective anchored in the interface of the reality of school and university. In this sense, the importance of the concept of “praxis” is reverberated, “we understand that internships are not praxis in undergraduate courses, but that, in this context, they constitute a theoretical activity of knowledge of the praxis of teaching carried out by teachers in schools (Pimenta; Lima, 2017, p. 37, our translation)”, that is, if ES turns praxis into a pedagogical principle that subsidizes the teacher training process, this assumption will possibly result in a Degree Course amalgamated by the articulation theoretical-practical, with an emphasis on training a critical-reflective teacher. In this context, faced with new emergencies of global crises, for example, the COVID-19 pandemic, there is an increasing need for teachers who promote critical thinking and, in this sense, we argue that this training can be sustained through the concept of praxis.

We highlight that faced with the catastrophic effect of the COVID-19 pandemic,

teachers were terribly affected, as they were forced to adapt to the remote and emergency format with the aim and responsibility of continuing the educational journey. To this end, classes continued through technological tools. Teachers were forced to learn how to use these technological tools, such as: YouTube, Google Classroom, Moodle, and Google Meet. Because of this, such approaches were used to “school”. It is worth remembering that this was an emergency attempt to ensure that teaching was not interrupted (Moreira; Henriques, Barros, 2020, p. 352).

As a result, teachers were the main actors in this pandemic, as they were suddenly faced with classes in another format. Many took their basic education classes through digital platforms, as already mentioned - Google Meet and Google Classroom. Another alternative that emerged in the pandemic context in the State of Mato Grosso do Sul was the use of Complementary Pedagogical Activity (APC). In this APC, the content was centered on a printed booklet and made available to students. The objective of this was to provide equitable assistance to those students who did not have access to the internet. In higher education, teachers also carried out their activities remotely and used the same platforms provided by Google.

In light of these (re)adaptations of teaching strategies driven by the pandemic, we highlight the use of Portfolios <sup>3</sup>in the ES III curricular component of the Chemistry Degree Course at UFGD. We corroborate the argument of authors Calixto and Marques-de-Oliveira (2023) in which the Portfolio can constitute a training strategy. In this sense, Ambrósio (2013; 2015) argues that the use of this tool has proven to be potentially formative, as it allows the teacher trainer to accompany the student for a long period of time, which allows for problematization and contextualize learning processes. Therefore, we argue that the use of the Portfolio in the HE curricular component can promote critical-reflective training anchored in praxis.

Given this exposed scenario, this research focused on understanding how the use of the Portfolio was constituted as a training strategy in ES III carried out in the first half of the pandemic year 2021. The basic research question that permeated was: how did the Portfolio contribute to the promotion of praxis in the initial training of teachers in the Chemistry Degree Course in view of the different realities experienced by interns in the pandemic context of Internship in Basic Education? For such understandings, we used a written Portfolio developed by interns enrolled in ES III of activities developed in basic education schools.

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<sup>3</sup>We understand that the Portfolios were already used in the aforementioned Course, however the reflection on their training potential intensified due to the pandemic.

This research on screen was characterized as qualitative in nature. We anchored it in Discursive Textual Analysis (ATD) to interpret the Portfolios. ATD is an analysis methodology that is based on phenomenology and hermeneutics in the attempt to envision new understandings.

### **The Portfolio, the Internship and initial training: ties and links**

Reflecting on the formative potential of the Portfolio in the training of Science/Chemistry teachers focuses on possibilities of articulation with the writings of Byung-Chul Han (2017), in his book *The Society of Fatigue* in which he weaves enlightening arguments of/for the importance of learning to read, think, speak and write. The author talks about the *vita contemplativa* in which he explores the specific pedagogy of seeing, that is, we need to learn to look slowly, contemplatively and with patience so that our gaze is close, belonging to ourselves.

Furthermore, the Portfolio can perform this extended function of an evaluative process of distant, slow, contemplative, patient and, above all, formative monitoring. In this context, we understand it as an evaluative and potentially formative strategy. In the conception of Villas-Boas (2004, p. 117, our translation), the Portfolio:

[...] makes it possible to assess critical thinking skills, articulate and solve complex problems, work collaboratively, conduct research, develop projects and also allows the student to formulate their own learning objectives.

From this perspective, the use of the Portfolio during the pandemic period was an ally for the process of developing critical-reflective training in the HE curricular component of the aforementioned Course. However, what is training?

According to Garcia (1999, p. 19), we cannot discuss teacher training without understanding the concept of training. The author reports in his work that there are different meanings regarding the concept of training, which can be understood as a “social function” that transmits knowledge, or as “a process of development of structuring the person”, in addition to training via institutional means (Garcia, 1999).

For this author, there is a discussion linked to authors about an important concept in training theory in which he mentions “training action”, in this context, it is anchored that this training action linked to a “set of interactions between trainers and trainees ” (Garcia, 1999, p. 21, our translation).

Teacher training courses that are characterized by a formative bias consist of developing the identity of future teachers with the aim of promoting critical-reflexive reflections so that they can become teachers engaged in the teaching process and learning, as the author Pimenta (1996) argues, “this is building your identity as a teacher”.

The first essential aspect for the teacher in training, according to Gil-Pérez, (2011, p. 21, our translation) is “knowing” and “knowing how to do”, since the initial element in the training of a teacher/ is knowing the content you want to teach, then seeking to develop and learn methods to teach students.

Training Science teachers with a characteristic anchored in authors who discuss critical-reflective training helps the teacher to value the experience in the classroom with knowledge and practices that teaching implies, in addition to enabling articulations related to societal themes.

However, this training of teachers in the Science/Chemistry area with a critical-reflective bias is a challenge, because as Maldaner (2013) argues, there is a rigidity of convictions that permeate the practice of teaching. Among which, the author mentions “environmental training”, that is, the major influence that the educational context exerts on his pedagogical practice. In addition, there is also the reproduction of models teachers had throughout their school career, mainly in their training courses.

In this aspect, these tacit convictions about the Nature of Science, teaching, learning and teacher training come from a process without dialogue and active participation of students. Contrary to this passive and model-reproducing model, we defend the importance of listening to our interns and discussing these nuances that permeate training.

In this sense, the use of Portfolios contributes to this dialogue necessary for teacher training. In this work, we use it in the ES curricular component, however we understand that it can be used in any curricular components. In the meantime, the author Villas-Boas (2004) elaborates key concepts for using Portfolios, which are: “1) the construction and mastery of teaching knowledge; 2) the unity between theory and practice; 3) autonomy ” (Villas-Boas, 2004, p. 116, our translation).

Therefore, the links between the use of the Portfolio linked to a Chemistry teacher training course can be/was a powerful and formative amalgam, especially in pandemic times when teaching took place in a non-face-to-face format.



## Methodological ties

This research was characterized as qualitative and we anchored some precepts of this approach regarding the role of the researcher with the argument of Martins (2004, p. 292, our translation) in which he says: “the variety of material obtained qualitatively requires the researcher to have an integrative capacity and analytical which, in turn, depends on the development of a creative and intuitive capacity.”

We also corroborate the ideas addressed by Gerhard and Silveira (2009, p. 31, our translation) about qualitative research, that is, “it is not concerned with numerical representation, but rather with deepening the understanding of a certain social group, of an organization, etc”. In this context, such discussions are in line with the qualitative analysis methodology, ATD, as we intend to deepen in this research.

The authors Moraes and Galiazzi argue that ATD is organized around four focuses. The first three make up a cycle of analysis, as shown in the following excerpt:

- 1- *Dismantling the texts*: also called the unitarization process, it involves examining the texts in their details, fragmenting them in order to reach constituent units, statements referring to the phenomena studied.
- 2- *Establishment of relationships*: this process called categorization involves building relationships between the base units, combining and classifying them, bringing together these unitary elements in the formation of sets that bring together nearby elements, resulting in systems of categories.
- 3- *Capturing the emerging new*: the intense impregnation in the materials of the analysis triggered in the two previous focuses allows the emergence of a renewed understanding of the whole. The investment in communicating this new understanding, as well as its criticism and validation, constitutes the last element of the proposed analysis cycle. The metatext resulting from this process represents an effort to explain the understanding that is presented as the product of a new combination of elements constructed throughout the previous steps (Moraes; Galiazzi, 2011, p. 11-12, emphasis added by the authors, our translation).

The last focus of the analysis mobilizes the cycle as a whole and brings it closer to a self-organized process, as the authors argue:

- 4- *A self-organized process*: the analysis cycle, although composed of rationalized and to certain extent planned elements, as a whole can be understood as a self-organized process from which new understandings emerge. The final, creative and original results cannot be predicted. Even so, the preparation and impregnation effort is essential so that the emergence of the new can materialize (Moraes; Galiazzi, 2011, p. 12, our translation).

In other words, ATD is an analysis methodology, in which there are steps that guide the study path of the phenomenon. According to Moraes and Galiazzi (2011, p. 13, our translation),

“ATD operates as meanings constructed from a set of texts. Textual materials constitute signifiers to which the analyst needs to attribute senses and meanings”. In this way, we understand that ATD seeks to understand phenomena.

ATD occurs through the analysis of a group of documents produced by the researcher, such as: interview transcriptions, observation records, notes and diaries. In addition to ready-made documents such as: reports, newspapers, magazines, among others. All these elements and types of documents are characterized as the “*corpus*” of the research. In this sense, the “*corpus*” of this research were the Portfolio writings produced by interns enrolled in ES III (Moraes; Galiuzzi, 2011).

Based on these theoretical assumptions presented, we will foreshadow the context in which the Portfolio was written, as ATD understands that the description of the context allows for immersion in the phenomenon investigated and, in this sense, new understandings emerge in a descriptive, analytical, recursive and (self)former.

### **On-site internship, the pandemic and the Portfolio in the Chemistry Degree Course**

Due to the emergence of the pandemic, the Federal University of Grande Dourados (UFGD) launched regulation no. 01, dated March 27, 2020<sup>4</sup>, suspending HE activities, in view of the Public Health Emergency. This regulation guided the suspension of enrollment of UFGD interns who were carrying out mandatory and non-mandatory Internship activities during the semester. It also explained the impediment of new contracts, as argued in this regulation: “prevent the signing of new mandatory and non-mandatory ES contracts until April 16, 2020, extendable as necessary” (Brasil, 2020, our translation).

Following this suspension, the Supervised Internship Committee (COES) of the Chemistry Degree Course organized meetings to discuss possible steps forward in this scenario.

UFGD remained with its activities suspended from March 2020 to July 2020, due to the increase in COVID-19 cases that had worsened and spread rapidly around the world. It was in June 2020 that UFGD approved a new academic calendar in which classes would be held through digital platforms.

Considering Ordinance RTR/UFGD No. 367, of June 29, 2020, in which the return of classes in a remote format was approved, activities were resumed on August 3, 2020, with the

<sup>4</sup>To consult the legislation and standards for undergraduate education as a result of the Covid-19 pandemic. Available at: <https://portal.ufgd.edu.br/pro-reitoria/prograd/informativos>. Accessed on: 10 Oct. 2023.



regulation of the Emergency Academic Regime (RAE). In this format, teachers taught their classes in synchronous<sup>5</sup> and asynchronous formats<sup>6</sup> using digital platforms. This RAE period was carried out monthly, consisting of 4 modules lasting 25 academic days each module.

With regard to the mandatory HE component, regulations No. 07, dated September 1, 2020, were released for face-to-face undergraduate courses and No. 12, dated October 9, 2020, for undergraduate courses in the Distance Education modality (EaD) from UFGD, establishing the same procedures for the non-face-to-face offering of curricular components of the mandatory ES type in the RAE, as expressed in article 1:

“the non-face-to-face offering of curricular components of Mandatory Supervised Internship during the Emergency Academic Regime (RAE) will occur starting in the 3rd module and ending in the 4th module of the RAE, considering the National Curricular Guidelines and the preparation of the following guiding documents:

I - Specific Work Plan, as provided for by MEC Ordinance No. 544/2020, to be prepared by the teacher responsible for the curricular component following the model, where applicable, of the Emergency Academic Teaching Plan (PEAE), II of the Resolution ad referendum CEPEC nº 106/2020, they must be approved at an institutional level, by the Faculty's Board of Directors.

II- Technical Report justifying the offer, as provided for in CNE/CP Opinion No. 11/2020, to be prepared by the Course Coordinator.

§ 3 The offer of curricular components of the Mandatory Supervised Internships type in RAE must comply with the provisions of CNE/CP Opinion No. 5/2020 and CNE/CP Opinion No. 11/2020, considering the steps, hours and procedures adopted.

§ 4 The Specific Work Plans and Technical Reports, accompanied by the approval resolution of the Board of Directors, must be forwarded to the Undergraduate Teaching Coordination (COGRAD), so that they can be attached to the Pedagogical Projects of the courses”.

For courses offering the non-face-to-face Internship curricular component, these procedures outlined above were necessary: Technical Report (the Course coordination prepared); Specific Work Plans (PTE) (the Internship teacher prepared). Both documents were sent to the Undergraduate Teaching Coordination (COGRAD) to be added to the Course Pedagogical Project (PPC).

In 2021, a new academic calendar was approved, called the Emergency Academic

<sup>5</sup>The synchronous format corresponds to classes that occur simultaneously, “live” between students and teachers. In this format, the teacher can interact through strategies, such as questions, synchronous *online games*, among others. You can also use the slideshow as a teaching resource. To carry out these synchronous activities, digital platforms are used, for example, *Google Meet*.

<sup>6</sup>The asynchronous format corresponds to classes that can be delivered via email or another tool, so that the teacher does not need to be simultaneously developing the activity. We can cite some examples of asynchronous classes/activities: a) films, documentaries and/or series to reflect on a topic; b) recorded videos made available by the platforms (these videos may be from the teacher of the curricular component or not); c) Writing reports, or asking questions, among others.

Regime by Modalities and Phases (RAEMF), and the guidelines for in-person, hybrid or non-in-person return were carried out based on the Proseguir Program<sup>7</sup>, which classified the severity of the contagion of COVID-19 through flag colors.

The Internship in which this research was carried out began in the 1st semester of 2020 (before the pandemic was declared) and was interrupted with the suspension of the academic calendar (due to the COVID-19 pandemic), with the return of remote classes in the year of 2021. Therefore, this class was not reopened in the 3rd and 4th modules of the RAE.

It was in this pandemic context of remote classes that ES III was held. Regarding the constitution of the empirical material, we used the writings of the Portfolios, which were composed of different activities carried out in ES III, namely: 1) Textual production in different genres: a case in the training of chemistry teachers; 2) The interns' perceptions of the school's teachers in light of the pandemic scenario; 3) Portfolio about the school's pedagogical spaces; 4) Pedagogical activities carried out remotely with basic education teachers; 5) School integration project in conjunction with the 1st training cycle between PIBID and PRP; and 6) Reflections on the dialogues promoted by the conversation circles. Among these writings from the Portfolios, we selected writing 4 for analysis, as it interweaves discussions about the Internship carried out remotely at the Basic Education school.

### **The analytical procedure via ATD: *vita contemplativa* in Portfolios**

We selected five portfolios from the HE component in Education III, from the night shift in the 1st semester of 2020<sup>8</sup>. In this first stage of analysis, we added a codename to each Portfolio in an attempt to preserve the identity of the interns, which were: Maria, João, Joaquim, José, Teresa. Therefore, we carried out the coding with readings and re-reading of the writings in the Portfolios, fragmenting the texts into units of meaning. Subsequently, for each unit of meaning we created three keywords followed by a title.

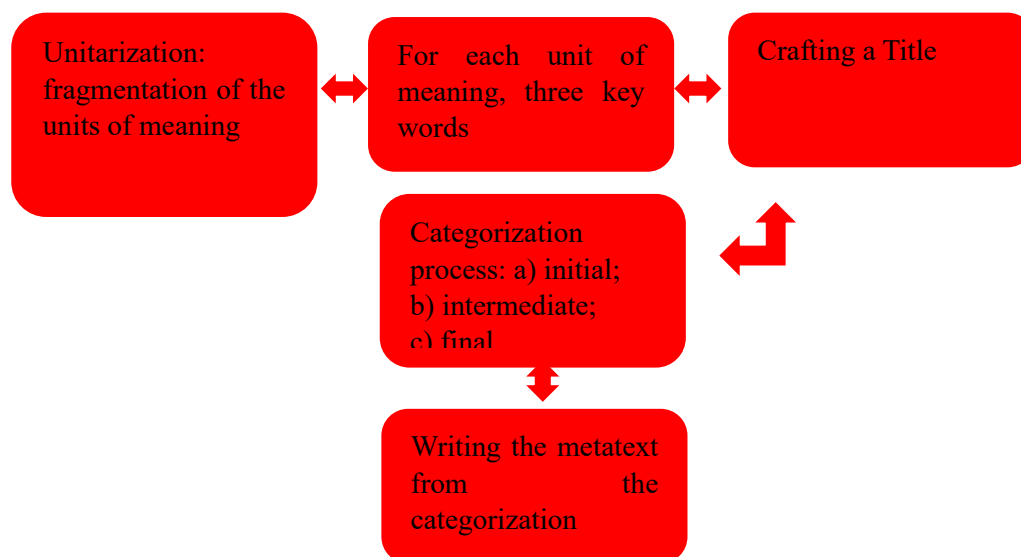
For each title described, we carried out the first approximation of the ideas in the concept called categorization. In this sense, the analytical path progressed towards the intermediate and final categories. This stage consists of establishing and building relationships between similar subjects. Finally, with the impregnation in the corpus seeking to develop a *vita contemplativa*,

<sup>7</sup>For more information about this Program, see: <https://www.pge.ms.gov.br/proseguir-sobe-municipios-de-bandeira-e-impoe-medidas-mais-rigidas-contra-a-pandemia/>.

<sup>8</sup>As we have already mentioned, due to the pandemic, the 1st half of 2020 was interrupted, with a return in the calendar year 2021.

we weave the metatext arising from the final category: Reflections of teachers in training: planning, the pandemic and the inclusive perspective are in check. The figure below conceptually represented the analytical process carried out.

**Figure 1 – Analytical path**



Source: Prepared by the authors

In this way, the analysis carried out combined excerpts - fragments, units of meaning - from the Portfolios written in the process called unitarization. Subsequently, similar elements were reintegrated and formed into the categorization process. And, in this context, unitarization and categorization led to the production of the metatext that was structured with descriptive and interpretative arguments interwoven with theoretical, empirical and researcher dialogues, as outlined in the next item.

### **Theoretical and empirical links emerged**

Due to the COVID-19 pandemic in Brazil, education was forced to continue and the alternative was the use of digital platforms. In this scenario, the Internship curricular components were also offered and carried out virtually. The interns were challenged to find methodologies to complete their HE hours, therefore we highlight the importance of planning. In view of this, we used Portfolio writing to narrate, reflect and debate atypical situations carried out during the development of ESIII that took place in a remote format.

It is worth mentioning that both the university and the Basic Education school were in a non-face-to-face format. And given the context, writing was an ally for training. It was with

this intention that we invested in the training strategy of using Portfolios. Based on the analytical path carried out in this research, the final category emerged: **Reflections of teachers in training: planning, the pandemic and the inclusive perspective are in check**, which made it possible to create this metatext.

One of the main methodologies used by Basic Education teachers during the pandemic was the use of APC, as argued by interns Maria and Teresa:

Maria: "I believed that setting up an APC would be simple, but when starting, study, plan and look for different sources to present it in a way that students understand the content. I saw that it is very complicated and requires a lot of planning time."

Teresa: "Today I realize that planning was essential from the beginning, as it took a lot of attention when defining the concepts that would be covered in each of the videos, as it was difficult to compress the content into just 6 minutes of videos".

It is interesting to mention that some interns completed their internship at Escola do Campo and thus had to adapt to another reality. The lack of internet was one of the main difficulties that Rural Education faced/faces, according to excerpts from Interns Maria and Joaquim:

Maria: "The school where I attended ES is a rural school, so the activity planning was geared towards the reality of the students working there, as they both do not have good access to the internet, many live on farms/farms, and access to these online activities is a problem that these students face in the face of the pandemic".

Joaquim: "because it is a rural school, many of the students still have difficulty accessing the internet".

A fact mostly found in these analyzes is the difficult access to the internet for Basic Education students, also in urban schools. When we come across this reality in the writings of the Portfolios, we realize how much the pandemic has exposed social inequality. In this sense, we highlight the argument of Almeida *et al.* (2020, p. 21-22, our translation):

Social inequality is the most striking and well-known characteristic of Brazilian society, which, evidently, makes the impacts of the pandemic more dramatic, mainly because it hits us at a particularly worrying time of rising unemployment, falling income and shrinking social protections. The combination of political and economic crisis experienced by the country in recent years has opened space for the implementation of proposals that have been lurking in Brazil for some time: the deregulation of rights and the dismantling of public policies aimed at social security.

Therefore, the political and economic crisis in a pandemic resulted in an even more aggravating educational gap. Many school students did not have access to the internet, which

led the interns to develop APC. However, we problematize some questions based on the writings of the interns, namely, were classes synchronous in private schools? Who has the right to learn during a pandemic? And also, who had the opportunity to learn during this COVID-19 pandemic?

In the unit of meaning of intern João, we observed a reflection on the reality of his school and the option to develop the APC: “the focus of activities should not be on the use of the internet, since many students do not have internet or means to access the activities, so I decided to work with the APCs”.

In this context, we can infer that the interns' experiences were anchored in the perspective that the Internship could make sense in their academic, personal and professional lives, that it was an event; because, in this way, HE could bring together formative aspects that would concomitantly promote reflection on the scenario experienced, as Bondiá argues that (2002) “what happens to us, what touches us” (Bondiá, 2002, p. 21, our translation); it can, then, provide - in fact - an experience that transforms. Therefore, these pandemic experiences during the Internship transformed the students' views on social vulnerabilities and the impacts they have on learning.

We articulate these reflections with the concept of Internship from the perspective of Pimenta (2012) “teaching activity is praxis”; therefore, this curricular component is praxis. This implies the understanding of the inseparability between theory and practice, “theoretical activity is what inseparably enables the knowledge of reality and the establishment of purposes for its transformation” (Pimenta, 2012, p. 105, our translation). Therefore, the reflections, dialogues and writings made possible by the Portfolio in the remote classes of this Internship were able to promote experiences that transformed the interns into teachers of this praxis.

From this perspective of experience, we highlight the writings of intern José who, in addition to the challenge already faced in carrying out the remote internship, had to reflect and plan classes with a focus on Special Education students.

José: “But there was something else besides the pandemic scenario we are living in, there was inclusion, in the middle of the pandemic how are we going to include in a system that does not allow inclusion? Very complex, not easy, but it is not impossible, innovation is necessary”.

This reflection by intern José comes from the challenge of carrying out the Internship for students with disabilities, the Target Audience of Special Education. It referred to a third-year classroom and the students had the following characteristics: low vision and impaired

literacy, which culminates in difficulty reading and writing.

Faced with this scenario, Intern José received guidance from the Internship teacher and the school's supervising teacher to talk to this student's support teacher, the target audience for Special Education. In dialogue with the support teacher, the intern learned about the reality of students with disabilities, which led to (re)planning, reflecting, and developing inclusive activities.

In this context of Inclusive Education and Special Education, we highlight the authors Zerbato and Mendes (2018, p. 148, our translation):

So, how best to teach heterogeneous classes? Would adopting an open and flexible curriculum be the most effective path? Or does a closed curriculum bring more specific and equal objectives for the entire class? Are individualized teaching and curricular adjustments good proposals? This article sought to discuss the pedagogical practices proposed for the educational inclusion of PAEE students in common education classrooms and presented a new theoretical debate that can contribute to the elaboration of these practices, following the concept of Design Universal for Learning (UDA).

In this article, the authors discuss that the school inclusion of the student Target Audience of Special Education can be enhanced if planned through inclusive pedagogical practices that meet a Universal Learning Design (UDL). Such inclusive pedagogical practices aim to bring everyone together, with a view to expanding student participation and learning and, in this sense, reducing the need for personalized adjustments (Zerbat; Mendes, 2018).

Faced with the COVID-19 pandemic, the remote internship and the new understandings that emerged through the use of Portfolio writings, we defend an inclusive school. That said, we agree with the quote below:

An inclusive school also requires the participation of the entire school team – school management, teachers, specialized professionals, family, students and the community in general – in the construction of a collaborative identity and culture for the development of more comprehensive practices for access and learning for all students (Zerbato; Mendes, 2018, p. 148, our translation).

In this way, Education can promote schooling in an equitable way. However, even if we aim for an inclusive school, other aspects are necessary for this to materialize, namely: infrastructure, internet access, appreciation of teachers, public educational policies, among others.

We also argue that the experiences reported by the interns were able to glimpse horizons of possibilities for offering the next Internships, for example, knowledge of the school reality,



dialogue with the teacher - regent and support - at the school and the university, the search for an inclusive school and the Internship as praxis. Therefore, we understand that the use of Portfolios was a formative and powerful strategy, as corroborated by authors Calixto and Marques-de-Oliveira (2023, p. 19, our translation):

we argue that working with Portfolio can glimpse new horizons committed to learning and teaching. To this end, it is necessary to discuss these new training possibilities in undergraduate courses that are allocated in the area of Exact Sciences and that are mostly permeated by objectivist assessments. However, it is worth remembering that these degree courses are training teachers, in our case, Chemistry teachers.

In this way, we can conjecture that these analyzes provided by the Portfolio writing strategy raised some thematic nuclei that need to be deepened and discussed in other research.

### **Final denouements**

The internship carried out during this remote and pandemic period was a learning experience full of challenges. However, we highlight the importance of study and planning for both interns and teachers at school and university, as the pandemic has called into question many traditionally used teaching strategies.

In the meantime, the interns had the challenge of planning “the new” to fulfill the workload, interweaving the terminologies of synchronous, asynchronous, APC, support teacher, in addition to the insertion of technological tools. All these understandings emerged and linked in this research were made possible through the writings in the Portfolios. In this sense, we argue that this was a powerful and formative strategy that provided an insight into the nuances experienced by the pandemic. Furthermore, it valued and provided opportunities for continuous, progressive and recursive assessment in which both the teacher and the student can actively participate in the process through writing, reflection and debate.

Another aspect that emerged was the theme of Rural Education and Urban Education. We observed that both faced/are facing problems of social inequality, which resulted in a loss to schooling, as internet access was scarce. In this sense, the pandemic exposed the realities of our public schools and, that said, interns were able to enter this complex universe of teaching chemistry considering the social reality of students.

It was also a challenge to carry out the Internship for students with disabilities, the

Target Audience of Special Education. In this context, we highlight the fundamental importance of dialogue between the support teacher, the regent teacher, the intern and the teacher trainer at the University, as there were possibilities for (re) planning, reflections and development of inclusive activities. Therefore, Education can promote schooling in an equitable way.

Therefore, we conclude that the experiences carried out by interns in this pandemic scenario in the ES III curricular component contributed to expanding perspectives on public education and its realities. Furthermore, it showed the teacher's challenges in teaching Chemistry through hitherto unknown strategies. Therefore, we agree and defend the concept studied and coined by Pimenta (2012) that the Internship is praxis, so that we can - in fact - train teachers mediated by theoretical-practical concepts. Thus, we announce that this research can provide possibilities for future studies concerning the formative potential of the Portfolio in the field of Internships, contemplating initial training for critical-reflective Science/Chemistry teachers.

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