

The specialization course in Instrumental Informatics for Basic Education Teachers/UFRGS: privileged research themes¹

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Abstract

The objective of this investigation is to understand the outlines of the bibliographic production of the *lato sensu* specialization course in Instrumental Informatics for Basic Education Teachers promoted by the Graduate Program in Informatics in Education at the Federal University of Rio Grande do Sul, based on the identification of research themes privileged in the bibliographic productions developed by its graduates (2010 and 2014). In the production of data, the principles of State of Knowledge were used, with a focus on historical-bibliographic, exploratory-investigative and inventory-descriptive research, and in the analytical process, Discursive Textual Analysis was used. As a result of the investigation, the complexity existing in the production of academic knowledge of the aforementioned program was highlighted due to its interdisciplinary nature, in order to enable a multifaceted engendering with different areas of knowledge beyond Informatics in Education. As privileged research themes, issues related to the development of *innovative pedagogical* practices, promotion of *teacher training* and recognition of *educational management* as prominent elements in the organization of pedagogical work and the realization of professional practice were found.

Keywords

Teacher training. Informatics and education. Scientific production.

O curso de especialização em Informática Instrumental para professores da Educação Básica/UFRGS: temáticas de pesquisa privilegiadas

Resumo

O objetivo desta investigação está em compreender os contornos da produção bibliográfica do curso de especialização *lato sensu* em Informática Instrumental para Professores da Educação Básica promovido pelo Programa de Pós-Graduação em Informática na Educação da Universidade Federal do Rio Grande do Sul a partir da identificação das temáticas de pesquisa privilegiadas nas produções bibliográficas desenvolvidas pelos seus egressos (2010 e 2014). Na produção dos dados, utilizaram-se os princípios de Estado do Conhecimento, com foco na pesquisa de caráter histórico-bibliográfico, exploratório-investigativo e inventariante-descritivo, e, no

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processo analítico, utilizou-se a Análise Textual Discursiva. Como resultados da investigação, destacou-se a complexidade existente na produção do conhecimento acadêmico do referido programa pela natureza interdisciplinar, de forma a possibilitar um engendramento multifacetado com diversas áreas do conhecimento para além da Informática na Educação. Como temáticas de pesquisa privilegiadas, encontraram-se questões articuláveis ao desenvolvimento de *práticas pedagógicas* inovadoras, fomento à *formação docente* e reconhecimento da *gestão educacional* como elementos de destaque na organização do trabalho pedagógico e da efetivação do exercício profissional.

Palavras-chave

Formação de professores. Informática e educação. Produção científica.

Curso de especialización en Informática Instrumental para Docentes de Educación Básica/UFRGS: temas de investigación privilegiados

Resumen

El objetivo de esta investigación es comprender los lineamientos de la producción bibliográfica del curso de especialización *lato sensu* en Informática Instrumental para Docentes de Educación Básica promovido por el Programa de Posgrado en Informática de la Educación de la Universidad Federal de Rio Grande do Sul a partir de la identificación de temas de investigación privilegiados en las producciones bibliográficas desarrolladas por sus egresados (2010 y 2014). En la producción de datos, se utilizaron los principios del Estado del Conocimiento, con un enfoque en la investigación histórico-bibliográfica, exploratorio-investigativa y inventario-descriptiva, y, en el proceso analítico, se utilizó el Análisis Textual Discursivo. Como resultado de la investigación, se destacó la complejidad existente en la producción de conocimiento académico en el referido programa debido a su carácter interdisciplinario, a fin de posibilitar una engendramiento multifacético con diferentes áreas del conocimiento más allá de la Informática en la Educación. Como temas de investigación privilegiados, se encontraron cuestiones que pueden vincularse al desarrollo de prácticas pedagógicas innovadoras, fomentando la formación docente y el reconocimiento de la gestión educativa como elementos destacados en la organización del trabajo pedagógico y la realización de la práctica profesional.

Palabras clave

Formación de profesores. Informática y educación. Producción científica.

1 Introduction

The transformations that occurred in Education resulting from the productive restructuring, the creation of new institutional arrangements, and the meeting of specific demands of qualified training necessary for the subjects to join the workforce unfolded in the realization/construction of a space for debate about the importance of academic training as a strategic element in the development of the nation. The speed of

technological advance and its assimilation into the social fabric are key factors to consider in the context of qualification for work (POCHMANN, 2020).

Inevitably, the qualification that we mention crosses different professional categories, but one stands out in the current context, as one of its essential characteristics is the need for constant updating within a process of formation of its professional identity: education workers. The qualification of this professional category occurs in different ways, considering the several aspects and dimensions of the training process, as it is motivated by multiple variants, such as institutional support, personal encouragement, or the construction of skills and abilities to carry out the pedagogical work (MONTEIRO, 2018).

In this context, Higher Education Institutions (HEIs) are privileged spaces to fulfill training needs for teachers from different areas and fields, as they manage to meet the practical qualification needs of these professionals, mainly through continuing education (FREITAS; PACÍFICO, 2020, SOARES, 2019). This type of qualification has different formats and models, from improvement courses promoted by public policies for teacher training to offering lato and stricto sensu courses in diverse areas of knowledge (NÓVOA, 2019). When we analyze the training of Basic Education teachers, there is a series of institutional programs developed from the perspective of efficiency and pedagogical effectiveness, in the promotion of a sequenced, progressive, low-cost process (Distance Learning) and with a high impact on teachers on the staff.

Specialization courses focused on teachers (mostly) are developed within this perspective, based on meeting the specific demands of a region, with a previously defined target audience and curricular practices that are inductive to the relationship between theory and practice (BARRETO; MARTÍNEZ, 2007). In Brazil, this training focused on subjects aligned with a notion of continuation of pedagogical knowledge developed during the undergraduate period, however, over time, other professional requirements were called for, especially those linked to digital communication and information technologies (FONTOURA; PROCASKO, 2019).

It's important to highlight the privileged spaces that offer continuing education for teachers, colleges and universities, within perspectives specific to the research field or even the disciplinary area that this qualification presents within the areas of knowledge. To help understand, Pierre Bourdieu's concept of field is useful, since it constitutes a

determined space or locus in which a set of social structures are built to characterize subjects, institutions, and communities within a specific and specific rule (BOURDIEU, 2004).

Using Bourdieu's perspective, the space for continuing education created by university graduate programs is constituted as a field and, as such, presents itself in constant movement (internal and external) within an arena full of specific meanings and values. In these spaces, there is the operationalization of a set of studies and research in the most varied and different areas of knowledge, acting, in a way, as a regulatory agent of production (HAYASHI, 2013).

Thus, we see the work developed in the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers promoted by the Graduate Program in Informatics in Education at the Federal University of Rio Grande do Sul (PPGIE/UFRGS), developed within the Center Interdisciplinary Program of New Technologies in Education (CINTED/UFRGS), in partnership with the Open University of Brazil (OUB). The course is for teachers working in Basic Education and other professionals with higher education who work in schools to support educational activities using computers. The continuing education provided seeks to develop the skills and abilities of teachers from public and/or private schools "[...] in full activity, in terms of computer content, conceptual, methodological and epistemological aspects of computer education, and of the use of new computer technologies in basic education" (UFRGS, 2014, p. 1).

The course has 8 (eight) modules, namely: Module I - Communication Tools: Initial training with moodle and Using e-mail; Module II - Concepts: Introduction to Computer and Computer Operation; Module III - Editors: Text Editors, Presentation Editors, and Image Editors; Module IV - Support Tools: Spreadsheets and Statistics; Module V - Web Concepts and Tools: Internet and web, Risks and damages and Editing of web pages; Module VI - Digital Media: Media and its use and Communication Tools; Module VII - Educational Software and Environments: Educational Software and Search for educational resources/information on the Web and Module VIII - Distance Learning Environments and their use: Authoring Systems and Distance Learning Environments. (UFRGS, 2014).

The investigation emphasized in this article seeks to understand the outlines of the bibliographic production of the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers promoted by the PPGIE of UFRGS identifying

the favored research themes in the bibliographic productions (monographs) developed in its first editions (2010 e 2014)².

Due to the nature of this investigation, we used the case study approach (YIN, 2015) to address the interpretive nature of the social phenomena experienced by the subjects, using the State of Knowledge principles (MOROSINI, 2015) in the identification and recording reflective of the senses and meanings present in the academic production of a particular field of study (Informatics in Education), research community (specialization course in Instrumental Informatics for Basic Education Teachers), with a historical-bibliographic, exploratory-investigative focus, inventory and descriptive (FERREIRA, 2002). In the data analysis process, we rely on the Discursive Textual Analysis methodology (MORAES; GALIAZZI, 2011) and its potential for data deconstruction and reconstruction in case there is new knowledge.

It's important to address that the investigation we present is inserted within a specific theoretical and methodological perspective, but this doesn't mean that this is the only possibility to study the phenomenon of knowledge production in the lato sensu specialization course in Instrumental Informatics for Education Teachers basic (PPGIE/UFRGS). We believe that this type of meta-research (research on research) is fundamental for the consolidation of the field and space for the production of scientific knowledge in all areas, as it simultaneously unveils the research interests present in research communities and trends in the field of study and indicates possible boundaries of the field of knowledge.

2 Methodological Strategies

We believe in the understanding of the methodological process as a “theoretical trajectory” (VIEIRA, 1992, p. 29), which is like a path to be followed by researchers when using the concepts and procedures to the analysis of different social phenomena. From this perspective, methodological choices are decisive in achieving the objectives of an

² The UFRGS PPGIE Specialization Course in Instrumental Informatics for Basic Education Teachers had three editions, respectively 2010, 2014, and 2017. We couldn't use the data from the 2017 edition, considering that it was completed at the end of 2019 and, with the beginning of the new coronavirus pandemic, in 2020, the bibliographic productions of the period weren't available in their entirety on the institution's digital platform.

investigation. We also consider that the use of different methodologies results in different results, producing different understandings about the issue under investigation. With this investigation, we seek to understand the dialectical movements of knowledge production through the lens of a research community (lato sensu specialization course in Instrumental Informatics for Basic Education Teachers), to highlight different perspectives, points of convergence, and divergence present in the training proposal's curricular knowledge, the knowledge of professional training and the experimental knowledge of the subjects in the particular context of their professional performance (TARDIF, 2011).

As we have already mentioned, this investigation is a case study (YIN, 2015), based on the in-depth reading of a research object in the construction of knowledge developed both broadly and specifically, evidencing the notion of “[...] an empirical investigation that investigates a contemporary phenomenon within a real-life context, especially when the boundaries between the phenomenon and the context aren't clearly defined” (YIN, 2015, p. 32). Thus, we align ourselves with the principles of the State of Knowledge (MOROSINI, 2015, p. 102), which seek “[...] consultation, systematization and analysis of what was produced [in a certain] disciplinary field”, in one determining time and space, or in a specific academic community.

The comprehension of the production of a State of Knowledge presupposes the analysis of any material elaborated on a specific research topic. Included here are magazines, books, congress annals, journalistic materials, among others. Thus, we use its principles in the composition of the understanding of academic production (monographs) arising from the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers at the PPGIE at UFRGS.

We emphasize as principles the identification and recording of the material to be analyzed as a first step in the constitution of the corpus of analysis, the in-depth reading of this material concerning its relevance in the analytical engendering in highlighting its constituent elements that help in understanding the main research objective and, finally, the process of categorization of these elements to organize and systematize the research findings and display them as a metatext (MORAES; GALIAZZI, 2007), that is, the final writing showing the results of the investigation.

In characterizing the methodology of the use of State of Knowledge principles, we bring the perspective of a historical-bibliographic character to highlight the construction of a specific bibliographic production; exploratory-investigative in the process of deconstruction and reconstruction of bibliographic material, highlighting the components that integrate its conceptual and theoretical basis deployed in meeting the research objectives; and inventory-descriptive in its strong structure of identification, cataloging and even showing the researches that make up the materials analyzed (FERREIRA, 2002).

The corpus of analysis was constituted from the final papers (monographs) of the lato sensu specialization in Instrumental Informatics for Basic Education Teachers of the PPGIE of UFRGS, in its first editions (2010 and 2014). We also use, to obtain bibliographic material that is part of the corpus, the UFRGS Digital Repository (Lume), which is a portal for accessing the institution's productions, to disseminate and ensure reliable and permanent access to these documents, enhancing their visibility in the set of research communities.

Data were analyzed using Discursive Textual Analysis (MORAES; GALIAZZI, 2011), which relies on the production and (re)construction of the text as a product of the analysis, considering it a qualitative data analysis methodology, to produce new understandings of phenomena, discourses, and narratives. The analytical process is a product of the intersection between content analysis and discourse analysis, which takes place through the constant movement of hermeneutic interpretation. This analysis methodology seeks to reconstruct different discourses based on the idea that “[...] the subject's knowledge needs to be destroyed, disorganized or deconstructed so that new knowledge can emerge” (MORAES; GALIAZZI, 2011, p. 193). Thus, the texts are deconstructed so they can be reconstructed later on, bringing to the initial text - metatext - new meanings and new understandings until then hidden in the speeches and expressions.

From the objective of understanding the outlines of the bibliographic production of the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers promoted by the PPGIE of UFRGS), in the identification of the research themes privileged in monographs written in its first editions (2010 and 2014), we focus our efforts

on the apprehension of bibliographic materials in the explanation or even on the clear indication of the research themes present in the biography.

The research themes present in the corpus of analysis were translated into units of meaning (MORAES; GALIAZZI, 2011). Subsequently, these units were organized in an intense process of categorization that would enable the understanding of research themes privileged in the editions of the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers (PPGIE/UFRGS). In this process, we seek to analyze the interlocutions between the diversity in the previous training existing in the student body that is part of this process and the articulations developed with the field of study of Informatics in Education.

3 Research findings: favored themes

Analyzing the bibliographic production, we noticed that there wasn't regularity between the total number of places made available by the editions of the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers (150 students per edition) and the number of students who concluded from the quantitative monographs (the first edition with 59 monographs and the second edition with 105 monographs). In the first edition, 39.33% of the students finished, while the second edition of the course 70%; an approximate 78% increase.

We can consider the differences in the quantity of the first and second editions, respectively, 60.67% and 30%, as the student dropout, that is, those who didn't complete the course. Considering the total number of 164 monographs from the two editions of the specialization course, the first edition corresponds to about 40% of all bibliographic material produced in the period 2010 to 2015³.

As already mentioned, the research themes emerge within a dialectical research movement that brings together the desires and concerns of students, the resolution of problems related to the use of technologies in the context of their professional performance, and the teacher's areas of activity. This relationship is established in a complex way, within

³ As we have already pointed out, the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers was developed in two editions, respectively, in 2010 and 2014. Considering possible delays in the completion of the editions concerning the development of the final work course, students were given more time to finish.

a Bourdieuan perspective, in which this tension is established in a specific arena of dispute, understanding Informatics in Education from the perspective of the field concept (BOURDIEU, 2004).

Bourdieu (2004) understands the field as an attempt to overcome a system that is simultaneously objective and subjective, in which subjects are a part of society. Thus, it's defined as a space made of a series of positions in which subjects (dominant and dominated) compete for the conservation and/or conquest of certain positions in the social field. Composing its particular logic, the field has a set of mechanisms and properties that help maintain it within the social or even institutional structure (BOURDIEU, 2004).

From the in-depth reading of the corpus of analysis, we located 21 research themes: Virtual Learning Environments, Distance Learning, Special Education, Early Childhood Education, Heritage Education, Professional Education, School Evasion, Teacher Training, School Management, History of Computing, Inclusion Digital, Infrastructure, Internet, Digital Teaching Materials, Digital Platforms, Public Policies, Pedagogical Practices, Writing Processes, School Performance, Technology, and Web Design. The categorization was based on the detailed analysis of the bibliographic material, which allowed a non-directive reading of the phenomenon analyzed. In this way, the process of deconstruction and reconstruction of discursive textual analysis provoked new understandings. These research themes were categorized a posteriori, seeking to reveal what the data set - in its context - unfolds from its elements.

Along with the category Pedagogical Practices - Teaching and Learning comes the development of studies that bring as a foundation and problematic the possibility of reinventing everyday school practices through digital technologies as a powerful tool in the teaching and learning processes. In this way, the pedagogical practice goes beyond purely didactic adjustments; it is articulated to social practice and the perception of knowledge as a production and a historical-social product, in a certain period and space, in a dialectical relationship between practice-theory (REZENDE, 2000). The pedagogical practice conceived from this perspective allows the school to become effective not only as a space dedicated to the assimilation of curricular knowledge historically constructed by societies.

The school goes beyond its mission of equipping subjects; it arises in the context of its perception as a space for socialization and achievement of knowledge caused and promoted by social interaction in a context of diversity and difference. Therefore, we have included studies carried out from the perspective of practices developed at the levels of Early Childhood Education, Elementary, and High School, in the modalities of Professional Education, Special Education, and Distance Learning, and Digital Teaching Materials (table 1).

Table 1 – Relation between the privileged study themes in the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers in the Pedagogical Practices category - Teaching and Learning, its incidence in the analyzed period, and its quantity

Research theme	Research topics	1st edition of the course	2nd edition of the course	N. total	% total
Pedagogical Practices - Teaching and Learning	Early Childhood Education	X	X	19	19.79
	Elementary School	X	X	21	21.88
	High School	X	X	17	17.71
	Educação Profissional	X	X	9	9.38
	Special Education	X	X	12	12.50
	Distance Learning	X	X	7	7.29
	Teaching Materials	X	-	11	11.46
TOTAL				96	100

Source: Author's own (2021).

In the development of studies in this category, we analyzed the pedagogical work in different curricular components (Science, History, Portuguese, Mathematics, Philosophy, Geography, Chemistry, Biology, Foreign Language: English and Spanish, Literature, among others), especially considering levels and type of education. We also noticed that most investigations are related to Elementary Education, emphasizing Special Education (prevailing along with Early Childhood Education studies). It's important to highlight the teaching and learning process through the production of digital teaching materials, including workbooks, manuals and guides, and interactive study in various formats.

Others researches are about the processes of teacher training, which created the category Teacher Training - Processes of Assimilation, in which investigations are about the creation, development, implementation, or even the analysis of actions/programs of continuing education with a focus on the process of

instrumentalizing teachers to communication and information technologies in the context of organizing pedagogical work (PÚBLIO JUNIOR, 2018). We perceive the presence of a training perspective in meeting the specific social and educational demands of teachers who produce this new knowledge. Thus, the objects of study are how teachers are instrumentalized in the use of technologies in the context of the classroom.

These new pieces of knowledge are necessary due to the new ways of being in the school space, the existing speed in the production of knowledge, and the consolidation of new habits in the interaction between subject-knowledge and the advent of interactivity as an important presupposition in communication. In the investigations present in this category, teacher training is analyzed based on Digital Inclusion, Writing Processes, Virtual Learning Environments, and Technologies (table 2).

Table 2 – Relation between the study themes privileged in the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers with the category Teacher Training - Assimilation Processes, its incidence in the analyzed period, and its quantity

Research theme	Research topics	1st edition of the course	2nd edition of the course	N. total	% total
Teacher Training - Assimilation Processes	Digital inclusion	X	X	13	30.95
	Writing Processes	X	-	3	7.14
	Virtual Learning Environments	X	X	17	40.48
	Technologies	X	X	9	21.43
TOTAL				42	100

Source: Author's own (2021).

Investigations into aspects of teacher training reveal an important dimension in the field of education, the instrumentalization of teachers (mostly) in potential scenarios of inclusive digital education as in that period the pandemic hadn't started yet, nor was it even considered as an effective possibility in achieving Distance Learning. The monographs focused on the understanding of the use of virtual environments by teachers (as Moodle⁴ and Google Classroom⁵) from the perspective of showing

⁴ *Modular Object-Oriented Dynamic Learning Environment, or Moodle, as it's commonly known is a free and open-source software to support teaching and learning processes, a virtual learning environment. It can be used to develop virtual courses, curriculum component pages, group work, and learning communities* (ASSUMPÇÃO; MACEDO; MOURA, 2015).

teachers the potential of these spaces combined with interactive pedagogical practice, taking advantage of resources that enhance the scope of their work.

The use of digital communication and information technologies has different dimensions of the educational space, not just inside classrooms; education management is a fertile field for the use of these resources in the optimization, dynamism, and agility of processes. Thus, we highlight the category Educational Management – Institutional Policies. The practice developed inside a school isn't isolated, it's dynamic and influenced by many factors, both internal and external to the teachers and students.

From this perspective, we understand educational management as the way to achieve educational goals, as its implementation in the schools articulates, encourages, and enhances the developed actions. Educational managers have little prominence in the use and operationalization of the production of technological knowledge, but they are fundamental to organize the pedagogical work of their school routine (MEDEIROS, 2014). In this category, we have included studies and investigations that focus essentially on the themes Digital Platforms, Public Policies, Infrastructure, and Management Tools (table 3).

Table 3 – Relation between the study themes privileged in the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers in the category Educational Management - Institutional Policies, its incidence in the analyzed period, and its quantity

Research theme	Research topics	1st edition of the course	2nd edition of the course	N. total	% total
Educational Management - Institutional Policies	Digital Platforms	X	X	5	19.23
	Public policy	X	X	9	34.62
	Infrastructure	X	-	4	15.38
	Management tools	-	X	8	30.77
TOTAL				26	100

Source: Author's own (2021).

To meeting the constant new social demands in the organization of school spaces, the use of technological resources is more radical in the school scenario.

⁵ Google Classroom is a content management system for schools to simulate a classroom, incorporating the creation, distribution, and evaluation of educational activities (SCHIEHL; GASPARINI, 2016). This resource is widely used in the 2020 coronavirus pandemic as a viable alternative by most of the Education Departments in the country in the implementation of Hybrid Education.

Technologies have become fundamental in daily life, both personal and institutional, the school couldn't be left out of this movement of expansion and growth of the uses of technology in social engendering. In the set of works presented in this category, there are discussions centered on the assimilation of these technologies by managers (directive teams) of basic education schools.

We highlight the analysis of government and institutional public policies regarding the incorporation of digital technologies in the daily life of the school, considering interdisciplinary projects such as promoting the democratization of access and the construction of referential matrices for the introduction of sectoral policies for the implementation of computers in spaces school (LIMA; AZEVEDO, 2019). Technological and digital education management tools are also in this context, especially in the debate on their potential for optimizing school resources and management processes for decision-making.

One of the objectives of the training promoted by the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers is the possibility of solving everyday problems for teachers and students taking part in the course. The privileged themes of knowledge production are explained in the monographs from a contextualization of the school space with a focus on a difficulty established in the school, in the classroom, in the education system, or even in the pedagogical work developed with the students. The data we present show a focus on investigations that favor pedagogical practices in teaching and learning processes in different fields of curricular knowledge.

It's important to consider the changes in studies and research in the field of information technology in education within a clear and defined assumption, interdisciplinarity. The investigations carried out in this context are multifaceted, covering an interesting set of perspectives in understanding the focuses of their investigations. This diversity is seen in the privileged themes of study, such as the family-school relationship, learning processes, innovative curricula, teacher training, school management, digital information and communication technologies during the pandemic, among many other themes (FONTOURA; PROCASKO, 2019).

This type of knowledge production, based on experienced knowledge (TARDIF, 2011), allows different intersections and arrangements to be established in the exchange between different fields, which converge to the understanding of structures, phenomena, and issues related to action and the educational process. The highlighted permeability can be seen as synonymous with the capillarity in which the field of research in Informatics in Education is inserted, as it presents in its genesis a vocation in the interaction with other knowledge (CHARLOT, 2006). It's through this approach that we understand the bibliographic production developed along with the lato sensu specialization course in Instrumental Informatics for Basic Education Teachers offered by the PPGIE of UFRGS.

4 Final considerations

The research of this article was developed in the context of the delineation of the field of Informatics in Education, in the perspective of the specialization course in Instrumental Informatics for Teachers of Basic Education of the PPGIE of UFRGS. The understanding of the research themes present in the monographs of the students of the course indicates the contours and scope of the investigations developed by this research community.

The theme of Pedagogical Practices in the scenario of teaching and learning processes gains significant prominence for its quantity in the analyzed corpus as a whole, representing about 59% of the total. These practices are mostly elements of intervention in Early Child Education and Elementary School. We believe that the development of work from this perspective indicates the relationship established between the multidimensionality of training in the field of Informatics in Education and the very first training of these subjects, as it is this that enables them to exercise their profession.

Virtual learning environments are addressed in the monographs from the perspective of Teacher Training, to give teachers tools for the development of pedagogical activities mediated by the use of interactive digital resources that enable the construction of new knowledge from non-traditional spaces of the pedagogical practice (OLIVEIRA; ARAÚJO; SILVA, 2021). Training for the use of these

environments proved to be essential in 2020, both in Distance Learning and in Hybrid Teaching models, as an alternative to the impossibility of in-person classes and the inclusion of teachers in Distance Learning due to the pandemic.

The structure of schools was also highlighted from studies on Educational Management as a focus on understanding institutional and governmental public policies to promote digital communication and information technologies in the school environment. This type of approach fits into a perspective of organization, governance, and the State in meeting social demands and demands beyond the instrumentalization of students, as a possibility of assimilating knowledge and knowledge that need educational management as an important tool for the operationalization of objectives educational institutions.

The research present in this article presents itself as a first approximation with the corpus of analysis of the dynamics that the specialization course in Instrumental Informatics for Basic Education Teachers at UFRGS produces with the field of Informatics in Education based on its academic production. This shift is important, as analyzing studies with this theme, we can glimpse the possibilities and characteristics that demarcate this same field of knowledge. The next steps from the data present in this investigation are in the delimitation and identification of the research objects analyzed by this research community, to include the latest edition of the course. We also endeavor to point out the relationship between the themes, the research objects, and the professional practice of the subjects authors of these monographs.

Teacher training in this scenario happens uniquely, especially at this sensitive time that we live as a society. Qualification for the use of digital technologies imposes a new order, another rhythm for humanity. In this process, we find the focus on the organization of pedagogical work, on encouraging dialogues and reflections on the most different understandings, such as Distance Learning, Distance Education, Online Education, and especially the power that exists in the educational process as an exercise in the development of critical, creative and autonomous subjects, in this moment of unveiling the exercise of citizenship.

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