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NEW TECHNOLOGIES TO PLAN AND MEDIATE READING: HELPFUL, PLEASANT AND INDISPENSABLE

NOVAS TECNOLOGIAS PARA PLANEJAR E MEDIAR LEITURA: ÚTEIS, AGRADÁVEIS E INDISPENSÁVEIS

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Abstract: Aiming to facilitate teaching planning and practice based on new technologies, this action research culminated in the creation and the implementation of a product (PLANPED), based on conceptions of Lévy (1999), Ferreira and Duarte (2012) and Demo (2009) on educational computing; Liberato and Fulgencio (2007) and Martins (1994) about reading; and Cosson (2007), about literature. Thus it contributed with the qualitative research in education, focusing the literary mediation in initial education.

Keywords: Reading. Planning. Technology. Formation.

Resumo: Visando facilitar o planejamento e a prática docente a partir das novas tecnologias, esta pesquisa-ação culminou na criação e aplicação de um produto (PLANPED), com base nas concepções de Lévy (1999), Ferreira e Duarte (2012), e Demo (2009) sobre informática educativa; Liberato e Fulgêncio (2007) e Martins (1994) sobre leitura; e Cosson (2007), quanto à literatura. Desse modo, contribuiu-se com a pesquisa qualitativa em educação, focando-se a mediação literária no ensino inicial.

Palavras chave: Leitura. Planejamento. Tecnologia. Formação.

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Introduction

In Brazil, the teaching is structured in two levels: Basic Education, subdivided in Early Childhood Education, Elementary and Middle Education (BRASIL, 2005); and Higher Education on the University, in which the professionals who work in the previous step are graduated. So, searching for a link between these levels, within the Professional Master in Teaching (PPGEN - Federal Technological University of Parana, city of Londrina), it was focused the teaching in the first years of the Elementary Education (1st to 5th grade), literacy cycle, in which operates one of the authors of this work.

Therefore, from the question of how ICT could help to make teaching in early education, this study aimed to understand some of the everyday experiences of teachers, with emphasis on resources available, accessible and more useful in schools, paying attention to planning strategies and implementation that emphasized reading, essential skill to writing practices.

Aiming to support the formal learning, regarding the demands on planning and reading mediation possibilities; and informal, providing exchange of experiences between those involved in the research, a digital program was created, PLANPED - Educational Planning, and by-products, motivating to the constant use of children's books associating with the curriculum work.

Both studies are presented in topics, with the review of the theories and the context peculiarities in which the research was carried out; followed by the description of the applied methodology, involving practical activities with students, and instrumental practices with teachers; and finally the collected data analyses.

Teaching and reading mediation

The teachers' graduation for early childhood education in Brazil, takes place preferably in Pedagogy courses at the universities, however it is allowed teachers from various areas to teach in this segment, if they have completed the

Middle Education with a specialization in teaching (BRASIL, 2005). These professionals should work as *Writing Masters* for beginners, from the systematization of knowledge, being responsible for teaching Portuguese, Mathematics, History, Geography, Science, Arts and Religious Education.

Being essential in all these school subjects, the core of this work refers to the *ability of reading*, which biologically is the relation between the verbal information (taken from oral and written) and nonverbal (world knowledge). By articulating these mechanisms, the reader creates inferences, consolidating the learning (Liberato; Fulgêncio, 2007).

Moreover, from a cultural perspective, it can be considered a mechanical decoding linguistic signs, or a comprehensive understanding of the process, in which the dynamics involves several components (Martins, 1994), corresponding to literacy on reading and writing practices in specific contexts, according to the needs, values and practices of each individual (Soares, 1998).

Therefore, in early childhood education supported by literacy, the *teacher* acts as *learning mediator*. So, working with reading, the teacher is assumed as an expression model, which *sponsors* the definitive introduction to literacy (Bajard, 2007) using fun games and strategies as a path to the childhood knowledge. Thus, literature constitutes an important teaching resource because implies the playful, which must precede the literacy and gradually go deeper in a convivial process between students and books; the school is a "space of convergence of multi-languages" (Coelho, 2000).

Therefore, in the autonomous reader formation, the exploitation of children's books can facilitate the transition between the auditory and visual edges, revealing the meaning, leading the child to benefit from this dual access to the narrative. This can provide the learner the imaginary world and contact with the most elaborate language matters, in addition to exposing the functioning of the written language, supporting the construction of a

knowledge of it and providing, informally, the first graphic code discoveries (Soares, 1998).

According to these considerations, there should be a special attention to the work with reading in the teachers' graduation, highlighting the operationalization for the use of such knowledge and skills, besides the constant updating to do it properly. That is why it is very important for the teachers to keep on studying after they graduate, to enable formal and informal learning linked to teaching.

Pedagogical planning and technology

Being an important part of the educational activities, planning is essential to the success of practices, since it is a tool and a document (Farias et al., 2011; Luckesi, 2002). However, sometimes its construction is guided by large bureaucracy. Facing this, as today's technological resources facilitate services in various sectors, it was investigated in this research, its use in planning and teaching practices of early childhood education.

These resources are called new technologies, and also known as the Information and Communication Technologies (ICT) (Kenski, 2003). The techniques generated by culture influence individuals to new practices and gradually transform knowledge, a fact that may require in the future, a new pedagogy, in which the teacher supports and encourages the intelligence (Lévy, 1999).

Considering the state of the art, concerning the educational computer science, which aims learning to learn, focusing on teachers as active users of these tools (Ferreira; Duarte, 2012), it is clear that they need to get hold of digital tools. So, offer improvement means in planning and teaching practice is configured as one of the possibilities to arouse the interest of teachers in the use of ICT, because there is still resistance and lack of technological fluency, by the same, the use of computers and internet (Demo, 2009).

Thus, during the research, the presence of ICT has been observed in some school practices, appearing as a resource in the content display or dissemination of learning. However, the circumstances led to conceive them as a means of exploitation of the teachers to enhance their actions. So, the idea of an educational product that facilitates the task of planning, motivating the use of children's books as a privileged resource, emphasizing the relationship with the playful, propitiated by literature, through contextualization themes and the blend of fantasy and reality, came from this context.

From these considerations and the diversity of concepts and subjects involved in the initial teaching, this research went through several stages, from bibliographical research to the field one, seeking to confirm the hypothesis that a digital program, which focuses on children's literature, can improve planning and teaching practice in the early childhood education.

Research steps

Aiming, in direct contact with early childhood education, facilitate teacher planning and motivate educators to constant use of children's books, with ICT as tools, the research was structured in the following steps:

Verifying the context, in April 2014 a questionnaire was applied to 20 early education teachers. At this stage, it was investigated the immediate needs in relation to an educational product that would facilitate the everyday teaching. The questionnaire had among four suggestions, the option of a simplified digital program that could store items to be chosen in the planning. This was the product appointed by the 12 participants in this initial test (60%) as the most interesting among the alternatives.

Therefore, we analyzed Lesson Plans models and official documents drivers of teaching in basic education, covering up possibilities for integration between children's literature and curriculum. Therefore, as explained in the next section, searching for alternatives to facilitate the daily teaching tasks, practices

with students were performed, which served as a *laboratory* in the construction of the product, as they contributed with later presented suggestions, in the item *Methodology*, which were integrated into the educational product.

From the fact that the teachers claimed for facilitating the lesson planning in which the reading mediation was one of the main points, the objective of the research was established. Therefore the practice with students was accomplished, having as resources the children's books from "*Acervos Complementares*" (Brasil, 2012), which were sent to public schools by the Ministry of Education, materialized in 180 copies of paradidactic type, which are intended to free reading and to pedagogical approaches.

Given these possibilities, it was emphasized the cultural background and the educational developments raised by reading. It was elected as a viable way to the methodology of the *Basic Program for Literacy Literary*, respecting the steps of: *Motivation* to read; *Introduction* of the book in a context of production and reception; *Reading* itself, with meaning in-depth exploration; and *Interpretation* sharing (Cosson, 2007).

Some components were essential in this context: the incentive to search for the meaning in unfamiliar texts; the work with graphic and alphabetic codes, with elucidation procedures, socialization, thinking and recording; and the systematization of texts production (Bajard, 2007). Thus, it was conducted four experiments with students from the 3rd grade of the first school years, between 2014 and 2015, from the following books: *Os guardados da vovó* (Ribeiro, 2009), *Rimas saborosas* (Obeid, 2009), *Rubens, o semeador* (Rocha, 2011), and *Delícias e Gostosuras* (Machado, 2011).

The table 01 compares the usual examples and activities in the mold of the proposals of the *laboratory*, as well as other ones suggested in the educational product:

Table 1 - Comparison of usual and streamlined practices

USUAL PRACTICES	STREAMLINED PRACTICES
Individual correction of the task, without the student.	Collective correction of the homework, with comments about the previous class, mutual reviews and exposition of the previous knowledge about the next themes.
Didactical Reading with concepts to memorize	*Motivation* step*:* videos, songs and images presentation about the theme, involving collective discussion and posters making, as a team or a collective activity.
Teacher transmits information searched by him/her.	*Introduction* step: games, as the *"Cadeiras do autor e do ilustrador"*, in which some studentsrepresent and the othersask aboutbiographies, based on the text that was read previously.
Texts are handed in for individual reading.	*Reading* step: children books individual exploration, and then collective, emphasizinginferences, structures, figurative language, intertextuality, etc.
Text written interpretationand notebooks archiving. Go to other subjects, unrelated to the previous topic.	*Interpretation* step: sharing interpretations, involving the students in creative activities, such as: *"Environmentalist Testament"; "Complement the ballads"; "Resolution and create minor problems"; "Illustrated Words"; "Acrostic Creation";"Advertising on reading"; "Movie poster"; "Frame";"Dramatization"; "Postcard"; "Drawings related to the theme"; "Poetic decomposition names"; "Collective and individualReading"; "Album (texts, photos orsubtitled drawings)"; "Game of words and feelings ("happy", "sad", "colored", "depressed" ...). "*
Exercises to be answered literally, considering all the presented concepts.	*Reading* e *Interpretation continuing*steps: presentation of students' papers; meaningful tasksrelated to the class theme, to be discussed in the following class; possibility of borrowing books or making students' papers available in the room to be accessedin the free time.

Source: own authorship.

Such practices pointed out that it is possible to diversify activities with reading, writing and speaking skills, combining work with content and literary mediation, in an interdisciplinary way. However, this requires a new approach to planning, providing a greater time to each activity, and dedication in the use of resources, especially children's books.

With these aspects in mind, the study led to other step where the educational product was developed in desktop format, in C # (C *Sharp*) using *SQL Server* database and generating reports in *Crystal Reports.* There are the seven items that make it up: the first one with open fields to the *Description* of the class, in which the details can be entered in a personalized way, and, from the second to the seventh element, there are buttons containing fixed content to choose from, with the possibility of inserting new items.

These fixed elements were filled in the current version of PLANPED based on the literature and field researches, defining then the Municipal

Curriculum Guidelines of Londrina [19] as a curricular basis, as this product is configured as a local initiative. Thus, for easy viewing and hence the choices of users, the *Content* and *Goals* were clumped together, resulting in a number of 1.390, mentioning the year to which they relate, subject, curriculum axis and only the goal, because it already determines the content. Therefore, it is presented below an example of how these items were listed in PLANPED:

Table 2 - Content pieces and PLANPED goals

(1st) PORTUGUESE – WRITTEN CULTURE COMPREHENSION AND APPRECIATION - Valuing the modes of production and writing movements in the society.
(1st) PORTUGUESE - WRITTEN CULTURE COMPREHENSION AND APPRECIATION - Understand the objectives, the functions and the production situation of written and spoken genres.
(1st) PORTUGUESE - WRITTEN CULTURE COMPREHENSION AND APPRECIATION - Recognize the functionality of different genres.
(1st) PORTUGUESE - WRITTEN CULTURE COMPREHENSION AND APPRECIATION - Identify the writing media.
(1st) PORTUGUESE - WRITTEN CULTURE COMPREHENSION AND APPRECIATION - Understand how to organize the written spaces in the various holders of texts; Identify the different spellings and letters; Recognize the writing direction.
(1st) PORTUGUESE - WRITTEN CULTURE COMPREHENSION AND APPRECIATION - Valuing and caring for the different writing and reading media.

Source: Londrina (2015, p. 1).

Also based on the bibliographical research and in the *Laboratory* (students practice), in the other items were listed some suggestions regarding the essential elements in the Lesson Plan (Farias et. al., 2011): *Methodology* (89 entries); *Assessment* (19 options); *Additional books* (180 children's titles and their reviews); *Other resources* (48 suggestions); and *References* (199 titles, including theoretical ones and children's books).

These fields allow the user to fill in his/her Lesson Plan, as shown in the following image:

Figure 1 - PLANPED screen with filled fields
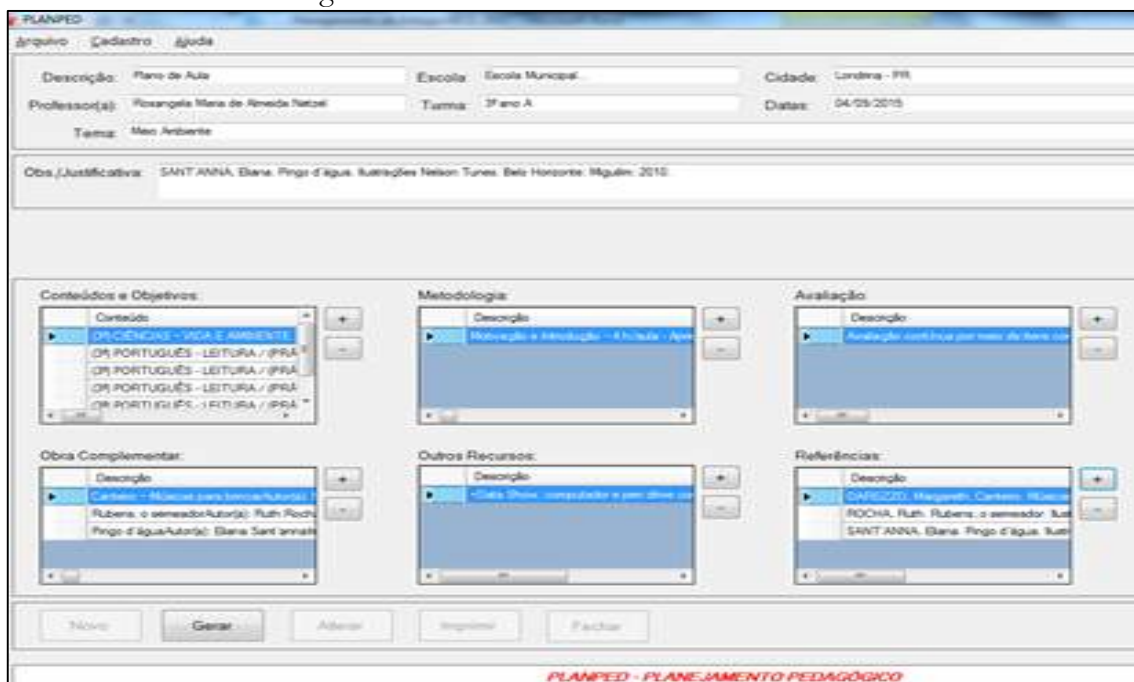
Source: own authorship.

At the end of the process, the planning is generated, as in the example below. It is necessary, after that, save the Lesson Plan in doc format, so it can be accessed and modified at the user's will.

Figure 2 - Lesson Plan generated in PLANPED
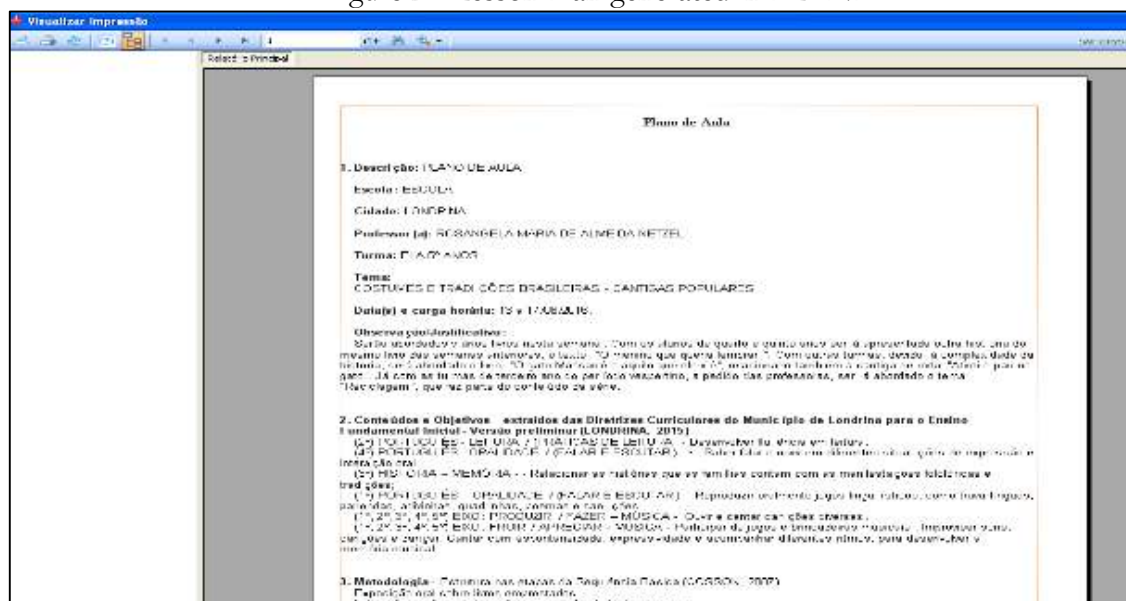
Source: own authorship.

Considering these instructions on using PLANPED, and the activities suggested in the product, as an incentive to participate, it was decided that the application of the product would be configured as a course for teachers.

Thus,the reseachers of this study asked support for the UTFPR Extension Department of Londrina, which offered a 24-hour certification between classroom and distancelearning activities. This type of course was due to the fact that the lack of time could be a stumbling block to the frequency of participants in the meetings if the course was fully face-to-face.

It should be noted that in the course planning stage, it was decided to create a website from online tools, to provide the materials to the participants. Through it, which is under the domain *www.planped.com* (NETZEL; OLIVEIRA, 2016), it is possible to download the PLANPED program by requesting it through electronic addresses, or through the link: <https://www.dropbox.com/sh/63uvcv70w8kckpt/AAAOYirqEbsFQNZ WqvAhPBJGa?dl=0>.

However, during the course held in 2015, the twelve participants counted with the aid of one of the researchers in the program handling, detailing the possibilities. Most of them showed enthusiasm with the completion of the Lesson Plan easiness, especially for having the reviews of the children's books which belong to *"Acervos Complementares"*, and with the possibility of "filtering" options by typing words or phrases related to the themes that they intended to work with. It was also provided a "manual" on the website, in PLANPED Program tab, describing such information.

In the data presentation, it was chosen to number the volunteers with the letter P, as in participant, followed by a randomly assigned number. So, the teachers are referred from P1 to P14, considering two who have given up during the course. Therefore, the data that support the closing of this research are portrayed in the next section.

Data analysis and discussion

Regarding the problem of how ICT can collaborate with the everydayteaching, the initial investigation revealed that the hypothesis of a digital program facilitating planning and practice and motivating the children's book approach was valid. Thus, after methodological experiences with students, it was produced two *Training Books*(also available on the website), divided into four modules, containing theoretical texts on teachers' planning and mediation and reading, as well as exercises and open questions to be handed in weekly.

Based on these activities and on the applied questionnaires, the reception of the product was investigated, assigning scores from 0 to 10 to the items related to PLANPED: a) agility in planning; b) easy access; c) elements and fixed items; d) flexibility in *Justification*; e) possibility of registering new items; f) use in daily life; g)generated*Lesson Plan*; h) motivation to use books.

Grafic 1 - Product PLANPED objective evaluation
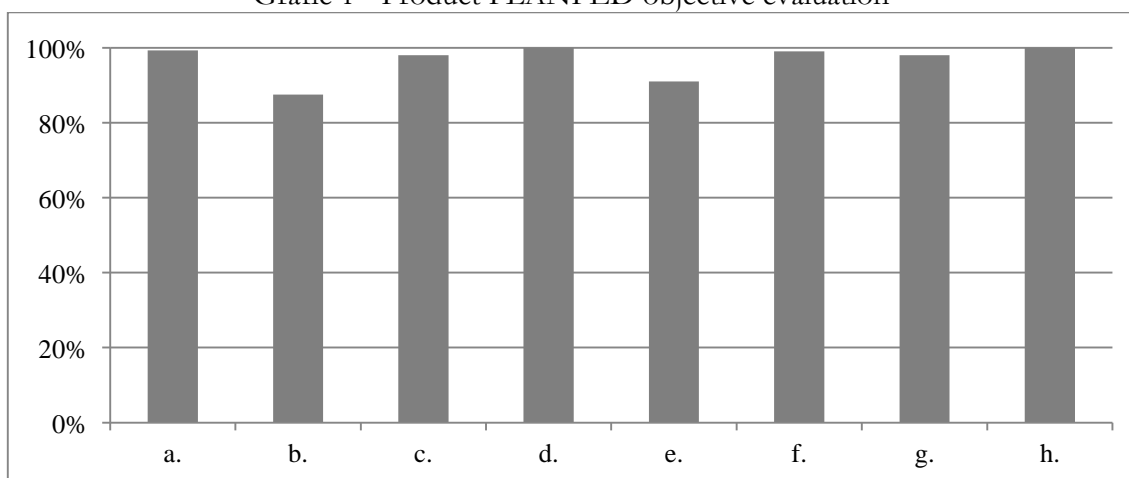
Source: own authorship.

In general, the notes made by the participant teachers were positive, showing that, 97 to 100% proved to be fully satisfied with: the speed of the program; the presentation of fixed elements, such as *Content* and *Goals*adapted from the city's proposal and suggestions on other items; the flexibility in filling the *Justification* in the *Lesson Plans*, only optional element of the product; the

applicability or software usability in everyday teaching; the layout of the generated planning; the motivation to the use of children's books from the reviews outlined in the program. However, there are exceptions, mainly regarding access to the program (only 87% satisfaction) and the registration of new items (91% approval). Perhaps such observations occurred because, at the time of the course, the program was not available online and even today, in possession of the folder that contains it, it is necessary to configure it in several steps, aspects to be improved in the future. Thus, during the course, there was not much time for the participants to explore the PLANPED autonomously.

It is important to emphasize that, as one of the main advantages of the product, the registration of new items in all fields enables users to use it for different purposes and in different segments of the Basic Education, Higher Education or other forms of formal or informaleducation. However, this flexibility was not unanimously approved. This is a fact to be studied in future developments of this research.

In view of these efforts to the effectiveness of the product, the participants also conducted self-assessments about their participation in the course, considering the items: a) dedication to the weekly activities; b) punctuality in hand in the activities; c) use of new technologies in carrying out activities; d) sharing ideas and Lesson Plans produced during the course; e) use of the Educational Planning website- PLANPED; f) interest in the educational product PLANPED. Thus, the data shown in the chart below were presented:

Grafic 2 - Score to the items of self-evaluation
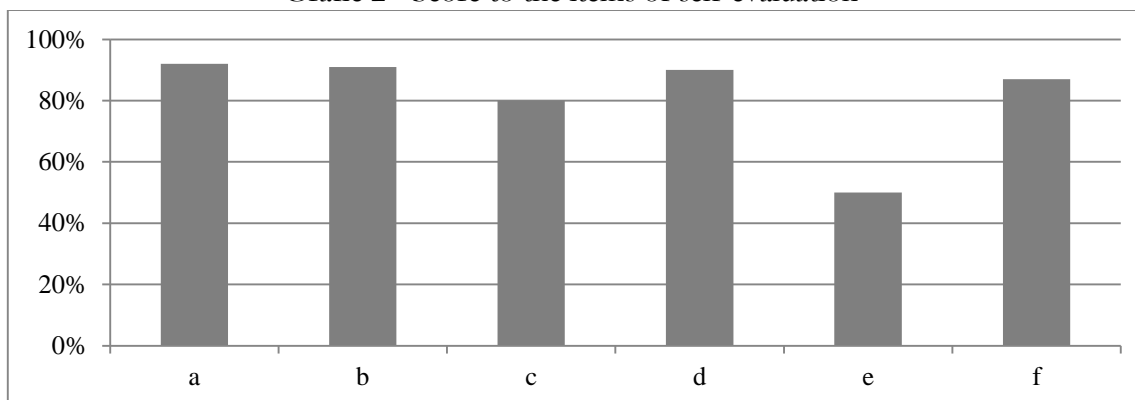
Source: own authorship.

It can be observed that although there is no unanimity, the participants showed optimism about the dedication to the course, the ponctuality, the action of sharing ideas and plans, and considered themselves willing to know the product. However, the data on the use of new technologies in carrying out activities (80%), and access to the website (50%) revealed difficulty, resistance or lack of interest in the use of ICT. Because of this evidence, and also because of the suggestion of one of the participants, a permanent forum on the website was set up after the course to exchange ideas on various subjects, which made this tool also a contact space between the participants, in an attempt to motivate the use of technological resources.

It is important to note that at the end of the course, one participant described as P3, revealed in his/her testimony a major evolution in the use of ICT in developing his/her lessons, making thematic relations. Similarly, the participant showed his/her satisfaction with the product and the course, which has helped him/her in digital practices and led to the inclusion of children's books in the planning.

However, the interestin using these technological resources is not unanimous, even among the participants, as evidenced. Thus, recently it was inserted a tab on the website, where news related to the research objectivesare posted, continuing the facilitation initiatives of teachers' planning and the motivation for reading mediation through ICT.

Figure 5 - Website page

Source: *www.planped.com*

Final considerations

The route of this study, which started from the direct action of one of the researchers in the early childhood education, considered the participation of other teachers, proceeding to thecontextinestigation. Thus, it was found that building plans that combine curriculum and reading mediation was a challenge in the segment. Therefore, the studies have been developed from the relationship between bibliographical researches and practical operations.

So, it was built, based on the practiceswith the students, the educational product PLANPED, digital program in which it is possible to select items for planning, combining reading mediation and several strategies on working with contents.

Thus, as a means of dissemination and implementation, a semi-distance coursewas offered to the teachers. Through the course, it was possible for the twelve participants reach the project ideas, who, at the end of the course, said to be the PLANPED an alternative to facilitate everyday pedagogical tasks.

Anyway, it was found that ICT can assist the planning and practice in early childhood education, having in PLANPED and in the by-products developed during the research (Lesson Plans models, semi-distance course, Training Books, Website PLANPED), supporting the formal and informal

learning, enhancing the theoretical study and motivating the work with children's books, concurrently with the curriculum work.

The results of this research demonstrate that continuing education can be effective when guided by theoretical instrumentalization of teachers and the exchange of practical experiences, giving space to their voices, their longings. However, as also evidenced in the research, there is some resistance to the use of ICT tools. So, currently, as part of a new action plan, it is intended to arouse such interest through the website, updating it constantly, searching new interaction ways, having in this by-product, as well as in PLANPED, the possibility of increasing teachers' horizons and, consequently, the students', as it also seeks to encourage the use of children's books as a resource to improve the reading practice.

Therefore, *the contribution of ICT for planning and teaching practice* constitutes insupportingthe continuous learning and interaction, spreading formal and informal knowledge. It is evident the scientific value of this research for theeducational computing area, advancing in discussions related to teaching, where the teacher is considered a mediator, and the ICT didacticteaching tools.

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