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ARTICLE

INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE PUBLIC SCHOOLS OF PARANÁ: EVALUATION OF AN EDUCATIONAL POLICY IN ACTION

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ABSTRACT: This paper presents the partial results of an evaluative research about the education policy of Paraná, Brazil, focused on promoting the use of Information and Communication Technologies (ICT) in the state public schools that have joined the project CONECTADOS, coordinated by the Policy Department and Educational Technologies of the State Secretariat of Education of Paraná (SEED-PR), in 2016. The instruments of data collection were: a) online questionnaire for school managers; b) semi-structured interview with the project coordinators at the State level. The dimensions assessed were: the ICT infrastructure in the school; participation of the management team, teachers and students; integration of ICT in pedagogical practices and the results achieved. The analysis of the empirical data based on Ball, Maguire and Braun's (2012) polity theory in action makes it possible to infer that the schools involved started a process of integration of ICT in pedagogical practices that could support the construction of digital culture in school contexts.
Keywords: Evaluation of educational policies. Educational Technologies. Theory of polity in action. ICT in school.

TECNOLOGIAS DE INFORMAÇÃO E COMUNICAÇÃO NAS ESCOLAS PÚBLICAS PARANAENSES: AVALIAÇÃO DE UMA POLÍTICA EDUCACIONAL EM AÇÃO

RESUMO: Este artigo apresenta os resultados parciais de uma pesquisa avaliativa sobre a política educacional paranaense focada na promoção do uso das Tecnologias da informação e comunicação (TIC) nas escolas públicas estaduais que aderiram ao projeto CONECTADOS, coordenado pela Diretoria de Políticas e Tecnologias Educacionais da SEED/PR, em 2016. Os instrumentos de coleta de dados foram: a) questionário *online*, para gestores

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escolares; b) entrevista semiestruturada com coordenadores do projeto em âmbito estadual. As dimensões avaliadas foram: a infraestrutura das TIC na escola; a participação da equipe gestora, dos professores e alunos; a integração das TIC nas práticas pedagógicas e os resultados alcançados. A análise dos dados empíricos fundamentada na teoria da política em ação de Ball, Maguire e Braun (2012) possibilita inferir que as escolas envolvidas iniciaram um processo de integração das TIC nas práticas pedagógicas que poderá dar suporte para a construção da cultura digital nos contextos escolares.
Palavras-chave: Avaliação de políticas educacionais. Tecnologias educacionais. Teoria da política em ação. TIC na escola.

INTRODUCTION

Every education policy concerns the decisions that the State makes in relation to education. Thus, programs are not proposed in an isolated way; in general, they compose a set of actions of a certain policy and, therefore, they are characterized by their connection and institutionalization in the administration of the State. In this context, the analysis of an education policy, where there may be several programs and projects, involves examining its intentionality, which may be clear or obscure, as well as its scope in the educational context. In this way, it is possible to develop a study in order to analyze the policy (in a broader way) or certain programs or projects that integrate it.

Projects linked to particular programs of an education policy have less formal and temporary structures, they are more flexible. A program consists of a variety of actions, which have a continuous character. Projects, in turn, have a more limited time horizon than the program (Fernandes, 2011). A program can contain a number of projects through which it is sought to achieve the goals set out in it. For the analysis of a program, it is necessary to consider the set of projects that compose it. However, one can opt for the analysis of a project among those that integrate a certain program and/or education policy.

The critical analysis of the trajectory of education policies, their programs and their projects, can use different analytical references. Mainardes (2018, p. 189) considers that "the object of study of education policy is the analysis of education policies formulated by the State apparatus at its different levels and spheres (federal, state, municipal)". The author explains that there are three levels of analysis

of interrelated education policies: the first is the research on the formulation, implementation, evaluation of policies and programs, results and consequences; the second level includes the identification of more general mechanisms that determine the configuration of education policies; and the third level refers to the identification of broader policy agendas, that is, the more general structures and constraints of education policies. The third level may contain the second, which may contain the first (MAINARDES, 2018).

In this sense, this paper presents part of the results of an evaluative research that is inserted into the first level of analysis of education policies, since it refers to the evaluation of the *CONECTADOS* Project developed in public schools of the state of Paraná, Brazil, in the period 2015-2016. In addition to this introduction and the final considerations, the text is organized in three parts: the first deals with the proposed policy for the insertion of Information and Communication Technologies (ICT) in public schools in Paraná via the *CONECTADOS* Project; the second discusses the assumptions of policy theory in action or policy enactment and the policy cycle for analysis and evaluation of education policies, programs and projects; in the third, the policy enactment is analyzed based on the empirical data collected.

POLICY FOR THE INSERTION OF ICT IN PARANÁ STATE PUBLIC SCHOOLS THROUGH *CONECTADOS* PROJECT

Social relations, today, are built with the use of various technological artifacts, among them notebooks and netbooks, tablets, cell phones, allied to the flexibility of access to internet, wireless use and cloud computing. Due to this broadening of the conditions and possibilities of use of different media in the virtual space, cyberspace,[1] digital culture is increasingly accentuated in society. According to Kenski (2013, p. 62), "contemporary culture is linked to the idea of interactivity, interconnection and the interrelationship among people, and among these and the most diverse virtual spaces of production and availability of information".

The incorporation in different social sectors of diverse perspectives on the impact of the digital technologies and of the network in the society gave rise to the creation of public policies for the digital and for the emergence of the term "digital culture" (CARVALHO JUNIOR, 2009). The complexity of conceptualizing digital culture is discussed by Iannone, Almeida and Valente (2016, p. 57), when they show that "it is not the technology that determines

or contributes to the evolution of digital culture, but the fact that it should be recognized through the recent technological development and other kinds of knowledge that have been built in the last decades".

Digital culture, like any other type of culture, is a human construction, the result of technological and social changes. Portability is one of the important aspects in the digital culture with the new technologies, making the devices more sophisticated, by adding different and diverse functionalities that allow to connect, to communicate, to edit texts and images, in any time and place, and, among them, the school context.

In the face of these technological advances, there is a strong movement towards the dissemination of digital culture in society today and, consequently, in education, making it reflect on pedagogical practices and the quality of the teaching and learning process carried out in schools. In this sense:

> Digital culture may be understood as full immersion in networks, and as such, it requires rethinking the school, in order to generate culture not only with technologies but above all with discoveries and experiences of production and socialization. That is, through the active immersion of the participants in the various spaces of the technological networks that are present in our daily life. (PISCHETOLA, 2016, p. 51).

However, technologies alone are not a guarantee of a democratic education, but rather one of the possibilities of participation of the digital world and of social communication networks, necessary conditions for the education and life of every citizen.

Although the insertion and democratization of education technologies are becoming an object of education policies, programs and projects, the analysis of the effects and impacts of the pedagogical use of technologies in schools has shown that the use of ICT in many cases is limited to specific activities, without an effective curricular integration. However,

> the school that participates in digital culture and dialogues with it assumes a central role in the education of students with autonomy to make decisions, to argue in defense of their ideas, to work in groups, to act in an active and questioning manner in the face of events, difficulties and challenges, and participate in the social transformation movement. In this school, the potential of ICT is incorporated into its practices through the exploration of mobility, connection and multimodality, to allow the authorship of the student, who seeks information from different sources; establishes new relationships between information, systematized knowledge and those that emerge from the connections in the networks or are generated in life experiences; (reconstructs) knowledge represented through multiple languages and non-linear structures; interacts and works in collaboration

> with peers and specialists located in different places. (Iannone et al., 2016, p. 62).

From the perspective defended by the authors, the *CONECTADOS*[2] project was conceived in 2015 for the public schools of Paraná state, by the Education Policy and Technology Department (*Diretoria de Políticas e Tecnologias Educacionais* - DPTE) of the State Secretariat of Education of Paraná (*Secretaria de Estado da Educação do Paraná* - SEED-PR), aiming at meeting the Plan of Goals of the State of Paraná Government (2015-2018), action 6 of the My School Has Action Program (*Minha Escola Tem Ação* - META)[3] and the Guidelines for a National Policy for Innovation and Educational Technology 2017-2021.[4]

The purpose of the META Program is to strengthen school management aimed at improving the quality of basic education in Paraná state and reducing dropout and disapproval rates, approval by class council and age/year distortion in schools. The *CONECTADOS* project, inserted into it, was implemented and developed in 2016 in seventy schools in the State of Paraná, aiming at the maintenance of technological resources in order to increase access to ICT in different environments of the school space, in addition to the laboratories of computing, considering the development of computer systems and the training of professionals for the pedagogical use of digital resources. Thus, one of the central axes of the *CONECTADOS* project is the promotion of the use of Information and Communication Technologies in public schools in Paraná state due to the importance and necessity of including the school and the entire school community - managers, teachers, students, parents - in the society's digital culture.

The central objective of the project was to stimulate the diversification of pedagogical practices in schools, with the distribution of educational tablets, expanding access to technological resources for schools, teachers and students, and contributing to the improvement of the teaching and learning process, organization and management of the school. Related to the defined objective, in addition to meeting action 6 of the META Program, the *CONECTADOS* project is also aligned to the other defined actions, as can be seen in the specific objectives outlined:

> - offer to education professionals involved in this process, acting in the indicated schools, training for administration and use of distributed equipment;
>
> - foster access to digital learning objects by consolidating the use of SEED-PR's digital content repository;
>
> - stimulate the use of available applications (online and offline) through

> differentiated methodological proposals;
>
> - encourage the practice of producing educational objects through access to the tools and applications available on the Internet;
>
> - promote the exchange of practices and different teaching approaches with the use of educational tablets among teachers;
>
> - evaluate the effects of the use of educational tablets in pedagogical practice and school organization. (PARANÁ, 2015, p. 4).

In order to achieve these objectives, five actions were carried out: a) the adhesion of the Regional Education Centers (*Núcleos Regionais de Educação* - NRE) and the selection/adhesion of the schools; b) distribution of equipment kits in schools; c) installation of an intranet/internet access network (wired or wireless) in schools and technical support; d) provision of continuous training for the use of technologies; e) research, monitoring and evaluation of the actions developed during the project (PARANÁ, 2015, p. 5).

The development of the project began with the invitation of the DPTE, from SEED-PR, to all NRE of Paraná state, which had the option to join the project or not. Of the 32 NREs that compose the State Education Network, only four did not join the project. The NREs indicated the schools that met the criteria[5] defined in the project, totaling a set of 70 participating state schools. The school that joined the project received an equipment kit containing 60 tablets, four routers, memory cards and an external HD, a commitment by SEED-PR to install an intranet/internet access network (wired or wireless) in schools along with technical support.

In addition to equipment and technical support, continued training was provided for the use of technologies for NRE technicians-pedagogues, managers and teachers participating in schools, addressing the offline tools present in the tablet, applications and compatible digital educational resources with the devices and routing of work proposals to use the tablet with the students. At the beginning of the *CONECTADOS* Project, SEED-PR partnered with Google and used Google Classroom. Teachers and students who were part of the Project received a special email and, along with the email, the application. In the continuous training of the pedagogical technicians, the pedagogical teams of the schools and in the study groups, the resources of the application were presented, as well as the possibilities of using the tools available in the classroom. The pedagogical technicians were responsible for passing on the content studied to the teachers of the participating schools in meetings of continuing

education, in order to contribute to the accomplishment of different pedagogical practices using the technologies in the classrooms.

The actions developed during the realization of the project were monitored and evaluated by the DPTE and the pedagogical technicians, through different procedures: fortnightly visits to participating schools, records of visits and successful practices, online questionnaires and interviews with participants and socialization of the results at events and publications.

POLICY IN ACTION THEORY OR POLICY ENACTMENT: ASSUMPTIONS FOR ANALYSIS AND EVALUATION OF POLICIES, PROGRAMS AND EDUCATIONAL PROJECTS

The analytical framework chosen for the evaluation of the *CONECTADOS* Project was the policy cycle approach, formulated by Stephen Ball and Richard Bowe (1992), and Ball, Maguire and Braun's (2012) policy enactment theory. Ball and Bowe proposed the policy life cycle in the book 'Reforming education and changing schools', published in 1992, considering five contexts:[6] the context of influence, the context of text production, the context of practice, the context of outcomes/effects and the context of political strategy.

In Ball and Bowe's (1992) proposition, the context of influence is where policies are thought, discussed, initiated, and political discourses are constructed from global/international, national/local influences and articulation between them. This is where diverse interest groups come into play to influence the definition of the political and social aims of the policy to be created. The analysis and evaluation of this policy context can be carried out through bibliographic research, with varied procedures for data collection, such as: document analysis, interviews with formulators and professionals involved, focus groups.

The context of influence has a symbiotic relationship, but not simple or evident, with the second context, called the context of text production, which refers to the political texts produced, both official and other originating from other printed or digital sources, such as news, pronouncements, videos, laws, among others. While the context of influence is usually related to narrower interests and dogmatic ideologies, policy texts are usually articulated to the language of the public of interest.

Policy texts represent the policy, although they are not always coherent and clear, and sometimes even contradictory. In this sense,

policies are textual interventions and carry material and structural limitations. The evaluation, in this context, can be done through analysis of texts and documents, interviews with authors of policy texts, interviews with those involved, among other procedures (MAINARDES, 2006).

Responses to policy texts have real consequences that are experienced in the context of practice. According to Ball and Bowe (1992), the context of practice is where the policy is subject to interpretation and re-creation, and produces effects and consequences that may represent significant changes and transformations in the original policy. To the authors, the key point is that policies are not simply "implemented" within this arena (context of practice), but are subject to interpretation and then "re-created". Practitioners working in the context of practice do not confront policy texts as naive readers, but they see it with their experiences, their values and purposes, because

> policies do not usually tell us what to do, they create circumstances in which the range of available options on what to do is reduced or modified or in which particular goals or effects are established. An answer still needs to be built in the context, counterbalanced or balanced by other expectations. All of this involves some kind of creative social action. (BALL, 2006, p. 17).

Interpretation and re-creation of policy in the context of practice therefore produce effects and consequences that can lead to significant changes and transformations in the original policy. The analysis and evaluation of the policy in the context of the practice presupposes the collection of data in the institutional spaces in which the policy is developed through interviews, observations, document analysis, focus groups, and others (MAINARDES, 2006).

Public policies, however, rather than outcomes, produce effects and impacts, which is the fourth context of the policy cycle, the context of outcomes/effects. Issues of justice, equality and individual freedom generated by policies should be analyzed by considering the impact and interactions with existing inequalities. Policy analysis and evaluation, in this context, involves the analysis of documents as well as qualitative and quantitative data collected through interviews, focus groups, discussion groups, among others.

In the policy cycle approach, the effects produced by the policies can be of two natures: a) first order effects, related to the changes in the practice or structure of policy enactment; b) second order effects, related to the impact of these changes on issues of social access, opportunity and social justice. For this reason, Stephen Ball, in an interview with Mainardes and Marcondes (2009), states

that the outcomes and effects of a policy are, in general, an extension of practice. Ball explains that:

> First order results derive from attempts to change the actions or behavior of teachers or practitioners who enact in practice. Second order results also occur, or at least some of them occur, within the context of practice, particularly those related to performance, to other forms of learning. Obviously, other results can only be observed in the long run and disappear within other contexts of achievement. (MAINARDES & MARCONDES, 2009, p. 306).

The fifth context, that of the policy strategy, "involves the identification of a set of social and political activities that would be necessary to deal with the inequalities created or reproduced by the policy under investigation" (MAINARDES, 2006, p. 55). In this context, according to Ball (MAINARDES & MARCONDES, 2009, p. 306), "thinking about policies and the discourse of policies can be changed by policy enactment. Thus they can be subsumed and integrated into the context of influence".

In the discussion about the policy cycle approach, it is clear that, in order to analyze and evaluate education policies based on this analytical framework, the contexts that integrate them must be considered as having no temporal or sequential dimension, and do not consist of linear or vertical stages, but are integrated and interrelated. Such theoretical perspective allows the understanding of the political process as dialectic and multifaceted, starting from the articulation of the perspectives of the macro (State) and the micro (institutional) sociological contexts (MAINARDES, 2006). Ball also complements:

> Contexts can be thought differently and can be "nested" within each other. Thus, within the context of practice, you could have a context of influence and a context of text production, such that the context of influence within the context of practice would be in relation to the privileged version of the policies or the privileged version of the enactment. Thus, disputes or competing versions may exist within the context of practice, in different interpretations of interpretations. And yet, there may be a context of text production within the context of practice, to the extent that practical materials are produced for use within the enactment. Thus, there may be spaces within spaces. (MAINARDES & MARCONDES, 2009, p. 306).

Recently, Ball *et al.* (2012), further advancing in the studies of the policy cycle, proposed the theory of policy enactment, published in 'How schools do policy: policy enactments secondary schools',[7] in England in 2012.[8] The term policy enactment can be understood as how policies are put into action in a given context. The policy enactment theory "rejects the notion that policies are implemented.

They are subject to processes of translation and interpretation in the context of practice" (Footnote as cited in BALL *et al.*, 2016, p. 12).

From the perspective advocated by the authors, policies are translated, interpreted and materialized in several ways by the subjects involved in them. The interpretation consists of an initial reading of the policy with the aim of approaching its meaning, questioning what the meaning of the policy text has for those involved and how to put it into action. Interpretation is an institutional political process, it is a link to the languages of the policy, while the translation is closer to the language of practice.

The translation consists of an interactive process of creating institutional texts and putting these texts into action and, for this, one can use tactics that include conducting lectures, meetings, plans, events, as well as producing artifacts and borrowing ideas and practices from other contexts, acquiring materials, consulting official websites and receiving support from members of local authorities. "Interpretation is about strategy and translation is about tactics but they are also at times closely interwoven and overlapping. They work together to enroll or hail subjects and inscribe discourse into practices" (BALL *et al.*, 2012, p. 47).

According to the authors, the elaboration of policies for/in schools is understood as "a complex set of processes of interpretation and translation, which are contextually mediated and institutionally rendered" (BALL *et al.,* 2012, p. 142). In this perspective, it is relevant to bring Ball's thought back to an interview with Mainardes and Marcondes (2009), when he stated:

> I completely reject the idea that policies are implemented. I do not believe that policies are implemented, as this suggests a linear process by which they move toward practice in a direct way. This is a careless and thoughtless use of the verb. The process of translating policies into practice is extremely complex; it is an alternation between modalities. The primary modality is textual because policies are written, while practice is enacted, includes doing things. Thus, the person who implements the policies has to convert/transform these two modalities, between the modality of the written word and that of enactment, and this is something difficult and challenging to do. And what this involves is a process of action, the implementation of policy in practice and through practice. (MAINARDES & MARCONDES, 2009, p. 305).

The authors argue that putting policies into practice is a complex, non-linear, sophisticated, and creative process because they come into play under differentiated material conditions, with varying resources, in relation to specific tasks, that is, the policy enactment theory attributes a key role to the context. The material, structural and relational dimensions need to be incorporated into policy analysis so that policy enactment

can be better understood at institutional level. Such conditions are called contextual dimensions of policy enactment. These are:

> - situated contexts (e.g. locale, school histories and intakes)
>
> - professional cultures (e.g. values, teacher commitments and experiences, and 'policy management' in schools)
>
> - material contexts (e.g. staffing, budget, buildings, technology and infrastructure)
>
> - external contexts (e.g. degree and quality of LA [local authority] support; pressures and expectations from broader policy context, such as Ofsted ratings, league table positions, legal requirements and responsibilities). (BALL et al., 2012, p. 21).

The relevance of the definition of contextual dimensions, according to the authors, consists first and foremost in the fact that policies are enacted in environments such as schools, which differ greatly in human, material and financial resources, infrastructure, in the history of institutions, in the socioeconomic profile of students, among other aspects. Secondly, that the school is generally conceived as a homogeneous organization without proper recognition of the different cultures, histories, traditions, values and commitments that coexist in it. Finally, the authors explain that the external pressures on the performance of the school, to meet certain goals, is always decisive in the actions that it performs.

A policy, a program, or an educational project undergoes innumerable influences in the contexts where they are enacted, that is, the context is unique for each school, for each institution, it is an enactment force and not just a backdrop in which it operates. "Context initiates and activates policy processes and choices which are continuously constructed and developed, both from within and without, in relation to policy imperatives and expectations" (BALL *et al.,* 2012, p. 24). Therefore, the context is a mediating factor in the work of policy enactment carried out in schools.

Considering the brief dialogue established with the authors about the policy cycle approach, the theory of policy enactment and the contextual dimensions, it is possible to point out the importance of research focused on the analysis of education policies, when put into action in varied contexts, that is, on how they are recontextualized, interpreted and translated, in the formative spaces and in the school institutions. The evaluation research carried out on the *CONECTADOS* project, developed in public schools in Paraná state, was based on such theoretical assumptions, "considering that to investigate the school in digital culture means to consider it as a fundamental unit of action and teacher and student education, as well

as of parents and guardians, of the school community as a whole" (IANNONE *et al.,* 2016, p. 64).

The reference units defined for conducting the research were: the school, school managers (principal and pedagogical team) and public managers, whose dimensions surveyed are specified in Table 1.

TABLE 1. Universe of research, units of analysis and investigation dimensions proposed in the *Conectados* Project Research

Universe of research	Unit of analysis	Investigation dimensions
Public schools in Paraná state, participants of the *CONECTADOS* Project - 2016 (70 schools)	Schools	1. School infrastructure 2. ICT infrastructure in schools
	School managers: principals and pedagogical teams	3. Teacher education and pedagogical team 4. Participation of those involved in the project: 4.1 Participation of the pedagogical team. 4.2 Participation of teachers. 4.3 Participation of students.
		5. Development of digital media integration skills in pedagogical practices, lesson plans and work projects. 6. Identification of the use of ICT media used in pedagogical practices.
	SEED/PR managers who designed and coordinated the CONECTADOS Project	7. Challenges and perspectives of the digital culture policy for the public schools of Paraná state, through the *CONECTADOS* Project.

Source: Research data.

CONECTADOS IN THE CONTEXT OF THE PARANÁ STATE PUBLIC SCHOOLS: POLICY ENACTMENT OF COORDINATORS AND SCHOOL MANAGERS

In this section, it is analyzed how the subjects that participated

in the *CONECTADOS* project enacted this policy, in a process of interpretation and translation (Ball et al., 2012), based on the evaluation of its formulators/coordinators, members of the DPTE (SEED-PR) and the schools that joined the project, represented by the principals and their pedagogical teams.

The procedures for data collection were: a) analysis of the *CONECTADOS* project documents; b) semi-structured interviews with the project coordinators; c) online questionnaire elaborated in Google Docs, containing open and closed questions, forwarded to the 70 schools participating in the project.

The empirical data collected from the management teams were extracted from the 59 online questionnaires answered by the schools. Each school received a code with the letter "E" (Escola - School), followed by a numbering, with schools being identified as E1, E2, E3, ..., E59. Similarly, the project coordinators, from the DPTE, are identified by C1, C2, C3, C4.

Considering the dimensions of the research (Table 1), the project evaluation indicators were elaborated on: the adhesion of NREs and schools to the project; the participation of the pedagogical team in the continuous education and development of the project; the participation of school teachers in continuing education and in the study group; planning of activities by teachers; the use of tablets in classrooms; the outcomes/effects of the use of the tablets in the pedagogical practices of the teachers, regarding the learning of the students and in the organization of the school.

The analysis of the data collected was carried out in a qualitative/quantitative perspective, and the statements of the coordinators during interviews as well as the management's team of the schools during open questions of the questionnaire were organized according to Lefèvre and Lefèvre's (2005a, 2005b) methodology of the Discourse of the Collective Subject (DCS).[9]

The option for the DCS methodology was considered adequate, since it makes the observation of the collective thinking about a certain topic through the meeting of the individual thought present in the statements of the respondents possible, which, in this study, was the evaluation of the *CONECTADOS* project.

> In methodological terms, collective thinking is more validly present in the individual than in the group, since the collective thinking is the presence, internalized in the thinking of each of the members of the collective, of sociocognitive schemes or socially shared thinking. In order to obtain collective thinking, it is necessary to summon individuals, one by one, the universe or another representative sample of a collective, so that each individual can expose his/her internalized social

> thinking, free from the group's psychosocial expression, and that the set of these individual opinions can represent, sociologically and statistically, a collectivity. (LEFÈVRE & LEFÈVRE, 2005b, p. 20).

The authors explain that the collective subject expresses him/herself through a social thinking, that is, of a collective "I" that, at the same time, signals the presence of an individual subject. In this way, "the DCS is a methodological strategy that, using a discursive strategy, aims to make clear a given social representation, as well as the set of representations that make up an imaginary datum" (LEFÈVRE & LEFÈVRE, 2005a, p. 19).

> For the elaboration of the DCS one starts from the discourses in a crude state that are submitted to an initial analytical work of decomposition that basically consists in the selection of the main anchorages and/or central ideas present in each of the individual discourses and in all of them reunited, and ending in a synthetic form, where the discursive reconstitution of social representation is sought. (LEFÈVRE & LEFÈVRE, 2005a, p. 20).

The DCS methodology is formed by the methodological figures: key expressions, central ideas and discourses of the collective subject. The key expressions are transcriptions that reveal the essence of the respondents' statements, that is, it shows the content of certain sections in a descriptive way, being the raw material of collective thinking. The central idea is the description of the meaning of a statement or a set of statements.

The DCS is constituted by the key expressions contained in the statements, which have similar or complementary central ideas (LEFÈVRE & LEFÈVRE, 2005a, p. 20). Thus, a DCS is a synthesis discourse written in the first-person singular formed by the key expressions of the same central idea. After the data collection, the DCS can be prepared manually or with the use of the Qualiquantisoft software,[10] considering the following procedures:

- literal transcription of the subjects' answers, participants of the research;
- reading each response to identify key expressions;
- selection of the key expressions present in each response;
- identification of central ideas of key expressions;
- gathering the key expressions of each of the central ideas;
- elaboration of the DCS from the key expressions contained in the central ideas, chaining them narratively so as to present a clear and cohesive structure in order to express the collective thinking of the research subjects.

In the following example, it is possible to observe the data organization and analysis process, according to the DCS methodology. After reading the transcribed empirical corpus, the key expressions contained in each of them were extracted, which revealed the essence of individual research subjects' thinking about the continuing education processes developed in the project. In Table 2, a fragment of this methodological process is presented.

TABLE 2. Key expressions extracted from the managers' responses to the research questionnaire

Subjects	Key Expressions (extracted from responses)
E8	*The search of teachers' knowledge to use new tools was also important; the availability and readiness of the teacher-tutor in always clarifying doubts.*
E11	*The training time was very valuable, resulting in the exchange of experiences and interdisciplinary planning.*
E17	*Teachers received more information on computer science, they felt more prepared to work with new technologies and methodologies with students, implementing their classes and making them more attractive.*
E33	*Finally, the exchange of experiences and interests of the teachers, who, even when overloaded, remained in the course until the end of the training.*
E41	*The presence and accompaniment of the NRE employee was important, in order to provide the necessary support for the Project to take place.*

Source: Research data.

The key expressions grouped in Table 2, according to similarity and complementarity of meanings, make up the central idea: importance of the training process for the teachers of the schools participating in the *CONECTADOS* Project. Considering that, in the DCS methodology, the meeting of key expressions contains the essence of the individual statements, when they are organized, they form a discursive whole, called the Discourse of the Collective Subject, which can be presented as follows:

> **DCS: Importance of the training process for the teachers of the schools participating in the CONECTADOS Project:**
>
> *The time for training was very valuable, leading to the exchange of experiences and interdisciplinary planning (E11). Teachers received more information on computer science, they felt more prepared to work with new technologies and methodologies with students, thus implementing their classes and making them more attractive (E17). The search of*

teachers' knowledge to use new tools was also important; the availability and readiness of the teacher-tutor to always resolve doubts (E8), and the presence and accompaniment of the NRE staff to provide the necessary support for the Project to take place (E41) and, finally, the exchange of experiences and interests of the teachers, who, even though they were overworked, remained in the course until the end of the training (E33).

This DCS is formed by the key expressions of five research participants, identified in this example by E8, E11, E17, E33, E41. As the methodological proposal of the DCS emphasizes collective thinking, the identification of the subject in the DCS body can or cannot be inserted, an option that belongs to the researcher. In this paper, we have chosen to use them in all Discourses of the Collective Subject.[11]

The organization, presentation and discussion of the results of the research are shown below, in five axes of analysis: I) adhesion of the schools to the project *CONECTADOS*; II) ICT infrastructure and the use of tablets in schools; III) participation of the management team, teachers and students in the project; IV) integration of ICT in pedagogical practices and outcomes/effects achieved; V) ICT challenges and perspectives in public schools in Paraná state.

ADHERENCE OF SCHOOLS TO THE PROJECT *CONECTADOS*

Adherence to the project was considered very good by 53% of participating schools, good by 42% and regular by 5% of them. The DPTE coordinators explained how this process of insertion in the project by the NREs and schools linked to them occurred, as DCS1 reveals:

DCS1: The process of joining *CONECTADOS* Project by state schools:

The project was presented to all NREs. They were also asked to participate. Four NREs of the State did not join the CONECTADOS Project, claiming excess of activities and impossibility of attending in the presented time frames. For the NREs that joined, it was requested the indication of schools within pre-established criteria. When designating schools, NREs should hold a meeting with the school manager and pedagogical team, presenting the project and verifying whether those schools would agree to participate or not. When we were forwarded to the indicated schools, the NREs had already given us the names of those who had accepted the challenge. It is worth mentioning that the schools indicated for the NREs that did not adhere were transferred to other NREs (C4). The schools, when they accepted, knew all the work methodology proposed for the project. In the adhesion term that they signed, this was well established: what the role of the Secretariat would be, what the role of the NRE would be, and what the school's role throughout the project progress and development would be (C1). Between the meeting with the schools in November 2015 and the beginning of activities in March 2016, we had a change of management in some schools, because of the election of principals that took place. In some schools, this was a complicating factor, since the new manager understood that he had not

> *made such a commitment. For us, this understanding was interesting because it attributes to one person only and not to the school collective the participation in projects. In these schools, we can say that we did not get a positive return (C4).*

The DCS1 states that the option to join the *CONECTADOS* Project was based on the contexts located in the NREs and state schools, which is justified because "the context is an 'active' force, it is not just a backdrop against which schools have to operate. Context initiates and activates policy processes and choices which are continuously constructed and developed" (Ball et al., 2012, p. 24). Another aspect that is evident in the testimonies is that the values, commitments and experiences of the management team are decisive factors for the management of the policy within the school. Schools have distinct professional cultures, perspectives, and attitudes that temporarily shape themselves and reflect the political responses in a unique way, depending on how they are understood by the actors.

INFRASTRUCTURE OF ICT AND THE USE OF TABLETS IN SCHOOLS

The schools that joined the *CONECTADOS* project belong to different NREs of Paraná state. They are therefore from different regions and municipalities, from different social and economic contexts, and with different organizational and physical structures. Respondents' statements were almost unanimous about the weaknesses of the physical structure for the allocation of technological equipment in these schools, as well as the quality of the internet networks, wireless network, due to the low speed and the attendance capacity of the participating student groups. In addition to these deficiencies, the quality of the tablets sent to schools was added, because their operation was too slow, often not allowing the use of applications in the activities planned by the teachers. The use of tablets was considered regular by 43% of schools, good by 38% and very good by only 19% of them, data that reveal the contextual differences of the schools with their material and structural difficulties, as shown in the statements contained in the DCS 2, 3, 4:

> **DCS2: Tablets with outdated/obsolete technology features:**
>
> *The project was a milestone in our school history, and, despite many obstacles, it was a great success (E8). The CONECTADOS project is very good, it stimulates learning and makes classes more attractive. However, the tablets did not work, it was necessary to use the computer labs and the cell phones of the students, when they had them (E13). The use of tablets in classrooms occurred on a regular basis due to the poor quality of mobile devices; therefore, students preferred to use their own smartphones (E37). In order for us to be CONECTADOS, we need to invest in high quality internet and modern tablets. Most*

tablets are obsolete. Without this issue, CONECTADOS is utopia (E1).

DCS3: The need for investments to improve the internet networks of schools by the sponsor:

In addition, the internet connection network is insufficient, making the work with tablets in classrooms impossible. We await the release of the network expansion resource that was foreseen at the time of joining the CONECTADOS project (E13). We are in favor of innovation and use of the media in the teaching and learning process, but that will never be efficient or will it achieve the desired results if the provider does not supply adequate conditions of installation and internet speed in schools (E4).

The coordinators of SEED-PR also expressed their opinion about the use of the tablets in the *CONECTADOS* project, pointing out the reformulations that took place:

DCS4: Reformulations in the initial project due to the material and structural weaknesses of the schools:

We noticed this in relation to tablets at the very beginning of the project. The initial proposal was to focus the tablet and a plethora of applications along with it. But on account of some technical issues, this turned out to be somewhat unfeasible, due to the tablet processing power, for example, because some things that teachers wanted to use couldn't be processed by the tablet. But we were able to identify this in the early months of the study group and we ended up modifying our initial proposal to not only think about the tablet, but also other features they had at school, including students' mobile devices. So, I do not know if you can say that after the 3rd or 4th meeting of the group of studies the focus was not just the tablet, but all the devices that were available in the school (C1). (…) even with these difficulties, the project happened, and sometimes because of the lack of connection, you have to work with offline content, that is, you ended up finding a way to get there too, and that was interesting (C2).

The statements reveal how the policy has been interpreted, translated and modified in the context of practice, given the weaknesses in the school infrastructure regarding the quality of internet networks, that is, due to the material contexts of schools for the use of new technologies - as Ball et al. (2012) refer to -, and failure to comply with the release of financial resources by the State, as defined in the initial proposal of the project. When faced with the insufficient quality of the tablets to run certain applications in classroom activities, teachers sought alternatives with other mobile devices, such as the students' cell phones, which shows that the enacted policy has been recontextualized and modified according to the material conditions available in the classrooms and participating schools. It was thus evident that the material contexts of schools had a considerable impact on the enacted *CONECTADOS* Project (the policy).

PARTICIPATION OF THE MANAGEMENT TEAM, TEACHERS AND STUDENTS IN THE PROJECT

The participation of the pedagogical teams of the schools in the meetings of continuing education was considered very good by 61% and good by 39% of the managers who participated in the research. The participation of the teachers was evaluated as very good by 41%, good by 51% and regular by 8% of them. Regarding the participation of the teachers in the study groups, 41% of the managers considered it very good, 54% good and 5% regular. Regarding the planning of activities by teachers, 49% considered as very good, 42% as good and 8% as regular. The answers to the question about participation in the training meetings highlighted the training related to the use of technology in pedagogical practices:

> **DCS5: The importance of the formative process initiated in schools:**
>
> *The time for training was very valuable, leading to exchange of experiences and interdisciplinary planning (E11). Teachers received more information on computer science, they felt more prepared to work with new technologies and methodologies with students, thus implementing their classes and making them more attractive (E17). The search of teachers' knowledge to use new tools was also important; the availability and readiness of the teacher-tutor in always clarifying doubts (E8), the presence and the accompaniment of the NRE employee to provide the necessary support for the Project to take place (E41) and, finally, the exchange of experiences and interests of the teachers, who, although overloaded, remained in the course until the end of the training (E33).*

The formative process initiated in schools by the *CONECTADOS* project, according to the statements contained in DCS5, was an opportunity for the participants to build capacities to manage the pedagogical use of technologies in the classroom, which allows to infer that the continuous training of teachers is one of the key elements for the insertion of ICT in school, since it triggers collective pedagogical reflections and "requires discussion on established teaching practices and a known teaching-learning scenario (…). It is a matter of discussing, with teachers, the advantages and disadvantages of ICTs in education, seeking opening signals and stimulating self-reflection" (PISCHETOLA, 2016, p. 126). The statements contained in DSC6, 7 and 8 confirm this process:

> **DCS6: Teacher education as an essential element for promoting digital culture in schools:**
>
> *There is a need for the promotion of new technologies in the educational context, for teachers to be trained and have the conditions to promote digital inclusion and improve teaching-learning, using the resources as tools for mediation of the teaching-learning process. No*

matter how challenging this may be, has to be tackled and the CONECTADOS is a means of promoting this process and even claiming for better conditions for the acquisition of new technologies and training for them (E52).

DCS7: Collective work developed in schools

What is worth emphasizing is the involvement of both the pedagogical team, the teachers and students in the activities. The group went beyond expectations, embracing the work proposals in a broad and objective approach, and the school community was mobilized with regard to digital inclusion in the educational context (E10). In classes where technological resources are used, students participate more actively and present fewer problems of discipline (E31). There was greater integration among students and greater acceptance of the use of new technologies (E9). The students who participated felt important and improved their performance (E5).

The coordinators of SEED-PR, when evaluating the participation of the subjects of the schools in the *CONECTADOS* Project, highlighted that:

DCS8: The participation of the school subjects during the realization of the project:

Those who were directly involved with the project, we noticed great commitment, a great enthusiasm with the project. The idea was precisely to create a cell and expand, that is, we are in the process of expansion, that is, we planted the seed, planted the idea, it needs to grow inside that school environment, so that later we can transpose to other environments as well, but it needs to be consolidated first in those in which it has already been applied (C2). If the school was engaged and involved, the pedagogical team was extremely present, replicated and encouraged teachers in the progress of the project. Of course, we had a few cases that, due to a multitude of issues that were independent of the school and the pedagogical team, they could not be present, due to all the demands they already have within the school (C1).

The participation of those involved in the *CONECTADOS* project, at all times of its development, revealed the commitment of the great majority of the subjects that integrated it, a commitment that favored the use of new technologies in the context of the school and the classroom, qualifying the process of teaching and learning and generating an institutional movement disseminating a new culture, the digital culture, as Iannone et al. (2016) advocate.

INTEGRATION OF ICT IN PEDAGOGICAL PRACTICES AND THE OUTCOMES/ EFFECTS ACHIEVED

The use of tablets and other mobile devices and their results and effects on pedagogical practices, student learning and school organization was evaluated by the participants according to data presented in Table 3:

TABLE 3. Evaluation of the outcomes /effects of the *Conectados* Project - 2017

Outcomes/Effects	Very good	Good	Regular
The outcomes/effects of using tablets and/or other mobile devices in teachers' pedagogical practices	29%	44%	27%
The outcomes/effects of using tablets and/or other mobile devices on student learning	22%	49%	29%
The outcomes/effects of project development on school organization	32%	54%	14%

Source: Research data.

The evaluation of the outcomes/effects of the *CONECTADOS* project reveals that they were considered good, since the highest percentage values focus on the item "Good" of the evaluation scale (44%, 49%, 54%). The variability of opinions is evidenced in DCS9, when the deponents explain the observed outcomes/effects:

> **DCS9: The pedagogical use of ICT in pedagogical practices:**
>
> *The results were satisfactory, and with the adhesion of this project teachers began to include mobile devices such as tablets and cell phones in pedagogical practice, and also the computer lab became more used throughout the project. The technologies are within the reach of most people and inserting them into the teaching-learning process leads to the expansion of knowledge and the improvement of the quality of teaching (E26). The project provided the pedagogical use of several educational media. We know the importance of mobile learning and the use of such equipment. The teaching practice may present changes in the quality of the work developed in the school environment. It was possible to perceive the need to adapt to this style of learning, since students are more interested in learning in this way (E7).*

> **DCS10: The effects of ICT use in the teaching, assessment and learning process:**
>
> *Methodological diversification through working with new media has improved the quality of the teaching and learning process (E1). Classes became more attractive and dynamic, and there was also a significant change in student assessment (E18). We found that the provided tablets are being used by many teachers in the classroom, as sources of research on various websites, of various subjects. This is very important for student learning (E22).*

The aim of the *CONECTADOS* project was to stimulate the diversification of pedagogical practices, through the distribution of educational tablets and the expansion of access to technological resources to schools, teachers and students. In addition, to contribute

to the improvement of the teaching and learning process and to the organization and management of the school. In this sense, it can be inferred that, although the policy has been recontextualized in the context of practice, due to the contextual conditions of the schools and the provider, the performance of teachers and pedagogical teams, by transforming the policy texts (interpret and translate) into viable situations within the complexity of the classroom environment in which they are materialized was fundamental. As Ball *et al.* (2012, p. 142) argue, "policies will be open to situated changes; they may get integrated into older ways of working – the history of prior discourses – and become invisible or asserted within new technologies and new ways of doing school".

ICT CHALLENGES AND PERSPECTIVES IN PUBLIC SCHOOLS IN PARANÁ STATE

In evaluating the project development, SEED-PR coordinators pointed out that one of the challenges was to overcome prejudices and resistance to the pedagogical use of technologies within schools, as expressed in the collective thinking of DCS11:

> **DSC 11 - Overcoming resistance to the pedagogical use of technologies in schools:**
>
> *The first important issue is the breakdown of bias with technology within the school, because we know that there is still a reluctance in the classroom; in fact, if there is not really a project for that, if everything is loose, there will be no class and each one will have his/her device, cell phone, tablet .... I think the first moment was this stigma breaking, that is, the technology is here and it can and should be in the classroom, inside the school (C2).*

Another aspect evidenced in the interviews with the coordinators of the *CONECTADOS* Project was that digital culture is a collective construction, and teacher training needs to adopt a critical posture that at the same time values the introduction of ICT in the curriculum and favors the development of innovative pedagogical practices inside the schools, having the teaching and learning process as the central focus. "The intensive use of the newest digital technologies and networks transforms the dimensions of education and gives the school the 'size of the world' (…). It requires massive investment in equipment, permanent research to update technologies, programs and softwares" (KENSKI, 2010, p. 124).

> **DCS12: Digital culture as collective and continuous construction in the school context:**
>
> *This project, it is a first step, it is a construction, and it takes time. So, it is one thing for*

> *a teacher to work with a technology alone, in his/her subject at school, in his/her way. Another thing is a school that embraces an idea and wants to develop it. This passed through the adhesion first, then some participated in training, discussion and reflection, and they reached the end, others did not. And some did not even participate. It is very likely that, if we go to schools today, the teaching staff is no longer the same, and has changed. So this construction of culture, of digital culture in schools, takes a little time. One cannot have this anxiety of having very fast outcomes (C3).*

Digital culture in schools, as expressed in DCS12, requires a new education mentality that considers the relevance and educational power of new technologies in the school context. It is a process of collective construction that presupposes the participation of managers, teachers and students, requiring changes in the structure and functioning of schools and in the spaces and times of teaching and learning (KENSKI, 2010), involving external contexts, whose pressures and expectations influence the management of school policy, in this case the DPTE, NREs and school management teams.

FINAL CONSIDERATIONS

The analysis of the results of the research, based on Ball *et al.* (2012) theory of policy enactment, showed how schools actually dealt with the demands that were presented, that is, how it was carried out in the context of practice. The different ways in which they creatively worked to develop the practices outside the texts of *CONECTADOS* project policy, according to their situated realities, were contextually mediated and institutionally designed, which generated a recontextualization process that produced heterogeneous practices, depending on the actors of the policy and how it was theorized in each school.

As an education policy from the state of Paraná developed with the purpose of fomenting the digital culture in the pedagogical practices of the state schools, it can be affirmed that the *CONECTADOS* project enabled the schools involved to take the first steps towards the construction of the digital culture in the school, and that it can and should be in the classroom, and at school. However, it is believed that the improvement and continuity of the actions are still necessary, as well as the expansion of the *CONECTADOS* project, in order to make the construction of digital culture in public schools in Paraná state feasible.

The distinction between policy implementation and policy enactment is that while much attention is paid to evaluating policy implementation, that is, how well policy is developed in practice, little

attention is paid to understanding and documenting the ways in which schools actually deal with policy demands in the light of their situated realities - a process of recontextualization that produces some degree of heterogeneity in practice.

The research revealed the need for improvements in the material contexts of schools, that is, in infrastructure, for the pedagogical use of ICTs in the classroom. In addition, the importance of the continuous mobilization of the school subjects - managers, teachers, students and parents - to participate in the actions of the project, considering the professional culture and the contexts of the participating schools, was also noted.

The continuous education of managers and teachers was considered a key element for the integration of ICT in daily pedagogical practices carried out in the school, as it provides technical and pedagogical support to the difficulties that arise in the teaching and learning process. Although the *CONECTADOS* project involved only 70 state schools in 2016, the outcomes of the research allow us to infer that changes occurred both in the organization of schools and in the teaching work focused on the integration of ICT in pedagogical practices.

It should also be mentioned that, in the evaluation of the *CONECTADOS* project carried out by the DPTE coordinators, results similar to those found in this investigation were pointed out. These are: a) there is a need for the renovation of the technological park in educational establishments; b) the participation of teachers is more effective when the school group is invited to participate in certain actions of the Project; c) there are weaknesses in the vision and skills regarding the use of digital technologies by the management and the teachers of the schools; d) there is a need for continuous education appropriate to the reality of each educational institution (PARANÁ, 2016).

Considering the results of the 2015-2016 *CONECTADOS* Project, the Goals of the Government of the State of Paraná (2015-2018), Action 6 of the *My School Has Action* Program (Minha Escola Tem Ação/META), the Guidelines for a National Innovation Policy and Educational Technology 2017-2021 and the research carried out in the State Educational Network of Paraná, entitled EduTec Guide[12], the project was reformulated and reissued in 2017 as *CONECTADOS* 2.0, with the objective of "favoring and broadening discussion and use of educational technologies, with the school community of 500 state public schools in 2017 and another 500 in 2018" (PARANÁ, 2016).

The contribution of the enactment theory to the analysis of policies, programs and projects, taking into account the initial outcomes of the evaluative research that originated this text, made

the understanding of the education policy for inclusion of ICTs in public schools in Paraná state possible, based on the articulation of the perspectives of the macro context of SEED-PR and the micro context of school institutions. This way, the policy enactment theory attributes to the contexts and subjects within them a fundamental role in the enacted policy.

REFERENCES

BOWE, Richard; BALL, Stephen. **Reforming education & changing schools**: case studies in policy sociology. London: Routledge, 1992.

BALL, Stephen. **Education reform**: a critical and post structural approach. Buckingham: Open University Press, 1994.

BALL, Stephen. Sociologia das políticas educacionais e pesquisa crítico-social: uma revisão pessoal das políticas educacionais e da pesquisa em política educacional. **Currículo sem Fronteiras**, v. 6, n. 2, p. 10-32, jul./dez. 2006.

BALL, Stephen; MAGUIRE, Meg; BRAUN, Annette. **How schools do policy**: policy enactments in secondary schools. London: Routledge, 2012.

BALL, Stephen; MAGUIRE, Meg; BRAUN, Annette. **Como as escolas fazem as políticas**: atuação em escolas secundárias. Tradução Janete Bridon. Ponta Grossa: UEPG, 2016.

CARVALHO JUNIOR, José Murilo. Por uma cultura digital participativa. In: SAVAZONI, Rodrigo; COHN, Sergio. (org.). **Cultura digital.br**. Rio de Janeiro: Beco do Azougue, 2009. p. 9-11.

FERNANDES, Domingos. Avaliação de programas e projetos educacionais: das questões teóricas às questões da prática. In: FERNANDES, Domingos. (org.). **Avaliação em educação**: olhares sobre uma prática social incontornável. Pinhais: Melo, 2011. p. 185-204.

IANNONE, Leila Rentroia; ALMEIDA, Maria Elizabeth Bianconcini; VALENTE, José Armando. Pesquisa TIC Educação: da inclusão para a cultura digital. In: COMITÊ GESTOR DA INTERNET NO BRASIL - CGI.br. **Pesquisa sobre o uso das tecnologias de informação e comunicação nas escolas brasileiras**: TIC Educação 2015. São Paulo: CGI.br, 2016. p. 55-67.

KENSKI, Vani Moreira. **Tecnologias e tempo docente**. Campinas: Papirus, 2013.

KENSKI, Vani Moreira. **Educação e Tecnologia**: o novo ritmo da informação. 7. ed. Campinas: Papirus, 2010.

LEFÈVRE, Fernando; LEFÈVRE, Ana Maria Cavalcanti. **O discurso do sujeito coletivo**: um novo enfoque em pesquisa qualitativa (Desdobramento). 2ª ed. Caxias do Sul: Educs, 2005a.

LEFÈVRE, Fernando; LEFÈVRE, Ana Maria Cavalcanti. **Depoimentos e discursos**: uma proposta de análise em pesquisa social. Série Pesquisa. v. 2. Brasília: Liber Livro, 2005b.

MAINARDES, Jefferson. Abordagem do ciclo de políticas: uma contribuição para a análise de

políticas educacionais. **Educação & Sociedade**, Campinas, v. 27, n. 94, p. 47-69, jan./abr. 2006.

MAINARDES, Jefferson. Reflexões sobre o objeto de estudo da política educacional. **Laplage em Revista**, Sorocaba, v. 4, n. 1, p. 186-201, jan./abr. 2018. DOI: https://doi.org/10.24115/s2446622020184139 9p.186-201

MAINARDES, Jefferson; MARCONDES, Maria Inês. Entrevista com Stephen J. Ball: um diálogo sobre justiça social, pesquisa e política educacional. **Educação & Sociedade**, Campinas, v. 30, n. 106, p. 303-318, jan./abr. 2009.

PARANÁ. **Projeto Piloto CONECTADOS**. Curitiba, 2015. Disponível em: <http://www.gestaoescolar.diaadia.pr.gov.br/modules/conteudo/conteudo.php?conteudo=1544>. Acesso em: 10 out. 2016.

PARANÁ. **Projeto CONECTADOS**. Curitiba, 2016. Disponível em: <http://www.gestaoescolar.diaadia.pr.gov.br/modules/conteudo/conteudo.php?conteudo=1544>. Acesso em: 10 out. 2016.

PISCHETOLA, Magda. **Inclusão digital e educação**: a nova cultura da sala de aula. Petrópolis: Vozes; Rio de janeiro: PUC-Rio, 2016.

NOTES

1 "Cyberspace means the new support of digital information and the original modes of creation, navigation in knowledge and social relation that they provide. Cyberspace is a vast, open field, still partially undetermined, which should not be reduced to one of its components. Space that exists (not in the physical world) within and among networked computer installations, where all forms of information pass through." (KENSKI, 2010, p. 134).

2 Information about the *CONECTADOS* project is available at: http://www.gestaoescolar.diaadia.pr.gov.br/modules/conteudo/conteudo.php?conteudo=1544.

3 In the META program, seven lines of action are defined to be developed in state public schools: 1) pedagogical master plan and action plan: consolidation and monitoring; 2) pedagogical practices: curricular proposal and teaching work; 3) continuing education for all education professionals in line with the plan of action; 4) monitoring the expansion of the school day; 5) continuous and permanent mobilization of the school community in the actions of the school and strengthening of the school authorities: 6) educational technology: pedagogical practice and school management; 7) continuous monitoring and evaluation of school management performance.

4 Available at: http://www.consed.org.br/media/download/5adf3c4e10120.pdf.

5 The criteria defined were: a) The choice of schools should respect different school realities of the territory of Parana state, that is, contemplate special education schools, youth and adult education and regular education with their specificities. b) To choose, preferably, schools located in the municipality that is the head office of the Center. c) Select medium-sized schools (between 500 and 1000 students). d) Observe if the principal and teachers of the school are receptive to the use of technologies in the classroom. e) Choose, preferably, an educational establishment that has a broadband connection available. Opt for those with better connection. (PARANÁ, 2015, p. 7).

6 International literature on policy analysis is vast, and a number of analytical approaches have been formulated. The approach proposed by Taylor (1997) suggests the need to

explore the contexts, texts and consequences of policies. This implies seeking to analyze the policy trajectory from its antecedents to its outcomes/effects. Another approach proposes the analysis of five different contexts of what is called the policy cycle: context of influence, text production, context of practice, outcomes or effects, and context of policy strategy. (BOWE & BALL, 1992; BALL, 1994).

7 The book was translated and published in Brazil by UEPG editors in 2016 with the title: *Como as escolas fazem as políticas: atuação em escolas secundárias*.

8 The research that gave rise to the work was a case study carried out in four public secondary schools and a private one, with two central objectives: the first, of a theoretical nature, with the purpose of developing a theory of policy enactment; and the second, empirical, to carry out the critical exploration of the performance of three policies in action, in similar but different contexts. The guiding questions of the research were: 1) "How do different individuals and groups of actors interpret and enact policy in specific contexts of multiple policy demands given the resources available to them?"; 2) "How and in what way do socio-cultural, historical, and contextual factors affect the ways in which schools enact policies?"; 3) "How can the differences between schools in the enactment of policies be explained?" (BALL *et al*., 2012, p. 11).

9 For further information on the methodology of the Discourse of the Collective Subject see: Lefèvre, F., & Lefèvre, A. M. C. (2005b). *Depoimentos e discursos: uma proposta de análise em pesquisa social*. Brasília: Liber Livro. (Testimonies and speeches: a proposal of analysis in social research). In English language, the paper *Discourse of the Collective Subject: social representations and communication interventions* also deals with this methodology – Doi: http://dx.doi.org/10.1590/0104-07072014000000014

10 Qualiquantisoft is a software developed at the University of São Paulo (USP), in partnership with Sales & Paschoal Informática, in order to facilitate the analysis of data in a qualitative/quantitative perspective, in which the Discourse of the Collective Subject technique is used. Available for download at http://www.spi-net.com.br/html/software.html

11 Discourses of the Collective Subject are presented in the text in font size 11 and in italics because they are texts derived from the testimonies of the subjects participating in the research organized according to the DCS methodology and not from long quotations.

12 Available at:<http://guiaedutec.com.br>. Accessed: 25 jun. 2018.

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