

# Contributions to Teacher Development in the Context of a Teacher Training Program

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## ABSTRACT

This article discusses continuous teacher education and presents the results of research involving 14 teachers from the public basic education network, who act as supervisors in the Biology sub-project of the Programa de Bolsas de Iniciação à Docência (PIBID), which is a grant awarding scheme for trainee teachers, in 7 institutions of higher education in Rio Grande do Sul (RS). The objective of this study was to analyse, from the perspective of the supervising teachers, the effects of participation in the program (PIBID) on their continuous teacher training. The data was collected using an anonymous questionnaire and semi-structured interviews, which was analysed by Discursive Textual Analysis (DTA). Analysis of the results demonstrated emerging categories that provided a view of positive aspects of the relationship of PIBID on the continuous formation of teachers, especially with regard to the supervisors who work directly with the program. In the teachers' reports, there are important changes in their practice evidencing the adoption of new perspectives on education and the integration of different methodologies in their teaching practices.

**Keywords:** continuous teachers' education; teaching practice; PIBID Biology; Discursive Textual Analysis.

## Contribuições para a Qualificação Docente no Contexto de um Programa de Formação de Professores

### RESUMO

O presente artigo aborda a formação continuada de professores e apresenta os resultados de uma pesquisa envolvendo 14 professores da rede pública de educação básica que atuam como supervisores no subprojeto de Biologia do Programa de Bolsas de Iniciação à Docência (PIBID) em sete Instituições de Ensino Superior do Rio Grande do Sul (RS). Teve por objetivo analisar, a partir da percepção dos professores supervisores, as contribuições da participação no Programa Institucional de Bolsas de Iniciação à Docência (PIBID) para a sua formação docente continuada. A coleta de dados deu-se por meio de questionário anônimo e entrevistas semiestruturadas, que foram analisadas por meio da Análise Textual Discursiva (ATD). Como resultados da análise emergiram categorias que vislumbram um panorama motivador relacionado às positivities que

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o PIBID pode oferecer à formação continuada de professores, especialmente no que se refere aos supervisores que atuam diretamente com o programa. Nos relatos dos professores, constata-se mudanças importantes em sua prática evidenciando a adoção de novas perspectivas sobre ensino e a integração de outras metodologias em suas ações docentes.

**Palavras-chave:** formação continuada de professores; prática docente; PIBID Biologia; Análise Textual Discursiva.

## INTRODUCTION

Continuous education is not a peculiarity of education. Professionals from all fields of knowledge engage in professional development on a permanent basis as part of professional formation, and to meet emerging market demands. For Santos (2012), the activity has long ceased to be a matter of choice, and has become an essential feature of any employee profile, in all the sectors of society.

In the field of education, the context could not be different, especially considering that the teacher is responsible for the basic training of all, or at least a large number of professionals working in the labour market. This imposes on this professional the need to seek constant (re) educating and updating of their training. The current social context requires different teacher skills. A teacher must be able to exercise their teaching in correspondence with the new realities of society, the knowledge, the means of communication and information, and this entails changes in the performance of teachers' roles, new ways of thinking, acting and interacting, provoking the need to be constantly updated, it is constantly in the process of formation.

In view of the social transformations that directly influence professional practice, the objectives of the Programa Institucional de Bolsa de Iniciação à Docência (PIBID) favour important reflections on continuous teacher education in a new context. In its actions, it contributes to the continuous education of supervising teachers through integration with the academic environment and contact with new methodologies, discussions and theories, enabling the development of their personal theories and practices related to teaching.

Thus, to better understand the relationship between PIBID and the continuous education of the teacher supervisors of Biology, the objective of the present study sought to analyse, from the perspective of a group of teacher supervisors of PIBID Biology, the contributions of participating in the Programa Institucional de Bolsas de Iniciação à Docência (PIBID) to their continuous teacher education. Further, this study attempts to answer the following question: how has the Biology subproject of PIBID, in different institutions of higher education, influenced the continuous education of the supervising teachers that work in the primary education schools in Rio Grande do Sul?

The paper is organized into five sections, including the *Introduction*; in it, justification for the study, the objective, and problem are presented. In the second section, *Theoretical Foundation*, reflections on the theoretical axes upon which the research rests are set out: continuous teacher training and PIBID. In the third section, *Methodology*, we show the methodological design, explaining the approach and type of research undertaken, the

characterization of the subjects of the research, the form of data collection and the method of analysis used. In the fourth section, *Analysis and discussion*, we discuss the material coming from the analysis carried out, which is organized in the following categories: the importance of the reflection instigated by PIBID; the development of teaching practice and PIBID; and repercussions of the experiences with PIBID on pupil learning. The last section, *Final Considerations*, presents some implications of the research, emphasizing that the results obtained from the analysis point to an encouraging view in relation to the positives that the program can offer to continuous teacher education, especially with regard to supervisors who work directly with the program. Involvement with PIBID rekindles interest in and like of teaching. In the teachers' reports, it is possible to observe considerable changes in their practices. From the activities generated and developed in partnership with the grant holders they supervise, they demonstrate the adoption of a more reflective attitude, reconsidering some perceptions and conceptions in relation to their professional work. They show, from their testimonies, the adoption of new methodologies and practices, integrated into their teaching.

## **THEORETICAL FOUNDATIONS**

In present-day society, permeated by an ease of access to information, we recognize that the school continues to play a fundamental role for human development. Unlike the actions of the media that simply allows access to information, the school presents the possibility of knowledge construction. However, it appears that the school has changed little. Education based on the simple transmission of information is still strongly present, although it no longer makes much sense in today's world.

More than ever, the teacher has to be up to date and well-informed, not only in relation to the curricular content of their subject, but principally in relation to pedagogical knowledge and new educational trends. In order to keep up with the changes taking place in today's society, we need a new teaching professional, who values investigation in teaching as a strategy that can contribute to this process (Galiazzi & Moraes, 2002), a professional, based on his or her theoretical position, who develops a critical reflection of their practice and is concerned with his or her continuous education.

The process of continuous teacher education is referenced by various authors who present discussions on the theme and highlight its relevance to teaching professionals. Among these authors are Candau (1997), Pimenta (2006, 2008), Nóvoa (2009), among others. According to these studies, continuous education has been understood as a permanent process of perfecting the knowledge necessary for a professional approach and commences after the initial formation with the objective of ensuring a better quality of teaching to pupils.

Continuous education then becomes one of the fundamental points for teacher development and formation. Through study, research, reflection and contact with new concepts and theories – provided by continuous education programs – changes will be

evident (Pimenta, 2008). Modifying the way of thinking in pedagogy is more difficult if there is no opportunity to explore new experiences in which one can reflect on the professional practice in the school. The need for good initial training cannot be ignored, but the importance of continuous education is evident in the fact that technological, social and political advances impose on professionals and training institutions the need to improve vocational training (Santos, 2012).

In this way, we can say that, in order to develop their classes so that learning is stimulating for the students, besides the teacher having a good initial formation, it is necessary that they seek professional improvement. For this, partnerships between universities and schools can contribute to the teacher's performance in the school, as they provide opportunities for exchanging experiences and developing their training.

It is important to emphasize the necessity for the teacher to take on a new outlook, in which training is understood as a continuous process, so that they can reflect not only on the views and discussions of the researchers, but also on their own actions (Schön, 2007). According to Perrenoud (1999, p.97), "[...] new texts alone do not change the representations and practices of teachers...". Thus, it is understood that the need for change must be assumed by teachers for it to be meaningful, based on the challenges identified by them in their reality as educators.

It is necessary, as pointed out by Demo (2002), Nóvoa (2009), Imbernón (2010), among other authors, to push and encourage teachers to become protagonists of their formation. It is not acceptable, according to them, that only institutions discuss and develop research on problems related to teaching. Nóvoa (2009, p.17) points out that "*it is necessary to pass the training of teachers onto the profession*", defending the idea that teachers have a predominant place in the formation of their colleagues, articulating the "*community of teacher educators*" and the "*community of teachers*" (2009, p.17). Otherwise, there will be no significant change in the training of these professionals.

Although there are studies and research in the field of vocational training, with regard to continuous education, the most frequent practice has been to undertake refresher courses in curriculum contents. Most of the time, teachers are merely listeners, forgetting that they have much to contribute, not just learn. In this format, these programs have been shown to be inefficient in bringing about change in teaching practice and, consequently, in situations of failing schools, since they do not consider teaching and pedagogical practice important in their contexts. By disregarding the context in which vocational training is developed, they do not allow the teacher to appropriate new knowledge and practices (Pimenta, 2008).

Nóvoa (2009) criticizes the current form of study concerning educational problems and teacher training. He questions the fact that researchers are often unaware of the reality of the classrooms in which they carry out studies on the problems faced by the teachers in their professional experience, on the "being a teacher". These studies then remain on paper, and the problems continue in school. In this context, the Programa Institucional de

Iniciação à Docência (PIBID) can be of help with this problem, since they are teachers engaged in forming new teachers, and reconstructing themselves as professionals in their reality.

Thus, by engaging in the PIBID, the teacher acting as supervisor has an important opportunity to contribute to the improvement of education. Starting from a rethinking and reflecting on their teaching, there is the ability to professionally develop, adding new knowledge to their practice. At the same time, while acting as a guide for future teachers, they contribute with their knowledge and experience to the training of those under supervision. Moreover, in the performance of their duties, there is the opportunity to improve and develop aspects of teaching activities, such as observation, critical analysis and the search for solutions to the problems facing education, fundamental characteristics for the teacher in their daily work. In this sense, this project becomes a significant ally in the development of teacher training in that it allows for more teachers to be aware of this fact (Farias, 2012). As Guimaraes (2014) comments:

In its design, Pibid is initial formation for the students of the degrees; it is also a continuing education for teachers in public schools and for professors of participating higher education institutions, providing them with ample opportunities for study, research and extension work. [...] in fact, in this still short period of its existence, the Pibid has already been recognized as a public policy of high impact on the quality of teacher education. (p.5)

PIBID reveals itself to be an important strategy in relation to the continuous education of teachers, it offers contact with new methodologies brought by academia, provides opportunities to reflect on teaching practice itself, on planning the contents of teaching, highlighting the need for modifications and prioritisation. It offers the teacher opportunities to understand teaching in a reflective and contextualized way, inserted in the present time that requires a professional that assumes a pedagogical position of investigation, and no longer a position of a mere repeater of knowledge (Baptista 2003). And, as Guimarães (2014, p.6) affirms, "Pibid is writing a new chapter in the history of Brazilian education".

## **METHODOLOGICAL DESIGN**

Research of a qualitative approach deals with, among other characteristics, the fact of assuming the reality as constructed by the subjects, seeking to arrive at an understanding of the problems and phenomena investigated in their own contexts.

As the form of research, we opted for a case study (Yin, 2005), proposing to study the contributions of a specific program, PIBID, to the continuous education of teacher supervisors, as it locates the study in a particular context that allows for the exploration

of different information. Moreover, according to this author, the research should be considered a multiple case study to the extent that, for the enrichment of the understanding of the phenomenon, we sought greater diversity of context, that is, public schools in Rio Grande do Sul.

The research subjects were 14 teachers, 13 being female and 1 male, who act as supervisors for students who are recipients of the award linked to the Programa Institucional de Bolsas de Iniciação à Docência (PIBID), of the biology subproject, of the basic education schools in different regions of Rio Grande do Sul. It should be clarified that the selection of the subjects took into account the seven counties of Rio Grande do Sul, established by the Brazilian Institute of Geography and Statistics (Brazil, 2014), so that the participants represent different regions of Rio Grande do Sul.

The teacher supervisors interviewed have training in the natural sciences, and three of the teachers do not have a post-graduate specialization certificate, although they are fully qualified to be teachers. 12 have a weekly workload equal to or greater than 40 hours of classroom work, and only two teachers have a workload of 20 hours a week. They mainly work in the final years of elementary school and in high school. Three teachers also develop activities and teaching for technical classes, adult education and teacher training. The main subjects taught by the teachers are Biology and Sciences.

With regards to length of service in basic education, 64% of teachers have less than 10 years' experience in teaching, 14% have between 10 and 20 years', and 21% have more than 20 years' experience teaching public school.

The data collection was based on two instruments: an anonymous questionnaire containing closed and open questions (Minayo, 2010), and semi-structured interviews which were conducted in person with individual interviewees at a place and date previously scheduled, based on the availability of each teacher. The guarantee of anonymity of research subjects and their schools is a condition for the release of research by the institution in which it was developed.<sup>1</sup>

The analysis of the information obtained was performed using Moraes and Galiazzi's (2011) Discursive Textual Analysis (ATD). The synthesis of the process can be described according to the table below:

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<sup>1</sup> The absence of a request for ethical evaluation by the CEP / CONEP system of the project, to which the present study is linked is due to the researchers' institution's understanding of not request this when the research is guaranteed the anonymity of subjects and schools. In the case of the present study it is important to add that the data were collected in 2015, prior to Resolution of the National Health Council No. 510, of April 7, 2016. For these reasons, it is reported that the journal *Acta Scientiae*, which today publishes the article, is not responsible for any consequences arising from the referrals of the research, including full assistance and eventual reimbursement to the research participants for any damages caused.

Table 1. *Synthesis of the Discursive Textual Analysis process.*

| ORGANIZAÇÃO DO<br>PROCESSO ORGANIZATION OF<br>THE PROCESS | DESCRIÇÃO DESCRIPTION   |
|---|---|
| UNITARIZAÇÃO UNITIZING                                    | - Fragmentação dos textos e codificação de cada unidade;-<br>Fragmentation of texts and codification of each unit; reescrita<br>cada unidade de significado e atribuição de nome/título para cada<br>unidade.rewriting of each unit of meaning and allocation of name<br>/ title for each unit.   |
| CATEGORIZAÇÃO CATEGORIZATION                              | - Agrupamento dos elementos semelhantes (unidades de<br>significado) a partir de comparação constante entre eles, originando<br>categorias:a- Grouping of similar elements (units of meaning) from<br>a constant comparison between them, giving rise to categories: <i>a<br/>priori</i> – preestabelecidas, construídas antes mesmo de consultar<br><i>o corpus</i> da pesquisa; <i>priori</i> – pre-established, constructed before<br>consulting the <i>corpus</i> of the research; emergent – that arise from<br>the analysis and intrinsic to the research <i>corpus</i> . |
| METATEXTO METATEXT  | - Elaboração de textos descritivos-interpretativos a partir das<br>categorias analisadas, trazendo novas compreensões do fenômeno<br>estudado para torná-lo mais compreensível, tanto quanto<br>possível, para o leitor.- Elaboration of descriptive-interpretative texts<br>arising from the analysed categories, bringing new understandings<br>of the phenomenon studied to make it more fully understood, as<br>much as is possible, to the reader.   |

Source: Based on the authors Moraes and Galiazzi (2011).

The information obtained was deconstructed into units of meaning. With the intention of letting ‘the voice of teachers’ express their theories and knowledge, we opted for analysing the *corpus* beginning with emerging categories, in a constant comparative process between the units of meaning and the objectives of the research.

According to this perspective, the units of meaning are organized around the essence that each small part of the text translates, expressing the different ideas of the speech of the subject. These small parts were coded to evidence their origin, facilitating the analysis. Further, as part of the analysis, units of meaning were rewritten without altering the subject’s idea, in order to facilitate their understanding and association with the researched topic.

After unitarization and rewriting of the units of meaning, each was grouped in sets of categories, whose criterion was given in relation to the similarity to what teachers describe in their statements. The categories seek to highlight the set of ideas contained in the units of meaning that express the same essence. The categorization is a process of comparison between the units of meaning, grouping the similar elements in sets, naming and defining more precisely the categories as they are constructed (Moraes & Galiazzi, 2011). As a result of the process, the following table was obtained:

Table 2. *Emerging Categories and Subcategories.*

| <b>CATEGORIES</b>   | <b>Subcategories</b>  | <b>Guiding words</b>  |
|---|---|---|
| <b>1 – THE IMPORTANCE OF REFLECTION ASSOCIATED WITH PIBID</b>     | <b>1.1 PIBID as a study space</b>   | Espaços de estudos e consolidação de conhecimentos. Study spaces and knowledge consolidation.   |
|   | <b>1.2 PIBID as a space for professional strengthening</b>                            | Oportunidade de reflexão sobre suas concepções; Opportunity to reflect on their conceptions; sua constituição profissional; their professional constitution; e prática pedagógica. and pedagogical practice.  |
|   | <b>1.3 PIBID as motivation for change</b>   | Ampliação das ações do PIBID aos docentes da escola. Expanding knowledge of PIBID to the teachers of the school.<br>Motivação para melhorar a prática docente e continuar a estudar. Motivation to improve teaching practice and continue to study. |
| <b>2 – THE DEVELOPMENT OF TEACHING PRACTICE AND PIBID</b>         | <b>2.1 Teaching practice and PIBID</b>  | Desafios da escola e da universidade. School and university challenges.<br>Dificuldades da atuação profissional – excesso de funções – pouco tempo. Difficulties of professional performance – overwork – little time.                              |
|   | <b>2.2 Effective changes in teacher practice</b>                                      | Contribuição para a formação dos bolsistas. Contribution to the training of the grant holders.<br>Qualificação da formação docente. Development of teacher education.   |
|   | <b>2.3 PIBID as a support for the teacher</b>   | Novas aprendizagens. New learning.<br>Novas práticas na escola. New practices at school.<br>Apoio ao professor. Teacher support.  |
| <b>3 – REPERCUSSIONS OF EXPERIENCING PIBID FOR PUPIL LEARNING</b> | <b>3.1 Improvement of pupil learning from the adoption of new practices in school</b> | Atividades diferenciadas. Differentiated activities.<br>Motivação para as aulas e atividades. Motivation for classes and activities.  |

Source: Authors' (2015).

## ANALYSIS AND DISCUSSION

[...] the teacher's voice is not only useful for research as a source of data, it also serves as an endogenous methodological resource, that is, when talking about their teaching practice, teachers can, at the same time, offer information and reflect on the style of practice in the classroom. (Silva, 2009, p.11)



Out of the analysis performed, three main categories emerged from the process, being identified as follows: the importance of reflection fostered by PIBID; the development of teaching practice and PIBID; and repercussions of experiences with PIBID on pupil learning. It should be emphasized, however, that each category unfolds into smaller units called subcategories. It is from the analysis of each unit, from each subcategory, that a new view concerning the area investigated is glimpsed.

## **The Importance of Reflection, Provided by PIBID**

When analysing the possibilities for reflection that PIBID provides to teachers and its importance for the continuous education as a space for studies, two perspectives were highlighted in the testimonies: *the importance of the moments of studies that the program offers to the teachers who are involved with PIBID for the construction and consolidation of knowledge* and *the importance of PIBID for the deepening of knowledge relevant to teaching*.

Observing the reports that describe the teachers' practices, it is possible to identify indications that the actions of PIBID have created an uneasiness in these professionals, who are seduced into using other methodologies in their classes. The P14 teacher, who says about PIBID and its influences, relates: *"It helps to give a renewal, I gather myself, I go out a little from that comfort zone that the teacher is in: 'I do not need to do much, I am a teacher of the state', 'I have students this year; I have students next year', the program is ready for next year"*. Teacher P13 also says about this aspect: *"[...] it is very uncomfortable, but it is good, it is like putting new fuel in people"*. It cannot be said that there was a change in the conceptions of teachers, but a principle of change, an indication that the teacher began to question their practices. Imbernón (2010) emphasizes continuous education as a means of fostering the personal, professional and institutional development of the teacher, elevating their work for the transformation of a practice. This practice is beyond the scientific, didactic or pedagogical updates of teaching work, it presupposes a practice whose foundation is on the theory and reflection of the practice for change and transformation in the school context.

It is noteworthy that the proposals that PIBID integrated into the teachers' reality, their work life, have helped teachers in the construction of new ways of developing their practices, as well as expanding their conceptions on many aspects related to education, especially those related to the learning of their pupils, as P5 reports: *"I had a vision from our initial training. Compartmentalized, the student will have the xerox, will have the folder, will sit, will listen to me. Today I think differently. I got in touch with more progressive ideas, something that I did not have the opportunity to do in university, in the discipline of didactics, I didn't know how to do it"*. The P1 teacher also recounts their experience: *"[...] PIBID gave greater openness with the pupils, to develop the project on sexuality. Last year, one of the ways we started working was with the wheels of conversation. Students are writing the questions, a week before, without identifying themselves. Then we organize the conversation wheel to answer and discuss the theme."*

*In a class where they worked specifically on Sexually Transmitted Diseases (STDs), and they were extremely interested [...] after that meeting, a student called me privately and told me that he had an STD*". One can sense a more critical reflection on their practice, which values the integral formation of the pupil, surpassing the understanding of teaching as a mere accumulation of information (Pimenta, 2008).

In addition to the perspectives related to the classroom, other professional competences can be highlighted in the learning that results from participation in PIBID. The teachers involved in the research do not only perform teaching functions within the school environment. They also work in the administration of the school and, for this, obtained through PIBID, in the moments of study and in the meetings, aid that can assist them in the performance of these functions. In performing the supervisory activity, the teacher exercises leadership over a group that expects and demands guidance to carry out its activities. In this sense, the teacher needs to make decisions and adopt positions in order to organize and follow the projects and activities that will be developed in the school through PIBID, an exercise that helps and enables, qualifying the teacher for the exercise of the different functions that they perform within the school.

According to Mizukami *et al.* (2002, p.14), in their daily lives

[...] the teacher confronts the most multiple divergent situations, with which he does not learn to deal with during the training course. These situations are beyond theoretical and technical references and therefore the teacher cannot gain direct support from the knowledge acquired in the training course to deal with them.

Thus, while the supervisor position challenges the teacher, it offers the opportunity to construct new knowledge and techniques that, added to their experiences, can serve as support in new situations that may be encountered in professional life (Tardif, 2007). The P6 teacher points out: *"Because, when we end up in school today, [...]. There are many tasks and we end up doing many different things. It's management, it's supervision, it's administrative, it's financial. And that's good! Yes, that's good, because you end up having knowledge, things I never had"*. In addition to promoting new learning, the teacher is motivated, as P6 states in another section: *"I accompany the award holders, and this is a situation that makes me study, I'm feeling like a student again! But that's good! I could go back to study!"*

The PIBID brings to the school and teachers, implicitly and explicitly, new proposals and methodologies that can be tools of change in the practices of teachers at school, and this does not come as an imposition, but as persuasion. The activities proposed by the award holders in partnership with the supervisor have stimulated the involvement of teachers in the actions proposed by PIBID. Some teachers end up involving themselves and being interested in the proposals and using them in their classes as a way to diversify their practices. Proof of this is the motivation they feel in involving themselves with the work of PIBID, even if they are removed from the supervisor's role. As teacher P5 mentions

regarding the link they built with the project: *“Actually, I was a supervisor last year, from March of last year until March of this year, and this year I am only a **collaborator, I am a voluntary supervisor** (our emphasis). I realize that everyone views PIBID very well, it is a very good contribution for everyone”*.

The teacher has sought in PIBID help for their needs, especially with regards to practices in the classroom. They seek to develop in order to meet the needs and difficulties in terms of change and innovation with regards to methodological aspects. However, together with this perspective, the teacher finds the possibility of deepening awareness not only in practical aspects, but also in the theories that underlie these practices, giving continuity to their studies (Freire, 1996). This can be observed in the report of P8: *“... this is not my idea (to stop studying), I think the tendency is to grow, it is to expand, I do not want to settle. I do not want to think it's good here. No! I want more and more to look for new formations and this was one of the changes PIBID brought”*.

## **The Development of the Teaching Practice and PIBID**

In analysing the importance of PIBID in developing teacher training, three aspects stand out: difficulties are indicated by supervisors with regard to teaching practice; the development of teacher training and new learning that the program offers to continuous formation; and the pedagogical and operational support provided by PIBID to the school teacher, motivating the practice of new pedagogical experiences in schools.

It is evident in the experiences of the public school teachers that, in general, there is no motivation for them to make innovations and changes in their daily practices. Some reasons for this may be: lack of support from the school for new practices, lack of collaboration from their colleagues, low salaries and the low appreciation of the profession by society. Continuing education courses, which should be a support the development and construction of changes in teaching practice, develop in a fragmented and discontinuous way, focusing only on some aspects that, for the most part, do not supply the needs of teachers in their schools (Nóvoa, 2009). In this way, the training opportunities end up discouraging teachers, since they do not have support for the continuity of the projects they propose to develop. Thus, teachers choose to return to their traditional practices.

In contrast, in the proposals brought by PIBID, the teachers have greater contact with the partners who develop the project, both in the organization and in the execution of the proposals in the school. Moreover, the teachers themselves become more involved. Diverse possibilities of collaborative work arise, allowing an increase of teacher contact with the different conceptions and methodological strategies of the other teachers. Sharing these experiences makes it possible to broaden the knowledge base and thus improve training (Perrenoud, 2002). As P5 reports: *“[...] I observe the good things that work in PIBID, what I can use in my classes, what I can bring as a teacher, and there are other things that I can apply in my classes”* And so, the new experiences and the experiences that the award holders bring from the university to the school help the teachers in the articulation of new practices in their classes. As P3 relates: *“So, we learn a lot from them.*

*I noticed how much knowledge they brought and how much it added to the knowledge I already had”.*

In addition, the new methodological proposals that are developed by the supervisors in partnership with the award holders in PIBID provide teachers with an opportunity to reflect on their practices (Sön, 2007). The new experiences added to the teachers’ knowledge are materialized in new practices that are developed in the school, which can also be an improvement for the pupils, reflected in the quality indexes of the school. The P3 teacher describes that, from involvement with PIBID, it has “[...] *made more practical classes. When I see award holders planning and applying their class work, I realize that it is not so difficult to do practical classes, and so I have been able to do more classroom practice*”. And in relation to the progress in the quality indexes, teacher P9 reports: “[...] *an issue that we can mention is the question of the Ideb (Índice de Desenvolvimento da Educação Básica – Index of Development of Basic Education) that has already changed, and this was after PIBID, the initials series of Ideb rose considerably, because, in truth, the teacher has improved their classes [...]*”.

The PIBID proposal offers teachers moments of interaction between different levels and areas of teaching, opening space for activities and projects that encourage cooperative and interdisciplinary work. As P1 reports: *“We work very hard on the question of interdisciplinarity, and it made me grow a lot as a teacher, and I see today that people’s knowledge triples from the moment you can share with other people, than from doing it alone, we always learn, but much more when we work as a group, without a doubt”*. As a positive result of the work with other areas of teaching, one can see how PIBID helps teachers to understand that there are different perceptions and ways of thinking in a school, a fact that is often overlooked in everyday school life (Fazenda, 2011). This interaction between the different areas enables an advance in breaking down barriers between the various disciplines of knowledge. In addition, by integrating other perspectives on learning, the teacher is able to identify more clearly the difficulties and limitations, as well as the potentialities that the pupil often does not demonstrate in their discipline, thus enabling the teacher to reformulate and establish new methodologies, favouring the pupil’s learning.

Although PIBID may appear, at first, to make contributions only to the award holders, the reflections provided by supervisors of their experiences, have contributed to a critical evaluation of their practice and formation and to the gaps they need to fill. The teacher becomes better aware of their own identity and understands why they act in this way or that (Marcelo, 2009). As P1 mentions: *“[...] I describe myself thus, today as a teacher I am a much more open person, to what is new, to work in groups, to be able to share with my colleagues, because I already learned so much that I did not know of other disciplines, for example, and that is very important”*. Thus, there is the possibility to change, to seek new ways of becoming a teacher and to help other teachers who are in the process of formation, have the possibility of being different, not only in methodological aspects, but in the perspective of being more open to criticism and observations from other teachers who can contribute to their formation. It is a path, a possibility of change in teaching practice. A principle of a more collaborative practice.

## Repercussions of Experiences in PIBID in Pupil Learning

Observing, in the teachers' reports, that the repercussions of the experiences in PIBID make an impact on their practices, the following perspective is highlighted: the adoption of new practices in the school through the different activities organized under PIBID, and its implication on improving learning.

Pupil motivation in class has long been considered a challenge faced by teachers in school (Cavenaghi & Bzuneck, 2009). Many teachers complain about students' lack of interest. They emphasize that students do not perform work in class or at home, even though they are being evaluated through it. They are reluctant to start an activity, are easily distracted, do not engage in activities or even respond to questions, or simply say "I do not know". Attitudes such as those described above demonstrate the students' lack of interest in the activities proposed by teachers. In some cases, this lack of interest can be attributed to the methodologies proposed by the teachers in their classes.

The proposal of PIBID, which aims to implement methodological innovations mediated by the actions of the award holders articulated to the teachers of the schools, demonstrates some advances in the sense of acting as an element of stimulus and motivation for changes. P4 reports: "[...] *it is not something they have been forced to come to, it is spontaneous, they want to come*". AND Q5: "[...] *they actively participate not because they are evaluated, but because it really works*". The fact that the pupils feel a desire to participate in these activities can be indicative in this sense. Developing activities with other types of languages, such as artistic expression, motivates the different abilities of the pupils and, by diversifying the methodologies adopted, the possibilities for more pupils to learn are widened. And this does not refer only to the curricular contents, but to the different ways of learning, necessary for a more critical formation for life in society.

PIBID proposes different activities in distinct spaces, which help pupils to develop not only cognitive aspects related to curricular knowledge, but skills that cover a broader formation (Brasil, 1996), among them the question of expression of the body, body language, developed by theatre activities, and other forms of language little used in the classroom. P4 states: "[...] *now we are engaged with environmental week, so they are rehearsing a play*" "To the extent that the society in which we live charges its citizens capable of critical positioning in the face of the world in which we live, activities that develop in the pupil's the ability to express the self from another language that is not verbal, has its importance in contributing to this formation. (Orlandi, 2008, p.39 *apud* Katahira, 2013, p.17004).

In this way, the teacher also has the opportunity to adapt teaching strategies to the reality of his / her own elaboration and, as Demo (2011, 54) points out in relation to the autonomy of the teacher, this prevents that "*the teacher becomes only a user of other teaching materials falling into the status of mere spokesperson*".

By introducing different methodological approaches in their classes, such as expanding the use of experimental activities to contextualize certain contents, the teacher

allows this knowledge to be closer to the reality of the pupils, thus facilitating learning and motivating pupils to learn. Teacher P9 reports: *“And from that perspective I reflected and realized that I had a gain in my pupils, they are much happier, let’s say, in that they will have a theory, a theoretical increase, but at the same time they will to have a moment in class to perform a practical activity ‘will get their hands dirty’”*. Teacher P5 also recognizes this positive aspect. They affirm that the differentiated activities, besides motivating the pupils, also help in learning, amplifying the knowledge and the abilities of the pupils. Pupils begin to like biology classes more because it is more grounded in their reality, as P5 says: *“So he grows to like Biology better, that he sees biology in his life, [...] they can understand what biology is ... we can work harder on the students’ abilities and bring new things to them”*.

In agreement with the motivational perspective that the activities of PIBID favour for the pupils, teacher P3 noted satisfaction at being able to count on this support: *“There are five more people who are doing activities in the school, that are doing activities that are bringing motivation to the pupils, that are trying to motivate pupils to learn”*. For the teacher, the projects that are developed by PIBID in their school motivate the pupils, because they organize themselves from the start in activities and count on the interaction with the award holders, who assist in the tasks. Confronting the difficulties met by teachers in promoting the pupils’ interest in study, counting on the help of the award holders, encourages the emergence of proposals which are different from those that the teacher usually uses in their classes. It also motivates the teacher to look for other methodological strategies to apply in their daily life at school.

Despite this, the teacher still finds it difficult to use this strategy with his pupils, considering the obstacles faced by the public school, such as lack of materials, space and time available for the preparation of activities and, especially, the large class sizes. To some extent, the impasse in which the teachers find themselves is understandable. In this sense, PIBID has been an important aid in that it offers all school teachers, not only supervisors, the opportunity of physical and methodological assistance in organizing and carrying out different activities.

Another aspect evidenced by teachers is changes in the relationship between teachers and pupils. From the participation in the activities offered in PIBID, some pupils have been more actively involved in the activities in the classroom. As P11 reports: *“[...] the school has gained, the pupils themselves begin to treat you differently, some more closely others less so, but they will interact, pupils whose voice I had never heard until March, until the beginning of March through PIBID, they began talking, telling their family history [...]”*. Related to this, P11 describes the gains that the interaction provided in the workshops and activities in which the pupils are involved can bring to facilitate learning, concluding: *“[...], but it is very cool to see them also evolving”*.

Freire already said clearly that in teaching, he who teaches also learns, just as he who learns a certain subject also teaches. He says that *“he who teaches learns by teaching, and he who learns teaches by learning”* (Freire, 1996, p.23). In the face of this, comparing the reality of the classroom with the author’s wise and truthful affirmations,

it is the constant exchange of information within the classroom that is important. And it is the restlessness of the pupil that involves and stimulates the teacher to continually search for knowledge to have at hand in order to meet the needs of the pupil, confronting doubts when they arise. Thus, in giving something and receiving something, it is clear that teaching is also learning and that a good teacher-pupil relationship is profoundly necessary for this practice.

## FINAL CONSIDERATIONS

In examining the results of the analysis, it is evident that PIBID has contributed in effecting changes in the practice of teachers. In implementing different proposals in the daily life of teachers, PIBID has integrated into this reality, especially with regard to conceptions and beliefs regarding knowledge, changes which are evidenced by the adoption of new methodologies and by a more critical and investigative attitude in their professional life.

Participation in PIBID, through the dynamic of collaborative work, has resulted in greater interaction between teachers. In establishing different work strategies, other teachers who are not part of the group of supervisors become involved in the activities, opening space for collaborative work in schools. With this increased interaction, PIBID has helped teachers in their interpersonal relationships, opening spaces of dialogue that promote knowledge and self-knowledge. Teachers begin to see the different perceptions and ways of thinking that are present in the school. Moreover, this dialogue enables greater exchange between disciplines. Thus, in sharing experiences with other teachers, the individual teacher widens their contact with different understandings and knowledge of colleagues, so expanding their own knowledge base and improving ongoing formation.

Teachers feel the need to improve themselves, to seek to broaden their knowledge and to confront the difficulties and needs they face. In PIBID they seek the tools and assistance to overcome these challenges and they find in this program the opportunity to deepen both in practicalities and in methodological aspects, thus having the possibility of continuing their studies. In addition to the practical aspects provided by PIBID, the discussion meetings and organized studies within the dynamic of PIBID, offers space for reflection that favours the establishment of relations between practice and theory, promoting self-knowledge, indispensable for the construction of a critical practice that leads to the autonomy of the teacher.

The skills required of the teacher in their practice sometimes go beyond what is used in the classroom. It is evident that the involvement of the teachers in the role of supervisor goes beyond stimulating skills for teaching. In the development of their participation in PIBID, they have added to their knowledge strategies of team work, coordination, supervision and leadership, providing assistance related to administrative and leadership issues, which are now a part of their practice in the many different functions they perform in school.

Considering the complexity that defines teacher education, when analysing the teachers' statements, it is clear that PIBID has provided important support for the teachers in this process. The reflexions of the teachers' participation in the various opportunities that PIBID has developed, both in schools and in different spaces of study and sharing of knowledge – such as seminars and study meetings – can be understood as a more reflective practice that seeks, in their daily life, to best articulate the theories which have been studied with their reality, thus assuming the authorship of their formation.

Finally, we may also affirm that the situations, conditions, activities and experiences that have been offered to these teachers by PIBID have contributed to the updating of their knowledge and practices, providing changes in teaching practice through their participation in the activities developed by the program in the schools in which they work.

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