

Online Degree for Teachers in the Brazilian Amazon: a Case Study

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Abstract

The Faculty of Education, University of Brasilia, implemented an online undergraduate degree program for classroom teachers who have not yet completed their studies. There are 1501 classroom teachers in the Brazilian state of Acre, bordering Peru and Bolivia, who have completed only high school. However, a new directive from the Ministry of Education makes it mandatory to have a degree in education to be a classroom teacher. A mixed program combining online work with face-to-face meetings was implemented to address this need. As part of their course work teachers have to complete a section of a Reflective Diary in each semester. As the undergraduate program is completed, each teacher delivers the complete version of the diary outlining the difficulties they encountered, the strategies used to overcome them, and how the program impacted their classroom teaching. The first group with a total of 810 teachers will graduate in March 2010. The dropout rate was very low, at 5.5%. A collaborative learning strategy was used to create learning communities and to bridge the various schools, regions and ethnic groups allowing participants to feel integrated despite distance, cultural diversity, language, religion. To conduct this research we collected data from project documents and teachers' diaries.

1. Introduction

A Teacher is not the one who always teaches, but also the one who is open to learn on the spot, anytime, anywhere. (Rosa, 1994, p. 199)

A reflective diary is a powerful tool for teacher professional development. This tool can facilitate teachers' reflection about their practice in the classroom. When reflection is not part of teachers work, classroom activities can become repetitive and un motivating (Schon, 2000). In this paper we discuss teachers reflective processes using the Reflective Diary as the unit of analysis. The teachers we study are those enrolled in an online undergraduate degree in education called PEDEaD (**P**edagogia em **E**ducação a **D**istancia). They use this tool in a continuous basis to improve their school practices. The Reflective Diary is also a requisite of the PEDEaD Program and is developed each semester by the teachers. At the end of the program teachers present their final version of their diary to an Evaluation Committee as a final requisite to complete the program. In the diary teachers describe their experiences and write their reflections about what they are learning in the PEDEaD program and about their practices in the classroom, establishing a link between theory and practice in their process of professional development.

The PEDEaD program involves three types of docents: **university professors** who elaborate the textbooks and the curriculum material (these are professors of the Faculty of Education –

University of Brasilia and professors of the University of Acre) who teach a post graduate certificate in distance education (Especialização em Educação a Distancia, **ESPEaD**) for the 54 **instructors** who then teach the 1501 **classroom teachers** enrolled in the online undergraduate program in Education, **PEDEaD**.

2. **The online undergraduate program in Education PEDEaD**

In 2006 the Secretary of Education, State of Acre, contacted the Faculty of Education, University of Brasília, to help them to comply with the new act of the federal Ministry of Education requiring that all teachers should complete their undergraduate degree in Education. A positive response of the Faculty of Education led to the creation of the online undergraduate program PEDEaD and the online post-graduate certificate ESPEaD which were launched in the first semester of 2007. There are 1501 classroom teachers in the State of Acre who have not completed an undergraduate degree. Of these, a first group with a total of 810 teachers will graduate in March, 2010. The second group of 691 teachers will complete the program in March 2011.

The PEDEaD program was offered in the mixed mode, combining weekly face-to-face meetings with online work in the Moodle online platform. The program is run by a General Coordination and an Intermediate Coordination. The General Coordination has an Office at the Faculty of Education, University of Brasília, and consists of the Director and Vice Director of the Faculty of Education, an Assistant Professor in charge of the online pedagogy, and four staff members. The Intermediate Coordination is based in the capital of the State of Acre, Rio Branco, and consists of four members supported by the staff of the Secretary of Education. These two units work close together to manage the entire PEDEaD and ESPEaD Programs.

The two programs, the ESPEaD and the PEDEaD are being offered in a concurrent format. The two programs led to the formation of a vast network of teacher professional development in the State of Acre that involves two universities (University of Brasilia and University of Acre) and schools in 20 of the 22 two cities of the state of Acre.

The foundation and structure of the PEDEaD program has its origin in a course developed by the Faculty of Education – UnB, in partnership with the Secretary of Education of the Federal District in 2001 called Pedagogy for Acting Classroom Teachers in the Elementary Grades (*Pedagogia para professor em exercício no início de escolarização – PIE*). The PIE program was a successful experience and led to the graduation of two thousand school teachers and sixty instructors enrolled in a post graduate certificate in teacher education. The PEDEaD was then modeled in the PIE program. In the offering of the PEDEaD program the same curriculum structure developed in the PIE Program was used, consisting of six integrating themes: 1. The Brazilian Educational Reality; 2. Culture and Work in Brazil; 3. Education and the Social Context; 4. The School as a Social Institution; 5. Curriculum and Cultural Diversity; 6. Teacher and Student Work in a Relation of Construction. These six themes were organized into six modules, each containing either five or six textbooks. Each textbook was then subdivided into three sections. With small revisions and alterations, almost all textbooks were used in the PEDEaD program. Alterations and additions were done considering the peculiarities of the State of Acre, i.e., a textbook on Native Education was introduced and other revisions were also done (*O Projeto Básico*, Universidade de Brasília, 2007).

As the original PIE program offered in 2001 was one of professional development for

classroom teachers, the challenge faced by the professors at the Faculty of Education was to develop an evaluation process that should be an integral part of teachers learning process, stemming from the continuous reflection that each make about his/her practice in the classroom (Batista, 2003). In this case the evaluation could be the starting point of a new organization of the pedagogical work, more oriented towards teacher reflection and with a better foundation in the relation theory and practice. One of the biggest challenges was the decision to eliminate the final exam and to adopt an evaluation model centered in the elaboration of activities of specific content and in the construction of a portfolio where teachers could express, in a processual format, the development of their learning process throughout the course. This decision required a long and strenuous debate among participants involved in the PIE Program and also included educational evaluation consultants (Villas Boas, 2005).

The Faculty of Education decided to utilize an evaluation process for the PEDEaD Program similar to the one offered in the Federal District, the PIE, but refining and revising the model previously used. The experience with the use of portfolios in the PIE Program made it clear that it was necessary to do a better analysis of what should be the content of the Reflective Diary. Besides incorporating pictures, testimonies, narratives, and information, it was also necessary to build a synthesis that could express a deeper reflection of the classroom teacher about his/her own professional development process. Based on this assumption it was then decided that the diary should be written by the classroom teacher as a component of the evaluation process and the elaboration of a final version would incorporate and summarize all reflexions made and recorded by teacher along the six semesters of the entire program.

Differently of the PIE program, that did not used the computer as a complementary tool, in the PEDEaD program teachers use the computer to access an online platform as the main tool to support the learning process. In this case, most of the activities are done in the platform and available to the instructors and colleagues as well. The instructors have access to the assignments – as they have to grade them – but other teachers can also access and read the activities of their peers.

A PEDEaD teacher in the classroom

To enroll and to remain as a member of the PEDaD program the classroom teacher has to be active in the school, teaching grade 1-5 students. This teaching is incorporated as a regular workload equal to the classroom internship in schools required for regular students in the face-to-face undergraduate degree of education in the Faculty of Education, University of Brasilia. Besides, s/he needs to have Internet access to logon to the online platform and perform the weekly tasks for each of the sections of the textbooks. In addition to the weekly online tasks the teacher has a four hour face-to-face meeting with colleagues and the instructor to review the activities of the week.

Teachers are required to complete the diary each semester and defend the final version of it at the end of the program. The final version of the diary contains the reflexions each teacher develops along his/her own path to professional development in the sixth and final semester of the program.

A bachelor's degree in Education requires completion of 3200 credit hours distributed as follows: 1920 hours for the modules activities (reading the textbooks and developing the

activities online and face-to-face), and 1280 hours of classroom internship in schools. Evaluation of the online and face-to-face activities is structured in the following format: individual and collaborative activities online represent 50% of the grade. The face-to-face activities in the regular weekly meeting represent 30% of the grade and 20% is for the elaboration of the diary.

3. Challenges to implementing the program

The implementation of the PEDEaD program faced many challenges that impacted the program to a significant degree, i.e., distant location of communities associated with difficulties of access, as many schools can be regularly accessed only in the dry season, while access in the rain season is by boat or plane only; technical problems to access the Internet; and teacher training needed to use the online platform. Next, these issues are discussed.

The State of Acre is located in the core of the Amazon region, bordering Peru and Bolivia to the east. To the west it borders the Brazilian state of Amazon. All rivers in the state flow to the Amazon basin and the region is very hot, humid, and rainy. The entire state is covered by the Amazon forest, and many of the native people who live close to towns are also enrolled in the regular school system. There are few roads and many cannot be accessed in the rain season. The presence of the forest and the seasonal rain seems to be omnipotent and local people have to adjust to this reality. The importance of the forest in the lives of the local people is such that while the word citizenship is used to express the rights and obligations of a citizen to his country or region, a new word “florestania”, that can be translated as “forestship”, has been created in the state of Acre to express the rights and obligations of their population to the forest.

All these environmental conditions difficult transportation and communication: often teachers and children have to change from a motor vehicle to a boat to get to school, and this makes the trip much longer and difficult. The same happens with the communication lines, the telephone and the Internet, that can be interrupted during the rain season.

Boats, ships and ferries are most common types of transportation

The technical problems we faced in the beginning of the PEDEaD program seemed to be insurmountable. Small towns did not have access to the Internet and when there was access, it was irregular and often it was not functioning making it impossible to do the regular weekly activities in the online platform. The only reliable service was the one owned by Brazilian Army as there are satellites over the sky of the region monitoring the borders and the forest. The PEDEaD team had several meetings with Army officers who helped us to broadcast several videoconferences to distant locations. In 2008, the second year of the project, many of the towns installed Internet services. But it was costly and still not totally reliable.

While in 2008 the Internet became available to all cities and towns involved in the project, access was mainly through school labs and government telecenters. Most schools and telecenters are closed in the evening and for teachers this was the best moment to work in their PEDEaD activities. It was by the end of 2008 that many teachers began to purchase their own computers and have access from home. Today we estimate that 80% of them have computers at home and Internet access.

Besides difficulties to access a computer and to the Internet, many teachers also had difficulties in learning how to use the computer. Many mentioned the fear they had to turn on the computer and do something wrong that would damage the machine. The PEDEaD program organized several training sessions in the different towns. While these training sessions were helpful, it was, however, in their homes that most teachers were trained. In fact, teachers' sons and daughters were in many cases those who first learned how to manage the home computer and the Internet and then taught their parents.

4. The Reflective Diary: What teachers say about professional development in the PEDEaD Program

In the "Teacher Manual of the PEDEaD Program", the Reflective Diary is defined as the space for classroom teachers to express themselves regarding their learning process in the program and to help them to develop the ability to reflect critically about their own professional development (Universidade de Brasília, 2007 a.). This new proposal reverses the old evaluation paradigm, when the student is evaluated about something that s/he has or has not learned. In the diary is the teacher who defines and writes about what was learned, or not learned. This method implies in a reciprocal evaluation: the teacher says what and how the PEDEaD program helped in the process of learning and the Coordination of the program then incorporates changes and modifications in the program. At the same time, the teacher is evaluated by the instructor. In this way the diary is an open space where a pedagogical relationship of a different evaluation nature takes place as it is not only centered in questions and answers.

This evaluation model was defined and implemented at the beginning of the project. Teachers should keep a written record of their journey into carrying out the activities of the PEDEaD program. There was not a model to be followed but only suggestions made for possible ways. The Coordination of the PEDEaD program identified, already in the first semester, through the reading of the teacher diaries, the need for an additional course to improve writing skills. A course called "Production of Written Text" was developed and offered for those in need. This course was not part of the regular program workload and enrollment was voluntary.

Online programs seem to be more demanding than face-to-face ones as participation is through the written word, with the messages and tasks posted in the platform, as opposed to the face-to-face learning when the spoken word is the main communication mode. Therefore, reading instructors and peer comments and messages, and writing and posting one's own contribution to the online platform becomes a routine task in the relation instructor-teacher.

Evaluation is perhaps one of the most complex tasks in the educational process. There are so many issues to take into consideration in this process as we try to understand whether the actions we carried out reached the stated objectives. As one teacher stated:

Today I understand that the time has come to reflect and to change, and to help school children think by themselves and to develop their own way to build knowledge. Enough already to try to make children just receptors of knowledge and information! We should let kids find their best way to learn because what may be easy for me may not be for the children. I also think that the word innovation should be part of the vocabulary of all educators so that they facilitate the emergence of new ways of thinking about how children learning processes can be

evaluated. Teacher 1

It seems that the need to control and to measure the extension of the knowledge built in the process of learning, that is, to evaluate, take us back to complex situations as is the case with this mixed mode program. The two programs, the ESPEaD and the PEDEaD, were offered in a concurrent format aimed at both instructors and teachers. To better situate this complexity, next we discuss five aspects of the PEDEaD program that are affecting the final outcomes: I. cultural diversity of the participants; II. curricular organization of the program; III. mixed mode nature of the program, offered in face-to-face meetings combined with online work; IV. teacher practices in the classroom; V. the relation between the undergraduate degree in education (PEDEaD) and the post-certificate graduate program (ESPEaD).

I. Cultural diversity. This first aspect has to do with the fact that the professional development program carried out by the Faculty of Education and the Secretary of Education, State of Acre, takes place in educational and culturally diverse spaces and using new types of resources. Many of the locations where the course was offered are very small communities. Some of the teachers came from rural areas, of precarious life habitat and poor learning conditions.

In order to undertake undergraduate studies I had to go through hardships and challenges that began in 1991, when my family moved from the small town of Tupan, in the State of São Paulo, to the State of Acre. I was nine years old and we moved to the town of Porto Acre. I was then in the third year of Elementary Education. My parents registered me in the local school. It was a very difficult period, to adapt to this new place, given the cultural differences, to their daily habits, and to the accent of the teacher and school children. Teacher 2

Another teacher commented about the same difficult he had with the local accent and how he learned to deal with the situation.

I should mention that I found a lot of barriers in the new town as the majority of people in the village came from the State of Paraná, in southern Brazil, and had a different accent, a bit as if they came from rural areas. However when I began to teach I taught them to pronounce words in the correct form, as I knew that changes do not happen in one day or a week, but in years. Studying one of our textbooks "Education and Maternal Language II", I began to better comprehend the spoken language of some of my school children as the majority of them came from rural areas and had a distinctive way of speaking. I confess that in the beginning I tried to correct them, but then I realized that when a child speaks a word wrongly you just need to repeat the same word with the right pronunciation and the child learns better this way rather than trying to correct and making the kid feel embarrassed in front of the others. Teacher 3

The use of the computer network linking the 20 towns in the state facilitated intercultural communication in a more consistent and regular way, allowing teachers to break the barriers imposed by geographical isolation.

II. Curricular organization. The second aspect relates to the curricular organization of the

program into modules. Each module contains five or six thematic textbooks produced by the professors of the Faculty of Education. Each textbook is then divided into three sections. Each semester is divided into weeks and in each week one or two sections of the textbook is taught. For a teacher to be successful s/he has to be well organized to deal with the specific themes discussed in the textbooks. Each week the teacher has to complete the online activities, responding to messages and interacting with the instructor and peers.

The program requires a great deal of organization, development, evaluation and self-evaluation, so that we experience the autonomy that is expected from us in the school where s/he teaches. It is a learning process mediated by technologies through which we are being prepared to teach with more competence by learning via a method of online autonomous learning, under the orientation of the instructor in the face-to-face meetings, when we review all the didactic material for the week, i.e., textbooks, additional readings, videos, and other learning materials of a very good quality. Teacher 4.

In this way the evaluation of the teacher in relation to his/her development and learning of the specific content is accomplished along the entire process, in each section, each textbook, and each module. The work posted by teachers is then read and evaluated by the instructor, besides being shared by all online peers, allowing for increased peer-to-peer communication and sharing. Teachers will then apply what they have learned with their kids in the classroom. As one teacher mentioned, the teaching strategies learned in the program were tested in the classroom:

Through the texts we read, the group discussions, the research we do, I have developed new knowledge and have also developed new research interests which related to my daily practices in the classroom. When I learned something new I would then apply that knowledge in my classroom and watch how the kids would react. There are very interesting teaching strategies presented in the textbooks and we have applied some in our own classes. Teacher 5

III. The mixed mode format combining face-to-face meetings with online work. While the online activities are the locus of the PEDEaD program, the face-to-face meetings are also an important component in teachers learning process. In the weekly face-to-face meetings teachers can establish a more relaxed interaction with peers and deal some of the difficulties they face in the program. Some teachers were discouraged because of the pressure and amount of work but were encouraged by their peers to persist and to overcome the problems they were experiencing. For many the help they found in the face-to-face meetings was fundamental to issues such as how to use the computer and to navigate online or how to deal with many of the demands they were facing.

“In the beginning my difficulties were enormous. I almost quit when I found out I had to use a computer. I did not know even how to turn on the machine, much less how to use it, how to work with the mouse. I was afraid to use the online platform and do something wrong. But my instructor was very patient with me and taught me everything, step-by-step.” Teacher 6

Another one mentioned how the help she got from her peers was important in moments of hardship and distress:

“First I thank God, then my colleagues, because without them I would have quit. When I was not able to do some of the online activities there was always someone who would come to me and say: and then my colleague? Why haven’t you done the activity yet? Let’s go to my place and there we can work and I will give you a hand.” Teacher 7

If the PEDEaD program were to be offered entirely online, without face-to-face meetings, many teachers would not have stayed and likely would have quit. The reason for the permanence of many teachers was the help and support they received in the face-to-face meetings. When teachers go to the weekly meeting they already have worked in the online activities and can bring to the meetings the difficulties and problems they encountered. The instructor then helps the teacher in need and discusses the problems and doubts s/he brings to the meetings. In this context, teacher evaluation takes place in a process-oriented format, in each meeting. One teacher mentioned how the help she had was important in achieving her objectives:

“I have learned that I am my own guide in this process and for this reason I have to dedicate myself entirely to the program, learning how to have an investigative mind and to sharpen my curiosity, fighting for not ever loose the desire to learn always, overcoming roadblocks and following the path to my objectives. I always found support from my instructors and colleagues, both online as well as in my meetings with them.” Teacher 8

IV. Teacher practices in the classroom. In order to enroll in the PEDEaD program participants have to be teaching elementary grades. In this way there is a professional development network that includes undergraduate education through the teacher in the classroom and graduate education through the instructors and the professors of the Faculty of Education. The result of this integration is that a significant part of the activities done in the program have a direct impact in each of the three levels of education: elementary, undergraduate, and graduate. And it is important to mention that the network reaches elementary school children of almost all cities of the State of Acre, covering 20 of the 22 cities in the state. The work teachers do in the classroom is followed by the instructor and evaluated, not only by the instructor but also by the school team where s/ he teaches. This network helps teachers to improve their practices in the classroom and foster their commitment to their students, as mentioned by one of the teachers:

“Now I have an even bigger commitment with education, not to let this knowledge I have built through this program be forgiven. My role then is to mediate the learning of my students and to facilitate the emergence of reflexive and critical thinking in the classroom, leading them to comprehend their social role, as I comprehend mine, and to let them know about their rights and obligations as citizens.” Teacher 9

The importance of the PEDEaD program in teachers practice can be noticed in this quote from another teacher.

I am more and more surprised about my own praxis, I have never had so many strategies to apply in my classroom. Now we are completing another module in the program and I have the conviction that the trend is to improve, it will depend of my efforts, of my capacity to act as a professional of quality. I will never forget that the future of my kids is in my hands. Teacher 10

V. The relation between the undergraduate and the graduate programs (PEDEaD and ESPEaD). The instructor has two main tasks in the PEDEaD program: he teaches his group of PEDEaD teachers both in face-to-face meetings as well as in the online platform, while he is also enrolled in the post graduate program of the Faculty of Education. In the beginning of each semester, instructors meet with their professors for one week of face-to-face meetings. Professors from the University of Brasilia fly to Rio Branco, the capital of the State of Acre where the meeting takes place. In the meetings professors present the content of their textbooks and propose and discuss with the instructors pedagogical processes to be developed along the semester. A significant part of these meetings were initially dedicated to training on how to use the online platform. Once this was learned, other types of usage were also done such as Web videoconferences, sites to place pictures, tools for chat, Wikis, and many others.

5. Conclusions

The Reflective Diary has been an important tool for teacher professional development in the State of Acre. Both instructors taking the ESPEaD graduate program and teachers taking the PEDEaD program benefited from the regular practice of writing their thoughts and reflections with a critical view of their own experience in teaching. As one teacher stated:

*“I remember that some years ago when we studied History, we would study only the past. Today we still study the past, however with a view of the future with a critical vision. When we study the present we try to understand the reason for some facts or things. When I am studying I also like to figure out how they happened as they did and the entire process that led to this fact or thing.”
Teacher 11*

And another teacher stated the ways he improved teachings of mathematics:

*“When I reflect about my work I can see that I have improved my way of teaching mathematics. Now I can contribute much more with the learning of my children and I help them to consider the various ways to come up with a solution to a problem. The math games we learned with our instructor are very interesting and the kids of my class loved to do them in the classroom and learned much more this way.”
Teacher 12*

Teachers diaries, as conceived in this program, is a tool to facilitate the reflection-in-action, used by teachers in elementary series to develop a continuous analysis of classroom activities, keeping a logbook of their reflexions, oriented by the instructor. Instructors also write their reflexion-in-action notes, producing their diaries, oriented by faculty members of the Faculty of

Education.

This educational process mediated by communication technology can facilitate the emergence of multiple dimensions and aspects that have to do with human sociability in today's world. As per the multiple practices that are used in education to transmit and build knowledge and to access information, it is above all necessary to work for the development of a human being who is capable to establish relations of humanity, be it online or face-to-face.

The background scenario for this network is literacy in its broadest sense. Therefore we want to support the development of a teacher that can learn how to learn and to have the initiative and will to constantly improve his/her own practice, feeling comfortable to express him/herself with the written word. And at the same time this teacher will be able to make use of Web resources, beyond the written word, with images, sound and other multimedia resources to improve teaching.

The sections I wrote in my diary describe some experiences in my learning process and reflexions about the PEDEaD program. I talk about the textbooks I read, the group discussions I had, the research and searches I did to find solutions for the problems I had in the classroom, allowing me to see many options and identify the different possibilities. We elaborated proposals for classroom activities and we would then apply those activities in the school to find out whether they were really good teaching strategies. Teacher 13

The design of this program has been based on the creation of a network to support teacher professional development with the support of professors and instructors to reach the teacher in the classroom. This was made possible because of the delivery mode chosen, a combination of online networking and face-to-face meetings to support the work of classroom teachers.

There is still much to learn from this experience, particularly from the network that has been set up for professional development of classroom teachers. Given the richness of the information available in teachers' diaries, in the messages posted in the online platform, and in videotapes made in the face-to-face sessions, there are many items still to be explored and studied.

The concept of reflection-in-action has been made more relevant in the program through the requisite of the Reflective Diary, a tool used both to evaluate teachers practices and the program itself. In the diary a teacher describes his/her experiences, difficulties, and successes, and through a continuous interaction of the items raised in the diary with the instructor and peers they have shown that teaching can always be improved through self-reflection and reflection-in-action about their classroom activities with their children.

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