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In general, graduate courses in Brazil receive professionals from different knowledge areas, even for graduate courses in education. The Master degree program is an entrance door for academic paths, especially when the profile of the teacher who will start teaching undergraduate or specialization courses is taken into consideration. In these programs, besides the professionals with specific interest in educational research, there are also teacher trainers, and in general, higher education professors.

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Between the Mirror and the Oil Lamp: Promptings from a Teaching Case in Graduation Courses

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Regina- Do you know the slightest feeling I have after I started the inservice program? Today I have here in my thoughts a student I had in second grade with the assumption I had what it meant to me to be a teacher at that time, you know? I failed him. Today, with this new way of teaching, I am donating myself so that he learns, and I am trying to be today what I was not towards him that year. If I could, I would retrieve that year back and move it one year ahead. Being with him is a way of rescuing what happened and saying to myself and especially to him that I am not that way anymore. I would show this other teacher, the one who cares about him, who teachers, who helps, etc. I look at him and I see myself in the mirror. Sometimes I smile with joy, and sometimes I feel sad when I realize that he could have passed.

Diana- Regina, it is a thousand times better to have a mirror today than always living in that darkness, thinking that we were a huge oil lamp illuminating the whole community with our great knowledge!

(ROCHA, 1999/2000).

I. INTRODUCTION

This paper presents the results of a formative experience involving teacher trainers in a Master degree graduation course. The course used a teaching case which is considered here a formative and investigative strategy. The writing of this paper derives from the re-reading of a paper previously published by Rocha (2012) on the *Ensino em Re-Vista* (UFU)Journal, v.19. The publication portrays the experience with teaching cases for a class of Advanced Seminar II in 2007 of the Master of Education Program, at the Federal University of Mato Grosso/Brazil - under the line of research "Teacher education and school organization".

In general, graduate courses in Brazil receive professionals from different knowledge areas, even for graduate courses in education. The Master degree program is an entrance door for academic paths, especially when the profile of the teacher who will start teaching undergraduate or specialization courses is taken into consideration. In these programs, besides the professionals with specific interest in educational

research, there are also teacher trainers, and in general, higher education professors.

Higher Education, through licensure courses, offers the future teachers a conceptual, procedimental repertoire, and diverse experiences aiming at starting to build the initial foundation for teaching. This foundation will enable the beginning teachers to work and develop professionally. These professionals need spaces and experiences of professional development, spaces for pedagogical practices, the living of the learned situations, and the development as a continuation of their formative processes. These learning situations and professional development allow them to expand their knowledge foundations for teaching.

As any occupation, teaching is something one learns. Learning how to teach and how to develop professionally are long term processes which start far before the initial formation course - licensure courses in general - in higher education institutions. This learning lasts along with the professional paths of the teachers. Before entering higher education, all future teachers will have spent 11 to 12 years of their processes of basic education having contact with different kinds of school, teachers, curriculum, assessments, patterns of interactions with colleagues and teachers, teaching strategies, etc. These are observational and experiential learning considering the different dimensions of the school daily routine, kinds of schools, curriculum, kinds and levels of education. From different sources of knowledge and experience, this learning tends to diversify, amplify, flexibilize, become more complex so that a more and more solid and broad repertoire may be built in such a way to enable the teacher to cope with different kinds of difficulties which appear along the professional journey.

II. TEACHING CASES, THE FOUNDATION FOR TEACHING AND FOR THE PROCESS OF PEDAGOGICAL REASONING (SHULMAN, 1986; 1987)

Teaching cases are theoretically and methodologically based in this paper on two explanatory models of how teachers learn to teach and to develop themselves professionally (Shulman, 1986; 1987). The models are the foundation knowledge to teach, that is, the set of diverse knowledge the teacher must have in

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order to be well succeeded in the processes of teaching diverse students, and the process of pedagogical reasoning, meaning the process through which the teacher builds, expands and diversifies his/her foundation knowledge. The teaching cases and the methodology of cases acquire their importance as long as they present their potential as a development tool for the processes of pedagogical reasoning and of the building of the pedagogical content knowledge. A teaching case, as Mizukami (2000, p.153) points out "is a pedagogical instrument which may be used to help teachers in the practice of their processes of analysis, problem resolution, decision making, among other basic professional processes".

The knowledge foundation is understood by L. Shulman (1986) at the intersection of the specific content from different areas/fields and of contents from pedagogical nature, such as the teacher capacity to transform the knowledge from the content he/she has into ways of action which are pedagogically effective and adaptable to the variations of skills and repertoire presented by the students. Based on the understanding of Wilson, Shulman and Richert (1987, p.105-106), the knowledge base in teaching is a corpus of knowledge that the teacher needs in order to act in specific teaching situations. Either for teaching Math for 10-year-olds in a downtown school, or English literature for teenagers in an elite private school, the teacher needs this knowledge base.

The diverse known components of the foundation may be grouped into three major topics: subject matter content knowledge, pedagogical knowledge, and pedagogical content knowledge. Under this perspective, when considering teaching cases as formative and investigative tools, the pedagogical content knowledge is privileged. The reason is because it is the only kind of knowledge which each teacher maintains a relation of protagonism. It is the teaching knowledge which is built by each single teacher along his/her professional trajectory.

The pedagogical content knowledge is understood as the one:

[...] that embodies the aspects of content most germane to its teachability. Within the category of pedagogical content knowledge I include, for the most regularly taught topics in one's subject area, the most useful forms of representation of those ideias, the most powerful analogies, illustrations, examples and demonstrations... it also includes an understanding of what makes the learning of specific topics easy or difficult: the conceptions and preconceptions that students of different ages and backgrounds bring with them to the learning of those most frequently taught topics and lessons. (Shulman, 1986, p.9)

Besides the foundation knowledge for teaching, it is also possible through teaching cases to explore teachers' pedagogical reasoning processes composed by six subprocesses: comprehension, representation,

instruction, assessment, reflectiveness and new comprehension. The two models are of extreme importance for the formative processes of the teacher trainers once they incorporate the different knowledge required to teach. Moreover, Mizukami affirms that

[Teaching cases constitute important investigative and formative tools] - by allowing not only to learn the professional theories, the processes of building the professional knowledge, and the development of the pedagogical reasoning of the teachers, but also to understand the teachers' way of thinking. For teaching, by allowing the professional development, the construction of knowledge foundation about teaching, the development of the pedagogical reasoning, and the construction of the pedagogical content knowledge, which constitutes the specificity of the professional learning (MIZUKAMI, 2000, p. 156).

Teaching cases are mentioned in this paper as "instructional teaching cases", which are usually narratives related to pedagogical practice which portrays pedagogical content knowledge.

a) *The inservice lay teachers' teaching case as a possibility to potentialize reflections: a possible re-reading*

The use of teaching cases in Graduate Programs disciplines offers an important contribution to the formative needs of the higher education teaching formative needs. Among these there are the expansion of the possibilities of reflection and analysis of situations which involve professional development, and the constitution of the teacher identity. By adopting this formative-investigative instrument the teacher educator has raised the following question: were the teaching cases considered satisfactory in the graduate course when they were used to potentialize the reflections about the theoretical background adopted in the discipline Advanced Seminar II at PPGE/UFMT/Brazil? The objective with the case was to study and discuss the basis which sustained the analysis, the interpretation and comprehension of the outcomes about teaching formation approaching the teacher professionalization and the development of the teacher identity.

Participants were 17 master degree students of the discipline who were divided into A, B, and C analysis groups. Video Recordings were made to register the master degree groups of students reflexive moments during a seminar organized for this purpose.

The teaching case adopted by the students for the discipline contemplated a dialogue between two student teachers from the rural area named Regina and Diana (fictional names) who taught multi-graded classes and had no prior teaching degree. This dialogue was organized by Rocha (2012), from excerpts of their formation memorials which were mandatory as an assessment instrument in the Program of Inservice Teachers Formation - PROFORMAÇÃO. In these memorials they reported their formative paths, how they

perceived themselves as teachers before, and they provided comments on the contributions of this program to their pedagogical practices. PROFORMAÇÃO/1998 was a program of inservice teachers education (offering the Teaching course) developed by Fundescola/World Bank and the Secretary of Distance Education/SEED/MEC, with the aim of educating lay teachers (the ones who did not have a license to teach). Brazil had in 1998 approximately 70,000 lay teachers. Of these, 3,000 were

in the State of Mato Grosso, the State with the smallest number of lay teachers. Many of these teachers in Mato Grosso where the Pilot experience took place did not finish high school. The memorials with the narratives of the lay teachers were very expressive in registering the progress in each module, as well as the resignification of their practices. Following, the teaching case in the format of a dialogue.

b) *Between the mirror and the oil lamp: reflexive dialogues from lay teachers in formation*

Regina- Hi, Diana, sometimes I think that now we are becoming a teacher, don't you think so?

Diana- I feel like having this transformation, which is a huge transformation for me because I did not have a major in teaching. I came from Paraná and went to teach in a farm. I had no idea of how to teach, but I started anyway. I was offered the position and so I went.

Regina- What's your school background?

Diana- I had incomplete middle school, and where I used to live there was only General Education. My concept of the classroom as a teacher was the model of the teachers I had. I imagined I had to be like them regarding grades, assessment, how to treat students. I had the assumption that the students had to be quiet and that I had to explain the subject very well. I used to take courses and did not listen to what people used to tell me, I would not change my way of thinking. I had in mind it had to be like it was when I was a student. Today, with this course I can see it is not quite like that: I started to see things differently, to act differently and I realized it was working. Our practice is different, we even change the way we see the students.

Regina- Same for me! I used to be a teacher who prepared the lesson plan, then went to the classroom and taught it, and if the students asked me: "teacher, have you seen that thing on TV"? I used to answer: "yes, but now it's not the time for that. I am going to teach, and if we have some time left at the end of the class, you tell me". Poor students! They had to arrive, sit still, behave, and listen to what I was saying. They had to listen, to memorize, and if they learned, fine, if they didn't, amem".

Diana- Right? We went through all this to learn that everything we used to do was wrong, but I always felt I was right. It's hard to believe we had taught like this for ten years...it makes me feel guilty!!!

Regina- Is it possible that we should have a guilty conscience when we make mistakes without being aware we are making them?

Diana- I can't answer that, because one thing is to be making a mistake and not being aware, another thing is to know one can study and not be taking action, and an even more serious one is to think: was the impossibility to study because we didn't have time, because we couldn't afford the course and the transportation really our fault?

Diana- Today I see in my classroom there are less failing students, the final result is better. I've changed a lot. I used to shout at the students, I still shout today, but I am changing. We cannot stop everything all of a sudden![...] And when we were studying about this topic, I saw I had to change, it was one more aspect that I would have to change, and by the end of the year during the last lessons the students were saying: "the teacher is calmer, she stopped shouting". They speak up and are sincere.

Regina- Yes, you've always been super authoritative, you conducted the class, the kids were quiet and eventually they relaxed a little.

Diana- Today, I can say I've changed a lot the way I evaluate the students, because today I evaluate each thing they do. For example: I no longer give them questions asking them to bring me the answers at "the tip of the tongue" the following day. I've learned that, with some students, you have to work differently, in a special way, because some of them can't keep up with their classmates. Today I can identify in each student I have what he/she can and cannot do. I've learned to work with the student's reasoning. I care more about them, whether they are enjoying or not the way I teach, and I even ask them to tell me how they would like the classes to be.

Diana- I used to be very demanding. There was a student who didn't do things and I used to leave him aside. I don't know if his parents didn't care about him and that's why he was this way. But this is not the case, if I come into details with all kinds of neglect I had with this student, it will give me goosebumps! Nowadays, after I have started the course, I see things differently. Today he is a "brat", he continues to be "terrible", but he does things, and he participates.

Regina- How did you reach this change?

Diana- I sit down, talk to him when he has something to talk about his home. He likes to talk. I place him in the first row of seats when I am doing something, I ask him to explain to his colleagues. This has given him more self-

confidence. I talked about this student to another teacher who helps me here in the morning, once he met him because this teacher used to substitute me last year. Then I showed him that I was talking to this student, he was doing an assessment, and I was showing him that when he wants, he does. So, I had to create a way for him to be there, doing it.

Regina- What do you mean? You created a different way for him?

Diana- That's right. I valued him. I have to be writing, taking much care. But the point is that he's completely changed. He's still "terrible", but when he has to do it, he does.

Regina- Yes, the course has contributed a lot. I now see myself completely different. I see that before I used to teach just for the sake of it. Today I think completely differently, I think that I need to study more and more, to be updated. Because if I stop, how will I teach updated things for my students? I study at night using an oil lamp, but I study. Before, I would never force my eyes, no way. Today, duty calls.

Diana- If now I feel like taking undergraduation, it is because this course has opened my eyes to the need to keep studying. We believed we knew it all, but as a matter of fact, we are never ready, we have to be always studying. We have to struggle to come here in each meeting of the course, we even have to cross forests and rivers, isn't that right?

Regina- Do you know the slightest feeling I have after I started the inservice program? Today I have here in my thoughts a student I had in second grade with the assumption I had of what it meant to me to be a teacher at that time, you know? I failed him. Today, with this new way of teaching, I am donating myself so that he learns, and I am trying to be today what I was not towards him that year. If I could, I would retrieve that year back and move it one year ahead. Being with him is a way of rescuing what happened and saying to myself and especially to him that I am not that way anymore. I would show this other teacher, the one who cares about him, who teachers, who helps, etc. I look at him and I see myself in the mirror. Sometimes I smile with joy, and sometimes I feel sad when I realize that he could have passed.

Diana- Regina, it is a thousand times better to have a mirror today than always living in that darkness, thinking that we were a huge oil lamp illuminating the whole community with our great knowledge! (ROCHA, 1999/2000)

The reflective questions on this teaching case were:

- Which associations could the group make between the authors who work with professional development and the teaching case in question?
- How can one evaluate the issue of formation from the perspective of the formation politics? Which authors would you adopt for such analysis?
- How did the teaching case help the group to reflect about the papers? How can one associate these papers to the teaching occupation and the professional path?
- In which episodes was it possible to observe the construction of the professional identity? Which authors could help in this analysis?

The rereading presented in this paper no longer focus the relations between theory and practice which were explored in the original paper, but it considers the reinterpretation of the collected data based on the models proposed by Shulman (1986;1987) in regard to the understanding of the processes related to learning and to the teaching professional development.

Analysis and discussions of the master degree students from the teaching case - Between the mirror and the oil lamp: reflexive dialogues of the lay teachers in formation

In order to analyze the data, we relied on the development and the learning of teaching based on the theoretical reference of Shulman (1986; 1987). This reference is about the knowledge foundation for teaching and the process of pedagogical reasoning as the guiding axes.

In order to reinforce our reflections, we will highlight excerpts of the reports of the master degree student groups related to the teaching case built from the dialogue between Diana and Regina, who are two of the lay teachers in the PROFORMAÇÃO formation course. These excerpts will be presented in two parts: (1) about the pedagogical content knowledge because it is an instructional case, it is very much present in the teachers' dialogues and in the master degree students' reflections, and for it is a kind of knowledge which aggregates other repertoire (general, and specific); (2) about some elements of the process of pedagogical reasoning, because it allows one to realize they are present in the teaching act of the lay teachers analyzed by the master students of this program.

Although they will be presented in parts, we reaffirm that the teaching base knowledge and the processes of pedagogical reasoning theorized by Shulman (1986;1987) are intimately related.

- 1) About the pedagogical content knowledge which aggregates pedagogical, and specific knowledge

According to Shulman (1986; 1987) the pedagogical content knowledge refers to an intersection between pedagogical and specific knowledge, and it includes the teacher's capability to transform the knowledge he/she has of the content in effective ways of pedagogical action. Among them all, this is the one with the greatest highlight because it is built by its interaction with other knowledge. It is the most important one for the author and the only one which allows the teacher to

assume the role of protagonist. This justifies the emphasis given to it to this kind of knowledge. The master students mentioned the following about this aspect:

Knowledge is, then, the result of the fluid and daily investigation about the peculiarities of/on and from the practice, and it legitimates in projects of reflective experimentation of the educative practice. (Report Group C).

It is possible to analyze the case based on the studies (of the literature of the discipline). This allowed us to comprehend that the teachers' professional development is an educative process that implies the understanding of the concrete situations that are brought up in the classrooms where they teach. (Report Group C).

A set of processes and strategies which facilitate the teachers' reflection on their own practice, and which contribute for them to generate strategic and practical knowledge, and that they may be able to learn with their experience (Report Group A).

The analysis of the master students indicate that they identify the pedagogical content knowledge involved in the lay teachers experiences, as well as the understanding of the dilemmas and peculiarities which are present and generate knowledge on/about Diana's and Regina's daily practice.

2) About some elements of the pedagogical reasoning process, which was conceived here in a spiral way

Six subprocesses are triggered in the processes of pedagogical reasoning and action: comprehension, transformation, instruction, evaluation, reflection, and new comprehension. For the present analysis we adopted the ones identified by the master degree students.

About the *comprehension* of the subject, which is the starting point for teaching, the master degree students affirmed:

We could realize in both [Diana's and Regina's] speeches the teachers' openness for changing their practice from the studies held during the formation program and the knowledge that came up from it (Report Group B).

It is necessary the teachers assumed to themselves the commitment of change in the quest of their overcoming (Report Group B).

That one can realize in the speech in one of the teachers the clearness of her transformation into a teacher - her professional identity in construction (Report Group B).

According to Shulman (1986; 1987) this comprehension demands from the teacher the domain of what is taught, and it requires a critical practice so that what is taught can become comprehensible to the students.

For the author, the *transformation* includes the combination of four subprocesses: interpretation; representation; selection; adaptation, and consideration of students' characteristics. The analysis of the master degree students revealed the comprehension about this transformation as follows:

With all these difficulties, Regina mentions in her statement her change of attitude with the students. We observe in the teachers' dialogue how they use the reflection as a tool to analyse the classroom space, taking as locus the historical resumption upon which they are building their professionalism (Report Group B).

The master degree students point out in their analysis the process of transformation that Regina presents regarding teaching, and the specificity of her students considering the classroom space, which is the place where she is building her teaching practice.

We can say that in order to think about the learning that was provided to the lay teachers by the formation program, the master students mention that the lay teachers relied on *reflection*. According to Shulman (1986;1987), at the moment of reflection, the teacher looks at the whole process and reflects on the students' comprehension examining his/her own work towards the established goals, as the example below:

Getting more participative schools with more innovative teachers who make their students become critical citizens necessarily requires the existence of professionals who are capable and committed to the values they represent. (Report Group B).

The question raised by Diana has surprised us a lot: was the impossibility to study because we didn't have time, because we couldn't afford the course and the transportation really our fault?

Regina answers that: I don't know very well, because one thing is to be wrong and not know about it, and another thing is to know that one can study and do nothing about it. (Report Group C).

These reports highlight that the master degree students reveal the lay teachers triggered the reflection, one of the processes of pedagogical reasoning, either to think about students' learning, or to think about teachers' learning.

The *new comprehension* is the last phase of the process of pedagogical reasoning being the one which generates more refined and enriched understandings, enabling the consolidation of new comprehensions and learning in the process of a spiral, not circular, pedagogical reasoning.

The knowledge related to the learning built during the formation course becomes legitimate when they relate the growth they had with the development process of their students. Also with the difficulties and how the advances started to be faced as new ways of learning and teaching. The professional development of teaching is evident in this teaching case (Report Group A).

The master students show the new comprehension when they highlight the change, the commitment with the transformation of the teaching practice pointed out in the lay teachers' speeches.

Considering the own narrative of the teaching case studied, some elements of the pedagogical reasoning process which were mobilized by the lay

teachers in formation were more highlighted in the analyses of the master degree students. Instruction and evaluation were not present in the teaching cases.

To conclude we can even emphasize the formative potential of the teaching case by the master students' perspective when they affirm that: "the teaching case allows us to rewind our videorecording, pause the image and thus rewatch a little slower the scenes or our journey which were unnoticed, or that we simply have passed through" (Group A).

III. CONCLUDING REMARKS

This paper presented the Master degree students' understanding from lay teachers reported experiences during a formation course. Their analysis consisted of the readings of teaching cases based on the theoretical foundations of Shulman (1986, 1987).

The adoption of the instrument of teaching cases was meaningful to "capture how teachers think, plan and teach [...] in the sense of reporting their constructions from their theorizations and the reflections on the pedagogical practice resulting from their interpretations" (Mizukami, 2000, p. 153). In this regard, the master degree student Ana mentioned that: "the effort to comment each teaching phase is quite important for the understanding of the theoretical perspectives presented and discussed in the seminar". She further observed: "it represented an intellectual and subjective exercise, and for this reason, very singular of each profession to look at Education and teacher formation from the same theoretical reference", emphasizing that "such highlight is differently enriched according with the knowledge and the own reading of each *locus*".

In this procedure of analyses and reflections of the texts associated with the teaching cases, the students concluded that "the use of teaching cases demonstrate advances in teacher formation. This happens either for the lay teachers, or us, master degree students when we analyse the teaching cases with the lived stories by the teachers during their formation". The use of teaching cases, despite consisting of a punctual and initiative in graduate school allowed the readers to potentialize their reflections on the theory studied in the discipline. Moreover, it made it possible for them to revisit their own trajectories, episodes, and/or formative events.

Considering the analyses performed in this chapter, we can affirm that the use of teaching cases in graduate programs has formative and investigative potential. This potential refers to the foundation of knowledge for teaching, for the process of pedagogical content construction, to the specification and interrelation of elements of the process of pedagogical reasoning. These are essential for the comprehension of how the teacher learns how to teach and to develop

professionally in different contexts and moments of his/her trajectory.

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